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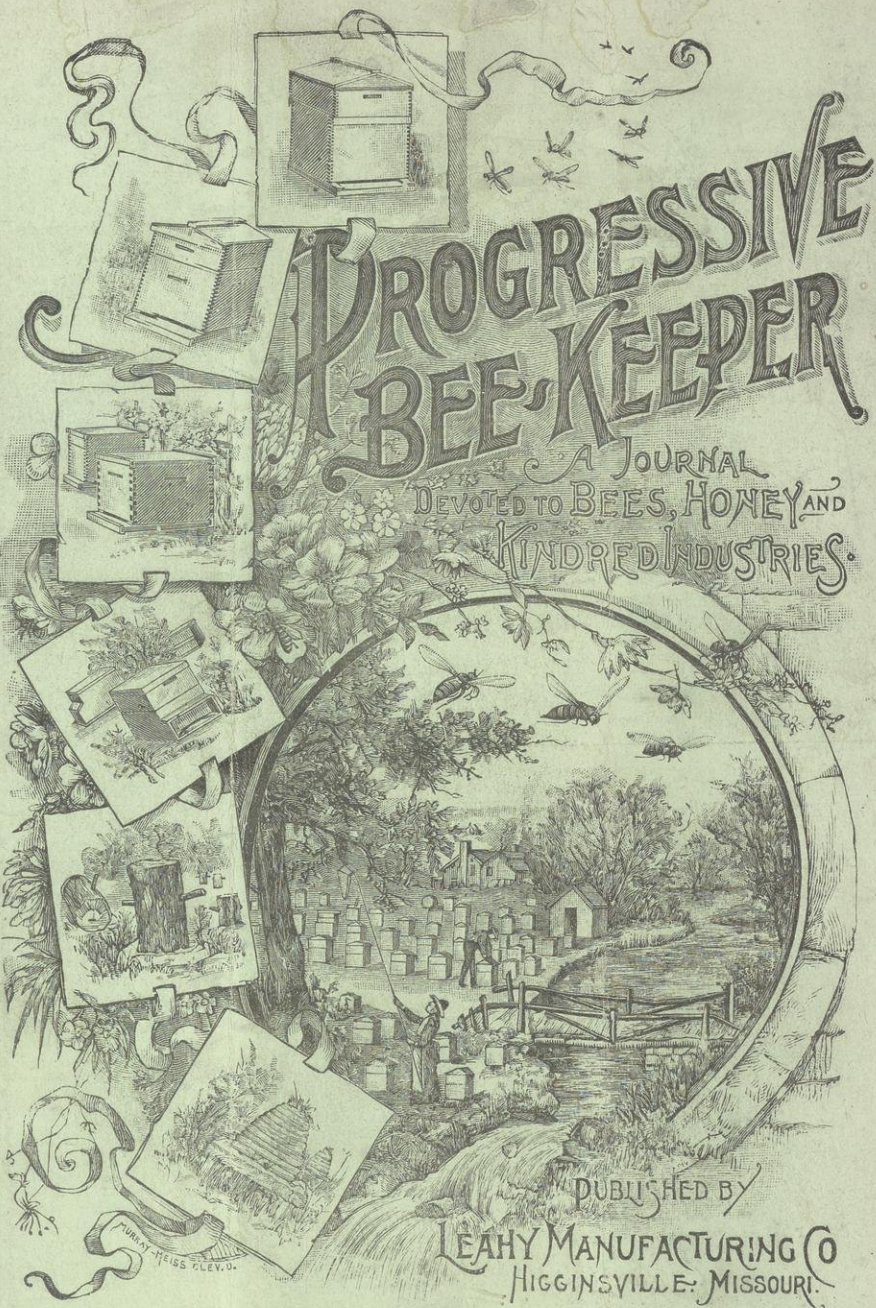
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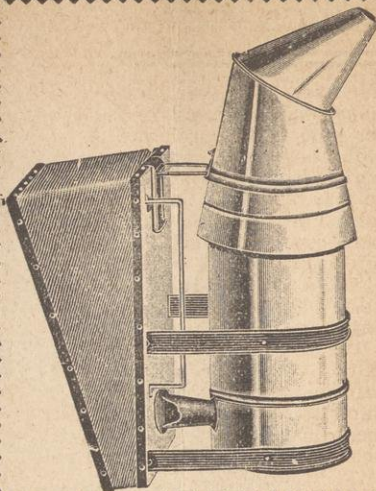
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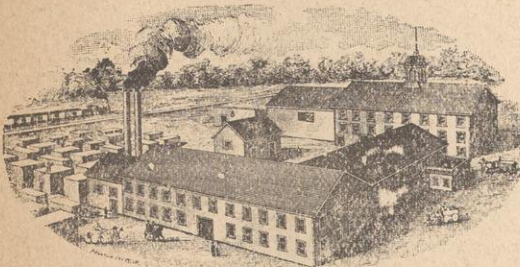
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Shady Grove Stock Farm

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Warrenton, Ohio

The Progressive Bee-Keeper.

A Journal Devoted to Bees, Honey, and Kindred Industries.

50 Cents per Year.

Published Monthly by Leahy Manufacturing Company.

Vol. XI. HIGGINSVILLE, MO., FEB., 1903. NO. 2.

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NOTES FROM THE STAR APIARY.

S. E. MILIER.

I am surprised at Editor Doolittle, page 1014, Gleanings for Dec. 15. In advising how to fill combs with syrup he says: "To get it into the cells, pour in a fine stream from a dipper or some utensil having a spout which should be held a foot or more above the comb." etc.

Now, Friend Doolittle, you have likely filled many more combs than I, but I can tell you a better way. Take a fruit can, about a 3-lb can, one that has been

used and cast aside is good enough, punch the bottom full of small holes, about such as a three penny nail will make. If the holes are punched from the inside the syrup will flow more freely than if punched from the outside. An old file with the point intended for inserting in the handle shaped to the proper form and size makes a puncher for the purpose.

Having your perforated bottom can prepared, lay the comb in the bottom of a tub on its side. Hold the can about a foot above the comb with the left hand and with the right hand take a dipper and fill the comb with syrup. Pass the can over all parts of the comb until one side of the comb is filled, when the other side can be turned up and the operation repeated. If there is about half an inch of syrup in the bottom of the tub it is all the better, as it will prevent the syrup from running out of the side first filled, while the other side is being filled. You see by this means we have one hundred or more streams of small size instead of only one. Try it, Friend Doolittle, the next time you have an occasion to fill combs.

Along last summer the attention of nearly every reading bee-keeper in the United States was directed toward J. L. Grandy, of Humbolt, Neb. His account of a modern apiary run under

strenuous pressure was enough to make many of us feel like small potatoes and few in a hill. But after E. R. Root and W. Z. Hutchinson visited his ranch it transpired that some of his writings were rather of the visionary order. In fact some of the great things that he told of were not things that he had really accomplished but that ought to be done.

Messrs. Root and Hutchinson found no "immense field of catnip and sweet clover," but saw much of it along fences and roads on his ranch. I think Mr. Hutchinson in his account of their visit made no mention of the large average yields per colony reported by Mr. Grandy, and the report of fifteen cents per lb. for comb and extracted honey received by Mr. Grandy has not been verified.

Altogether it seems to have been a great deal of smoke without much fire. Still it may not be without its good effects, as it will probably induce many bee-keepers to encourage such plants as catnip, sweet clover and other nectar producing plants to grow in worse places now occupied by obnoxious weeds.

