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JANUARY 1, 1898.

PROGRESSIVE BEE-KEEPER
A JOURNAL
DEVOTED TO BEES, HONEY AND
KINDRED INDUSTRIES.

PUBLISHED BY
LEAHY MANUFACTURING CO
HIGGINSVILLE, MISSOURI.

MURRAY-HEISS CLEV. O.

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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.**

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THE AMERICAN BEE-KEEPER, (monthly, now in its 7th year.) 36 pages, 50c a year. **Sample Free.** Address,

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W. Z. HUTCHINSON,

- FLINT, MICHIGAN.

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

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

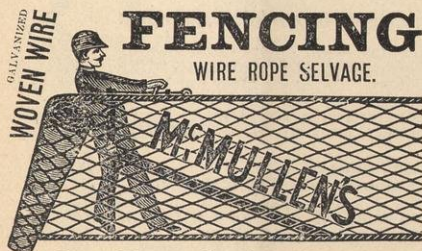
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The great Northwest is rapidly settling, but there is still room for thousands of farmers to secure good homes; land is yet cheap. Good farm lands can be had at \$5 to \$10 per acre. Improved farms at \$10 to \$20 per acre, buildings all on ready to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

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

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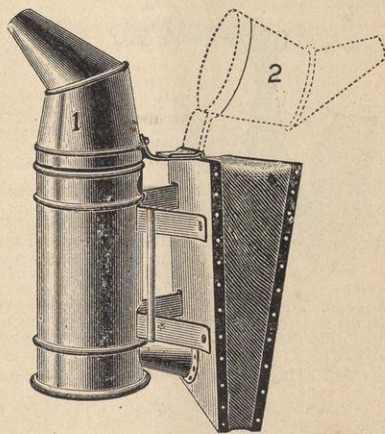


I am now ready to receive orders for May delivery, 1897. Full colonies of three-banded Italian bees in 8-frame dovetailed hives, \$5. Strong three-frame nucleus, with tested queen, \$2.75. Untested Italian queens, each, 75c; per doz., \$7.00. Tested Italian queens, each, \$1.00; per doz., \$10.00. Best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

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

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

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THE "HIGGINSVILLE SMOKER."

A Good Smoker for a Little Money.

THE HIGGINSVILLE SMOKER A DANDY.

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

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

LEAHY MFG. CO., HIGGINSVILLE, Mo

"Higginsville" 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 smok- er made.	per doz.	each.
Doctor.....	3½ "	\$13.00	Mail, \$1.50
Conqueror.....	3 "	9.00	1.10
Large.....	2½ "	6.50	1.00
Plain.....	2 "	5.00	.90
Little Wonder.....	2 "	4.75	.70
Honey Knife.....	2 "	wt 10 oz	4.50 .60
			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.

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 3½ inch just received fills the bill. Respectfully,

O. W. OSBORN.

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

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

WM. BAMBU.

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

Please mention the 'Progressive.'

T. F. BINGHAM, Farwell, Mich,



The Progressive Bee-Keeper.

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

PUBLISHED MONTHLY BY LEAHY MFG. CO.

VOL. VIII.

HIGGINSVILLE, MO., JAN. 1, 1898.

NO. 1

A TIME TO COME.

BY WILL WARD MITCHELL.

There'll come a time when you and
I must sever;
When we who love so well must
say goodbye;
Must part, to meet on earth no more
forever,
And neither, love, may ask the
other why.
I met you, Jael, and I loved you
dearly;
And you loved me—was that a gall-
ing crime,
That life should frown upon us
sternly, drearly,
And warning say, Beware! there'll
come a time.

* * * * *

There'll come a time when we shall
know the meaning
Of all life's lessons, all its woes
severe;
When we shall pierce the curtain
intervening
Between the lovely Afterwhile and
Here.
When all our earthly trials compre-
hended
And understood, will gladden heav-
en's clime,
And make all life a song nor ever
ended
Till God shall pass away—there'll
come a time.

Higginsville, Mo., Jan. 1898.

WAYSIDE FRAGMENTS. Somnambulist.

"What comfort or cheer has the white of the
year?
What gift is in store for us now?
Blow up, stormy wind, from the cold, sodden
plain,
And toss the loose locks on the hill;
The voice at the keyhole, the hand at the
pane,
Let come, or let go, as you will.
We build the red fires on the hearths of our
sires,
Who feared not the months as they ran;
And our feast shall be blest with the flowers
we love best—
The nurselings and house-mates of man."

Good morning, 1898. How glad-
ly we welcome thee. For what
would have become of good, faith-
ful old Santa Claus, had not you
arrived to relieve him? Just imag-
ine the magnitude of that relief.
Only those who've experienced
short spells or snatches of off duty
from the onerous burden of life,
can in the least degree sympathize
with the old man. Call to mind
the weight of his years. 'Tis a
great blessing he's not required to
tarry to witness the chagrin of the
recipients of many of the presents
entrusted to his delivery. While
the delight arising from his time-
honored visits remains unquestion-
ed, how about the disappointments
arising from the same source?
Vivid illustration of the trite say-
ing, "Poor rule that won't work
two ways." Talk about heavy re-
sponsibilities! Where's the person-
age loaded even equally with Santa?
What matter if he discovers dis-
crepancies or inconsistencies? He

must not shy of his imperative duty, and must deliver each and every parcel to its individual owner, as designated by the label. Wonder if he has time for ruffled feelings when he finds the TIPPLER has sent to his faithful, patient wife a case of ale, with "such a fine tonic, you know," on the accompanying card? Or when the other presents his bosom companion with a box of fine old Havanas, in simple revenge for her having the preceding Christmas presented him with a Brussels carpet. Do you suppose his sympathies are exercised when he finds the maiden aunt forgotten because her former presents were double in value to the ones she returned? Or when the baldheaded bachelor uncle with "not a hair 'twixt him and heaven," receives a complete toilet set, brush, comb and all? And again, is the responsibility his when some of his many clerks include the Holy Bible in a parcel of merchandise in order that Uncle Sam may be defrauded of half a cent an ounce for the whole amount? If so, I shouldn't wonder if a wholesale firing of clerks might be expected most any day. Parenthetically, what more appropriate holiday present than honey? And do bee-keepers over the land make the best of their advantages?

Does the old year have to answer for the sin of omission? Science itself seems to be just waking up as to the value of sweets as aids to muscular energy. And where is he who will object to a change of diet from beef, iron and wine, to sugar or honey? 'Tis a well authenticated fact that Alpine tourists develop an abnormal appetite for sweets and sweetened food. And the Prussian war department, being cognizant of these facts, makes practical use of the knowledge, inasmuch as when an unusual muscu-

lar service is in probable demand, a corresponding increased allowance of sweets are issued, from the consumption of which is derived an increased capability for work. Many thin, angular or bony people resort to sugar or honey as counteractents. Is it not clear then that from the use of honey we may expect fat, hence heat, and also muscular strength? As to the healing virtues of honey, they've so long been sung that none dare doubt, and who is there to contend as to its beauty of appearance or its deliciousness?

"All human history attests.
That happiness for man—the hungry sinner—
Since Eve ate apples, much depends on
dinner."

I see by a recent reference to *Sommy's* doings, the "Straw man" has a big heart somewhere within him, and who realizes more than your humble servant that "a kind heart is a fountain of gladness making everything in its vicinity freshen with smiles;" and, too, I long ago learned with Spurgeon, "he who boasts of being perfect is perfect in folly. Every rose has its thorns, and every day its night. Even the sun shows spots, and the skies are darkened with clouds. And faults of some kind nestle in every bosom." Can we, then, expect to find a perfect man? Thank you, dear friend, and not only you, but all other friends who have been kind enough to express the least appreciation of the humble efforts of yours "most truly." And now, ye editor and compositor, one little moment with you. Many times has my conscience upbraided me, as to the temptations lying in wait for the unlucky reader of this scribbling of mine, what profanity might be provoked, etc., and ye editor may remember I've had the good grace to apologize long since, whereupon I was assured that ye

compositor could read, intelligibly, even straight lines, so keen was his aptitude. But my last must have proved too great a strain, for where I meant to say "our millions of workers," I was made to say ONE million. Now the question with me was, had I never before reached that degree of prosiness, that is, so severely tested you? or had your deciphering powers been over-estimated?

