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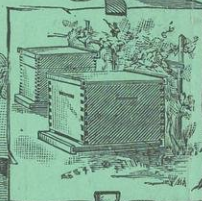
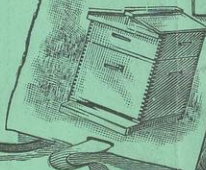
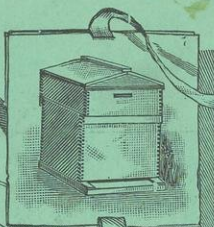
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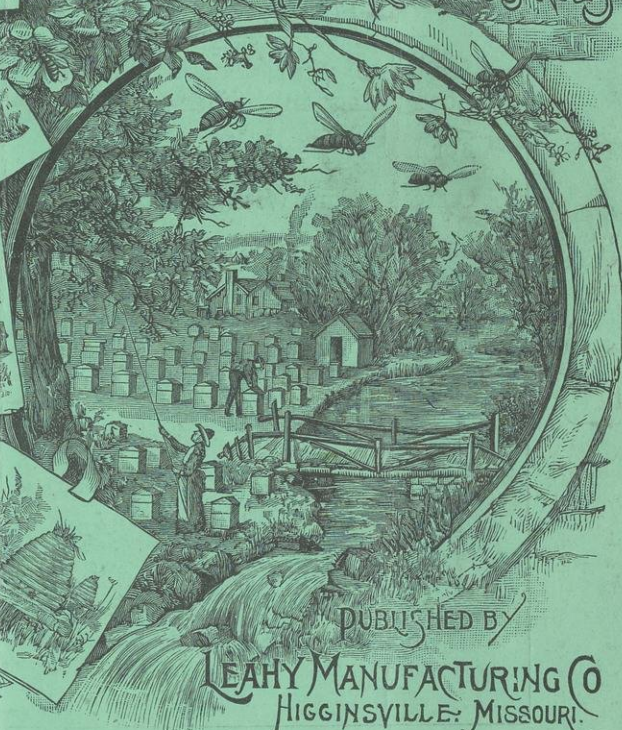
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PROGRESSIVE BEE-KEEPER

A JOURNAL
DEVOTED TO BEES, HONEY AND
KINDRED INDUSTRIES.



PUBLISHED BY

LEAHY MANUFACTURING CO
HIGGINSVILLE, MISSOURI.



March 1905.





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The Progressive Bee-Keeper.

A Journal Devoted to Bees, Honey and Kindred Supplies.

VOL. XIII.

HIGGINSVILLE, MO., MARCH 1905.

NO. 3

strong reason for believing that it arises chiefly from the bees being in a worse bodily condition, and having but a small quantity of nutriment stored up within their own systems, which alone enables them to pass some portion of the winter in a state of repose. If the female of the common bumble bee, *Bombus terrestris*, which sleeps through the winter and appears early in the following spring, be examined about the end of September, its abdomen is found to be supplied with large bags of fat. At that period the insect is less active and evolves a smaller quantity of heat than in the spring, when there is a much lower temperature of the atmosphere. And if at that period the insect be deprived of food, it will continue to live very much longer than it would have lived, under similar circumstances, and exactly at the same temperature of the atmosphere, in the month of April."

On page 27 of same issue (Feb.) L. M. Gulden sensibly asserts that "There is little more logic in expecting bees to provide themselves under all conditions with sufficient stores for winters of variable intensity and duration than to expect live stock to lay in a supply of fodder. A season like the present one, that hustles stockmen to keep provender for their live stock will also drive the bee-keepers to look after their interests, or to the wall.

J. E. Johnson reviews "American Apiculture" and the question of in-

Good Things In the Bee-Keeping Press.

SOMNAMBULIST.

