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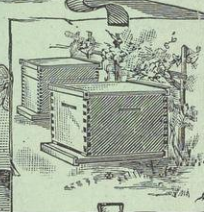
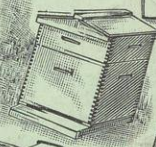
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MAR., 1900.



MUNN, PRISS GLEY, O.

PROGRESSIVE BEE-KEEPER

A JOURNAL
DEVOTED TO BEES, HONEY AND
KINDRED INDUSTRIES.



PUBLISHED BY

LEAHY MANUFACTURING CO
HIGGINSVILLE, MISSOURI.

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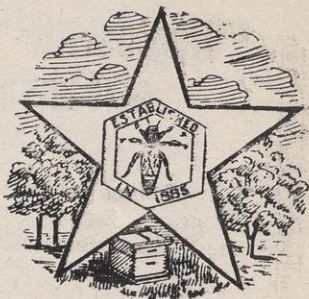
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**The A. I. Root Company,
Medina, Ohio.**

N. B.—Watch for our announcement next month.

The Progressive Bee-Keeper.

A Journal Devoted to Bees, Honey, and Kindred Industries

50 Cents a Year.

Published Monthly by Leahy Manufacturing Company.

Vol. X.

HIGGINSVILLE, MO., MAR. 1900.

No. 3.

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POTPOURRI.

F. L. THOMPSON.

Among the bee-keepers whom Mr. Lovesy took me to see was Mr. Schach, who used to be a neighbor of John Conser, of non-swarming fame. Mr. Schach says Mr. Conser's plan of removing sealed brood into an adjoining apartment is all right for a climate that is adapted to it, and thinks highly of the plan. He considers the climate of Salt Lake county too cold for it, however, as well as for himself, and thinks of moving. This is a pity, for as far as looks go, his home is an ideal one, with the mountains close up on one side and the very thickest of that delightful tangle of small farms, trees, green lanes and running water surrounding it that characterizes so much of the valley east of the Jordan. His apiary is large and neat looking. A hobby of his is the free use of slacked lime in hives containing combs empty of bees, in the honey house, and everywhere where dryness is desired, and where it is desirable to make the moth uncomfortable; for unlike Colorado, Utah has the regular wax-moth of the east, and it was in Utah that I obtained my first sight of the animal, in the shape of large white larvae, quite a contrast to the small pink larvae of a kind of grain-moth that sometimes riddles

Mixed Letters.

Mary wrote a letter, and directed it to me, It was full of tender nothings, we were soon to wed, you see.

Incidentally she roasted Hartz (the milliner, you know. He was charging her a fortune for a recherche trousseau.

Mary wrote a letter and directed it to Hartz. Saying that his last creation was the masterpiece of arts. And regretting, very sweetly, that his little bill must wait Till her wedding—I would pay it—I was flush and up-to-date.

Mary wrote a letter, but it wasn't any good. I returned her phiz, and told her to forget me, if she could.

Came a letter and a statement, with Hartz' signature affixed.

Mary wrote a letter—two—but got the letters mixed.

—Will Ward Mitchell.

pollen combs in Colorado, but never—I say NEVER—attacks section honey. A neighbor who has a few bees came in while we were there, and told how he had just stopped a case of robbing by scattering slacked lime at the entrance, a kink that he had evidently been put up to by Mr. Schach.

Mr. Lovesy himself lives in the city. He has fifty or sixty colonies near Mr. Bouck, and from two or three to six at four or five places in and about the city, thus making it possible to get an idea of the comparative merits of locations. His experience, in common with that of others, has shown that the city is a very poor place to winter bees. His back yard, which like all Salt Lake City yards is of generous proportions, contains a number of fruit-trees, and some ten or twelve hives arranged close together on benches—a fashion that is rather common among some of the bee-keepers there. He was going to try just once more to winter them there, this time putting them in a little house with walls packed with lucern (as they call alfalfa in Utah). Mr. Lovesy crossed the plains some forty years ago, and tells some interesting stories of the early days—such as seeing between fifteen and twenty thousand buffaloes at once, narrowly escaping a struggle with wolves, etc.

Mr. Moore, another bee-keeper we called on, has a turn for peddling, and has made quite a success of delivering honey by filling vessels that his customers bring out to the wagon. I remember I once induced a neighboring farmer to take along a five-gallon can of honey on his butter route. He did so once, and declared he would not do so again; the honey was so thick, and consequently ran slowly, and was unmanageable in other ways, such

as getting out the exact amount required, that he said it was more bother than it was worth. Mr. Moore obviates this by a device that is used with molasses-barrels. I don't know the internal workings or the name of it, but in outward appearance it is a faucet connected with a set of gearings turned with a crank, and having a dial face around which a hand moves, subdivided into gills, pints, quarts, etc. By turning the crank fast or slow the syrup or honey comes out at a corresponding rate, and when the hand reaches the indication of the measure wanted, the operator stops turning, and the exact amount is in the vessel. It is a rather expensive article, costing some six or eight dollars, I believe, but Mr. Moore sells enough honey to make it pay to have it. He uses it on a can holding about fifteen gallons.

I noticed a fence separator lying under the stove, and asked about it. Mr. Moore said he had tried quite a number of the fences, with plain sections, and was now using them for kindling wood, because he could see no advantage whatever in the results produced. I asked him particularly about the filling around the edges of the combs, and he said he could see no difference whatever in this respect between combs produced with fences and those in ordinary sections. He tried the $4\frac{1}{2}$ x $4\frac{1}{2}$ plain section. He also said that the combs projected so that the sections were hard to pack properly. I did not have that experience myself.

I congratulated Mr. Moore on being a bachelor, for which harmless sentiment I was taken to task by Mr. Lovesy as we drove on, and I had to do considerable explaining before he could see the point—in fact, I am not sure he sees it yet. It is funny that so many people do

not realize what a nice thing it is to be care-free when one has important objects to accomplish that have no connection with money (as all should have)—why, we all know that the first requisite for what is conventionally called a “home” is unqualified surrender to the god Mammon.

I also called on Mr. Fagg, the secretary of the State Association (of which Mr. Lovesy is president), but as I did not see him at his apiary, and my stay was not very long, I can not report any kinks, except the noteworthy point that Mr. Fagg, like others, has found it much easier to sell a LARGE AMOUNT of honey to the trade than a small amount. He thinks there is more money in extracted than in comb honey.

I presume anyone who has been at Salt Lake City is expected to give some account of the lake itself. It had been a cloudy day on the afternoon of which I went to the lake, some thirteen miles distant, but when I reached there the sun showed itself intermittently and lighted up masses of heavy clouds in the west. The scene was a surprise to me. No description I had read said anything about the surrounding mountains; I had always imagined the lake as lying among plains, but when I had gone out on the pier to the further side of the great pavilion, which obstructs the view from the shore, the entire coast seemed surrounded with the purple heights of mountains, and the islands themselves were mountains, so that an indefinite purple vista extended to where the sky and water met, illuminated by the somber light reflected from the sunset clouds. Beneath, the glassy brine (six volumes of water produce one of salt) was heaving from the effects of a fresh western breeze; and with the historic recollections of the region, the scene was well calculated to make a deep

impression. It reminds me of those nice old romantic steel engravings in the old annual gift-books of forty or fifty years ago, with their old-fashioned tales, and poetry by “L. E. L.” and Mrs. Hemans, or something of the same stamp;—such as “The Garland”, “The Keepsake of Friendship”, “The Lady’s Album”, and will always remain in my mind as a fitting embodiment of those magic lines of Swinburne’s

“Out of the golden remote wild west where
the sea without shore is,
Full of the sunset, and sad, if at all, with
the fulness of joy,
As a wind sets in with the autumn that
blows from the region of stories,
Blows with a perfume of songs and of mem-
ories beloved from a boy.

* * * * *
From the bountiful infinite west, from the
happy memorial places
Full of the stately repose and the lordly del-
light of the dead,
Where the fortunate islands are lit with the
light of ineffable faces,
And the sound of a sea without wind is about
them and sunset is red.”

The valley of the Jordan river is about thirty miles long, extending nearly south-east to north-west, and twenty miles in the widest part. At the upper or south-east end the ranges close together except for a small canyon, while at the lower end the western range touches the eastern shore of the lake, then seems to turn and follow the lake shore west or south-west. On the other side of the valley, the eastern range, constituting a part of the main portion of the Wahsatch Mountains, makes a little turn at the lower part of the valley, and just at the corner of this turn is the city of Salt Lake; then continues on north-west. Hence the Jordan valley is quite distinct and separate, seeming like a great bowl when viewed from a height, as it is shut in on three sides and a small part of the fourth; and the lake, or that portion of it which lies nearest to and west of the city, is equally shut off from a direct view into the valley. A ledge observable on some parts of the range

on the east side of the valley is supposed to mark the ancient level of the lake, as it is on a level with the upper portions of the Snake River in Idaho. The thirteen-mile approach to the lake from the city is a low alkaline plain, scantily covered with chico, or greasewood, as they call it there, and was quite evidently a portion of the lake bottom in recent times. Indeed the pier and bathing-houses show they were built for a higher level, and the shore presents the appearance of low tide on the sea-coast. The bottom appears to be a light-colored mud, destitute of any form of vegetable life, and not stirred up in the least by the waves so as to affect the crystal clearness of the water. Near the shore are the wide, shallow pools of the salt-works, with plank walks leading out into the midst. In some of them men were shoveling the salt left by evaporation into wheelbarrows, trundling them along the planks and up great piles of salt, the latter in the form of truncated pyramids, some ten or fifteen feet high and apparently fifty to seventy-five feet long and nearly as wide—making salt look nearly as cheap as dirt.