In regard to the PROGRESSIVE's new year, I am much inclined to be decidedly optimistic, only, were I in Aikin's place, my sides would be Aikin (aching) sure enough even in the anticipation of the squeezing I should get from such a pressure as Doolittle has the power to apply. Wonder if there would be any harm in picking up the rind of their lemons after they get through with them, same as the small boy does the castaways of the street? At any rate, might save some follower a first-class slip and, consequently, fall, thereby, at least; so here goes for this once at any rate:

Doolittle, in commenting on saving bee papers as he and Aikin have done, same as preached, "Go thou, and do likewise." Said he would not take \$500 for his stock of old bee journals, etc. Possibly my self-conceit was already entirely too predominant, but Doolittle will have to answer for having raised it yet a notch higher. Never had the least idea, prior to the reading of his article, that I had proved myself so great a philanthropist. \$500! Inasmuch as I had given most of my old bee-papers to friends and neighbors, and thus gratuitously spread the tidings far and wide, just think, if you can, how philanthropic your humble Sommy has proven himself. Say, honestly, don't you envy me my feelings? Inflation's nothing compared to it. P'r'aps I'd best desist, however,

lest Doolittle, out of revenge, set his wits at devising some sort of puncturing contrivance, by the use of which this puffed-up condition might be greatly modified. I rarely get so far gone but that I remember the warning, "He that is last shall be first," and vice versa.

Allow me to present to one and all, great and small, of PROGRESSIVE readers, the "compliments of the season." Au revoir.

Naptown, Dreamland.

THE DECEMBER "PROGRESSIVE."

J. W. ROUSE.

The December number of the PROGRESSIVE is a "hammer," and no mistake. I somewhat fear for the reputation of the editor, and so offer the following explanation, for in reading his "Shadows by Moonlight," someone might think that he had got "moon-eyed," or at least a little "mooney" in his musings.

Now, dear reader, does he not take aerial flights, and get quite poetical in his visionary soarings? but does he not come down fine? and his alighting—is it not grand? But just to think that when he arrives at Mexico, and wishes to find where I live, when I thought every one in our city knew where Rouse, the bee and honey man lived, of the trials he had crossing bridges, ditches, etc. To one who knows Mexico, it might look like he had got pretty full of the moon, or something else; but when he arrived at our home so early in the morning and had awakened from me a peaceful slumber by pounding on our front door, I arose, and on opening the door could see his face by the light of the moon. I am sure he was all right then. I offered him a bed, but not a bed would he; so we talked and swapped experiences of the busy past season. Was much interested in his relating

his visits to Messrs. Nebel, Flanagan and Muth.

I am writing this Christmas morning, and the children have just got up. Such a time as they are having, (while I write,) examining what Santa Claus has brought them. Such shouts of glee and ecstasy, and the two younger ones are hugging their pretty dolls almost as large as they. Whoop! Does this not remind us of our childhood days when we used to receive the nice presents that we so much enjoyed? A Merry Christmas and New Year to all.

Now back again to my main subject, the PROGRESSIVE. Dear reader, does it not have interesting reading? Just look at those articles of Aikin's, and the elder editor's review of his articles. They are just a feast, and more to follow, as well as more from the editor in his very wonderful pen picture of his travels.

Say! I feel very proud of our paper. It is very close up to head in bee journalism, for with its splendid bee articles, it has quite a lot of spice thrown in.

From present indications, I am looking for a good year and a busy season.

Mexico, Mo.

Bro. Rouse would have you think I had been drinking "moonshine" whiskey. Naughty Rouse!—Ed.

A NEW HIVE.

W. C. GATHRIGHT.

I send you a description of my new comb honey hive. Most hive manufacturers are making more than one style of hive now. For instance, the Roots are making the Danzenbaker hive, Kretchmer the "alternating," etc. So if you are contemplating making an addition

to your list, perhaps the following description may prove interesting:

I have used both eight and ten-frame L hives, and I consider the ten-frame perfect in proportion, but I changed to the eight-frame because I found it more profitable for comb honey in this locality. But it is not so perfect in proportion as the ten-frame. It is too long and deep in proportion to its width. So I cut off very near $1\frac{1}{2}$ inches from the end, and the same from the bottom, and added one frame, making nine frames $7\frac{1}{2}$ inches deep and $16\frac{1}{2}$ inches long.

This gives a capacity of about the same as the eight-frame L hive, but as perfect in proportion as the ten-frame. The hive bodies are made of eight inch lumber, and are just seventeen inches in length inside, so you see it makes the supers perfectly adapted for the $4\frac{1}{4} \times 4\frac{1}{4}$ section without any end blocks. I make the hive bodies just wide enough to take nine frames without a division board, as I can get out a frame just as easy as I can the board. In the supers I use cleated separators, with sections $1\frac{3}{8}$, plain all around, no entrances cut in them, same as described in Gleanings, Oct. 15, pages 744-745. The slats to support the sections are plain, $1\frac{3}{8}$ inches wide, $\frac{1}{4}$ inch thick, seventeen inches long, supported at the ends by a piece of tin or band iron same as the section holders in the dovetailed hive. The cleats on the separators are $4\frac{1}{2}$ inches long, and the end cleats rest on the tin support at the end of super, thus holding the separator in the proper place, and at the same time keeping the slats apart and in perfect alignment with the sections. Combs built in these look much better than the old style. The face of the comb comes within $\frac{1}{8}$ inch of the

edge of the wood, which causes them to look very plump and full. Half depth frames are used in supers before the swarming season.

All colonies will not breed up alike, so when the strongest colonies occupy the small frames above, they are taken off and placed on colonies that have not commenced work in the half depth frames above. A super of sections is then placed on the strong colony from which the super of frames was taken, if the honey flow is sufficient to warrant. If not, put on the super of empty frames that was taken from the weak colony. When all strong colonies have commenced in sections, and the weak ones have been built up and are ready to have sections put on, take off the supers with the small frames, put two together and place on a bottom board, and put on a cover. Place these by the side of the weakest colonies, give a small entrance, and in twenty-one days drive all bees out into the colony, and extract the honey. In the fall, when the dark honey comes, take off sections and put on extracting frames.

Dona Ana, N. M.

A YIELD OF 1897.

D. L. TRACY.

I thought I would tell you, Bro. Leahy, of my experience of 1897. In my experience of sixteen years with bees, I have had, as most apiarists have, years of lean and years of fat, but I think the past season has been a record breaker.

I started in in the spring of 1897 with seventeen stands. Two of them died about swarming time, so they did not count. At swarming-time I kept the bees back as much as I could by cutting queen

cells, taking queen away, etc. Now the result at this time, Dec. 15, is: I have 51 stands in good condition; I have sold 101 twenty-four pound crates of honey, and have ten crates on hand. We have used in the family all that was desired. My *modus operandi* was: Eleven of my stands were on ten-frame hives; four upon eight-frame. When the eight-frame hive cast a swarm, I divided the frames in that hive, making four swarms, that is, giving three frames with a queen cell to each nuclei so formed, and filling in with empty combs. Those four old stands gave me sixteen stands, counting the swarm cast. The eleven old stands in the ten-frames all swarmed once; two of them twice. I caught four swarms outside of my apiary—whether they were cast from my bees, I do not know. Now let us recapitulate:

The fifteen stands have given me thirty-six stands, with the "maverick." This is $2\frac{2}{3}$ swarms to one old stand—2664 pounds of honey. We will say nothing of what the family has used, or $177\frac{3}{8}$ pounds to a stand, or one old stand gave me $2\frac{2}{3}$ stands of bees and $177\frac{3}{8}$ pounds of honey. Pretty good, isn't it?

Now a word to "the other editor": My friend and fellow bee man, R. C. Aikin, Esq., of Loveland, Colo., does not require any small fry like myself to help him out with his "tilt" that's on. But turn to page 325 PROGRESSIVE for December, and read to the end of paragraph from "Moths have no power to take possession of any colony," etc.

Now, Mr. G. M. D., I will admit that they do not have that power here in Colorado, but in Iowa, I have seen moth literally eat up a swarm that were like the Englishman's corpse, "pretty dom'd lively." There was no sickness and no languishing. There were 10,000 bees

to the frame, and ten frames to the hive, yet the moths completely annihilated them.

Denver, Colo.

PUTTING THE BEES INTO WINTER QUARTERS IN SOUTH MISSOURI.

W. H. RITTER.

This is a very simple and easy plan, especially with the "Higginsville" or any hives that use the wide surplus frames in section case. We begin here to do this work any time between the middle of October and the last of November. Our yard is in an oak grove, and any time after the leaves fall and get dry and crisp so that they will break up easy, is the time for us, as we use the leaves for packing. They are clean and nice, and right at hand ready for use. They are about the best material to hold heat that can be found. I never saw the ground freeze under a bed of leaves. We first empty all the section cases of the wide frames, using only the rim. We now open up a hive, examine the condition, and if the bees are all right, with plenty of stores for winter, the next thing is to lay across the middle of the frames a strip of wood long enough to just reach the space next the outside frames. It ought to be nearly an inch thick. This will hold up the cloth cover, and leave a good passway for the bees to reach all the honey in the hive. I use my oil-cloth covers, putting the oil side up. Any good cotton cloth will do. Have it full as large every way as top of the hive. Put it on. Now set on section rim. See that it catches the cloth all around. Now you must have an assistant to hold the section case firmly in place

while it is packed full of dry leaves. Smash up a bunch and crowd into each corner. Fill full, put on the cover, and lay a brick or rock on top to keep the wind from blowing it off. Now the job is done, and well done. For outdoor wintering, leave the entrance wide open.