W. H. Morrison in Dec. 15 Gleanings makes such a strong argument in favor of sheds for the protection of bee hives that one is almost tempted to go forth with and erect a shed. I have only one objection to make to a shed and that is this: There are many days, especially in the early spring, when it is a benefit to have the sun shine on the hives to warm them up. For this reason there is no better shade in my opinion than large deciduous trees. These permit the sun to shine on the hives in the early spring before they have put out their leaves and again in the autumn after the leaves have fallen, and during the hot summer months when shade is most needed by the bees as well as their keeper, they afford a

cool, pleasant place underneath their spreading branches.

However suitable, trees are not always available to the bee keeper and even if he has large trees on his premises they may not be in the most suitable location for the apiary.

For many reasons the shed would be the most economical as well as the handiest arrangement of any apiary for many bee keepers. The immunity from stings mentioned by Mr. Morris is quite a consideration in itself.

There are many little kinks and short cuts known by some bee keepers that are not known generally to the bee-keeping fraternity.

These should be given through the bee Journals, and no harm will be done if some of them are repeated. Some little hint that is of value to bee-keepers may be given in certain bee paper and Jones and Smith read it and profit by it, but perhaps Mr. Brown was very busy at the time and glanced hastily over that particular issue hence did not read about it. For this reason there are many valuable hints that will bear repetition.

Some two or more years ago Mr. Hutchinson in the Bee Keepers Review gave a description of a handy device for resting the combs on while uncapping. This I afterwards gave to the Progressive, but probably few bee-keepers have grasped the idea of its great value.

It consists of a piece of board about one by three inches and long enough to reach across the uncapping can or box. A nail about eight or ten penny is driven through the board near the center clear up to the head. Lay this board against the uncapping can with the point of the nail up. Rest one of the end bars of the frame on this nail point while you hold the other end bar in the left hand and use the uncapping knife with the right.

When one side of the comb is uncapped, the nail point is used as a pivot and the comb can be swung around on it without the assistance of the right hand. This is a simple little contrivance, yet I should not like to have five dollars and be deprived of its use in the future. Try this next extracting season and be convinced.

Montgomery Co., Mo., bears the distinction of having elected as their representative to the State Legislature a prominent bee keeper, Mr. John V. Nebel, one of the members of the firm of John Nebel & Son of High Hill, Mo. Mr. Nebel's opponent for the office belongs to what for many years has been the dominant party in this (Montgomery) county.

Bluffton, Mo.

SELLING HONEY.

I. T. HAIRSTON.

Editor Progressive: I would like to give your readers my experience in selling honey, and also what kind sells best in this locality. I produce both section and extracted, but more extracted than comb.

I put up my extracted in glass, mostly in Mason quarts and $\frac{1}{2}$ gallon jars, some in "Pouder" 5 oz, $\frac{1}{2}$ and 1 lbs. jars, but find the Mason gives better satisfaction. I have never produced bulk comb honey but ran across a lot of it in my market last fall, but found it didn't hurt my trade any only in one case. At Wagoner, I. T., I went into a grocery store and sold them a bill, but before I left the proprietor told me he had some bulk comb honey from Floresvilles, Texas, on hand but didn't know whether it was fine honey or not. I asked to see it. He opened up a pail I sampled it and told him it was fine. He said it was a very poor seller. I sold him a bill consisting of both sec-

tion and extracted, the extracted being in quarts and $\frac{1}{2}$ gal. jars. I was passing through the town about two weeks later with a load and called on all my customers to see if they needed stocking up. I called on the above firm and asked him how he was fixed in regard to honey. He said he had sold out all of my honey, but didn't want anymore then. Of course I asked his reason. He said he couldn't sell any of that bulk honey while he had any of mine. I had a sample jar with me. A customer of his that was present prevailed on him to buy it for him (as I don't retail in towns or cities). So you can imagine I'm not very enthusiastic over bulk comb honey.

I sold \$375.00 worth of honey on three trips last October, and was out not over three days each trip of selling, (I was longer at other business some trips), and I find to sell honey you want a fine, well ripened article, and it should be put up in an attractive shape. Section honey should be as near full pounds as possible to get them, and put up in "no drip" cans. Extracted for my locality should be in glass; and you want to impress on the retailer to display where the light will shine through it.

When I go into a store to make a sale I get the benefit of the light, otherwise I would fail provided I had never made a sale there before. Its no trouble for me to sell when I have sold before. I sold \$72.00 worth in one town in two hours the first trip I had made there. When I go on a trip I carry the honey in a wagon, well cushioned on hay, and when I make a sale I deliver. I some times work the town before I deliver. By doing this I save the freight and breakage; also my fare and find I sell to better advantage when the honey is delivered when the sale is made, the buyer being able to see all the honey in your presence. There's no chance for a claim of shortage nor nothing of

the kind, and you get your money at once.

To make a success you want a fine article put up in an attractive shape and above all deal honestly. Label every package and advertise your business. Let people know that you have honey. Give the editors a generous supply and if you have a good article he will help you.

At best you will have enough to try the patience of job, but keep your temper if possible. You will have adulteration and manufactured comb honey thrown in your face every day, but such is life.

Salina, I. T.

GOOD THINGS IN THE BEE-KEEPING PRESS.

SOMNAMBULIST.

Needless to say the readers of the Progressive will regret the retirement of Mr. Doolittle from the editorial department. In him the bee-keeper always feels he has a staunch friend. Always on hand to sound a warning note and guide by friendly counsel to success. To say we shall miss him seems entirely too weak an expression for the occasion. May his shadow never grow less.

F. L. Thompson takes a position on the editorial staff, and Oh! my! what we all have to toe the mark and at the same time keep up a succession of dodgings to escape getting our ears boxed? I've my head to one side now in anticipation of a slap because I feel like favorably commenting on his January contribution. Lest in many cases the January Progressive may be loaned or given to a neighbor, or for some other reasons may be inconvenient to lay hold of, I will reproduce a few sentences:

"If a man is too weak-minded to have a particular purpose in life as a justification for the existence of his own peculiar individuality, but has taken it on

himself to call children into existence, he can at least make their development a purpose. It is not a sufficient one, for if he does not justify his own existence they may not justify theirs—he will miss giving them the example of his own growth as an incentive to theirs but if he neglects theirs too, he certainly will be a flat failure."

If a man is compelled to find an excuse for his existence, none will deny that the development of children is a high purpose. So far no dissenting voice do I hear, but when he insinuates, as it is not difficult nor far-fetched to imagine he does, there are higher aims in life, at once the clamor of dissensions grows deafening.

Indeed, from his own reckoning, the highest development of children is so very high up as not to have yet been reached by our best educators.

After using a quotation from Prof. Butler of Columbia University, an authority on education, which begins with, "We have still to learn what interest means, how it is changed from indirect and how it is built up into a permanent element of character," and closes with "The proper and scientific course is to search for the pupil's empirical and natural interests, and to build upon them," he comments as follows: "But how combine practical work for which practical motives are absolutely necessary, with the mastery of knowledge and the absorption of culture?"

Well, that is the great problem of education, and when experienced minds acknowledged themselves floored by it under present conditions, we shall have to remain modest.