Some of the editors are calling for early reports as to wintering in 1904 and '05. Looks just now in these parts, as if we might expect a good many to send in their resignations during the "spring opening." In all probability populous hives will be no common affairs, the weather having been one continuous zero show with scarcely any waits between the acts. Snow covers the ground and has been with us long enough that the wildest colts are about broke to sleigh bells and the fuel bills have about broke their drivers. February has sure given us the cold shoulder, and while cold shoulder is good enough too much of a good thing surfeits. A full larder last fall will be an encouraging item on which to rest one's thoughts in contemplating the situation. A. C. Miller in *The American Bee-Keeper*, calls our attention to the fact the "functional conditions may have a bearing upon the matter of successful wintering." He quotes from Newport: "It is well known to the cottager, that when the flowers have not yielded an abundance of honey in the latter part of the summer, the bees in his hives will have less chance of existing through the winter than when the production of honey has been plentiful. This latter circumstance may, perhaps, be said to arise from a deficiency in the quantity of honey stored up by the bees, but I have

crease in number of colonies kept, in an interesting manner, a few paragraphs therefrom will illustrate the trend of his reasoning: "Now, by making specialty of bee-keeping, and continuing to increase my colonies as fast as possible, and thus branch out by starting out-apiaries, etc., I should be able, ere long to possess one thousand or more colonies. If my crops should be fairly good and I should be able to dispose of all my honey at the same price that I am getting at present, great wealth would soon be mine, and my knocking at the door of prosperity would cease. However, no doubt if one thousand colonies proved a success, that success would only whet my appetite for keeping still more bees." After consulting market quotations for last year he asks, "What do you think of \$1.46 per twenty-four-pound case of best honey? Nos. 2 and 3 somewhere between that and nothing, and counting nothing for your work, cost of hive and other expenses." He refers to future organization of specialists and concludes his article as follows: "Shipping in carload lots and saving both freight and commission, they can, without any trouble, undersell the ordinary bee-keeper with his one hundred or two hundred colonies. The western states and Texas have still much unoccupied territory, which, in the near future, will contain thousands of colonies of bees. The bee-keepers in those parts are largely specialists, who are increasing their stock, and there is no gainsaying the fact that the output of honey is gaining more rapidly than is the consumption."

Bessie L. Putnam tells us, "it is apparent that there must be a line of demarkation on one side of which may be written profit and on the other loss." She could have appropriately headed her article "Overstocking"

and concludes in these words, "The larger the supply of natural food per swarm, the higher the net profit. The location of the line between profit and loss varies with the season. Its mean position everyone must locate for himself."

J. W. Tefft regards Apiculture as peculiarly adapted to women. A portion of his article is here reproduced: "The establishment of agricultural and apicultural schools would open up a new field for women of activity to which too little attention has been paid. Down to the present time the majority of attempts in this department have been made for the boys, but it is peculiarly fitting that we should endeavor to find out just what may be done to ameliorate the economic condition of women of the industrial classes, and that in a practical manner which shall increase the health as well as increase the income. Since men have deserted the land and have monopolized many of the trades, why should not women return to the land and cultivate fruits, poultry and bees? I do not desire to make laborers of women, but rather train intelligent cultivators of bees, who will become producers of the first order? If we are told that the physical qualities of woman unfit her for rural life, we reply that the unhappy seamstress, bent double over her work from morn until night, expends a much greater amount of energy than she would in apiculture."

In Miss Wilson's department *American Bee Journal* there also appears champion for lady bee-keepers who says, "In these days when so many men refuse to support a family, lots are mean enough to find fault if a woman takes the job; and many women are fearful of having bond-chains riveted on them by matrimony, so worthy

women are compelled or choose to earn their own living, and it is pleasing to see some one come to the front and advocate woman's rites in apiculture with so much practical ability as Miss Wilson is doing it."

In the *Agricultural Epitomist* we find that Ida M. Shepples evidences that a woman is capable of being a practical apiculturist, by the following suggestions:

CARELESSNESS IS EXPENSIVE.

[Written for the *Epitomist*.]