On page 826 of the American Bee Journal appears an insinuation that is both unjust and untrue, being the third distinct case of injustice done to the writer by what is printed in its columns, and malignant and rancorous besides. It must make Prof. Cook feel real sad. The substance of it is that in what I said in the December PROGRESSIVE of the publication of honey sales at good prices, specific reports sent in for publication were referred to. If the cute editor will put his finger on the slightest justification for that assumption, he will do more than I have been able to. Not only was that idea not apparent in what I wrote, but it was not present in my

mind at all. There are some cases of the suppression of truth in other matters, and perhaps the guilty editorial conscience was its own accuser on that score, but that is another story. I believe my meaning was perfectly understood, and that it is mere pettifogging that leads to the surprising assertion in reply, that publishers who handle honey do tell if any honey sales were made at good prices. They do nothing of the kind, and the American Bee Journal for 1899 is a proof of it; and no one can expect it of them. It is unworthy trifling to wrest this plain and true statement so as to apply it to the very rare cases of specific reports of prices sent in for publication, which do not affect the situation perceptibly anyway, so as to make it at all likely they could have been referred to. I do not remember a single instance in which any honey-buying editor himself told of sales made at good prices, mentioning the prices, which he became aware of in his capacity as a honey-buyer in the field, and some twenty-five or fifty instances a year would be required of him, if he did do so. The discussion is childish, and is another example of the hollowness of the professions of our bland writers; if the truth were their main object, such exhibitions would never occur; in fact, blandness is used as a cloak to hide injustice, and is fast becoming a badge of the same.

Denver, Colo.

Bees for Sale.

Two hundred colonies at \$3 each.
Eight-frame dovetailed hives,
two supers each, with fence separators complete. Good location,
no failures and no disease.....

W C. Gathright, Dona Ana, N. M.

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CEMENT FOUNDATION MOLDS.

ADRIAN GETAZ.

During the last few years I have saved all the pieces of old combs, burr combs, moulded combs from empty hives, in a word, all the scraps of black or otherwise inferior wax. Occasionally I would melt what was on hand, and obtain a cake of wax, rather dark and not very pure; in fact, practically unsalable. By and by a hundred pounds or so of that stuff had accumulated. So the question was what to do with it. Well, the only practical thing was to make brood foundation of it.

As it would not have been expedient to buy a foundation mill for that purpose, and I had plenty of time during the winter evenings, I concluded to make a plaster mold such as Oliver Foster used to make and recommend a few years ago. I found out that the plaster is a very weak material and very unsatisfactory for that purpose, so I thought of substituting something stronger. I decided at once that Portland cement would fill the bill, and proceeded to make a mold.

Make a wood frame, the size of the foundation sheet that you wish, and of a depth of one and a half or two inches. The wood used need not be very heavy, as it is simply to hold the cement. Lay a sheet of foundation on a table. Put your frame upon it and fill the frame with a paste of cement and water of about the consistency of the mortar used by bricklayers. However, it is well to put in first some thin paste and rub it well into the foundation, otherwise air bubbles would remain in the cavities of the foundation and spoil the faces of the mold. Leave the whole thing undisturbed for twenty-four hours, or until the cement has set. Then turn the frame, cement and foundation sheet over. Lay another frame on it and fill it as the first one. Keep the mold wet during a week or ten days. By that time the cement is nearly as hard as a piece of marble. To open the mold, put it for an hour or so in a place sufficiently warm to soften the wax but not melt it. Then force the mold open.

In order to insure an exact correspondence of the two faces, it is well be-

fore doing any casting to fasten the two frames together on one side with hinges. Brass hinges fastened by brass screws are best, as they do not rust. The screws could be long enough to be imbedded deep in the cement, and thus increase the strength of the apparatus.

I first tried to pour melted wax in the mold, or rather the "book," since it has the form of a book, and shut it hard so as to make a sheet with the imprint of the two faces of the book, let it cool sufficiently, and took it out. Well, I failed. The foundation that I used for a pattern had very high walls, making very deep cuts in the book, and it was almost impossible to take the sheets of foundation out, as they were held tight by those deep cuts.

I thought then of pressing the foundation. This succeeded much better. The plan was to put a sheet of wax in the book, shut the book, put it in a press and press it. The pressing of a sheet will not force the wax tight in cuts of the mold as does the melting process, and there is no trouble in taking the sheets out.

To make foundation by the press process, it is necessary to have the sheets of wax of a uniform thickness. In rolling, the inequalities of the sheets are laminated out, but nothing like that takes place in pressing. Dipping the boards endwise in the wax does not give uniform sheets, as the wax runs down in streaks when the boards are taken out, so I had to invent some other process. I used a board with a handle on one side or I should say on one face. The board is laid (rather than dipped) on the melted wax, so that the whole face opposite the handle comes in contact with the wax at once, or nearly so; for a slightly rocking movement must be given to the board, otherwise air-bubbles might remain under, and cause holes in the sheet. Take the board out as soon as it has been in contact with the wax, and turn it at once and hold it upside down, so the waxed face is up. This causes the wax to spread evenly on the board, and insures a uniform thickness. As soon as the wax begins to solidify, which is shown by its losing its transparency, plunge the board and wax, face downward of course, in a vat of warm water, about as warm as your fingers can stand. In a few seconds the sheet will fall of itself, and remain in the water when you take the board out. If the edges of the board are very sharp, they will trim the sheets to the exact size of the board.

When you are ready to press the sheets be sure to wet the mold with warm water, so as not to chill the first few sheets you will press. Put your sheets in a vat of warm water, about as warm as your fingers will stand. The sheets will thus be soft enough to receive easily a good impression, and being wet, no lubricant at all will be needed. The water held in the pores of the cement will prevent the wax from sticking.

The foundation thus made is of about the size of the medium brood foundation. I kept the wax barely above the melting point. I think a higher temperature would secure thinner sheets.

I used a tin vat or tank a little larger than the dipping-board to hold the melted wax. This was placed in a larger tank of boiling water.

The mold and press could be combined in one apparatus, but even then I would retain the book form, as this insures a better fitting of the faces of the mold.

I may add also that if kept wet the Portland cement will slowly harden during several months, and eventually become as hard as the best quality of stone.

The dipping-boards should be of some fine-grained, perfect wood, and kept as smooth as possible. When cooling, the sheet of wax shrinks considerably, and if it cannot, so to speak, glide on the dipping-board, it will crack wherever the inequalities or roughness of the wood hold it and prevent it from contracting freely.

A vat or tank can be made of tin or sheet iron without riveting or soldering simply by bending and folding the corners.

Knoxville, Tenn

WINTERING IN WESTERN COLORADO.

J. S. BRUCE.

Wintering here has not been given its proper share of attention. Our losses are quite serious each winter, but the ability of bee-keepers to replace bees each spring so cheaply by purchasing from farmers who were tired of their few colonies has had a tendency to make apiarists careless as to wintering. Conditions are now different, all the small lots having been gathered into the hands

of bee-keepers. Those who would attain the best results in the future must face the problem of successful wintering to replace winter losses. Natural swarming, coming as it does late in June in the middle of our best honey-flow, is such a severe loss in the output of honey that year, that almost all bee-keepers have been trying to find some method of avoiding all natural swarms.

I believe our winter losses are chiefly from two causes: granulated honey in the brood-chamber, and moisture in the hives; and with our present materials, these are hard problems to deal with. Our hives are all made from our native lumber, and not one cover in a hundred will keep a chaff cushion dry, allowing snow and rain to enter, so that I have had no better results when packed with forest leaves or chaff than those who made no preparation the same winter. I controlled 370 colonies last winter, and 65 of them were lost winter and spring, coming close to 20 per cent. 100 under a dense grove lost 24, while 72 in sunshine with extracting supers under the brood chambers, lost only six. Those in single stories in the sunshine lost far less in proportion than those in the shade. This difference in sunshine and shade is perhaps not significant, as I think I can trace other causes.

I shall begin on the winter problem by first getting hives of better material and workmanship, and made on what I believe to be more rational principles than the hives I am using, when I think I can study the subject from a higher standpoint. Each one should study the subject from his own experience, for we have much to learn about wintering, and summering as well, if we would develop the grand possibilities of our little valley.

Montrose, Colo., August, 1899.

EXPERIENCE AND ITS LESSONS.

R. C. Aikin.

(Continued from Feb. PROGRESSIVE.)

CHAPTER XXIV.

Interchangeableness of Hive Parts.—
Foundation in Sections.—T Supers.

In chapter XV, page 12, Jan. 1, 1899, PROGRESSIVE, I wrote: "First and foremost I want a hive that is easy of construction. The hive parts should be interchangeable. It should be so constructed that it can be tiered up unlimited, either brood chamber alone, or brood extracting and section parts, altogether and intermixed."

It is evident from Doolittle's comments that he misunderstood my meaning, or else thought that the general reader would, that I was advocating the production of both comb and extracted all mixed up or both together on same hive at same time. I do not practice or advocate such doctrine. What I meant was that I want my hive so constructed that if I have a colony running for comb and they have a super (or supers) on and just about ready for removal, I could lift the super and put extracting chamber UNDER it, or I should want to change the other way, that I could put a super under an extracting chamber. The brood chamber, super and extracting chamber should all be the same in outside measure, all have square tops and bottoms just as the hives now of common manufacture, as the dovetailed. So constructed it simplifies the manipulation of the apiary. I wanted to emphasize the value of COMPLETE INTERCHANGEABLENESS of hive parts.