In one place he tells us "if the parent or teacher spent his acumen in searching out motives as would inspire the child to undertake such work as leads to knowledge and culture, instead of attempting to force those things upon him in such a way as to inspire disgust

"we would meet with success instead of failure." And on the succeeding page he uses the phrase "drudgery is deadly." On page 335 *Progressive Bee-Keeper*, from this same source we find, "forced work that is just forced work and nothing else, is no advantage to anybody but a detriment." And yet he sarcastically refers to a certain editor who defined success as "making a livelihood at a congenial occupation" (and of course *Sommy* received a sharp rap for smiling blandly).

From the above are we to conclude that congeniality is a recognized factor to success in attaining an education but not in obtaining a livelihood?

To be educated as to how to gain a livelihood would be a great boon to a certain part of humanity, congeniality not considered.

Wonder how many he reached when he threw that missel "The usual parental idea of education is to leave it all to the school teacher as being something special and external to some?" Few but that will concede that education in the truest sense is taking place all the time, at home as well as at school for better or worse.

The silly, shallow school-boy and girl conversation, through utterly wile-s, interspersed, with much giggling and tittering, which is so frequently thrust upon the public, just as frequently leads the public to interrogate as to where such are receiving their education? It is self-evident to the listener, that they are seeking to display their attainments. Alas, too many times said attainments consisting principally of a too free use of slang.

Who, that has traveled, that has not experienced occasions when the intrusion amounted to a disgusting nuisance? Yet those folks are styled educated.

In another place he remarks, "Perhaps the kind of education we need most is the education of parents." Is

that not just what we are doing? educating the parents of future generations?

How all important then that we ourselves should be educated. Time was when teachers were naturally expected to set a good example before their pupils, but judging from recent experiences one would be forced to conclude that principle had been overlooked in the education of some teachers. Or is it no longer considered worthy of notice? He concludes, however, that, "For spirituality and liberal-mindedness, for progressive citizenship and the foundation of true happiness, we must continue to depend on all around education and apply ourselves to remedy its defects; and for this purpose teachers and educators are greatly dependent on the co-operation of parents in evolving right principle of general education in general home training, in supplying the knowledge by frequent consultation for special treatment of each individual child" and so forth.

Possessing such liberal mindedness, does it not seem passing strange, something like the irony of fate, that no child calls him father? And all the more so when we consider that so many mentally maimed and blind are so addressed and that, too, by a numerous progeny.

Our ideas of Texas bee-keeping are to be brightened up by a Texas Department. No doubt it will be an eye-opener to many of us.

In referring to moving bees with open entrances I see he thinks "it might work with some and work very successfully for a time or two, but Oh! the time when it does not work."

Yes, look out for that time by never allowing it to come. And this reminds me, there passed through our town the past summer a curious combination. A hay fram in the center of which the usual "prairieschooner" appeared. On the outer edges of said frame on both

sides of the schooner arrangement were rows of populated bee-hives of the Langstroth pattern, with entrances wide open. At one place on their route they camped over night on the river side, and the next morning had to wait until near ten o'clock before they were ferried over. All the morning the bees were foraging over the adjoining country, and when the "command" moved on were left to the tender mercies of an unknown country, homeless indeed. What kept the colonies on the wagon from being depopulated was beyond my comprehension.

I see our Florida friends are indignant that their honey is frequently classified as "Southern" honey and claim a damage from such classification.

Do Texas bee-keepers suffer from this score also?

C. S. Harris in *American Bee-Keeper* says he is "acquainted with the brag honey of the north-middle states and yet would hesitate to place either clover or basswood ahead of saw palmetto, usually the main crop and second in color, if nothing more, to mangrove honey, produced further south.

In an article from the *Mexican Herald*, Carl Ludloff, speaking of honey in old Mexico says, "The quality of the honey gathered excels the best brands of the northern and western states of the American union. And again, "the extracted Mexican honey from the high table lands may conquer the world's market. It is of light, bright wine color, clear like crystal, of a pleasant sweetness and the finest flavor."

And yet the editor says "It is doubtless a fact that the south puts upon the market a larger percentage of low grade honey than any other section of the country. He attributes this to the unprogressiveness of many sections of the south, and thinks the up-to-date bee-keeper should not suffer the stigma which belongs to a product he has not

been guilty of placing upon the market.

In an article in the *Review*, Editor Hill interestingly treats on the subject of bee-keeping in the north and south. He tells us "individual ideas and purposes are largely responsible for the diversity of working plans, regardless of geographical position."

As a frontispiece, a picture of the home apiary of J. B. Hall of Woodstock, Ontario, is given, which picture brings to mind many of the teachings imparted by Mr. Hill. A few are given as applicable to all localities:

"Never leave for a moment honey running from a tank.

If you have to take your eyes off the running honey, first close the gate, then it's safe."

"In handling combs always keep them on edge—reverse it edge-wise, not flop it over as if it were a piece of solid lumber.

"There is but one position for a hive or super containing foundation, that is as it sets upon the hive: never set them down otherwise"

"The operator's position is at the rear or side of the hive; never get in front of it; that's the bees end of the hive."

In noting some of the differences between bee-keeping in the north and south he says, "Mr. Hall can store quantities of comb honey in the fall without fear of deterioration."

In the humid atmosphere of south Florida it would most likely become worthless as a merchantable product within a week after being taken from the hive. Only continued artificial heat in a close room would save it from "weeping and sweating."

This is a result of the well known affinity of honey for moisture. During a great part of the year extracted honey exposed in an open tank, though sheltered, would become thinner instead of increasing its body. The contrast between the atmosphere of Florida and

that of the arid west in its influence on honey being quite striking."

Mr. Hall can store his extracting combs in an open shed from season to season. In south Florida they would be destroyed within a very few days by the moth larvae. The webs may be seen in combs that have been off the hive for a single night.

Owing to their activity bees consume more stores in Florida than in the north and for the same reason the useful period of a queen's life is reduced about one-half.

Owing to the country being sparsely populated, home consumption of honey is limited and marketing expensive.

The greater part of December's Review is devoted to discussion on organization and co-operation and the subjects are well handled. But don't forget what S. E. Miller said in January Progressive, "All the talk in the world will do no good unless the majority of bee-keepers are ready to go into it and lend a hand to help push it along." Again I say, don't forget.

Easy Bee-Keeping—Prolific Queens—Introducing.

F. A. MORGAN.

On page 776 (1902), in an article by F. Greiner, reference is made to the bee-keepers' convention last winter where a friend gave his management of bees. It consisted in giving plenty of room—two extra 10-frame brood-chambers full of comb were added below. It prevented swarming.

It might have prevented it in one instance, but it is not the want of room which causes bees to swarm, especially Carniolans; location controls everything. It is prosperity that makes bees swarm. I well remember several years ago paying an enormous price for a few non-swarming queens warranted never to swarm. But in my location every

one swarmed, though given as much room as our friend gave. I learned later that they were reared in a district of great scarcity, and had not enough prosperity to swarm.

The advice given—invest \$60 in catnip, keep 15 colonies of bees, then give plenty of room and go a-fishing 5 days of the week, would hardly work up here. The fishing on Yellow river is good, but the mosquitoes here in the woods are No. 12 size, and the way they attack a man, piercing right through a thick coat and gloves, makes it impossible to fish; to me every bite is worse than a bee-sting.