Springfield, Mo.

STRAWS FROM THE APIARY. Fred S. Thorington.

In fixing my bees for winter and putting the cushions on, I took from the extracting supers more than 125 pounds of nice amber colored honey. It would have been taken from the hives sooner, but the fall was very dry, and the bees were prone to rob on short notice when the forage was cut short in the fields. The days were mostly hot ones, and the bees prowled around outdoors often until after dark, so there was but little chance to take honey from the hives until cooler weather. Then, too, we were building a new barn, and had but little time to care for the bees just then. About the middle of November last, I extracted about eighty pounds of the 125 pounds, and put the frames of comb away for another year. About the same time I had painted some new dove-tailed hives I have had some time past, as well as others not used on account of the few past poor seasons. The fact is, I have had lately more good hives without bees in, than were occupied by bees, so I will have enough on hand now ready to make a good start for providing little homes for bees next season. I may have to have some extra hives if the season of 1898 is a good one, especially for swarming, yet I shall aim to keep my colonies

as strong in numbers as possible. By so doing, we have less hives to manipulate, and get more surplus honey than we would were the working force of one hive scattered out into three, six or more. If unity is strength in other things, I think it is equally so in regard to keeping colonies strong.

I like to get things ready during the winter months, as well as I can, for the next season's use among bees, so as to avoid the rush in beeyard. Then, too, on our place is quite a good deal of other work to be done the year round, and when the swarming season comes on, there is hurrying everywhere. There is no time to make hives, etc., then. We raise quite a lot of strawberries every year, and they ripen about the time the bees are in their glory, swarming, or about the middle and last of June.

If one knows what supplies will be apt to be needed for another season, as a rule they can get them at a discount by making early orders, as most of the supply factory managers allow a discount on early orders. Then the goods can be made up sometime during the winter months. Sometimes if the supplies are not ordered until wanted, they are not received until not wanted for immediate use, as the past season has proven in more cases than one. Supply companies cannot well avoid this, and they often run most day and night at their fullest capacity to fill orders in the height of the honey season, and then sometimes fail, and the bee-keeper is unavoidably disappointed.

The apiary picture of Mr. F. J. R. Davenport, page 289 November PROGRESSIVE, makes a very pretty picture, and his picture shows him to be a kind man and up-to-date bee-keeper. I enjoyed reading his biographical sketch.

I enjoyed looking at the pictures of J. W. Rouse and family, and E. T. Flanagan and apiary, in December PROGRESSIVE.

I can't get along without the PROGRESSIVE. Let her come.

Tangled Ends.

In American Bee-Keeper for November, page 323, Friend G. M. Doolittle's article reads: "And as the time of natural swarming will be at its height when this reaches the eyes of the reader," etc. Do bees swarm much in November?

According to the December PROGRESSIVE, we are to have the pomace and squeezing results during 1898. I'm just aching (Aikin) to get 'em.

Now is a good time to mend the broken links of friendship, if we have any; and if we are not on good terms with the bees because they stung us sometimes, etc., last season, let us return good for evil, and see they do not go hungry during the winter. When spring has come and the fields are spread o'er with a carpet of green, and the flowers make us glad with their pretty bloom, they (the bees) will more than repay us for our care of them.

The Old and New Year.

The first snow of the season here fell on Dec. 2. It made me think,

'Tis winter and the north winds blow,
Forward comes the falling snow,
Under the jasmine the snowflakes creep,
Then cuddle down and go to sleep.

We have had a light snow lately.

The old year is gone, and has left behind it a cold world. Some people are sad, while others feel gay; some live on the luxuries of life, while others live in want; and are we not all brothers and sisters, in search of the better land where peace and harmony dwell? May the new year bring many blessings

and less sorrows, is my wish.

I was very sorry to hear of the accident at the factory on the evening of November 3. The grief of the little one's parents must have been very great when they learned of the child's sad fate. I truly sympathize with the parents in their deep sorrow. It is true little Florence has been taken from her home where she was so dearly loved, and is gone to the heavenly home where pain and sorrow are no more. Yes, she has gone home in her innocence to the One who said, "Suffer little children to come unto Me, for of such is the kingdom of heaven."

Why could not some of the good things that have been said of the late Henry George after he was dead, have been said to him while his ears could hear them? The kind, cheering words would have thrilled the heart with joy. It too often happens that good things remain unsaid of our friends until they are dead, and then they can do them no good. Flowers laid on the graves of our departed friends do them no good, and the beautiful eulogy at their grave is unheard by them. Sometimes I think it is a great pity the departed cannot awaken at their own funeral and hear the kind words spoken of them that should have been said to them while living, to cheer them on their weary way through life. Let us open the alabaster box of our love and tenderness to our friends while they are living. Let us scatter the flowers of love all along life's weary way, that they may make happier some lonely heart, and not, as is too often the case, burn the deadwood of friendship on the altar of love. The fire of hatred burns deep in the soul, and consumes the essence of life.

Chilliothe, Mo.

HINTS FOR BEE-KEEPERS.

JAMES CORMAC.

The past season was an exceptional one on many accounts. The extreme rise in temperature for many days, wrought disaster with new drawn combs under unfavorable conditions of shade. The loss to many a bee-keeper from the melting of a few combs to almost the entire apiary, in several cases (in one of eighty hives) is recorded. Such serious losses ought to elicit from bee-keepers subject to such loss, inquiry as to what are the most feasible methods to be employed for protection. As our bee journals are open to afford any apiarist an opportunity of inquiry, also affording the same to anyone wishing to give their views from experience relating to any and all experiments to accomplish any advance beyond the general practice. It being generally admitted that shade is desirable under the conditions which are likely to be experienced any summer, south of forty-five degrees of latitude, U. S. A. The question may be asked to state the most favorable conditions. Some would answer, having arranged their hives on the north side of grape trellis, such was; others under fruit trees; others in shade of any deciduous trees; others evergreens, etc. Having experience under all these conditions, my preference is open space and shade boards. Why? Because of a freer circulation of air over and around the hive. Having hinted in a former article of damage to too thick shade being detrimental in cool spells, there is also a liability in a hot, damp condition of the atmosphere, to produce the extreme concentrat-

ed heat conditions, felt under the direct rays of the sun, with heated vapor added, more destructive than an equal degree of dry heat, softening the wax in much more readily, whilst in a large part of the western country a timberless condition prevails, and the neglect to provide shade trees, fruit or forest, and an absolute need of shade is required to protect from loss of melted combs, as well as comfortable working conditions for the colony. This can be supplied at slight expense by the use of lath, cut to suit the notions of the bee-keeper as to length and width. This material is light, and spaces between each allow air to freely circulate between top of hive and shade board, and by the use of lime whitewash applied two or three times during summer furnishes to my way of operating, the best shade, except for the apiarist, but he has all the room above and around to exercise in, as well as a clear observance of the bees in case of swarms.

Having experimented as to facing hives in different directions to obtain the best results, dividing them in plats, equal as to number and strength of colonies, results obtained advocate the facing of hives east or southeast. Another and very important method practiced for the last five years, which has given me more pleasure and less work in producing comb honey, is a slight change in the manner of using the furniture in the super, as also a slight change in the super. First, having added a $\frac{3}{8}$ inch strip to all my supers, making them five inches deep. The last lot, gotten four years ago, was made to order five inches deep. All previous of usual depth, have strips nailed on upper edges, $\frac{3}{8}$ thick, so that I can lay on top of each row of $4\frac{1}{2} \times 4\frac{1}{4}$ sections, a section holder, and thus

cover the entire filled super, holding the same in place by laying a strip of wood across in the center of supers, upon which the cover rests, or the supers above one another. By this means my sections are comparatively free from propolis, and as white as when placed on the hive. No scraping to do only on edges, and the cleaning then is done with a three-inch thumb plane. A thin shaving takes all bee glue off except in the grooved part for passages of bees. Then the end blocks are not nailed to the section holders, and can be taken out separate and piled in supers, as well as the section slats, which are far easier scraped and cared for, and can be stored in a few supers. As the section slats or holders are, when in supers, (section holder cases) separated by the separators, and come even with the top of sections, those used to cover the sections where $4\frac{1}{4} \times 4\frac{1}{4}$ sections were used, should be 1-16 inch wide, to come closer together, and then the tops would be almost free of glue. For instance, $1\frac{1}{8}$ sections need two-inch slats for the top, taking and shaving of each edge. This method of using top slats is far in advance of paraffine paper, as the bees are unable to lift the edge of slats to insert glue. To prevent the weight of honey in the sections springing the slats down on the first super next the brood frames, a strip even with the top of hive, $\frac{1}{2}$ inch wide, as spoken of in article in the November PROGRESSIVE, where the Petit wedge is recommended for airing the hive in summer to increase the entrance. This same strip is handy when cellaring bees used to lift front of hive, giving plenty of air, and when a strip one inch wide of $\frac{1}{4}$ inch mesh wire cloth is placed in front, and tacked to hives, the mice, if any get in, are shut out of the

hives. No bottom boards have to be removed, and more hives can be stored in same space, as hive on hive can be piled up with inch stuff on cover at rear end of each. This keeps all level, and dead bees can be carried out and dropped on to the cave or cellar floor.