The value of this will appear when comes one of those slow tedious flows when one does not want to put on supers of sections when all the

indications are that they will not be completed in marketable shape, just propolized and half done—at least so left that they cannot be marketed as comb honey.

Let me illustrate: Last fall and the fall before, just as the season was drawing to a close, the question came, Shall I put on more sections, or not? There was an uncertainty about the matter, honey was still being stored very slowly, and probably would be for a week or two, some place was needed to take what would come, yet in all probability to put on a fresh super meant to take it off again a little later and tear it to pieces and extract a lot of sections to keep the honey, little though it be, from candying in them. Such sections make good bait combs, but I believe I would prefer to have such comb built in frames and extracted, the combs cut out and fitted into new sections for bait combs the next season rather than have to extract from sections.

It will do very well for those having a very few colonies to have wide frames of section holders so they can put on 4 or 8 sections at a time, thus tinkering along from day to day, giving just what sections the colony will complete and no more. I have done so in former days when I did not have many bees, but if a man has other work in plenty, this becomes too tedious.

Then again there are many localities having slow flows, some having two or more flows, some having both light and dark honey, etc., and to all such it is a great convenience to have hives so constructed that the transition from comb to extracted, or vice versa, would be a great convenience. I can readily see how the methods Doolittle has so often written of, putting on a very few sections at a time while "closing down", will work just as

he has told us, particularly when applied to rapid honey flows as are usually had from basswood, and frequently from white clover, but very many seasons and localities are not so. It makes lots of difference whether my honey crop is going to be harvested in 2 or 3 weeks, or as many months. If to be months, I do not want to be wasting time putting on a half dozen pounds room at a time; I want to give the colony what they are likely to need, then go about other work.

This idea of interchangeableness applies to ALL hives, and facilitates management and method with all, and that is what I meant to bring out in the above-quoted language. To produce both comb and extracted at one and the same time on same hive is NOT practical in a general way, though it is possible in a manner under certain conditions.

BOTTOM STARTERS AND FULL SHEETS.

In that same chapter 15, we discussed slightly the use of foundation in sections, and bottom starters. Doolittle said no bottom starters for him. Here again comes in location and methods. If you can crowd your colonies in the sections and keep them so, never letting them have much room ahead, nor yet ever without room; and more, if the honey flow that is to fill these sections come freely and work goes STEADILY ON TO THE CLOSE of the flow, and not only so, but comes reasonably rapid, say 3 to 5 pounds daily on the average, then a bottom starter is of little use; but take it in slow and intermittent flows, and bottom starters—or their equivalent by having the full sheet come so close to the bottom that it will be fastened there—is a necessity to obtaining the best SHIPPING sections.

As to the use of full sheets or starters only, in the hands of any

but an expert and in all seasons, I should recommend full sheets WHEN PRODUCING FANCY COMB. Full sheets will insure section work sometimes when starters will not, and they also insure better finish than starters only. As I have previously said in these columns I was slow to begin the use of full sheets of foundation, yet it seems that to keep up to the requirements of the present we must use them.

I like yet to use starters only sometimes, but just when those sometimes will be is hard to anticipate; to know when needed and to prepare in advance just what is needed is almost impossible. If a flow has been rather free and continuous, there comes a time at the slowing up when the colony has a surplus of wax, and if we could anticipate and so arrange as to have starters for the colony to work from just at the right time, we could have comb built without cost, that is, so far as secretion work and honey consumption by the bee is concerned. But, as intimated above, we cannot tell beforehand just when such conditions will be on hand, if at all; consequently if one has many colonies and much work, he cannot always be ready for the contingency to take advantage of it. Experience and observation lead me to the conclusion that until we can positively control swarming in a practical way, and until we know more of the scientific management of bees than we now do, we must put up with using full sheets of foundation.

T SUPERS.

Also in that same 15th chapter I made reference to the T super as my preference among the supers of the present. I still hold to the same opinion, partly because Friend Doolittle in former years instilled into me an aversion to having many "STICKS AND SPACES" mixed up with

the bees and honey, and partly because of its ease of construction and handling. If I had a special trade in fancy comb in which the customers must have strictly clean and white wood in the sections and would pay for same, I could then think of using a close-fitting, wide-frame completely covering the section; but for the general trade I have never found use for such clean white wood, and as for the honey itself and the finish thereof, it will be just as nice in a T super. My supers have the T's fastened permanently in them, are always ready, and no lost T's.

I consider the complete protection of the outside of the section to keep off propolis such as will be placed upon the FACE of the wood to stain it, as one of the very foolish expensive things that bee-keepers are asked to do. I consider this one of the very class of things Doolittle has been kicking against right along, and why he should advocate this very white section "fad" I do not understand.

I use the T super because of its very simplicity, and because I have never yet found a pattern slat or section wide frame of 4 sections length, but that it would sag or allow in some way of the chinking in around the edges of as much or more propolis than in the use of the T.

The 4 section wide frame does give an advantage in putting on a FEW sections at a time on weak colonies, etc., but as before stated, that is not generally practicable except with the few colonies, is not suitable for large apiaries, and where one makes a business of honey production. I can put on and take off a whole super while I would be putting on or taking off 4 or 8 sections in the wide frame.

Loveland, Colo.

Recapitulation by G. M. Doolittle.

"Interchangeable Hive Parts."—

I have read the first part of Bro. Aikin's article over carefully twice, and I have come to the conclusion that either he or myself, or both of us, are laboring under mistaken ideas. When I read about those "slow, tedious flows," in which he had nothing but part filled sections all propolized over, I was about to tell him if he would put on only what sections he believed would be filled at one time, and then if the season changed for the better add more, he would have none of the trouble he speaks of regarding sections that "cannot be marketed as comb honey," and if he would practice a gradual narrowing down in the same way at the end of the season, he would in nine seasons out of ten, have his sections of honey so thoroughly completed that he would have scarcely enough which was not marketable, to supply his real need for "bait" sections. But I see by reading on further that he throws the matter of "location" at me, and seems to think that were I in Colorado I would "tumble" to his ideas and give up all of my experience of the past, as useless, only in central New York. Well, perhaps I should, but just at present I must be excused for not believing such a thing. We have slow, tedious flows here, and especially was the past season, 1899, one of them, yet I managed to secure an average yield of about 67 pounds of section honey per colony, while very little, and in many cases not any honey as a surplus, was secured about here, 1899 being known as the poorest honey year during the past quarter of a century, by those who managed their bees on plans similar to those recommended by Bro. A. And this honey sold for between \$400 and \$500, and that from only the smaller part of the apiary, as more colonies were used for queen rearing, of the spring count, than were used for comb honey. Had I used the Aikin plan, in all probability I should have

been like the rest, with few pounds of marketable honey, and many unfinished sections; or perhaps, some little extracted honey, with very *little, if any*, less labor. Bro. A. says he does "not want to be wasting time putting on a half dozen pounds room at a time; I want to give the colony what they are likely to need, then go about other work. That sounds very much like James Heddon of the past. "Fussing," *fussing*, **FUSSING**, has been thrown at me all along during the last quarter of a century, yet more than once, beside the year 1899, have I proven that it is just this *fussing* in bee culture which pays the best. "Go about other work?" Will Bro. A. tell us what I could have gone about to produce \$500 during the time I spent, *over and above* what I should have spent had I used his plans? Would it have been farming for myself at the rate experienced by the most of our farmers, which finds them at the end of the year about where they were the year before? Would it be the book agency business, making myself a nuisance to everyone I "button-holed" and retiring with just about a living? Would it be going on the road breaking stone, at which the "tramps" are put so that they can secure a meal of victuals and the station house to lodge in? I want it understood that *any* fussing that pays at the rate of \$5, \$10, \$20, or \$30 a day, is the kind of "play" I enjoy, more than leaving such play to "go about other work" that brings in only a pittance compared with an *enlightened* fussing with bees. But I have not the slightest ill feeling toward Bro. A., or any other person who does not agree with me. It is only a feeling of pity I have for them.

The Best Shipping Sections.—Did the reader notice what was necessary in obtaining the best shipping sections, in Bro. A.'s article? Well, I am with him regarding *full sheets* of foundation in sections, and where such are used I

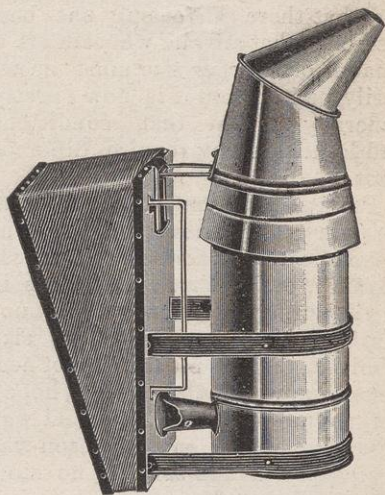
do not see any need of bottom starters, and I *never* could see wherein enough foundation was saved between the full sheet plan and the bottom starter plan to pay for the extra work of putting in the bottom starters, and that is wherein I said, "no bottom starters for me." If I am wrong on this point I am ready to be set right by Bro. A., Dr. Miller, or anyone else. But about the best shipping sections, I have this to say, that the *best* shipping sections are those upon which the shipping quality depends upon the *section* holding the honey rather than the *secure fastening* of the honey to hold the section together. Let me explain a little: Some years ago I was at a noted manufactory of bee-keeping supplies, and I was shown some comb honey in dovetailed sections. I picked one of them up, taking hold of the edge of the *section* with thumb and fingers, as everyone should always handle sections of honey. In talking regarding the quality of the honey, I chanced to take hold of the bottom of the section with the other hand, allowing it to hang downward, when, with a thud, the honey and the top and sides went to the floor. I was chagrined, for up to this I had never dropped a section of honey, and I supposed this one had slipped from my fingers. Seeing my chagrin, the proprietor said *that* section did not have the comb fastened very well at the bottom. Then I saw that I had the bottom piece of the section still between my thumb and fingers, while the smashed honey lay on the floor. To not appear too awkward I said, "I see now, you calculate that the honey is to hold the section together, rather than the section the honey." And right here I wish to say that very much of the "broken honey during shipment" which is reported, comes from sections which are not made *rigid* enough to stand the many jars necessary during transit without going out of shape. *Rigid* sections, put up in equally *rigid* cases, will overcome very much of the

breakage of comb honey during shipment.