Four hundred pounds surplus per colony, at 15 cents—6000 pounds \$900, a la Dr. Grandy. Investigation proved only a small garden patch of catnip was growing in his vicinity, and no honey in sight. I think catnip and sweet clover good honey-plants, and the planting should be encouraged, but none of us expect to get 400 pounds surplus per colony, with \$60 worth of seed sown and few will make a living at bee-keeping and go a-fishing 5 days in the week.

PROLIFICNESS OF QUEENS.

Mr. W. J. Stahmann, page 776, speaking of prolificness of queens says we cannot have prolific queens without a large hive, and in his experience a queen reared and allowed to lay eggs for a space of a week or more in a small hive, or having a small amount of bees, will seldom make a prolific queen, regardless of the stock she comes from. I have been a queen-breeder quite extensively for 20 years, and have all my queens mated in 2-frame nuclei, keeping them there until I have orders for them or want to use them myself, and often I keep them one or two months in such nuclei with a small force of bees without in any way affecting their prolificness. When introduced to a mammoth colony they are just as prolific and long-lived as though mated in a big hive. In fact, I think all

queen-breeders confine young queens to small quarters for a longer period than one week, without injuring them.

TROUBLE IN INTRODUCING A QUEEN.

On page 779 (1202) if Washington had placed his queen in a Miller cage at once instead of waiting 48 hours, then in 48 hours removed the plug, filling the entrance with a little comb and honey, then close the hive, in two days she would have been laying. Waiting 48 hours after removing the old queen gives the bees time to start queen-cells, then they will continue to rear them and become hostile to a new queen. My plan is to run their own queen into the introducing cage, let her run around a few minutes, then destroy her and run the new queen in the same cage, thereby getting the scent of their own queen, then no trouble will occur.

The question was once asked Josh Billings which was best, a large or a small hive, and arguments of advocates of each presented. He said both were right. The man with a small hive was right, for he never had bees and honey enough to fill his hive; and the one with a large hive was also right, for he couldn't get a hive large enough to hold his bees and honey. Hence it is a matter of location. This is the reason we all differ. Disposition of bees are changed by location.

Chippewa Co., Wis.

—Amr. Bee-Journal.

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and this NOTICE we mail big seed catalog, 10 Grain Samples including above, also Speltz (80 bu. per A.), Oats, (250 bushel per A.) Rye,

Barley, (173 bu. per A.) Peas, etc. Worth \$10. to get a start. H

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The Progressive Bee-Keeper.

A journal devoted to Bees, Honey and Kindred Industries.

FIFTY CENTS PER YEAR.

R. B. LEAHY, Editor and Manager.
F. L. THOMPSON, Editorial Writer.
HOMER H. HYDE, Editor Texas Dept.
LEAHY MFG. CO., Publishers.

IF THE SHAKEN SWARM METHOD, next June, will be your choice, now is the time to begin to think about it. Extra hives are to be provided and all foundation starters fastened beforehand and all section supers made ready.

HAVING HAD EXPERIENCE with the essential feature of the method on a large scale for two seasons, I think it correct to say that it saves many dollars. Two classes of bee-keepers should be especially benefited by it: those so situated as to lose a large proportion of their swarms, under ordinary circumstances, such as farmers who can not watch their bees, and specialists who have bees in more than one place. If farmers would put a little time on their bees more than to put on and take off supers, hardly any work would pay them better for the amount of time taken. But they don't and won't, and I don't believe I would either, if I were a farmer ignorant of bees. With an undue excess of physical work to sap the energy which should support the brain, the brain is put in a condition to be readily wearied and stultified by too much variety of work as well as too little, especially when the varieties interfere with one another. The brain is one portion of the body. Nature revenges herself by calling for routine work, so as to think as little as possible.

SO THE SPECIALISTS, practically, are the ones most benefited by the work of anticipating swarming; and with

them it is largely a question of whether it pays better to do that or to hire some one to watch for swarms in the outyard, or rather, perhaps, of which course they like better; and most people prefer to do work themselves when it can be done conveniently, rather than be bothered with overseeing a green hand, with other matters on the mind at the same time.

OLD-FASHIONED WATCHING FOR SWARMS vs. doing all the work ahead in a systematic manner, is the question at issue for those who have all their bees in the same yard. When artificial swarming is practiced, there is just so much work for each colony, always about the same, and just so many colonies a day may be disposed of; and when the work is all done, one can go ahead at other work with little chance of interruption. With natural swarming, there is just as much work for each colony that swarms, and often more, and the work is irregular, unexpected and interfering. I clip my queens, so there is little trouble with swarms alighting in inaccessible places; but in spite of that, a natural swarm, as some one has said, always causes the same feeling that one has when a cow gets in the yard. During the swarming season, there is not much chance to do other work, when natural swarming is allowed. One does not like to nail up many shipping-cases before then; but when that work is delayed until then, it is hard to work in with the interruption of swarms; and the same is true of putting up sections, and inspecting and tiering up supers. These objections would not apply where swarming is all over when the main flow comes, but in this locality swarming coincides with the first main flow and extends through it, so that "swarming-time" and "honey-flow" mean exactly the same time. The case is altered by anticipating swarming. Then, after a week or ten day's hard work, the thing is done, and

through the rest of what is ordinarily the swarming season, one can turn his attention and time comparatively undisturbed to the work which the honey-flow brings along with it.

BEFORE THE BEES PREPARE TO SWARM, is it well to make artificial swarms? That depends somewhat on whether natural swarming is exactly imitated or not in making the swarm consist of a portion of the bees at a certain time, without any further additions from emerging brood. If it is exactly imitated, then it may be well to have a closer regard than otherwise to the preparedness of the colony for swarming. But if the plan of adding young bees is followed, then it is not exactly swarming that we imitate, but it is a plan by itself, to be considered on its own merits. I think a less advanced colony can be profitably manipulated in this way than could bear the process of ordinary artificial swarming.

THE SIMPLEST CASE will serve for an illustration. Suppose a colony neither strong nor weak, at the beginning of the flow, that has made no preparations for swarming. Suppose now you put a second story above, with an excluder between, and put all the combs and bees above the excluder except one comb of brood and bees, with the queen, which is put below, and the rest of the chamber below filled out with frames having starters only. Now consider the results. If the flow is fairly good, does this process set that colony back to any appreciable extent? I have not found it to do so, judging by yields and condition of colonies so treated. If there is a small effect of that nature, it is offset by the practical consideration that by including all such colonies in the one big job of anticipating swarming, it is all done with for good, and there are little or none of those repeated observations from week to week which are held up against the system by objectors.

THE PRACTICAL TEST of whether a colony is to be included in the job or not, is, with me, whether it will bear a super of sections between the upper and lower stories in addition to the operation referred to above. If it will not, it is likely to be too weak to swarm anyway during the swarming season, and is not at all likely to swarm after the middle of July has passed, in this locality. A colony so weak as that I treat as a nucleus to be built up, and give it such work as a nucleus may do.

WHY I PREFER THE AUTOMATIC PLAN of anticipating swarming, to the application of the Heddon method to the same, will now be understood by Mr. Stachelhausen, if he reads this. It is because the automatic plan affords a close bond between parent colony and swarm for some time after the operation, so the bees hardly know the difference at first, except in the changed position of the inside fixings. This close bond permits a general application of the system to the whole yard at once, so that the whole job is got rid of for good.