A cave twenty feet long and six feet high, eight wide, and a truss formed of two 2x20 planks, one foot wide, sustains the roof. A two-inch strip nailed on the bottom edge of said plank truss on which a floor is laid, which floor is covered with leaves one foot thick, a roof of $\frac{1}{3}$ pitch, center of each side of roof boards supported by 2x6, and said roof boards, one end resting on floor, and depends on a 2x6 center support, these 2x6's supported every four feet, to sustain the weight of one foot, six inches of earth, the roof boards covered with tar paper before earth is laid on, and over the earth sheet iron, painted on each side, makes a bee cave where the thermometer did not change from $42\frac{1}{2}$ degrees during the past two years, loss one per cent bees winter of 1895.

A contrivance to open and close the entrance, made of galvanized iron, sheet zinc, tin, or thin pine; thus one piece $1\frac{1}{4}$ inch wide and 13 inches long, two pieces $\frac{1}{2}$ inch wide and 3 inches long. Lay the strips in place, nail to hive with long strip resting on the bottom board, left end, (you face the hive entrances) even with outside of hive, right end one inch from outside of hive, a notch 2 inches long cut out 3-16 deep. Now move the strip to right; as it turns on nails, it will rest parallel with the bottom board until entrance is $1\frac{1}{4}$ inches open, if you raise here on wedges. If wanted to close entrance, move to left. This is always in place, and you can control width of entrance

to your liking. In case of a raid of robbing bees, only two inches and a $1\frac{1}{2}$ space under the length of strip. Robbers are shut out. Can be left on all summer and winter, and regulated as occasion requires.

Des Moines, Iowa.

CROSS-BREEDING.

DR. C. C. MILLER.

Suppose you have a virgin queen of pure Italian blood mated with a pure black drone, and then continue the stock by in-and-in breeding for ten or fifteen generations, what will the stock be?

If I had been asked this question, and had answered without any study, I think I should have said that the stock would be just half Italian and half black blood. But an article in a German paper showed me differently. I'll give you some figures, using decimal fractions instead of the common fractions used in the Centralblatt. We needn't consider the worker stock, merely the queens and drones. Let us keep track of the percentage of Italian blood, in which case the blood of the Italian queen would be 100 per cent or 1.00, and the Italian blood in the black drone would be 0. In the first generation from this, the queen would be a half-blood, and the drone would be pure Italian. You see that knocks us out of our calculation already, if we have been thinking of having half-blood stock, for now we are to breed from a half-blood Italian queen and a drone that's pure Italian. Let us follow up the matter for some generations. In one column put the per cent of Italian blood in the drone, and use another column for the queen:

DRONE.	QUEEN.
1st Gen. 1.00	.50
2d. " .50	.75
3d. " .75	.625
4th " .625	.6875
5th " .6875	.65625
6th " .65625	.671875
7th " .671875	.6640625
8th " .6640625	.66796875
9th " .66796875	.666015625
10th " .666015625	.6669921875

As a matter of curiosity, I followed up the figures to the 18th generation, when I found the per cent of Italian blood in the drone was .6666717529296875, and in the queen, .66666412353515625.

After showing what the tenth generation would bring, the writer in *Centralblatt* remarked that only a fraction of black blood was left, and by continued in-breeding, the black blood would gradually fade out entirely. Investigation of the figures will show this to be an error. Like the swing of a pendulum, the figures in the column are alternately larger and smaller, the difference constantly growing less, always approaching but never quite reaching a continuous series of the figure 6, making the amount of Italian blood present two-thirds. Indeed we have already in the fifth generation so nearly reached two-thirds, that the difference is hardly worth considering. Of course, if we should start with a black queen and an Italian drone, we would then secure a cross having only one-third Italian blood. Suppose, however, we should desire to secure a cross containing Italian and black blood in equal parts, how is it to be obtained? Easily; at least theoretically. You will notice that the queen of the first generation is a half-blood; likewise the drone of the second generation. Now pair these two, and you will have half-bloods that

will be constant. Of course they may be from different families so as not to be akin.

The Seasons.

Not so very long ago, in these columns I discussed the question whether we might again expect good seasons, taking the ground that as we could not understand entirely why good seasons had departed, there was no reason why we might not expect their return. "The thing that hath been, it is that which shall be." The event seems to justify my view. If I remember correctly, at the time I wrote, my bees were not only not bringing me any profit, but were a burden of expense. In the year 1894 I think I took only a small amount of surplus from just a single colony, and then fed an even ton of granulated sugar to tide the bees over till flowers should come again. The year 1895 was a repetition of the preceding year, so far as the white honey harvest was concerned, but the fall harvest gave the bees plenty of winter stores, so I didn't need to feed any. That seemed to be the turning point, and 1896 and 1897 have been good years, 1897 giving me the largest crop I ever had, 17,150 pounds, all but 300 pounds comb, from 239 colonies, spring count.

Perhaps no one held more strongly than W. Z. Hutchinson the view that we ought no more to expect the seasons of yore, explaining that the advance of cultivation had destroyed the native flora, and advising that bee-keeping should hardly be pursued longer as a specialty. In the last number of the *Review*, he mentions the crop I have secured, and then remarks with a frankness that is characteristic of the man, "This is the best possible answer to the query, 'Will the good years come again?'"

Marengo, Ills.

EXPERIENCE AND ITS LESSONS.

R. C. Aikin.

(Continued from Dec. PROGRESSIVE).

Those who have kept bees for the past twenty years and have tried to keep up with the improvements, know how rapid have been the changes. Of course I must keep up. I tried many new things invented by others, and invented many myself.

About this time I was convinced that the tall, narrow hive I was using was not the best. I was always annoyed because I could not get super room, especially with one pound sections that were coming into use. I was a disciple of Kretchmer and Doolittle, so was not ready yet for the L frame, because too shallow, so I adopted what Kretchmer called his "new system hive." It was a big chest of a hive fifteen inches deep, $13\frac{1}{2}$ inches wide and twenty-four inches long, two division boards and side storing.

The division boards were supported by hanging on the rabbet just as the frames did, but were large enough to prevent bees passing them to the ends of the hives, thus forming a brood chamber in the center to take just as many frames as wished from one to fifteen. The frame was ABOUT thirteen inches wide and fourteen inches deep, and hung crossway of the big hive, the entrance being at the side. The surplus was to be taken at the ends—which were movable—and shoving in four or five pound boxes against the division boards which were provided with passages to let bees through.

The brood frames were fixed with metal bearings, and the rabbet that supported them had a tin strip on it so that the frame rested on the

tin EDGE. As the frames were to be spaced $1\frac{1}{2}$ inch from center to center, little notches were made just that far apart in the edge of the tin. The metal bearing in the frame end was just a piece of sheet iron inserted in such a manner that when the frame was in place this support rested on the edge of the tin on the rabbet at right angles and edge downward. This arrangement allowed of no fastening by propolis, for the only points of contact were the sheet iron crossing the tin, and the point or end of the iron touching the wood at the back of the rabbet.

This was an inexpensive arrangement, and so far as propolizing was concerned the frames were never glued to the hive but that they were very readily removed. When the frame was dropped into the hive a slight sidewise movement on the rabbet till the frame bearing dropped into the little notch spaced the frames.

After all, this was a good thing carried too far. When the frames were new, or even empty combs, it was almost impossible to pick up a hive and carry it without displacing the frames, so easy were they to move. Another difficulty was that should one side of a comb have longer cells than the other, or one side be filled faster than the other, things of very common occurrence, the heavy side pulling down the hardest out of plumb with the very narrow bearing at the point of support, would throw the bottom of the frame over against the next one.