2 to 3 Cents Per Pound More for Clean Sections.—That is what a writer said in the American Bee-Keeper, during 1899, and he believed that the sections should be "snow white" and so protected that no propolis could come in contact with the "face" of the wood, or else the face sides of the wood should all be run over a sand paper machine, where propolis was allowed to come in contact with the wood, as in the T supers, and yet, here we find Aikin going right square against a saving of from two to three cents a pound more for honey, simply because he has become accustomed to think there is *nothing* equal to the T super. Well, all-I have to say regarding the matter of surplus arrangements is this: I have faithfully tried nearly every kind that has been put before the public, and *all* of them except *properly* made *wide frames* are piled up in the "exhibition" heap, as none of them had any advantage, *all things considered*, over the wide frames, while many had positive disadvantages and this I would say, no matter whether a *few* sections are put on at a time, or whether enough for the *whole season* go on on at once. *Properly* made wide frames holding either two, three, four or eight sections, will not sag so as to allow of propolis being "squirted" around the sections. I know very many of them do, but that is because they are not made so the four sections *just* fit the frame, and they are not properly keyed up also. But Bro. A. is very much mistaken in thinking that it is Doolittle that is advocating "this very white section 'fad'," for Doolittle never advocated any such thing; neither do I believe that consumers will pay any more for the same quality of honey stored in *very white* sections than they will for the same quality of honey stored in "seconds", as they are called, the writer in the American Bee-Keeper to

the contrary notwithstanding. If I did, I should not be using "seconds" for sections all these years as I have been. What I believe is, that after the sections are *filled* with a nice *white* comb of *honey*, the sections are *rarely* looked at, either by the *producer* or the *consumer*, but it is the *beautiful comb* honey that is looked at *ever* afterward, and it is for this reason that Doolittle has been advocating taking off the honey while the *combs are snow white*, all these years, rather than "white sections," as Bro. A. imputes to me. I don't guess at the matter; I *know* that snow white combs will sell both in the New York and Boston market at from 2 to 3c per pound above those left on the hives till they are colored, each having the same quality of honey, and an experience as to the selling price of the two during the past 15 years, is the *reason* of that "know."

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



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COMMENTS.

DR. C. C. MILLER.

Over in Germany it seems to have been settled by the higher powers that the nineteenth century has been rounded out, and although an occasional bee journal may make a wry face over it, they have all fallen into a reminiscent mood, and recount what has been accomplished in the past hundred years. On this side the water, not many of us are willing to admit that the first century could have closed until 100 full years were over, so we count that we have another year to bring up some fag ends and to squabble a little more over the things we can't agree about.

The size of hives is still an unsettled problem, but some advance has been made, since instead of thinking that there can be only one best size, and that anyone who adopts a smaller or a larger size must necessarily be in error, it is now pretty generally agreed that conditions and localities may require different sizes.

Plain sections and fence separators are yet a bone of contention, some insisting that they are a great advance, others that the advance is in the wrong direction. Is it not just possible that, as with the size of hives, the same rule does not necessarily apply to all? I had hoped before this to have settled what was best for me, but the past season was against me, as the bees did no storing till the usual time for storing was over, after which time, I am thankful to say, they seemed to do their best to make up for lost time. So far as I did try them, I could not feel very sure there was any difference except in one case. I filled a set of supers, perhaps a dozen in number, with both kinds of sections;

one side inset sections with plain separators, the other side plain sections with fences. Where there was any difference it was in favor of the old style, the bees advancing these a little ahead of the others. I cannot understand why this should be so; for certainly freer communication if it did no good should do no harm. There is a bare possibility that there might be in some way an advantage given to the old-style sections, but so far as I know, they had an equal chance. Whether the next season might show the same difference is uncertain, for bees are freaky things.

I am sorry to say that the plain sections have some advantage in the way of looks, for a plain section is filled out more plumply. I remember years ago hearing James Heddon, when speaking in favor of producing sections without separators, saying that a separated section had such a lean look, and the forceful way in which he spoke that word "lean," made it appear very lean indeed. Just the difference in leanness that there is between separated and unseparated sections, that there is between the inset and plain sections. I say I am sorry to say these things, for if there is a difference in favor of the new sections as to appearance to such an extent that they will sell better, then in order to keep up with the procession I shall be obliged to change, and the change cannot be made without some expense. I know nothing about it yet from actual trial of the market, but so far as I can judge from appearances, if I do change entirely, it may be to plain sections $5 \times 4\frac{1}{4} \times 1\frac{1}{4}$. This gives a little larger surface than the old sections, although hardly equal in weight.

The matter of hive covers has had considerable attention, and I hope

it may have still more attention. The Higginville cover was an advance, and when the ridge piece was channeled and had the shoulders of the two side pieces projecting up into it, allowing water to enter only by running up hill, that was a big advance.

Suppose we talk a little about what is needed. We need a hive that new or old will always be water-tight; that will make a close fit and will stay a close fit when it is old; that will be warmer in winter and cooler in summer than the covers now in use, so that it will practically be a cover with a shade-board over it. In some of these particulars a plain board cover is all right. If of one solid board, it is water-tight. But in time the board will warp, the outer edges curling up. It was a bright idea in the Higginville cover to have the outer edges of the two principal boards beveled so that they were so thin that the nails in the cleats would firmly prevent their curling up as they do when left full thickness. But that does not prevent twisting and I doubt whether you can make a cover with the grain of the wood all running the same way that is not in danger of twisting in time to such an extent that it will not make a close fit. This may be hindered by having two surfaces, the grain of one running lengthwise and of the other crosswise. This kills two birds with one stone; for the two surfaces can easily have an air-space between, making the cover cooler for summer and warmer for winter.

At one time I said something about this in PROGRESSIVE, and a friend kindly sent me a cover something after the plan I have mentioned, and I am very sorry to say I have lost his address. I had, however, for a short time had fifty covers in use after the same plan. His

and mine are covered with tin; good, but expensive. Mine have the advantage in the matter of weight, weighing only $4\frac{1}{4}$ pounds, while his weigh $10\frac{1}{2}$. His are better than mine, however, in one respect, for a layer of paper inside helps to make close any cracks that might be left. Mine are made of $\frac{3}{8}$ stuff, and seem to be heavy enough. The grain of the upper surface runs lengthwise, and of the lower crosswise, with a $\frac{3}{8}$ air-space between, made by a strip $\frac{3}{4} \times \frac{3}{8}$ nailed about the edge between the parts.

I would like to see tried another cover that could be less expensive and might be just as good, using the Higginville as a basis. Take a Higginville, perhaps a little lighter than usual, and have under it another surface $\frac{3}{8}$ thick or less, with a $\frac{3}{8}$ air-space between, having the grain of the under surface run crosswise, the cover fitting entirely flat upon the hive with no cleat at the end projecting downward. Maybe it wouldn't be as good as I think, for you never know till you try just how a thing will turn out, but I think such a cover would be worth a trial.

Marengo, Ills.

SPENCERIAN PENS

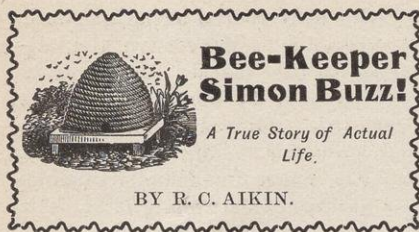
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BY R. C. AIKIN.

This story began in the Dec. "Progressive."

CHAPTER X.

A Citizen's Duty.—Apiculture.—
Man and Nature.

To reach perfection—no, we will not say perfection—we will never be perfect in our knowledge in this world—but rather let us say, to reach a high degree of attainment in any art or science, one must make a special and continued study of the things in which he desires to excel. Never, thinks Simon, can he cease to think and act in the social and political affairs of mankind; these are the bounden duty of every citizen. The more free the government, the greater is the citizen's duty. Ours is a free government—a republic. One has well remarked, "A despotism may have *subjects*, but a republic, *citizens*." The citizen is a ruler, and to rule well must give attention to his citizenship.

Neither, thinks he, can he forego to inform himself, and practice, too, in other industrial pursuits, for one must experience the many blessings that are for mankind, in order to become the full well rounded out man. Who can so well sympathize with the sick and suffering as he who has in like manner suffered? The same is true of enjoyments. The greatest poet that ever graced the written page, was one who filled almost every place of service, trust and honor, from an humble shepherd to the kingship of a great and mighty people.