THE DARK OLD COMBS directly above the super of clean sections would tend to soil the section combs. So I put an escape-board between, with the escape left out, and provide for a channel leading from the upper hive to the lower one down the outside, as explained in previous articles. This arrangement permits of various applications.

A ROUGH-AND-READY PLAN, I admit. It is suited rather to the needs of one who is making his bread and butter from bees by wholesale and approximate methods, than to the standards of one who wants to do everything just right. Such a person might find no particular advantage in it.

WHY BROOD IS GIVEN to the swarms will now be plain. It is not to prevent them from absconding, for I have often omitted the comb of brood in treating

strong colonies without being able to observe any greater percentage of absconding swarms. It is merely to get the bees of such medium colonies to working below with as little interruption as possible. If the brood comb put below is straight and well filled with brood not too far advanced, it may be left there permanently without harm. It should not have many empty or uncapped cells before the first new comb is built; otherwise the cells in the old comb will be drawn out inordinately, and the neighboring new comb dished to correspond.

WILL SUCH SWARMS STAY PUT? Well, most of them. I have had some trouble with absconding (not losing, the queens were clipped and the bees came back—or, alas! went into other hives), but am inclined to think it was mostly because I did not take account of all the conditions, and bungled a little. The escape-board plan permits great elasticity of method; and now I think that with colonies at all strong I shall leave the central hole entirely open until a new brood-nest is well established below, or, if the colonies are very strong, put no board between at all at first, but add it in time to prevent discoloration of the sections. But with such absconding as I have had, I prefer the plan to go-as-you-please swarming all through the flow.

Bee-Keepers, as a rule, have considerable confidence in the future. We judge so as this is one the years we do not ask them and beg them to buy their supplies early. Indeed they are rushing matters and seem to have the impetus that business men of other callings have. We have sold from this point double the goods we did last year to this date and our branch houses and car-load dealers are meeting with equal success. Some of them have ordered their second car already.

Mr N. E. France, who was recently elected General Manager of the Bee Keepers Association, has refused to serve, considering the ballot an unfair one. This leaves the political boss, Eugene Secor, still on the hands of the association.

A very favorable winter for bees is what we are having. There has been no severe cold weather and at no time have the bees been confined to their hives for more than a month. With a favorable and early spring the success of the bee-keepers will be assured as there will be a bountiful white clover crop all over the Missouri valley. "Everything comes to him who waits," seems to apply favorably here.

Our new catalogue and price list just out and in the hands of our branch houses, car load dealers and many smaller dealers, and is free for the asking. Parties wishing one of our catalogues may address the supply house nearest him. They are as follows: Leahy Mfg. Co., Higginsville, Mo.; East St. Louis, Ill.; and Omaha, Neb. Car load dealers, J. W. Rouse, Mexico, Mo. Walker-Brewster Grocer Co., 423 Walnut St. Kansas City Mo., Topeka Bee Supply House, Topeka, Kan., W. D. Fulton, Garden City, Kan., Frank L. Aten, Round Rock, Tex., D. C. Polhemus, Lamar, Colo., B. W. Hopper, La Junta, Colo. Many others are talking of buying a car load of supplies, and there are others that have bought only part of a car load. Any one wishing the name of the dealer in our supplies nearest to him can obtain the proper information by addressing this office. All our dealers are authorized to take subscriptions to the Progressive Bee-Keeper, so please do not forget to send an extra 50 cents when ordering your supplies.

WAX-PRESS.

**Their Advantages Over the Sun-Extractors—
Directions for Making and Using a Cheap
But Effective Hot Water Extractor.**

BY H. H. ROOT.

Were we to go to Cuba we should find some men keep bees only for the wax they produce. Much of the honey is fed back or wasted, because the natives think it pays them better to ship the wax than to bother with the honey. If they were to come here to the United States they would find some men who run apiaries solely for the purpose of getting the honey, paying no attention to the wax, but wasting it by throwing away old combs, etc. These men represent extremes, and probably there are not many bee-keepers who would advocate either method; but it is a recognized fact that a great amount of wax is wasted by being thrown away as dirt, old comb, etc. It is pretty generally known now that the sun-extractors are not the most economical in the long run. They have their uses, and are very convenient to leave in some handy place in the apiary, to act as a receptacle for small pieces of burr-comb which collect all the time. I do not know that any estimate can be given of the per cent of wax that is wasted in rendering old combs in a sun-extractor, as it depends on the age of the combs, and how much dirt there is in them.

Lately the most up-to-date bee-keepers are beginning to use extractors in which the wax is pressed out of the old comb by means of a screw or a heavy lever, while the contents are heated above the melting point. There are three methods of rendering from old combs: 1. Pressure on the combs, when heated by steam; 2. Pressure under hot water; 3. Pressure on the comb which has been heated somewhere else.

In my experiments with wax-presses I consider steam-presses by far the most efficient. They are quicker, easier to operate, and do better work. Some have said that the old comb should be under hot water when the pressure is applied, because as the mass of wax oozes out from the dirt, it instantly floats to the surface, giving place to that which may come afterwards; or, in other words, the hot water method "takes in the slack." However, I believe this to be simply theory. I do not see why melted wax can not drop down from the old comb, which is surrounded by steam, just as well as it can float up from it when surrounded by hot water. Lest some one should say this is also theory, I would state that by actual test I have proven its correctness.

All other things being equal in my experiments, I have found that there can be just as much wax obtained by the steam method, and in much less time, than by the hot-water method. Aside from this, there are many objections to the hot-water. The juices from the dead bees or larvae give the water a very dark, reddish-brown color, darkening the wax to a very great extent. After the pressure has been applied, and about all the wax comes out of the old comb that will come, it is then very hard to get the melted-wax of the surface of the water. The only way is to let the whole mass cool so it may be taken from the top in the form of a cake.

In the third, the comb is heated in a wash-boiler or some other receptacle on the stove, and then poured into the press. I have not had as good results with this as with the other two. I admit that it is a quicker method; but when a bee-keeper renders out wax it is usually done in the winter, when his time is not the most important item. I am convinced that a great

deal of wax is left in the comb unless the said comb is kept at a high temperature during the process of pressing. Again, lest some should say that this is theory, or that my experiments have not been made correctly, I would say that one writer, after reading an article in *Gleanings in Bee-Culture* for Sept. 15, on the subject of wax-presses, stated that he could get more wax by his method of pressing the comb after it had been heated elsewhere than by pressing it in hot water or steam. To prove his statements he sent a sample of the pressed-out comb, saying that we could test it for ourselves, to show that it contained no wax. As he suggested, we did test his sample in hot water and found that it contained 25 per cent pure wax. I do not mean that this method of pressing out old combs, which has been heated in another receptacle, leaves 25 per cent of wax, but I do assert that it leaves a great deal more wax than the two other methods—that is, of pressing under hot water or with steam.

In describing a home-made press, since steam would require a more expensive apparatus, I will tell about a home-made wax-press using hot water as the method of heating, and giving very good results, though not as quickly as with a steam press:

The first thing to get is a water-tight barrel. Saw it off, making a tub about one foot in depth. Bore a hole in one side near the bottom, and insert a short piece of pipe, to be used to drain off the hot water and wax after pressing. A wooden plug should be fitted into the end of this pipe, to act as a valve.