This matter of frames hanging out of plumb is a serious one, and I might as well say right here that I very soon discarded the metal bearing in the frame and used the ordinary bar full width throughout, $\frac{7}{8}$ inch, but retained the tin rabbet. Even after I used the all wood top

bar the frames would not hang plumb, but would frequently hang one way and its neighbor the other way till there was room between the bottoms for another comb, and sometimes the bees would put in that other comb, too. This fault is common to all loose hanging frames with $\frac{1}{4}$ inch top bars, and to some extent with the wider bars of more recent date.

The size and shape of the brood chamber—I usually used about ten of these frames—was apparently all right for wintering and building up in the spring. The space at the ends where the surplus was to be taken, could be filled in winter with chaff or not as I pleased. I frequently moved out the division boards and gave twelve to fifteen frames, or in case of nuclei or weak colonies, contracted even to one comb if necessary. When a honey flow came I could take out some of the end combs and shove in the division board and put in the surplus boxes, thus at once COMPELLING the bees to go into the surplus arrangement.

This taught me the great advantage of having a hive that was elastic. While this experience was away back about fifteen years ago, never have I given up the idea of an elastic hive—one that could be easily adjusted in size at the option of the apiarist. If I am permitted to complete this series of articles you will find this idea coming out to the end, and by whatever the means to accomplish the purpose, is a valuable idea.

I said the surplus was taken at the ends of the two foot long hive, though at the side of the brood combs. I thought if "side storing" was a good thing, why not go one better and have side and back both, thus having surplus chambers on three sides of the brood nest?

Don't you see we could then take off the cover and manipulate the brood nest without in the least disturbing the surplus boxes? That looked like progress, so I just built on "back kitchens" to some of the hives. Just think of it; a "lean to" on the east, another on the west, and one on the back, too. Chaff or leaves in these side chambers in winter—honey boxes in summer, each box having glass fronts and a movable side to the hive in front of this. The top of the hive accessible directly to the brood nest without removing a single honey box.

Nice as this all appears it was short lived. The four or five pound boxes that slipped into these chambers soon gave way to two pound sections. Wide frames with tin separators were made to support these sections, and the section being entirely surrounded by these close fitting wide frames no bee could touch the outside of the sections, a principle highly valued by some today, though not by the writer. With this arrangement I could change places or "jump frames" so putting nearly finished sections outside, and those less advanced on the inside, etc., etc.

Well, while this brought a great amount of surplus surface near the brood nest, two grave faults appeared. Those sections nearest the bottom and inward next the brood, were capped dark by an admixture of wax from the brood combs, and also caught too much pollen. If one were equipping an apiary exclusively for extracted honey production, there are excellent features about such an arrangement, but for comb honey it is not the thing. I learned that the sections next the top were capped much the whitest. Also that for nice comb finish the work must not be done too close to

brood. I further observed that the strength of the colony had a great bearing on the matter, too.

Having found out that "side storing" was not what I wanted, I concluded to make some kind of a super to go on top. I made supers to take the two pound sections that were then much used. I arranged to retain the side storing feature to use if I wished to, and above both brood chamber and side chamber was the top super. This super was practically a T Super, but in those days the T's were made of wooden rail or slat with a strip of tin nailed on the under edge. The sections were open at the bottom only, not calculated to tier up. As each super held twenty-four two pound sections I had a forty-eight pound capacity on top once filling, which with a twenty-four pound capacity at each end (or side) of brood chamber, made a total section room of ninety-six pounds. Each outside section, both above and below, could be faced with glass or wood just as I felt inclined, and I spent much for glass.

A difficulty that now confronted me (see, like all beginners and inventors I would climb out of one hole only to fall into another. In my eagerness to overcome one fault I did not look far enough ahead to see the next snag in my way), was the everlasting shifting and changing the size of the brood chambers to correspond to the size of the colony. This I must do in order to make all get to super work. The brood chamber was large, and when I contracted the brood nest I must also put on a proportionately less number of sections, which I did by just moving up the end ones with glass fronts and putting in something against the end of the super and pressing against the glass, or by tying a string around

them to hold all close together.

I also made supers on the same general plan to hold one pound sections, and made my sections by sawing out four pieces and nailing them together. I have sawed and nailed many hundreds of four piece sections. While here speaking of sections I will say that there is now a grand change taking place in the matter of sections, and before this series of articles are all published there will be a section largely used—I mean for the season of 1898—that will possess some of the good features of the old four piece section; but as this will come up later I will drop it now, and in my next introduce you to my next hive, the "Clipper, Jr."

Loveland, Colo.

Recapitulation by G. M. Doolittle.

Average Surplus.—Continuing my "chase" after Bro. Aikin, from where I left off in the December number, I find him saying in that number that during the seventies he had produced several tons of surplus honey, had in 1880 as many as 100 colonies of bees, and two years in succession had secured as high as "seventy-five" pounds of honey, on an average, spring count. This was something of a surprise to me, for I had supposed that things could not only be purchased more cheaply in a new country, but that a new country always, or very nearly so, gave a larger yield of any product worked for. For the last seven years in the seventies my average yield was 106 pounds of (nearly all) comb honey, while one year gave me an average of 134 pounds, and in 1877 I obtained an average yield of 166½ pounds; one colony giving as high as 309 pounds of comb honey, while one of the TWO colonies worked for extracted honey gave 566 pounds. But the woodman's axe, and the more thorough cultivation

of the cleared fields, has changed these former yields so that the past five years have given me an average of only about 70 pounds, instead of the former 106.

Brood Rearing in January.—

Friend A. says he "had read" that brood rearing commenced in his latitude in January and February, and tells us how in opening a hive in January he found brood to the amount which a silver dollar would cover. The person who said brood rearing would "commence in all good colonies about Christmas," was our own M. Quinby, who passed to the beyond some years ago. His accuracy of statement was rarely equaled by any other apicultural writer, and he was greatly beloved by all who knew him. But this brood rearing matter only referred to colonies wintered on their summer stands. Colonies when wintered in the cellar, or cave, rarely have any brood in their hives when set on the summer stands in April, if the wintering has been perfect.

Winter Losses.—Bro. A. next tells us of losing his bees to so great an extent that he had only eleven left out of the 100 he had in the fall of ABOUT '83. If he had not said about, I should take the time necessary to look the matter up; but as he left it that way I will say, without hunting over old volumes of the bee papers, that I think that it was the winter of 1882-3 that the great loss occurred, a loss so great that fully three-fourths of all of the bees in the United States were swept out of existence. So general a loss never was known before or since. And while that loss has been attributed to poor honey, pollen, dampness, old bees, etc., Mr. Aikin seems to be about the only person who agrees with me as to what the REAL cause was, which is manifest where he says "for about five months they were confined to the hives without one cleansing

flight." I contend that long confinement is the real cause of all of our wintering troubles, where bees are PROPERLY prepared for winter, and would emphasize this by saying that, had that confinement held out two more months Bro. A. would not had even one of those 11 colonies left. That winter I started in with 90 colonies on their summer stands and 55 in the bee cave, or cellar in the hillside. When spring fairly opened I had bees in 15 hives of those on the summer stands, while the whole number of bees in the 15 hives would not make three good colonies. The bees had no chance to fly here, from October 22d to April 7th, or nearly 5½ months. But to show how much better bees can stand long confinement in the cellar than out door, I will say that from the 55 placed in the cave, 53 came out strong and in good order, with one weak and the other dead. Here was where I decided NOT to put all of "my eggs in one basket," and every year since has found me following "mixed wintering" with bees, though the cellar gives the best results as a rule.

Non-Swarming.—I wish the reader to turn back to the December number and see what A. says about his bees not swarming during the summer after his great winter loss. It will be noticed that he seems inclined to credit his taking brood from the hives to form nuclei with, as the cause of his bees not swarming. It undoubtedly did have some effect that way, but the main cause lay in the season. When the honey harvest begins early and continues right along without interruption, very few swarms issue, as a rule, but with a season where only just enough honey is obtained to carry forward profuse brood rearing the "swarming mania" is quite liable to break out. Thus, in 1877, which gave the great yield, I had little swarming, with colonies all strong in the spring;

while another year 49 colonies in the spring gave 348 swarms, with some little honey. In such cases, "colonies not strong enough for super work" will swarm, as Bro. A. says his did when he had his swarming year. In fact almost anything and everything will swarm in spite of all of the usual precautions taken.

Cutting Queen-Cells.—But of late years I have practiced something unusual as to precautions, which A. hints at where he says "by cutting queen-cells, taking away brood," etc., the usual part lies in waiting eight days after the swarm having the laying queen issued, at which time the first young queen has emerged from her cell, as a rule, in the parent colony, when I go and cut off EVERY queen-cell from the combs and have a sure thing on them, as all after-swarms come from plurality of queens. Then, ALL swarming can be stopped by caging all queens just before the swarming season arrives, and ten days later cutting EVERY queen-cell off, when instead of the solid stopper usually used in the queen cage replace it with one which is hollow, the hollow being filled with the candy used in shipping queens, to a sufficient amount so it will take the bees three or four days to eat it out. By this time all desire to swarm has ceased, and with the liberation of the queen comes a desire for both brood and stores, which will cause a tremendous rush of honey to the sections, if there is any to be had in the fields. By having a thorough knowledge of our location, and using this plan in accord therewith, great results can be obtained, as I have proven to my satisfaction.