No, no, dear reader, Simon is not the man to become so engrossed with one thing that all others must be neglect-

ed. The best man is the one rounded out by a wide knowledge and experience.

But a man can taste of many blessings and enjoy them, too, yet he may add to his own and his brothers' welfare and success by a thorough knowledge of some special pursuit. Thus Simon seeks the true knowledge of the science of bee culture in all its branches, and as he attains to greater knowledge, freely gives to others every advance idea. The greedy mind seeks to cover up knowledge to the detriment of others, that thereby he may selfishly enjoy it. Around the corner or behind some screen, behold selfish man eating in solitary delight the rich fruit of advancement, while on the common of industrial life lie the corpses of those who could and would make life richer and brighter for the miserable man, hiding that he knows should be freely imparted and shared. No, no, brother; "freely ye have received, freely give."

Come with Simon to his bee yard. See him open hive after hive to learn of the condition and needs of the various colonies. The time is early spring, the day a soft, balmy one. Bees are sporting from the various hives, some downy and clean-looking, young and inexperienced. These try their new wings in little short flights, off a little and back again, like the child taking first steps within the fond parents' reach. One successful little trip encourages to another until the confident learner becomes tired and retreats to feed and rest. The master sees and knows that within is the warm nursery and a mother on duty.

Other bees are passing to and fro. They are browned with their days of labor both within and without. Their flight is more vigorous, and away to the distance with a directness that implies a duty to perform. The return resembles that of the man whose duties are done, coming home with a head of the golden grain he has labored for.

The master knows that a store of that which is life, seed and fruit, in the plant and tree, is being laid by within to supply the life of the growing members of that family.

Still others come and go. These sail out like the last, but return with no visible sign of deeds accomplished, save a tired note and manner. Hold a bit. The master sees, 'tis more than tired. The rounded abdomen tells of nectar or water within—stores of food for old and young.

Oho, little bee, your family doth thrive,
So busy are you, I will not stay:
Your neighbor I'll see in this other hive.
I'll come again some other day.

Out at the door the next are seen;
Many are resting, looking weary and worn.
Where are the youthful, downy and clean,
All seem so dull, listless, forlorn.

Liveth this queen who reigned so long?
Why are her daughters so careless—'tis sin.
The master looks grave; somewhat is wrong;
Those who should labor lack luster and vim.

He strikes the hive; within a sound;
Instead of roar, a hollow redound.
He lifts the cover, finds little but air.
The queen is gone—O, who knows where?

Few workers are there, old or young bees;
Those on the step the remnant he sees.
They never again the sweets will sip,
Their life is gone—by fate 'tis nipt.

So thus he goes to all the hives,
By eye and ear the truth derives,
And judges true of queen or bee,
By all the things his eye doth see.

Man is social; so the bee. As man must unite to accomplish great things, so must the insect in great numbers be. The season advances, and with it the colony grows, until the hive is full to overflowing. Nature will not have idle or useless forces, and unless the master finds a way for the overflow to expend itself, it will find its own way. He brings from his store house additions to his hives, and there is room made for the ever increasing numbers to busy themselves in.

A multitude of flowers are in the fields, and nature is calling for the busy insect that must carry the fertilizing

pollen from bloom to bloom, and nature answering to nature sends the hungry bee in search of food. She finds the nectar within the bloom, appropriates it and is invigorated thereby. Aye, so is the bloom that hath given the sweet. The bee cannot thus follow its instincts and partake of the nectar, without giving something in return—the pollinization of the bloom. Simon wonders and reasons. Can a man follow a reasonable and pure motive in the pursuit of wealth, happiness or fame, and in turn not benefit those from whom he receives? The insect and vegetable world have both given and received, and so are mutually benefitted. But man, reasoning man, it is he who reverses nature and would cause all to yield to his greedy grasp, could he wield the necessary power.

The strong colony, with its great number of workers going to and fro, builds and stores to the limits of its hive. Nature, by the nectar in the bloom, continues to call for the busy bee that thereby the pollen may be transferred, the bee by instinct collecting the nectar and pollen, thus carrying out nature's designs. So long as the bee family has room and no idlers, nature is satisfied; but increasing numbers and decreasing opportunities for using their energies and nature demands new conditions, and out comes the boiling, tumbling mass, a swarm. The master reasons that he may direct nature, and, instead of this new family, because of cramped quarters, he provides the necessary conditions and gets honey instead of numerous colonies. For that end he gave the extra room.

In spite of his reasoning and the additional room, swarms will come. Why? Because the requirements were but partially supplied. 'Tis true that man can supply the necessary space to receive all the stores that can be harvested by a colony, and thereby remove one of nature's tools or means of awakening the bee instinct, but this falls far

short of removing the instinct itself, and all the things that cause it to act. Though a man's right hand be removed he still can feed himself and in a large measure perform his labors, so to remove but one, or at best but a part of the means used by nature to bring about her ends, will not entirely control the bee and make it completely subservient.

But how far may man go in assuming to control or direct nature? Indeed this is a hard question for finite man to answer, yet he may reason upon the matter. God created man in His own image. He enjoys many things as it were in common with God. God reasons; so does man. Man may be said to be finite God. The infinite God is nature. The Infinite may permit the finite to exercise some of His minor functions, even as the servant of his master.

Is it, then, not reasonable that man should in large measure control many things in nature? Surely yes. Man should not attempt the unreasonable and violent, but the reasonable and just. That man may eventually so understand the nature of the bee as to become its real master and control it to subserve his interests, and that this control will be to the extent of a full mastery of the swarming nature of the bee, is the belief of Simon. To this end he is thinking and laboring, and he has faith that the goal will be touched.

CHAPTER XI.

Apicultural Science.—A World's Fair Incident.

Until the science of bee culture shall have so far developed that the control of swarming shall be a fact, the apiarist must be governed in his methods by other principles. The man busy in some worthy cause or calling will be less prone to fall into other or less useful practices. Just in the same way, while the bees, as a family or community, are kept busy storing honey, there is less to cause a desertion of the home

by swarming. Knowing this as a true principle, Simon uses it to his advantage in his apicultural work.

In the production of extracted honey this principle is more easily applied than in producing section or comb. Large combs being used in the surplus apartment, two things work together to keep the forces busy. Large combs being used makes it necessary to use a large chamber, and the combs being there draw the force of bees there to fill them, and being there in large numbers and the space ample for the storage of the gatherings, tends to keep the family contented with their home, and work goes on uninterruptedly, and the master is happy because of a goodly stock of sweets.

The production of comb or section honey brings about a different condition. The smaller surplus room, or, what seems to the bee equivalent to small room, the room divided into many compartments, and the additional fact of no comb in which to put the honey, tends to make the colony seem crowded. The brood combs do indeed become crowded with honey and brood, and the slowness or reluctance of the workers to build store comb in a chamber more or less detached or cut off from the main body of the hive, causes a real crowded condition of the workers themselves. The crowding, the turgid condition of the hive, heat and general discomfort and idleness, awaken and make active the swarming instinct.

Although Simon thinks the day will come, and in the near future, too, when swarming will be under the control of the bee-master, yet he believes that until a greater degree of wisdom is reached in some other matters pertaining to the pursuit, it is for the best that swarming is not under full control. Such control would help those so inclined, to monopolize the stock. Now many swarms stray and become the nucleus of many a new apiary: then no new apiaries except by purchase. Now

increase beyond the needs and wishes of many cause the sale of many, many, colonies and so get stock into the gardens and orchards of the masses: then those in control of stock would turn it to personal advantage. The full and complete control of swarming might reduce the numbers of the insect in our land, which would prove a calamity to many. The bee family is not too plentiful now.

Our Simon, bee-master, talks of many things that seem strange to some, and well he may. He has been practicing in an age of advancement. He well remembers the day when honey was not on sale in many stores; now it is in almost every part of our country. Today it is in small wooden frames holding about one pound each, then in big frames or boxes, or on big plates or crocks in a broken mass and dealt out with a big wooden paddle.

He has seen the one pound box, the extractor, comb foundation, factory made hives, the trade in queens, the bee escape and many other things come into general use. So rapid have been the changes in methods and appliances that he could scarce keep up. So like a favored and vigorous child has the pursuit grown, that scarce was a garment well worn till it was outgrown. The child of scientific bee culture is indeed a thrifty one. Has she grown fast? She will yet grow. Never since her birth have her prospects been so bright. The facilities for her advancement are greater today than in all her history.

Many men of ability are pushing forward scientific apiculture till it must attain to a full stature. The friends who stand with Simon and watch, must yet see great things for the bee. She had a place in ancient history, and will in modern and future.

But who shall be the pillars that shall build up this worthy industry? Let Simon tell the kind they must be. It was in the days when the Nebraska

and Colorado plains, all that vast tract of prairie between the Rocky mountains and the Missouri river, was one stretch of open country and haunted by the red man and thousands and thousands of buffalo and antelope. The great Pike's Peak and the village of Denver were trading places. In those days the Iowa pioneer plied the business of teaming by great ox wagons, and went in companies or trains for mutual protection and help. Among the many neighbors of Simon who made these long trips, was one plucky Irishman. He had made trips loaded with butter, eggs, chickens, meat and such things.