We must consider how we are going to apply the pressure—with a screw or with a lever. In my experiments either works about the same, only a lever takes two to operate it, making it more expensive, and not quite so

quick. I prefer a screw, and used such a one as can be found in an ordinary carpenter's bench-vice—something that can be obtained very cheaply at any hardware store. A cross-piece of hardwood, 4 inches wide by 3 inches thick, should be placed across the top of the tub, and one of corresponding dimensions underneath. These should be connected by two side-pieces, also of hard wood, about an inch from each side of the tub, and the whole firmly clamped together by long half-inch bolts with heavy washers. The nut belonging to the screw should be placed in a hole bored through the middle of the hardwood piece extending across the top of the tub, and the tub itself is to rest on the under piece. A plunger must be made having a smooth, hard top on which the screw is to rest.

When ready to begin operations, wrap up (in cheese cloth) about 5 pounds of old comb or refuse from the solar wax-extractor, and place this package of comb in the tub. Next, pour on top of this one good-sized pailful of boiling water. It will be enough since the tub is only one foot high. Place the plunger on top, and slowly turn the screw down. Next, turn the screw up; and after tipping up the plunger with a stick, haul over the contents of the cheese-cloth package, and again apply the pressure. By this time all the wax, or as much as can be obtained, will be at the service of the hot water, and the whole may be poured off or drawn off through the spout, and allowed to cool. By keeping four or five pailfuls of water going it is not difficult to have hot water as fast as necessary. In this way I succeeded in getting 18 ounces as the average amount of wax from 5 pounds of very old combs, and in less than 20 minutes. This amount of dirt or old cocoons in it.

Medina Co., Ohio.

—American Bee Journal.

Texas Department.

HOMER H. HYDE, Editorial Writer.

Floresville, Texas.

N. B.—All subscriptions from Texas should be sent to me direct. All matters relating to advertising should you desire space in the *Progressive*, should also be sent to me. I am the Texas agent and representative of the Leahy Mfg. Co., for their excellent paper, the *Progressive*. We ought to have 500 subscribers from Texas, so come on with your subscriptions.

EDITORIAL.

When I received my card to vote in the last election for General Manager of the National Bee Keepers Association I was much surprised to find that on it Mr. France's name was placed in nomination as a candidate and Mr. Abbott's was not. Why was Mr. France's name given at all? And if necessary to give any names, why not give Mr. Abbott's also. I ask why this species of political trickery propagated? It does begin to look like a certain ring was trying to run the Association and trying in every way to keep out those on the outside. As long as such things are we cannot hope to build up the National, nor can we hope for it any great success. It does seem that after the past season's ranglings and disputes that the ones at the head would have tried at least to have shown equality on paper at the least. I personally voted for Mr. Abbott and I influenced at least two others the same way, not because I had any real preference between the two men, but simply because it seemed to me that some one was trying to use unfair means to keep his name from before the Association members. I notice I am not alone in my views on

house of the R. M. B. J. holds about this matter and that Editor Moore—the same views. I notice that Mr. York in a recent issue of the A. B. J. condemns the recent election in strong terms and that also Mr. France wants another election to be held. This would be the only fair thing to do, viz, hold another election with names of all who have been nominated for General Manager and the names of all who have been nominated for directors plainly printed on the card or else no names at all. I am for fair play and the only way we can get it will be to have another election.

I have noticed lately that Salt Lake City, Utah, wants the next meeting of the N. B. K. A. I am not opposed to its going there sometime in the future, but at present I think some other part of the United States ought to get it. Salt Lake City, you see, is much the same part of the United States as is Denver where the last convention was held. I notice that some expressions have been made that San Antonio, Texas, be selected as the place of the next meeting of the National. This is in a great honey producing region of Texas. The Texas Bee Keeper's Association and the Bee Keepers in general will welcome the National next fall or any other time that it sees fit to hold its convention in Texas. We have in San Antonio one of the oldest and most picturesque cities in the United States. We have in it the historic Alamo in which 300 brave Americans were butchered by the

Mexicans. We have near it several of the old Spanish missions that are historical efforts of the Spaniards to convert the Indians. We will have held next fall and in fact each fall a great International Fair that annually attracts its thousands. Within easy reach of San Antonio is Corpus Christi on the coast a famous health resort and to which and other points of interest excursions can be arranged. The railroads have promised to help us in every way they can and will see to it that every cheap excursion rates are in effect during October 1903. Personally nothing would please me better than to have the meeting in San Antonio in Oct. 1903, and I am going to do all in my power to have it come to us next year. However if the directors see fit to vote it east next time and to St. Louis in 1904. I give notice to all that we must and will have it in 1905. We have positive information that the Southwestern Passenger Association will grant us a rate of one and one-third fare for the round trip and the other passenger associations have signified their willingness to make us the same rate. Therefore what more can be asked? I confidently expect the association to meet in San Antonio in Oct. next.

The Texas Bee Keepers Association at its last meeting elected me as a committeeman on exhibits and awards for the coming exhibit at College Station at the time of our regular meeting in July. I have been soliciting subscriptions to our premium fund so that we may offer something in the way of premiums to exhibitors. I have received a good many subscriptions to the fund but we have not near enough yet. I would respectfully ask all Texas bee keepers to subscribe to the fund and make it known to me at an early date.

In the Am. B. J. we have the following from Mr. Hasty:

NAMES FOR VARIOUS FORMS OF HONEY.

Perhaps it would be nice if we could adopt Mr. Cary's three terms—"section honey," "extracted honey" and "comb honey" as per page 700, but practically it is not possible. "Comb honey" has been so long used, and so often used, as an alternate term for section honey that if we start in to use it for something else we shall for years have a large share of our hearers and readers misunderstanding us. The term "chunk honey" has the merit that it goes right to the spot, and it is not to be misunderstood; but confessedly it doesn't sound altogether alluring. Those who produce the article are entitled to have a name that doesn't insult their product, if they can discover and introduce such a name. I believe the term "bulk comb" and "bulk honey" have been used to some extent. Those terms rather convey the idea of a large quantity. What's wanted is a term that will fill a pound or a thousand pounds equally well."

Yes, certainly, Mr. Hasty, we ought to have a name that has come into usage down here in bulk comb honey. This is to distinguish it from section honey which is very often called simply comb honey. We also want to be distinguished from box hive, log gum, bee bread, and "chunk" honey. It would be a manifest injustice not to say inappropriate to call our product chunk comb honey. I admit that the term "bulk comb" honey conveys the idea of quantity rather than kind or quality, still in one sense of the word it is bulk honey in that it is in cans and not in one pound sections, and also from the fact that a much greater amount of it can be produced than can there be of section honey. Until a better term is invented we shall continue to call our product bulk comb honey, and let us suggest that we come to the use of section comb honey for section honey

so that we may easily and undoubtedly know just what is meant by the two terms.

A Pure Food bill has recently passed the house of representatives by a good majority. I trust that the bill will also pass the senate, if it has not already done so. It would be well for every bee keeper to write a short letter to their senators and to the point asking their support of the bill when it comes to the senate. A pure food law such as the new measure will be, would undoubtedly be the greatest boon possible to modern bee keeping. So write your senators today, don't wait till some other time, but at once, and we may yet get the law at the present session of congress.

A special hive cover for Texas is our latest fad, and really is it a fad? I will leave the readers of this department to decide.

All know that the present several piece one thickness covers are very unsatisfactory as hive covers and especially is this so of the covers that are very thin and slope from center to outer edge where the cover is only $\frac{1}{4}$ inch thick. With these covers it is also necessary to use a stone or brick to hold them down and also where there is no shade it has been found necessary to use heavy shade boards to protect them from the heat in summer.