Exactly the Same Conditions.—In winding up his article in the December number, Bro. A. would allow us to infer that he believes that we may have "EXACTLY" the same conditions with our bees at certain times during

two or more seasons. Hear him! "Bees NEVER act DIFFERENTLY under exactly the same conditions; races may differ, but the average bee WILL do what it HAS done under the same environments." I agree "exactly" with the above, but wish to say that Doolittle has been trying, now going on nearly thirty years, to find the "SAME ENVIRONMENTS" carried out a second time, with an entire failure to do so, when we come to all of the MINUTIA in the matter. I have said hundreds of times that bees act differently indifferent seasons, for the reason that no TWO seasons are exactly alike. Two seasons may be APPROXIMATELY alike but never EXACTLY alike. I used to wish that each season might be alike, then I could secure a crop in just such a way every time; machinery like; but of late years I have not wished that way. Had it been thus, Doolittle's bee fever would have run its course long ago. But as it is, each season adds new thoughts, new complications, new zest, new energies, new determinations, etc., till the one great WHOLE gives an indescribable pleasure to bee-keeping not found in any other pursuit. And this pleasure can only be grasped by the one who is not turned aside by trifles. Over the door of apiculture stands written in "letters of fire." "LAZY AND SHIFTLESS PERSONS NEED NOT APPLY." And if they do apply they are always like the seed of the scripture which was sown in "stony places." See Matthew 13: 5, 6.—20, 21.

Enough Super Surface.—I now come to Bro. Aikin's article in this the January issue of the PROGRESSIVE, and that I may be fully caught up with this already too lengthy editorial, I am going to give something I wrote after reading a sentence A. had in the November number. I might write it different now, after reading what he says in this number, but as I wish each reader to do some thinking of their

own, I will give it as I wrote it for that occasion, asking the reader to find out for himself which, or if both of us have made a mistake, together with the why's and wherefore's.—“After telling how a deep frame was all right for winter, Bro. A. says he learned “that the deep hive did not furnish enough super surface.” Well, I wonder how he arrived at such a conclusion? Wonder where his eyes were when he was reading those articles of old Jasper Hazen's in the American Bee Journal, which he tells us he took in those years? Did not Mr. Hazen tell us that he was not confined to the top of the hive for surplus, but surrounded the whole of the brood combs with surplus honey receptacles, except the bottom, and secured enormous yields of fine comb honey, with that swarming trouble which overtook Mr. Aikin a little later, nearly or quite done away with? And has not Doolittle told the readers of the bee papers for years, how he secured those crops of comb honey, which A. I. Root said “put Huber in the shade,” by the same plan? Where have you been friend A. that you should think that there was no place but THE TOP OF A HIVE for surplus, or “super surface?” As bees build comb much more freely at the sides of the brood nest, and store honey more rapidly at the top, there is no method of supering that will compare, as regards a large honey yield, with having the sections filled with comb at the sides, then raising them to the top for completion, taking the completed product from the top, raising the part-filled sections from the sides to take the place of those taken off, and putting the empty sections at the sides; and so on till the season closes. I fully learned this at about the time friend A. first saw the “light of day” as a bee-keeper; and by it secured a yield of 309 pounds, of comb honey from a single colony, and an average

of 166½ pounds from the whole apiary of 69 colonies, spring count. I admit that this course requires more labor, but for an ambitious person, there is no system that will roll up comb honey equal to it.”—And I still believe the same notwithstanding what Bro. A. has in this issue.

THE ITALIANS SWARMED.

Something About the Past and Present.— A Visit to Washington City.

(Continued from Dec. PROGRESSIVE).

Friends, did it ever occur to you the different kinds of people that compose the crowded passenger trains, the different sentiments of these people, the different incidents that are causing them like troubled waters to flow and rush from one part of the continent to another; some to joy, and some to sorrow; some on their wedding tours with the joy and hope of life budding forth; some to the bedside of an invalid friend or the bedside of a dying mother or father; and some to visit the home of their childhood to weep at the graves of their ancestors, and mingle their tears with the green grass that grows above their dead? I cannot say, when I boarded the train at Cincinnati, again to follow the course of the iron trail across the Alleghenies, whether it was with a feeling of joy or sadness. I think I felt a touch of both, alternately. This day I shall begin to see some of the once familiar scenes, scenes of twenty years ago, when, without friends or fortune, with little else than hope, I followed the same trail westward. Today I shall see them as they are, and draw them with the comparison of what was then.

Just before the train pulled out

of Cincinnati, a swarm of Italians (not bees, but bipeds,) entered the car in which I was seated. They brought in with them all kind of baggage, tied up in bed ticking, and filled all the surrounding vacant seats; piled up bundle after bundle in the aisle, until it was impassable without a ladder. They looked to me as though they might be three families of Italian emigrants moving with all their worldly possessions to some other part of the country. After they had got their bundles all securely placed in the car to their notion, they seated themselves in a group, and buzzed Italian, which I could not understand. It was not long, however, until they apparently got hungry and thirsty, too, for they brought forth two large cakes, many loaves of bread, quantities of cheese and sausage, and two decanters of wine. I watched them eat and drink for awhile, and then becoming disgusted, (not with their eating but their drinking), I went to another car with the hopes of finding something more congenial to my inclination, which I am happy to say turned up at the very next station, where a lady got on with three little children, all of them under five years old. (You know children over five years old don't ride on trains—if they did, they would have to pay fare.) These little ones were lifted up and dropped into the vacant seats about, but like rubber balls, it seemed they no sooner touched the seat than they bounced out again, and began rolling and tumbling around the car, climbing up to the open windows and leaning out, and it seemed at any moment one of them might lose their balance and be precipitated headlong from the train. It made me feel quite uneasy, and noticing the anxiety of

the mother, I persuaded one of them, a little girl, to occupy the seat with me, where I could hold her up to the window and let her look out. I always enjoy being useful and in doing that which will help others and make them happy, but when I held this little girl up between me and the beautiful sunshine and the passing landscape, I could only compare her, with all her little starched clothes and ruffled cape, with her golden curls flowing to the breeze, with the little straw hat and ribbons all the colors of the rainbow, to a beautiful large butterfly that had been sent here by God to adorn the world. With such a little companion as this, the time seemed to speed along with the speed of the train we were on, and we soon arrived at the beautiful city of Chillicothe. Here my little friend and her friends left the car. The train stopped here for some minutes, and I got off on the platform, and viewed again what I once thought the prettiest small city I had ever beheld. Twenty years ago I lived for a short time at Chillicothe, and helped to build the Scioto Valley Railroad at that place—that is, I shovelled dirt—and well do I remember how the scorching sun of Ohio's summer days had caused the skin to peel off my nose and neck. But I hold no resentment. The skin has grown back again, Chillicothe is still beautiful, the little poles that lined the streets twenty years ago have now grown into magnificent trees; the birds sing among their branches, and the limbs make shady arches along the streets. Blessed be he who plants a tree, or makes two spears of grass grow where but one grew before. The train thundered over the railroad I HELPED TO BUILD, and awakened memories of the past. All aboard. "All aboard!"