In those days there was no railroad to Denver, and provisions were very expensive. Our wily Irishman concluded to take a full load of eggs. The wagons were great vehicles that would carry tons and drawn by many yokes of oxen. One of these wagons was packed full of oats and eggs. A layer of oats, one of eggs, and so on till the great box was full. The jolting of the wagon broke many of the eggs and so wet the oats beneath, while rain from above wet them on top. True to the nature of damp grain in a body, the oats became hot and so cooked the eggs. Learning the condition of his load, the disgusted but not daunted Irishman pulled aside and dumped his hundreds of dozens of eggs upon the desert, saying to his comrades, "Dade, boys, go on and sell your loads and I'll stay here and do something till you come back." True to his word he was there when the boys came back and had as much money as they. He had found employment somewhere and worked in the meantime.

The bee-keeper must work. The bee has been credited with working for nothing and boarding herself, but Simon has not found it so. We must be up and doing. There are many obstacles to overcome. We must obtain vigorous working qualities in our bees,

improve methods of management, systematize the distribution and marketing of the product, and cause the people to know the value of using the best of sweets in their homes.

To winter the bees successfully is one of the great unsolved problems. In the tropical climate the matter is not so perplexing, but in the temperate zone where the winters become extremely cold at times, the problem is indeed a most serious one. The reader has already been told how Simon twice lost almost his entire apiary, each time numbering almost one hundred colonies. One of these winters was a continuous cold and snowy one, for five months the bees confined to their hives. Such confinement results in two grave dangers: The first is that the colony will be gradually reduced by frozen bees until the weakened cluster is frozen through and through; and the other is diarrhea. This problem Simon believes will be solved, too.

Indeed, Simon is yet at work as hard as ever. Year in and year out he works away as undaunted as the Irishman that scooped the eggs out on the prairie for the coyotes. He is the same Simon as of old, ever helping his fellows by imparting such knowledge as he possesses. He is in conventions, in the public prints, gathering, seeking and finding.

He was at the great world's fair in 1893, and at the national gathering of apiarists. He was there and got away, yet as it were by magic. It is a wonder he ever escaped with his life. At the great union depot one of the great days of the fair, he got caught in a jam of people going down that stairway to the train yard, jammed so tight that all he could do was to simply move as the crowd did, and there he stood expecting any minute that the whole mass would sway and fall, crushing and trampling each other.

(Concluded in our next).

Wanted.

Alsike clover seed and Japanese buckwheat. If you have any to sell, write to us. Address,
Leahy Mfg. Co., Higginville, Mo.

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



Another bee-keeping sheet bearing aloft upon its title-page the sweepingly comprehensive inscription, American Bee Journal, may be confidently expected to call once a week, and because of this, along with many other reasons, it has honestly earned the now quite familiar cognomen, the "Old Reliable."

I sometimes wonder if in these days of wagging of tongues on the subjects of imperialism and expansion, just according to which of the two great political parties the speaker belongs, ye editor's heart swells with befitting pride as he finds his rightful territory extending into what was formerly foreign islands of the sea. How's this, Bro. Y.? Loose apparel getting tight-fitting? Hat band still sound? At any rate I am convinced, inasmuch as the spirit of reaching out has so far developed as to become dominant, Editor York will not be left out in the cold, but will be found right in the crowd, reaching out for all he can catch, with which to serve the readers of the American Bee Journal. I came near putting it A. B. J., but didn't we catch it for thus abbreviating only a short time ago? Presume he did not want his paper called a bee jay, as that kind of a bird is one of the worst known enemies to bees. They will dart down and pick a bee from the alighting board as deftly and surely as a sharpshooter does his man. Can one condemn them? They know a tooth-

some or sweet morsel on sight, and are governed by the laws of self-preservation, just as ye editor knows relishable and appreciable articles and hustles around to secure them with which to maintain life in his journal.

Among leading attractions of the American Bee Journal are the reports of the various conventions. Next to attending them in person, is attending them in imagination through the medium of these columns. The latest one reported is that of Colorado, the proceedings of which disclose so much enthusiasm as to almost incite feelings of envy. And as if scenting danger from afar, one of the editors sounds the warning that Colorado is already fully occupied. In discussing the hive question, one enthusiast said, "Give me any old box with movable frames, and I will produce as much honey as with the latest hive." In the midst of this talk, E. R. Root quoted Mr. Coggshall as having said, First, locality, next, the man, and, lastly, the hive. Yes, furnish the man and the locality, and all other adjuncts will follow. The man makes the difference between the refined gentleman and the groveling inebriate; the hustling individual known as the tactful business man, and the tramp; the millionaire and the beggar; in short, the difference between success and failure. Hence, the right man in the right locality will not be long in bringing the right hive to the front. The question of labelling coming up, it was decided that not only the name but the address of the producer should appear on the packages. A sort of reciprocal protection in the appearance of both. The name protects the buyer and the address protects the producer in the way of finding him a new market, for a pleased consumer will often write to

the source of a production and buy direct, not recognizing the absolute necessity of the middle-man. Might not this be styled high protection? On page 52, Jan. 25th No., we find Harry Lathrop saying:

"There is no sense in the idea that honey must be 'white' in order to be good honey, no more than there is in the idea that honey in tall sections is better than it is in square sections. My honey this year was produced from white clover, goldenrod, asters, and heart-ease, all blended together, and many people prefer this honey to any other. We should be shy of those persons who go to bee-keepers and offer a big price for 'strictly white clover' or strictly something else, when they know he has none that is unmixed, and expect to buy his mixed grades, for about half what they are worth. Honey of good body and flavor need not go begging, even if it has been produced from a variety of flowers. In conclusion, I would say to the producers, If you must sell your honey at a low price, it is better to let the jobber have it than to sell it to the retailer. The jobber knows what it is worth, and will not sell it at a price to demoralize the market as the retailer would be very apt to do. The best signs of the times for bee-keepers is the fact that buyers were lately going about the country picking up honey in small or large lots. This indicates that soon there will be an established market value for honey, the same as there is for wool and other products of the farm."

On page 91, Feb. 8th No., M. M. Baldrige corroborates these remarks in this wise: "I happen to know that Harry's statements are not far from the truth. Most probably the majority of bee-keepers have an inkling in regard to these facts, but the question remains, how are we going to get the general public to believe?" Alas! it is to the taste of a whimsical public we are compelled to cater. Just how to persuade an over-indulged public to take leave of pet whims and notions, is a problem so deep that the solution seems to belong to the distant future. Educate it, do I hear you say? Yes, possibilities are more plenty than we oftentimes are inclined to admit, but still when we are at the beginning of the alphabet, an

education seems far distant. Yet once attained, it will work wonders. Observe if you will what high rates of value are placed upon novelties. If only our product could be made to appear as some new-fangled fad, it would go off like hot cakes. But the plain, old-fashioned Biblical name of honey, everybody knows just what that is. No new style there; too much out of date. To be sure, it is claimed that "Pure Honey" should constitute a prominent part of every label, which might signify to some that there existed two kinds of honey, pure and impure, but that isn't sufficient scope. Couldn't a name ending in some of the popular affixes, as "ine," "rine," "line," etc., be invented for honey? Should it smack slightly of humbug, it would only be the more taking. And, Mr. Editor, since it is quite the fashion for bee-keepers to promptly claim credit for any original idea, will you not see to it that this brilliant innovation is protected. However, I am compelled to confess the thought was not wholly original with me, as it was suggested by an article headed, "Religion as a Factor in Our Oil Exports," which went to show that the ends to which trade interests may go to kill competition and secure business for themselves were without limit. It having been whispered to the Mohammedans of northern Africa that American oils contained the product of the hog, they were about to be superseded by French and Italian oils, which, it was claimed, did not contain the forbidden pork, hence they were purer and better. American oil, however, had found favor to the extent that a prominent Mohammedan was sent to the Department of Agriculture to investigate. It is thought that the scruples of himself and of the Mohammedan consumer can be satisfied as to its

composition so that a good market for an American product may not be lost, cottonseed oil being exported to Africa to the amount of nearly a million gallons annually, to say nothing of other Mohammedan countries. Should they be convinced that American oil contains the Koran-forbidden hog, and resolutely avoid it, and devote themselves to the purer product of France and Italy, they might be in danger of defeating their own purpose, for the reason that France annually imports from this country 12,000,000 gallons of cottonseed oil, and exports annually about a like amount of "olive" oil. It is said that Texas is the greatest producer of olive oil of any state or country in the world. It is sent out in barrels and in tank ships. It does not appear on the manifests as olive oil, but after it has been placed in fancy bottles and had nice labels, covered with French and Italian words, placed on it at the ports of the Mediterranean, and when it has paid a duty to get back into the United States, it is recognized as the genuine simon pure product of the olive, fit to season the salad of the epicure. Before making this double trip across the ocean and taking on foreign dress and airs, this olive oil is known as cottonseed oil. The day may come when Americans will consent to dispense with travel as an essential in the finishing of olive oil, and will call it by its right name and will make it popular to season their salads with cottonseed oil. A very little light on the history of this one article of commerce is proof positive that education works wonders. See, I didn't have very far to drift to discover that could honey only assume new dress and manners possibly it might be received with open arms and command attentions from many new admirers. This

craze for something new has its use as well as abuse. It is a grand power in keeping the world's machinery moving. Through the creation of new styles the merchant is enabled to dispose of over one-half his goods and in some lines over two-thirds, thus making room on the shelves for more, which in turn relieves the factory of its surplus, and keeps hundreds, yes thousands, of hands busy, which means mostly something more than sustenance, not alone to the operatives, but to each individual residing in the great manufacturing centers.