Last spring we noticed the description of a cover used by Mr. Gill of Colorado. We sent for one of them and have modified same to suit our Texas climate as follows:

First we make a rim $2\frac{1}{2}$ inches deep, halved together at the corners; on this is nailed one inch boards—it is preferable to use not more than two boards, with which to completely cover the rim. Next, the side pieces of the rim are rabbited $1\frac{1}{4}$ inches and in these are

let down cross ways of the cover $\frac{3}{4}$ boards which are nailed in, thus making a double cover with the two sets of boards 1 inch apart, and still the cover rim goes down over the sides of the hive $\frac{1}{4}$ inch. For ventilation the end pieces have a slot $\frac{1}{2} \times 5$ inch cut right between the two sets of boards and these slots are covered on the inside with coarse galvanized wire cloth so that no spiders or insects can get between the two boards. These slots allow the heated air to pass out and the cool air to come in so that the lower cover boards are no warmer than the air. The whole cover is given a thin coat of paint and on this is spread a piece of thin muslin and then the whole is given two coats. By this means the sun and atmosphere can never warp or pull apart the cover, neither can the dampness penetrate into the wood so that a cover is bought once for all. Taking everything into consideration this cover is by far the cheapest in the long run, and then hives can be worked much faster with these covers than they can where a stone and shade boards are to be removed and replaced. Again in moving hives and bees and especially the latter this cover is par excellent, for in moving it will not be necessary to nail down the covers as they fit over the edges of the hives. I shall look forward to the day when this cover designated as the Hyde-Gill shall be the exclusive cover used in the Southwest. All manufactures will be prepared to make them and at a very little extra over the price of the other covers on the market.

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FRANK L. ATEN,
Round Rock, Tex

SPREADING OF BROOD—WHEN AND HOW IT MAY BE DONE.

In the fall of 1901 there was a general dearth of pasturage up until middle of September. At that time owing to previous dearth bees were not very strong and at the same time a good flow of honey came on. Bees being in no shape for super work, stored almost exclusively in the brood chambers. Now it so happened that we were preparing to move the entire lot of over 500 colonies to our present location. Owing to the heavy condition of the comb we saw that it would be necessary to extract a good deal of honey from the brood combs, in order that we might have no loss from breaking down in the moving and rough handling. The winter of '01-2 was very protracted and the spring was late and on account of the dry weather many of the minor plants that usually yield some honey did not bloom at all. These conditions were very bad for here we were with a big lot of bees rather short of stores, not very strong on account of the conditions the previous fall and only about 40 days counting from the first of March when spring opens until the main honey flow was due, and worse still practically no honey coming in. We at once saw that if we were to get any surplus honey it would take heroic measures and to such we at once repared, viz, the "Spreading of Brood," in a wholesale way.

To understand the procedure we took it will be necessary to study the natural condition of the brood nest in a normal colony at the first of the breeding season. As soon as the queen begins egg laying we may notice that they are laid in the center of the cluster. We will note that next to the frames containing the first brood we will find a comb containing pollen on each side and beyond these combs of honey. As

the queen increases her brood she will gradually extend the patch on each frame until it covers nearly if not all the entire comb and as she does this the bees will remove the pollen from the adjoining comb which the queen fills as fast as the bees move the pollen towards the walls she will follow with eggs, until the entire set of combs are filled or as many as she is capable of filling, the bees at all times keeping the pollen beyond and in the frames on the outside of the cluster of brood. Now if we spread brood we will either radically change this order of arrangement, or do it in a way that will stimulate the bees and queen, cause her to lay more eggs, and at the same time not to destroy the regular order of things.

To illustrate we will take a normal colony at the opening of spring and as soon as we find that the queen has brood in two frames we will select two nice combs that are about one-third full of honey at the top and will set two of these combs one on each side of the two frames of brood; thus we will have two frames in the center of brood, the one next on each side partially empty and beyond these the two combs of pollen. In about two weeks we will return to this colony and we will find that the queen has extended her brood and now has four frames filled. We will proceed as before and slip in two more combs next to the four containing brood, always moving the pollen combs towards the walls and finally making use of them for brood. Now by the time the queen has the six frames full of brood we may expect that the two middle ones are about full of eggs again as the first eggs laid therein have hatched out. Now at this juncture just as the queen begins filling them the second time if we will insert between the two middle combs, empty combs they will be filled at once with eggs and fuller than they would be fill-

ed if placed on the outside. There is one great truth to learn in spreading brood and that is that we must not chop brood and by this I mean placing empty combs in between combs of capped brood or the giving of combs faster than the queens can fill or the bees keep warm. It is alright to place empty combs up next to frames of eggs and larvae and it is alright to place empty combs in between combs of hatching brood. But before we begin spreading brood we must first calculate how long it is until the first honey flow, then how much honey you have to rear brood on and if not the necessary old honey, will there be new honey coming in sufficient to feed the brood. And if not enough new honey and old honey together, will it pay to feed and if so how much will you have to feed. These are all questions that each man must decide for himself. If you have enough honey in your hives or in sight or the season promises favorable enough so that you can afford to feed, then I will say spread brood as fast as it will do, for the more bees you have ready for the honey flow the more honey you will be able to harvest. It will certainly pay and pay big to spread brood when you have a big honey flow in prospect, provided always that you do not spread too fast or do not do it in a way to chop the brood as explained.

The above system as outlined was practiced with our bees in the spring of 1902, with entire success. We believe that if we had not spread brood that spring that we would have been short many thousands of pounds of honey. Now there is a time when it will not pay to spread brood and that is where the owner is not sure that there will be a good honey flow at the end of the time required to breed the bees up. Neither will it pay where it is not done right by the proper men. I have seen whole apiaries almost wiped out by ex-

cessive brood spreading in unskilful hands.

For localities where the honey flow comes late and the bees have a long season in which to get bred up, it certainly will not pay to spread brood, it will simply be a great loss. In hand of experienced men and in the right localities and in the right seasons there is nothing that the Bee Keeper can do that will pay more than the scientific spreading of brood. In the hands of the inexperienced or in the wrong season there is nothing that will cause more loss than the spreading brood. I am honest when I say that I believe there has been more lost by brood spreading than there has been gained. But because there is loss with the wrong parties and in the wrong seasons, is no argument against it if done in the right way and at the right time. To spread brood rightly is a very important part of beekeeping and one that calls out all your knowledge and judgment, and I would advise the inexperienced to go in on the matter very slowly until he feels his way in the matter of the business.

H. H. FIDLER.

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We have received a carload of the unique supplies this year and are now ready to sell. We expect to order another car soon. These goods are equal to if not the best on the market. Give us a trial order. We are also agents for the PROGRESSIVE BEE-KEEPER, price 50 cents per year. Send your orders and subscriptions to us. We sell at factory prices.

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CHUNK HONEY—VARIOUS APIARIAN KINKS.

EY J. M. YOUNG.

Every fall, after all the supers are taken from the hives, I overhaul all the finished sections, cut out what honey there is in them, trim the unfilled sells all off, and sell this as chunk honey. By putting in a vessel of some kind, it can be sold to the grocers very readily, and can be put in common wooden dishes the same as butter is sold to customers. By this means the bee-keeper can get rid of everything in the comb honey line that will not do to sell otherwise.