shouts the conductor, and I enter the train once more. We are now nearing the eastern borders of Ohio. The Ohio river comes in sight. The dancing waters sparkle in the light of the setting sun, and the green trees and bushes that mark its course, add beauty to the scene. The train crosses the bridge—the same bridge I crossed on foot twenty years ago, and we arrive at Parkersburgh, West Virginia. I get out on the platform, as the train is to stop here for a little while. I try to pick out familiar objects, but there are none but the river and the old bridge, and even these have changed some. I recollected having read in the paper the last time I was here, an account of how they had taken a stranger out and hung him to a tree. I wondered then if they hung all strangers that came to this town. I was anxious then to get away, and I have the same feeling now; so I board the train, which soon pulls out (as I will call it) for Washington City. In getting on the train, I noticed another man get on carrying a big, heavy gun. I do not know as I should have noticed it, but the gun was of a different pattern of any I had ever seen before. When I took my seat, the man with the gun took a seat behind me. I had remembered in passing this way before, the many tunnels that spanned the road from Parkersburgh to Washington City; the rugged mountains that line its course, and the pines which cluster at their tops, all of which I wished to see again, and regretted that darkness was coming on. Just then the man with the gun touched me on the shoulder and said, "Pull down your window; we are coming to a tunnel." I soon noticed the necessity of this, for when the train entered the tunnel, the smoke poured in through the windows that

were left open and made the car almost suffocating. As my companion, the man with the gun, seemed to be quite talkative, I entered into conversation with him and asked him what kind of a gun that was he had. He told me, but I have forgotten the name, but he explained its qualities as a Gibraltar only about four feet long; that is, one man with this kind of a gun could mow down a whole regiment. I noticed every time we stopped at the platform, or out in the woods anywhere, this man with a gun would go outside and remain until the train started up again. I became inquisitive, and asked him what was the purpose of the gun, and his going to the platform every time the train stopped, to which he replied, "Robbers," and then explained that he was employed by the railroad company to make this trip over the road with the train every night in the year. Is it possible, I thought, that there is in this civilized state, here where people talk of the "wild and woolly west;" here where the Father of his Country had established law and order more than 100 years ago, that now the offspring of the Mother of Presidents could not establish laws sufficient, and enforce them, to protect the trains from highwaymen and robbers? and I told my companion so. I further told him I did not believe that the lives or property of the passengers were in danger; that twenty years ago I came over this railroad, on foot and alone; that the railroad company had sent no man as my protector, and I pulled through all right. If the railroad company had no interest in a lone man, unarmed, I could see no reason why they should trouble themselves about a train-load of people that were well able to take care of them-

selves. In ancient times, Moses smote the rock and brought forth water. In the present age, man smites the rocky ridges of West Virginia, and brings forth oil. I asked my companion what those towers along the mountain side were built for. He answered that each one of them was built over an oil well. There was a light burning at each one of them. What for, I do not know; but perhaps it was because oil is so cheap in this region. I watched the chain of lights as they twinkled by, far into the night, until Morpheus clasped me in his arms. My troubles for that day were o'er. I slept on peacefully, watched and protected by the man with the gun.

The next morning when I awoke, the train was at a standstill way out in the country—how many miles from anywhere, I do not know. There was not a house in sight, nor depot, not even a platform; but there was another railroad crossing there. Just think, friends, of a railroad crossing with no city attachment! Why, if we had this railroad crossing out west, we would lay off a town, build a \$20,000 opera house, establish churches and schools, name the town, "Eureka," and advertise town lots for sale in the eastern papers. The only refreshment we could get at this place was coffee. A small boy came out of the woods, (from where I cannot say, as there was not a house in sight), with two buckets of coffee, and a long string with tin pint cups strung on it like so many fish. He offered for sale a pint of right good coffee, with a tin cup thrown in, all for a dime. The convenience of this was that the purchaser could drink his coffee at leisure, not being compelled to return the cup.

The train pulled out, and we arrived in Washington City about 7

o'clock. I inquired about the hotels, and was informed that there were very good places where I could stop for \$1.50 per day. Two colored individuals (cab-drivers) assured me they would take me to the best hotel, and each one was very positive that his hotel was better than the other one. They kicked up such a rumpus between them I became embarrassed. I really thought they were going to fight. Finally I rushed into one of the cabs, and the negro who had captured me, with a broad grin drove away, while the other negro stood on the platform shaking his fist at him, and calling out in a loud, boisterous tone that he would fix him the next time they met. I had some apprehension that if I went to one hotel, I should wish I had gone to the other, and vice versa; but I was agreeably disappointed. This hotel was conducted by southern people who had come to Washington City "since de wah." Everything looked clean and neat, and the room to which I was consigned overlooked a broad avenue lined with beautiful trees. After washing off a few of the travel-stains, I enjoyed a good breakfast. I went out to take in the sights. I had been in Washington City before, but I did not realize then that to see this city to the best advantage in a short space of time, one must employ a guide. These guides are men of good character, who have vested authority from the city officials to solicit patronage from tourists. They know just how far and where you are permitted to go. To make it more plain, I will put it like this: There are some government buildings you are not allowed to go into at all; others that you are allowed to go into certain departments of; and others you are allowed to go into only at certain hours in the day. The

guide knows all this; you do not; hence you would be getting into places where you would not be permitted, and ordered out, which would be quite humiliating. By all means, if you visit Washington City, and want to see the most in the shortest space of time, with the least trouble and expense, employ a guide. There are plenty of them, and they are easily found, as they wear a blue suit and a star, and the price is only \$2.50 or \$3 for a day. There is another interesting feature about these guides: They are historians, as far as Washington City is concerned—at least mine was.

With my guide I visited the White House, one room of which is always open to visitors. I believe it is called the East room. I walked into this room, as many others were doing; looked at the beautiful paintings hanging and standing against the walls; wondered how many miles of cut glass there was in the chandeliers; wondered what kind of carpet and furniture was under the canvas covers, for the furniture and carpet were all covered up; raised my eyes to the low ceiling, and stared awhile at it. I listened as though I could hear the footsteps of some of the great men whose tread had echoed through those halls. The names, WASHINGTON and LINCOLN— Just here the guide called my attention, and said, "It is time to go." In leaving the White House, I looked back and contemplated the scene. What a common, old-fashioned rookery this was for the home of the president of such a grand and enlightened country. The ambassadors of many of the foreign countries have much more costly and elegant residences, and salaries, too, that are equal to, and even surpass, that of our president. There is grandeur in Washington City, though. And there is

architecture, too, which equals that of the ancient orient, yet to the American eye and heart, to the sons of liberty who drink at the fountain of enthusiasm, here where the children of the humblest can become the peer of the greatest, there is something grander than all this. It is the goddess on the Capitol dome, overlooking all, holding forth the burning torch of liberty. All around is emblazoned—WASHINGTON. [R. B. L.]

(To be continued in our next.)

Second Hand Foundation Mills.

We found 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.

One six-inch Root Mill for making extra thin foundation. Price, new, \$18. To close this out, we will take \$9 for it.

LEAHY MFG. CO., Higginville, Mo.

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 early 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.

The Jennie Atchley Co.,

Beville, Bee Co., Tex.

O. P. HYDE.**One of Texas' Staunch Bee-Keepers and Supply Dealers.**

Mr. O. P. Hyde, the subject of this sketch, was born on a farm in Dawson county, Ga., March 4, 1853,

to whom he had been paying court four years. Mr. Hyde worked at the carpenter trade for a number of years, and finally in 1884, moved to Texas, and has since lived in five different counties. In 1890, he moved to Lampasas, and in 1891 traded for two colonies of bees.



O. P. HYDE AND FAMILY, HUTTO, TEX.

and remained on the farm until he was 28 years of age. In 1879, he was married to Miss Emily Evans,

This was the beginning of Mr. Hyde's career as a bee-keeper, and both he and Mrs. Hyde imbibed

considerable enthusiasm for the pursuit. In the short space of six years, Mr. Hyde has built up an apiary of some 300 colonies of bees, and harvested in 1897 a crop of over 19,000 pounds of honey, about half comb and half extracted. Mr. Hyde has also kept supplies for sale, often selling as much as a carload of supplies for a single season. He is a good business man, an ardent Christian, a lover of home life and of his chosen pursuit. He has an interesting family, which we are pleased to present to our readers in the accompanying illustration; "Wife," as he calls her, and two sons and one daughter. Last year Mr. Hyde and his family moved to Hutto, Tex., where they now reside. Long may they live to enjoy the fruits of their labor. May the future have in store for them good health and happiness.—THE EDITOR.

Convention Notice.

The Colorado State Bee-Keepers' Association will hold a two days' session Jan. 17-18, in Capitol Building, Denver. R. C. AIKIN, Prest.
F. RAUCHFUSS, Secretary.

Editorial..

The Progressive Bee-Keeper.

A journal devoted to Bees, Honey and Kindred Industries.

TERMS: Fifty cents per year, in advance.

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

A Happy New Year.

+++++

The new year is here. Now will you be good?

+++++

On another page appears the advertisement of a combination offer with the PROGRESSIVE, a rare opportunity for PROGRESSIVE subscribers. Our florists, however, have just notified us that it is too late to fill lily bulb orders, and we will send in their stead five other floral novelties.

Bro. Doolittle has left me and gone off with a handsomer man—that is, he is following Aikin. (See pages 18-21).

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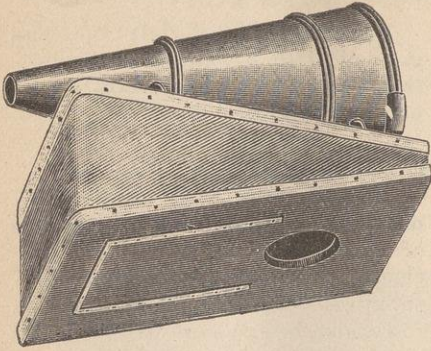
Messrs. Henry L. Miller and C. E. Walker, of Kansas City, Kas., made us a pleasant call on the 29th of December. Mr. Walker purchased a carload of "Higginsville" supplies, and will be in a position to furnish bee-keepers with the best on the market.