R. C. Aikin, pp. 19, Jan. 11, takes advantage of this phase of human character, where he says;

"Consumers will buy it candied, and liquefy for themselves, and many want it candied when spread on their bread. People buy new things because they are always wanting 'something new,' and if 'tis new to buy candied honey they will do it and soon learn to melt it. I sell my extracted honey in lard-pails nicely painted and stenciled—that is, I used to—now our pails are lithographed. This is the cheapest package, and nice, and with the honey candied, there is no drip or leak. In my home market the prices are very close to that of granulated sugar, the honey being sold when candied. I DO NOT PUT LIQUID HONEY IN STORES, and my honey sells right along, and is fast becoming a staple."

E. E. Hasty comments on this paragraph in these words:

"It's true that people like new ideas, when informed that they are new, and saying, 'This's a new plan; we let you melt your own honey, and buy it so much cheaper,' is quite likely to go to the spot." Page 18.

H. M. Arnd furnished the Chicago convention with the following on the subject of "Creating a Demand for and Marketing Honey."

"From my short experience I find that it is not difficult to sell A No. 1 honey direct to the consumer at a good price, if you go at it in the right way. A man should be neatly but plainly dressed, as his appearance goes far in impressing the purchaser that he has the genuine article from his own apiary. He must be 'up in his business,' always willing and ready to answer the hundred and one questions that

are apt to be asked. I do not know of anything that will get a person quicker and more interested, than the bee subject; nearly all seem to know that the science is full of the miraculous, and are not at all backward in asking all sorts of questions, some of which would stump Dr. Miller or Mr. Doolittle to answer.

You must send out only superior goods. If you have an inferior article, either sell it to some of your neighbors, or to bakers, at a discount, and tell them that it is not first-class; feed it back to the bees in the fall or put it in the vinegar barrel, but never put it on the market as fancy honey.

You must study your trade, and know when to approach certain customers. Some you can sell to at any time of the year, whereas the indifferent honey purchaser can only be reached successfully after a pay-day, or when the thermometer is down to zero. If your competitor has good goods, always have a good word for him. Most of my product goes to Chicago, and by a careful study of my customers, giving them just what they want, and when they want it, I am able to get magnificent prices. I always sell direct to the consumer, and get all that there is in it. I sell my goods on their own merits, not on the defects of my competitors'. I do not try to compete with South Water street, or the corner grocery, but sell as independently as if I were a "trust." I do most of my business in the down-town district, as I have a large acquaintance there, and can meet them personally. I usually go to such places where I am either known, or I might know their forty-second cousin's aunt; if I am not acquainted, I will tell them that I know their relative, and explain my business. I usually have a few sample bottles of honey, and some of my circulars, and place them where I think they will be most effective. If I do not then make a sale and get some encouragement, I will call again later. Politeness, appearance and modesty do a great deal in getting a proper interview, which is one-half in getting them interested and-making a new customer, who, with proper treatment, will be instrumental in getting some of his friends. Twelve pounds of honey is considered a gallon, but my customers get nearly thirteen pounds. You will find it pays to be liberal with your customers. Always rectify any mistakes, even if you lose at the time, for it will pay in the end, as a reputation for square dealing is worth money to any man."

Prof. E. N. Eaton read a paper on "Honey as Food," of which the following are extracts:

"The food value of sugar has been underestimated in the past. Children are even to-

day discouraged from eating candy, which their system craves, and are usually obliged to content themselves with penny goods and other cheap and inferior sweets. And this in the face of the fact that nature has given her most emphatic approval of sugar as food by placing it in almost all animal secretions for the young. It occurs in predominant quantity in the milk of all mammalia; in human kind, constituting over one-half of the entire solids, and double the amount of any other constituent. The sugars are the most available of the heat and energy producers. Recent investigations in Germany, France and Italy have shown that sugar acts as an immediate invigorator when fed to persons in extreme fatigue. People at extremely hard work immediately feel the recuperating effect of a sugar diet. The governments of Germany and the United States have added sugar to the rations of their soldiers."

On which E. E. Hasty comments in this wise:

HONEY THE THING FOR CHILDREN.

Prof. Eaton, on page 25, says a nobly forcible thing when he tells how almost all people try to repress children's appetite for sweet—right in the face of the fact that more than half the solid contents of mother's milk is sugar. Who will manage it to inform the Creator that He didn't know what children need?"

The Apicultural "Ten Commandments" as revised by Hasty also appear in the same article. I give them in full:

THE APICULTURAL "TEN COMMANDMENTS."

Ten bee-keeping sins are held up to our view on page 42; and of course the apicultural ten commandments would be the "thou shalt nots" of these ten. This critic kicks—won't accept them short of opening the Ark and seeing them on the stone tables. No. 4 is not a sin, and 7, 8 and 9 are quite debatable. He moves the following substitute.

1. Thou shalt have no other craft BEFORE bees.
2. Thou shalt not bow down to other crafts, by calling thine own craft, "FUSSING with bees."
3. Thou shalt not say naughty words when thy bees salute thee, neither when they cross thine expectations, neither when they clean out thy nuclei.
4. Remember and have a Sabbath corner in thy soul for SOME other things beside bees. Thou mayest have bees on the brain, but not on the whole of thy brain.
5. Honor the bee-book, which is as thy father, and the bee-paper, which is as thy

mother. Whoso curseth father and mother, let him die the death.

6. Thou shalt not kill—neither thyself by overmuch worriment, neither thy bees by overmuch neglect in the fall, neither thy Gentile neighbor by overmuch bee-talk.

7. Thou shalt not commit adulteration—neither at the glucose barrel; neither shalt thou accomplish a similar thing by extracting thine honey too soon.

8. Thou shalt not steal thy neighbor's cash by selling him poor honey. Thy honey shall be pure, and clean, and ripe.

9. Thou shalt not bear false witness in favor of thine hobby—for the same is false witness against thy neighbor. Behold he will try to ride thine hobby, and fall bleeding by the wayside.

10. Thou shalt not covet for an out-apiary thy neighbor's range; neither shalt thine eye be evil toward thy Gentile neighbor's few hives; neither shalt thou covet the honey thy bees need for food. Thine heart shall be large toward every creature; for, behold, the same God which made the insect and the angel, made thee."

Naptown, Dreamland.

Fruit Tree Pests.

The life of the average fruit grower and farmer seems to be a constant struggle against almost countless insect pests. However, for such as attack and injure the tree trunks, there is a most highly endorsed remedy in Otwell's Tree Paint, patented and manufactured by W. B. Otwell, of Carlinville, Ills., whose ad is found elsewhere in this paper. Mr. Otwell in advertising his paint, makes the statement that he was "born in an orchard;" not literally of course, but evidently intimating that all his life he has been intimately acquainted with his subject. He is making a special offer for agents at this time, and offers inducements by quoting remarkably low prices. We understand that those who have undertaken the sale of this article have done well financially, and just at this season, before the active spring work sets in, many of our readers could spare the time and "coin" a few extra dollars. The matter is worth investigation. Please refer to the ad, and write Mr. Otwell, mentioning this paper.

Headquarters in Chicago for Bee Supplies.

Good goods, right prices, prompt service.
Catalog free.

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

GEO. W. YORK & CO.,

118 Michigan St., Chicago, Ills.

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 call attention to Mr. J. W. Kuhn's advertisement of Siberian millet seed on another page of this issue. We received a sample of this seed, and it is very fine indeed. We believe there are many localities in the west where this millet could be grown with considerable success and profit.

WE have received a very fine smoker from Mr. T. F. Bingham, of Farwell, Mich. The metal part of this smoker is made entirely of brass. For beauty and durability there is no smoker on the market today that will equal it. We call attention to Mr. Bingham's advertisement of this smoker on another page.

AT the present writing the supply business is nothing to boast of, but we notice up to the first of March our cash sales far exceeded last year's cash business to that date, or to March, 1899. Bees have wintered well, there has been plenty rain nearly everywhere to insure a good honey crop, and we predict a big supply business in the near future.

WE do not remember a time in the history of our business when we have received so many encouraging reports as now. We don't remember to have received one report where bees have come through the winter in bad shape, or loss of colonies of any moment. "Bees have wintered well" seems to be the unanimous report. Later on there will be a large demand for supplies, and there has been no increase in the number of factories or the capacities of

the old factories in the past year, and we will not be able to take care of the trade if the bulk of the orders come at the last moment. We advise bee-keepers to buy goods now. They will be no cheaper in a month or two months hence, when you will need them, and perhaps can't get them promptly.

We copy the following from the American Bee Journal:

"The Western Bee-Keeper was the name of a new bee-paper started in the west a year or so ago. We learn that it has recently turned its subscription list (?) over to the PROGRESSIVE BEE-KEEPER. We did not announce its advent, as we failed to see wherein it had sufficient merit. It certainly was no credit to the printer's art, and we failed to see where it could be of much advantage to anybody—not even to its publisher. This latter opinion has now been verified, by its giving up the effort."

We do not admire this style of jumping onto something that is dead. Bro. York's further remarks on new bee-papers, are more timely, and we recommend them to the careful consideration of those who have in mind the publication of a bee journal.

"While it really is none of our affair, we can't help feeling sorry for the poor, misguided people who think there is money to be made in publishing new bee-papers. In about forty-nine cases out of fifty they have proven to be a delusion and a snare. But we presume we shall see new bee-papers in the future as in the past—with about the usual result."