I don't see how an up-to-date bee-keeper can get along without having his hives painted. It certainly pays. The advantage of having them look clean and nice is one big item. I would paint the supers one color and the hives another; the edge of the queen-excluders would be of a different shade, as well as the edges of the honey-boards. I now have hives in my apiary that have been painted 20 years that look very well yet, although they have been painted a time or two within this time. The advantage of having them painted are many, and a hive should not be set out even one season without being painted.

In the early part of the season I select all such colonies as seem a little weak, or that are not likely to work in the supers, and fit them up with extracting-combs for extracting purposes; by this means every colony in the yard can be made to bring the bee-keeper in some revenue, that would otherwise

lie around idle. Of course, plenty of combs should be given these weak colonies, and they should have good queens to start with. Colonies that won't work in the supers will store honey in the combs if given them. It will be a surprise to see the amount weak colonies will store.

* * * * *

Whenever snow begins to melt then it is time to shovel it away from the entrance or the front part of the hives, but not until it does begin to melt. Disturb the bees as little as possible, unless they begin to fly. The more bees are disturbed when it is cold, the worse it is for them. If there is snow on the hives, or in the corners, I would get it away from them, for when it begins to melt it will run into the hives more or less and wet the bees over the packing. Bees in the winter season must be kept dry if they are wintered successfully. It will not hurt them to be in a snow-drift—I don't advise their being covered clean up, but it will not hurt them for a short time. Since we have been in business my bees have been covered up several times by snow-drifts so that if I didn't know where they were I could not find them. My experience has been that they won't smother if they are covered clear up with snow, if the hive is kept so that it will not leak.

Cass Co., Nebr.

—American Bee Journal

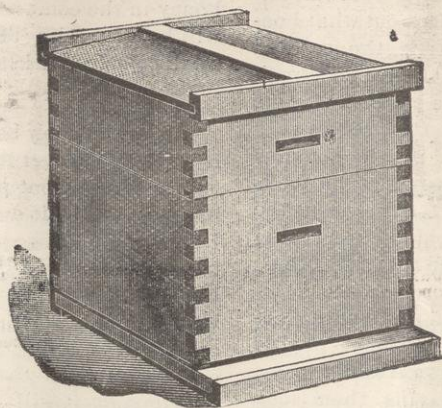
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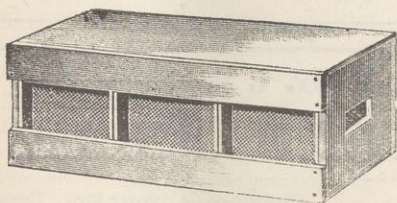
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...as... a Few Stands of Bees.

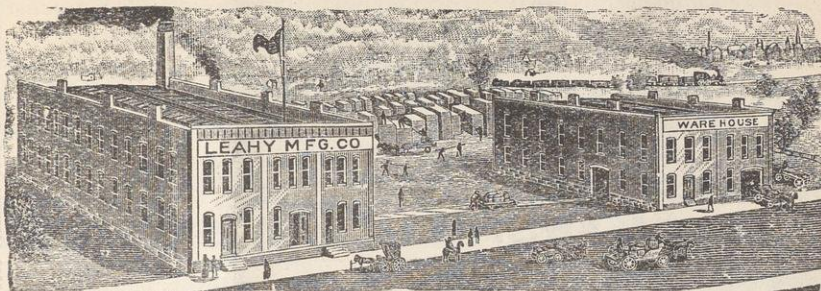
They work for nothing and board themselves, and require but little time to handle. We have just received a car-load of the famous "Higginsville" Supplies, consisting of dovetailed hives (like cut), sections, foundation, extractors, shipping cases, smokers, bee veils, swarm catchers, etc.....

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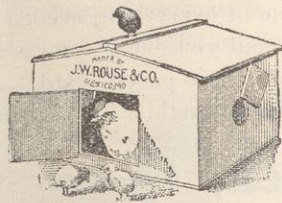
queens can be had at the lowest price—Long Tongue, Leather Colored, 5 Banners and Carniolians, at all seasons. Untested 50c; tested 75c. Satisfaction guaranteed.

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After a man succeeds in publishing a good journal, the next step is that of getting people to read it, and becoming acquainted with its merits. This can be done by advertising, sending out sample copies, circulars, etc. All this costs money. I think I am safe in saying that for every new subscriber I have received, I have paid out \$2.00 in advertising; hence I have often said that a publisher of a good journal could afford to send his paper one year free. It would cost no more than any other forms of advertising and would be very effective, but, for obvious reasons, this plan could not be put into practice, but I am going to come as near to it as I can. I have between 200 and 300 complete sets of back numbers for the present year, and as long as the supply holds out I will send a complete set and the rest of this year free, to anyone who will send me \$1.00 for the Review for 1903. For a few particulars regarding the numbers already published this year read the following:—

There is not room to say very much about the back numbers for this year but I will mention one prominent feature of each issue.

JANUARY is a Colorado number; six pages being devoted to a beautifully illustrated "write-up," by the editor, of that paradise for bee-keepers. This issue also shows how to make a cheap hive-cover that will neither split, warp nor leak, in any climate.

FEBRUARY contains the beginning of a series of articles by M. A. Gill, who last year managed 700 colonies of bees, and produced nearly two car loads of honey. These articles are written from the fullness of his experience.

MARCH has an article by S. D. Chapman, on "What Makes Bees Swarm," that I consider the best I have seen on the subject. It gets right down to the foundation of the matter. In fact so thoroughly does Mr. Chapman understand the matter that he has so made up a colony that one half would swarm leaving the combs deserted while the other half would not hudge.

APRIL ushers in some typographical changes. The smooth, shiny, glazed paper was laid aside for a soft white paper that gives to printing a clean, tasty, tempting look. The frontpieces are printed in

colors instead of somber black. The cover is of Court Gray printed in two colors—Umber and Milori blue.

MAY contains a five-page review of a book by E. A. Morgan, entitled "Bee-keeping for profit." It was rightly named. The author getting right down to basic principles, and giving the chit of profitable honey production, particularly in the Northern States.

JUNE shows how a man may practically defy foul brood; how he may keep bees in a foul-broody district, all surrounded by diseased colonies, yet keep his apiary so free from it and its effects as to secure a good crop of honey each year.

JULY has an excellent article by Mr. Gill on the management of out-apiaries for the production of comb honey, showing how the work must be generalized, yet systematic, and done just a little ahead of time.

AUGUST illustrates and describes the handiest and best bee-tent for circumventing robbers that I ever saw. It also has an article by Mr. Boardman on "shook" swarms, showing how we may practically take swarming into our own hands.

Remember that each issue contains dozens of interesting and instructive items aside from the ones mentioned. Send \$1.00, and the back numbers for this year will be sent at once, your name put upon the subscription list and the Review sent to the end of next year.

W. Z. HUTCHINSON, Flint, Michigan.

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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

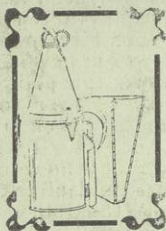
I have used Bingham Smokers ever since they first came out. Working from three to seven hundred colonies twelve months in the year. I ought to know what is required of a smoker. The Doctor 3 1/2 inch just received fills the bill.

Respt., O. W. OSBORN.

Mt. Pleasant, Mich., 7-7 1896.

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Respectfully, WM. HAMBU.



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

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