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In another column will be found the advertisement of Mr. C. E. Walker, of Kansas City, Kas. Mr. Walker has purchased the interest and good will of Henry L. Miller, who formerly represented us in that city. Mr. Walker will carry a complete line of "Higginsville" supplies, and will fill orders for our Kansas friends at our catalog prices.

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The Bee-Keepers' Review to hand is a unique paper. I am not going to say I was surprised, because Mr. Hutchinson had explained to me when I visited his home last summer, the changes he contemplated making. The new Review has a straw-colored cover printed in clar-et, is printed on heavier paper, with new type; and one of the features which adds tone to the whole make-up, is a frontispiece, a half-tone cut printed on heavy glazed paper. The editor says: "The new type is one size larger than the old, and that this increase in size may not lessen the amount of reading matter, eight extra pages are added, which much more than makes up for the increase in the size of type." I am glad, yes, happy, that Mr. Hutchinson has been able to make this change, as I know what pride he takes in the Review. I wish the Review had 10,000 subscribers.



THE NEW CLARK SMOKER.

The above illustration will show our readers that we have something real good in the way of a larger bellows, cleats to keep the fingers from slipping, and a new spring valve that adds real life to the smoker. It is worth just two of the smokers we sent out last year, though the price is the same.

+++++

A HAPPY NEW YEAR.

With ringing bells and joyful hearts the glad new year is born, amid the plaudits of the world, and the expression, "Happy New Year. Happy New Year," is passed around. But, friends, I never before have been inspired with the gladness and happiness on the birth of the new year as I have with the coming of 1898. The bountiful crops, and the kind patronage of our friends, enabled me to take that long-wished-for tour to the scenes of my childhood. My health is much better than usual; our factory has been running on full time since the 15th of October, and orders have been coming in to such an extent that we could hardly fill them. The new year finds us busy and prosperous. Hence we are happy and thankful. Thankful to our friends who so kindly send us their patronage;

thankful for the words of kindness and good cheer that are coming in, and thankful to Him from whom all blessings flow. But with all this sunshine there is a shadow that causes me to feel a little disappointed and sad at times. It is this: While bee-keepers buy our supplies in such quantities that we are unable at times to fill orders, they do not subscribe for the PROGRESSIVE as I would like for them to do. Friends, do you know the PROGRESSIVE has never made a dollar for me yet? It is a fact. It has never paid more than expenses, and the only reward I have received from it for my time and care is the pleasure of meeting you once a month in these pages. True, this is a pleasure indeed, but I do believe if I were getting something for my trouble, and the subscribers would pay up a little better, and I had more of them, I could make the PROGRESSIVE better.

Friends, now will not each one of you that receives this invitation, help us to make that better PROGRESSIVE? Can we not work hand in hand in this matter? I am willing to do my part. Remember the PROGRESSIVE is but fifty cents a year, and I know you cannot afford to lose the R. C. Aikin articles (reviewed by Doolittle) for \$10.

As I have said above, I feel a little sad at times, and it is about this: A number of our subscribers have been a long time delinquent. I cannot sit down and write each one of you a personal letter, asking you for 50c. You have received the PROGRESSIVE—that is invitation enough. If it is worth the money, and you want it continued, kindly make it known by sending us a half dollar. Otherwise we will conclude you do not want the journal any longer, and will discontinue sending it to you. I thank you all for past favors.

A Happy New Year to all, and may the year of 1898 be one of peace, plenty and prosperity.

Removal of the Wauzeka Section Co.

PRAIRIE DU CHIEN, Crawford Co., Wis., Sept. 7, 1897.

TO OUR PATRONS:—

Finding our shipping facilities were not what they ought to be at Wauzeka, we have moved our machinery and stock here, only a short distance, where we have two railroads, the C. B. & N. and the C. M. & St. P., and the Mississippi river. This enables us to get the lowest rates to all points. We now have a much larger plant, having added more machinery which has about doubled our capacity.

We have a fine lot of Basswood lumber, which we shall work up this fall and winter, and will be in first-class shape to fill orders on short notice.

We are still in the Basswood timber, and can get our lumber right from the log, which makes the best sections to be had. The timber is tough, and the corners do not break as easily as those made from basswood lumber. Send for price list and sample section free.

Thanking our patrons for past favors, and hoping for a continuance of the same, we remain,
Fraternally yours.

The One Piece Section Co., PRAIRIE DU CHIEN, WISCONSIN.

21st Year. **DADANT'S FOUNDATION** 21st Year.

Why Does it Sell So Well?


Because it has always given better satisfaction than any other. Because in 21 YEARS there have not been any complaints, but thousands of compliments. WE GUARANTEE SATISFACTION. What more can anybody do? Beauty, Purity, Firmness, No Sagging, No Loss. Patent Weed process of Sheeting. Send name for our Catalog, samples of Foundation and Veil material. We sell the best veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

LANGSTROTH ON THE HONEY-BEE, Revised.

The Classic in Bee-Culture.—Price, \$1.25 by mail.

CHAS. DADANT & SON, Hamilton, Hancock Co., Illinois.

 We can furnish you with Dadant's Foundation at Dadant's Prices. When more convenient you can order from us.

LEAHY MFG. CO., Higginsville, Mo.


WE MAKE A.....
 **SPECIALTY OF SECTIONS,**

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


A GENERAL LINE OF BEE-KEEPERS' SUPPLIES

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

**MARSHFIELD MFG. CO.,
Marshfield, Wisconsin.**

 Please mention the "Progressive" in answering this advertisement

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."

Please mention the "Progressive."

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.

25 CTS.

Send 25c and get a copy of the **AMATEUR BEE KEEPER**,
A book especially for beginners. Address
Leahy Mfg. Co., Higginsville, Mo.

Sydnor's Tecumseh, 17368,

(By Chief Tecumseh, 2d, out of Ina Wilks), and

Sydnor's Hands-Off.

These two great Boars head my herd. *Sydnor's Tecumseh* cost \$495.00 at eight months old.

Here you will find great bone and size. Pigs quick growers; Fatten at age.

Stock for Sale.

Service Fee, \$25.00 each.

--

Prices Reasonable.

H. C. SYDNOR,

Please mention the **PROGRESSIVE** in answering this advertisement.

Corder, Mo.

FOR
\$1.00



VESTA TUBULAR.

Upon receipt of \$1 we will send you, freight pre-paid, one of our new "Vesta" Tubular Lanterns, which we regard as perhaps the best value we have ever been able to offer. The Vesta Tubular combines the "bull-

strength" make-up of the Railroad Lantern with the perfect combustion of the tubular construction, and it is simply "GREAT" — so great, indeed, that we issue a special Circular of it.

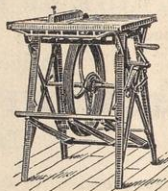
OUR LITTLE ILLUSTRATED CATALOGUE IS MAILED FREE. ASK FOR ONE.

R. E. DIETZ CO.,

60 Laight St., New York.

ESTABLISHED IN 1840.

"DIETZ" is the "sterling" stamp for Lanterns.



MAKE YOUR OWN HIVES

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

W. F. & JOHN BARNES CO.,
914 Ruby St.

ROCKFORD, ILLS

Please mention the "Progressive."

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Quickly secured. OUR FEE DUE WHEN PATENT OBTAINED. Send model, sketch or photo, with description for free report as to patentability. 48-PAGE HAND-BOOK FREE. Contains references and full information. WRITE FOR COPY OF OUR SPECIAL OFFER. It is the most liberal proposition ever made by a patent attorney, and EVERY INVENTOR SHOULD READ IT before applying for patent. Address:

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PATENT LAWYERS,
Le Droit Bldg., WASHINGTON, D. C.

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See Our Great Combination Offer!



THE PROGRESSIVE BEE-KEEPER, one year	- \$.50
The Mayflower (great floral paper)	“ - .50
Womankind (great home magazine)	“ - .50
Farm News (great farm monthly)	“ - .50
Ten Rare Lily Bulbs	- - - 1.00
The Farm News Poultry Book	- - - .25
The Womankind Cook Book	- - - .25
Total value,	- - - - \$3.50

**Our Price for all
\$1.00.**

WE are more than confident that our readers will be pleased with this combination; it is undoubtedly the best, the most liberal subscription offer ever made.

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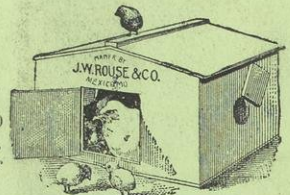
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