Don't do it, friends. It will only use up your surplus money, and you will be glad to get someone to help you let go. The PROGRESSIVE was run at a loss three years before we assumed control. We run it at a loss for two or more years; then two or three years more it barely paid expenses; and now after ample experience we are satisfied that the same money and time invested in most any other legitimate business, would pay much better.

ROYAL POULTRY AND BEE FARM.

Wallace's honey gatherers. You can handle them without gloves. Have won five times at state fair. Our poultry has been in warm company. Untested Queen, \$1.00; Tested Italians, \$2.00; Choice Breeders, \$3.00. Eggs, per 13. Light Brahmas, \$1.50; Partridge Cochins, \$1.50; Black Langshans, \$1.50. Brown Leghorns, \$1.00. Write for circulars.

Thomas Wallace & Sons, Clayton, Ills.

References, Bartlett & Miller, Clayton, Ills.

10-Inch Second-Hand Foundation Mill For Sale.

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

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

LEAHY MFG. CO.,
Higginville, Mo

NOW

is the time to subscribe for the
PROGRESSIVE.....

ONLY 50¢ A YEAR.

FARMER BEE-KEEPERS!

Try that grand new forage plant,

The Siberian Millet,

Superior to all others. Withstands drouth like cane. Yields heavily; hay of finest quality; very early, and requires only ¼ bushel of seed per acre.

Seed, extra re-cleaned, \$1. per bushel. Sacks (2-bu.), 15¢ each extra. Circular and sample of seed free.

J. W. Kuhn, Belleville, Kas.

I handle also Golden Beauty Corn, Amber Cane and German Millet; also improved Golden Italian Bees and Queens. Circulars free.

BEES AND QUEENS

Three Apiaries—Three Races.

*Either Golden Italians, 3-Band Italians
or Holy Lands.*

We secured our stock regardless of cost,

Rear queens by the best known methods.

Queen rearing is our specialty. We

have been at it for years. Our Mr.

H. H. Hyde will have charge of
this department.

We want the address of every bee-keeper for our queen circular, which gives prices on bees and queens, besides valuable information on queen rearing, swarming, etc. We are also headquarters for Root's supplies for the Southwest.

Prices, either race, for June, July, August and September—Untested queens, each 75 cts, 6 for \$4.25; tested queens, each \$1.25, 6 for \$6.75. All other months—Untested \$1 each or 6 for \$5.00; tested queens, \$1.50 or 6 for \$8.00. Discounts for quantities. Select tested and breeding queens a specialty.

O. P. HYDE & SON, Hutto, Tex.

Bear in Mind



If you are needing bee supplies of any kind—makes no difference what it is—you can save time and money by sending for our 1900 illustrated 40-page catalog of bee-keepers' supplies, FREE.

We get our supplies from the A. I. Root Co. in car lots; can furnish them promptly at low freight rates. There are a number of improvements in 1900 make-up of supplies. We have the Danzenbaker hives in stock also. BEESWAX WANTED.



John Nebel & Son, High Hill, Mo.

PLEASE don't neglect to mention the PROGRESSIVE BEE KEEPER when answering advertisers.



OTWELL'S TREE PAINT IS THE BEST

thing in the world to keep off Borers, Sun Scald, Rabbits, Mice and Vermin and make trees bear young. Used on Millions of trees in every state and GUARANTEED never to injure a tree. Patented by a man who was born in an orchard. If there's no agent near you send one dollar for a sample gallon, by express, which paints 500 three-year old trees. Only one sample to one address. You can make big money and benefit your neighbors selling my paint. Get control of your territory at once. Circulars tell one hundred times as much as this ad. and are FREE. Address **W. B. OTWELL, Patentes, Carlinville, Ill.**

Please mention the "Progressive" in answering this advertisement.

Made to Order.

Bingham Brass Smokers,



made of sheet-brass, which does not rust or burn out, should last a lifetime. You need one, but they cost 25c more than tin of the same size. The little pen cut shows our brass hinge put on the three larger sizes. No wonder Bingham's 4-inch Smoke Engine goes without puffing, and

Does Not Drop Inky Drops.

The perforated steel fire-grate has 381 holes to air the fuel and support the fire. Prices, Heavy Tin Smoke Engine, four-inch Stove, per mail, \$1.50; 3½-inch, \$1.10; three-inch, \$1.00; 2½-inch, 90c; two inch, 65c.

BINGHAM SMOKERS

are the original, and have all the improvements, and have been the STANDARD OF EXCELLENCE for 22 years.

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 smoke. The Doctor 3½ inch just received fills the bill. Respectfully,

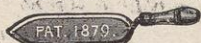
O. W. OSBORN.

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

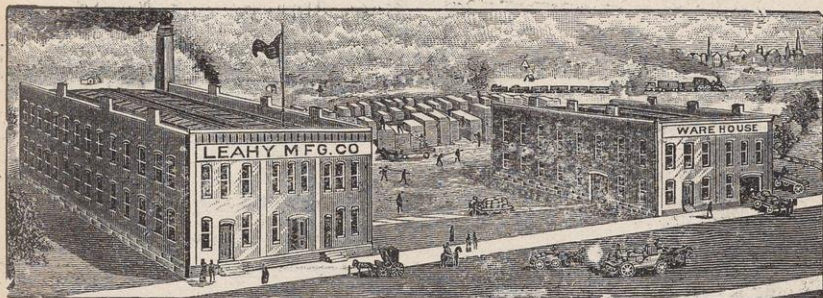


producers use Bingham Smokers and Knives. The same is true of the world's largest producers of extracted honey. Before buying a smoker or knife hunt up its record and pedigree.

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T. F. BINGHAM, Farwell, Mich.

MANY IMPROVEMENTS THIS YEAR.



We have made many improvements this year in the manufacture of bee supplies. The following are some of them: Our hives are made of one grade better lumber than heretofore, and all that are sent out under our new prices, will be supplied with separators and nails. The Telescope hive has a new bottom board, which is a combination of hive stand and bottom board, and is supplied with slatted tinued separators. The Higginsville Smoker is much improved, is larger than heretofore, and better material is used all through. Our Latest Process Foundation has no equal, and our highly polished sections are superb indeed. Send 5c for sample copy of these two articles, and be convinced. The Daisy Foundation Fastener—well, it is a daisy now, sure enough, with a pocket to catch the dripping wax, and a treadle so it can be worked by the foot. Prices as low as conservative, considering the big advance in raw material. If you have not received our new catalogue, send for it at once. Sample copy of the PROGRESSIVE BEE-KEEPER free. Address,

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Having disposed of my Supply Business I am able to give more time to my bee business, and can promptly fill all orders for Queens, bees by the pound, nuclei, and full colonies. Send for my price list, and see my prices, and what pleased customers have to say about my Bees and Queens.....

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QUEEN BEES.

	1	6	12
Untested—Jun., July, Aug. and Sept.	\$ 75	\$4 25	\$ 8 00
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My queen are all bred from selected stock, and are bred for beauty and business.

Address, **G. DAVIDSON,**
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Albino Queens.

If you want the most prolific queens, the best honey gatherers, the best comb builders, and the hardest bees known, try my Albinos. Untested Queens, \$1.00.

J. D. GIVENS, Lisbon, Tex.

FORTY PICTURES!



The editor of the Bee-Keepers' Review, in July last, spent nearly three weeks with note-book and camera among the bee-keepers and supply-manufacturers of Wisconsin, bringing home with him many items of interest and value, and about forty views of apiaries, hives, factories, etc., all of which will eventually find their way into the Review. Arrangements have also been made with some of the best bee-keepers of Wisconsin to describe in the Review, before the opening of another season, the methods whereby they have been so successful.



Back Numbers Free.



I have found it profitable in the end, to make some extra offer in order that bee-keepers may be induced to subscribe for the Review, and thus become acquainted with its merits. As such an inducement, nothing has given better satisfaction than the offer of back numbers of the Review. Back numbers of the Review are different from those of newspapers and some journals. The information that they contain is just as valuable now as when first published. Each issue of the Review, especially if devoted to the discussion of some special topic as is the case with all of the copies printed during the first five or six years of its existence, is really a little pamphlet containing the best thoughts and experience of the best men upon the topic under discussion. Some issues are now out of print; of others only a few remain; while of others there is still a good stock upon hand. Instead of letting these back numbers lie on my shelves gathering dust year after year, I think it better to use them in getting new subscribers, and, at the same time, have them out doing good. I shall, therefore, as long as these back numbers hold out, send 12 of them free to each one who sends me \$1.00 for the Review for 1900. Not only this, but all subscribers for 1900 will get the Review the rest of this year free. The selection of these back numbers must be left with me; but I will see to it that no two are alike. To be sure that I am understood, let me tell it again: Send me \$1.00, and I will send you twelve back numbers of the Review, then the Review for the rest of this year, and for all of next year.



W. Z. HUTCHINSON, Flint, Michigan.

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Being located in the great BASSWOOD timber belt of Wisconsin;
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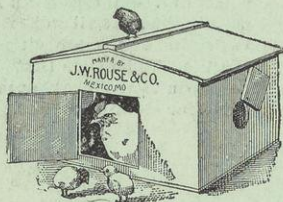
on January 1st, 1900. It is now under the editorial charge of Mr. H. E. Hill, and is regarded as strictly up to date. Send for a sample copy, and we are sure you will subscribe (50 cents a year). Also get our catalog of Bee Supplies, free. Our prices are low, and our goods are the best. Address,

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