When the winter sets in freezing cold and you wrap up the bee-hives with old quilts, comforts, etc., don't forget to take them off when the weather moderates. More damage is done bees by covering up too warmly than by not covering at all. A friend of mine did this way last winter—piled much stuff about his bees, and forgot to take it off when a warm day or two set in. Consequence was, the bees got a good sweating out, the water ran everywhere in the hive, the honey came uncapped, the bees were all stuck up and helpless and a big freeze set in and froze up the water in the hive, bees and all. Another friend left his bees out in the cold and snow. No roof, no protection, and yet they kept warm and did well because he had left them a fine lot of honey to winter on. But one night came a deep snow, then a rain that crusted over the snow. This man forgot to go out and dig away the snow so the bees could get a breath of air. They all smothered. Four fine stands of bees gone to "Davy Jones' locker" just because of a little carelessness.

Lewisville, Ind. IDA M. SHEPLER.

From Green's *Fruit Culturist* we clip this reference to American women: "The women of America, unlike the women of other nations may follow any pursuit which they show themselves capable of following. To-day 5,000,000

women are employed in the United States in 400 different wage-earning occupations. It is not necessary to argue as to whether women should be wage-earners; we accept the conditions for the reason that women workers are everywhere about us, side by side with the men-workers, equally respected. To men and women alike work is a natural heritage. The field of work opened to women has no boundaries, there is a bewildering choice, yet a woman's principal work, or her means of earning a livelihood is not always left to her choosing. If it were, would she till the soil? For instance, take a small plot of ground and raise violets for the florists? flowers for seeds for the seedmen? mushrooms, vegetables, fruit or poultry for the market? or would she undertake to run a dairy farm, or to manage a Western ranch, raising grain or cattle?"

All of which women have successfully managed, and if not exactly from choice, as is many times the case with men also, their manner of accomplishing ends would certainly indicate they were filling their niche, what though they did stumble into the same, just as many a man before has done. Mrs. Catherine Green, a planter's wife, was the inventor of the cotton gin. Her work on the farm taught her the necessity for such an invention, and although her husband has been given the credit for it, the fact is said to be thoroughly established, that Mrs. Manning was the author of the American mower and reaper. Indeed the inventions attributable to women are not a few in number, which goes to show they are not devoid of energy, that factor that has created more millionaires than the accident of birth. As to a question of endurance, take for an example Sara Bernhardt, who has led perhaps the most strenuous life of any person now before the public. Her stage deaths by self-admin-

istered poisons, total about 10,000; she has jumped into the scenic artist's Seine over 7,000 times; she has sent over 5,000 imaginary bullets into her head from a revolver, while about the same number of daggers have been plunged into her emaciated anatomy. As to the discovery and application of ways and means of raising funds, (and oftentimes Cain,) they take the cake, witness Madame Humbold and Cassie Chadwick, the banker's having scarcely fairly caught their breath from the effects of the latter's pyrotecal flights of feminine finance. In Boston there is a club of more than a hundred members (women) whose principle object is to assist women to secure situations, and to prepare them to hold the same. The president of the club owns and operates her farm, which she holds open as a place of refuge to broken down women in need of rest. The scheme was originally intended for the benefit of Swedes, Norwegians and Danes, and was started from a nucleus of 20 members, but has extended a helping hand to many an American woman seeking a home and situation. Truly great oaks from little acorns grow, and the remembrance of this, one of many like institutions of relief, brings us back to Miss Wilson's department again where Frances E. Wheeler says: "This is a great age in which we are living. I suppose there has never been a time when the individual, as an individual, was of so much account, or received so many helps to make life seem worth living. It is an age when the brotherhood of man is accepted as a fact, and acted upon in its deepest, most affectionate, and sympathetic sense as never before. Many cords are stretched out to draw us—even the most isolated—into a close, familiar touch with each other, and the great work of regeneration steadily goes on about us.

FOR BEE INSPECTION BILL.

J. C. Stewart of Hopkins Here Urging Passage of Measure Before Assembly.

From St. Joseph Mo., Gazette.

The bill before the general assembly providing for a state bee inspector, which was passed by the senate has been favorably reported upon by a committee in the lower house.

The bill is known as the "foul brood bill," taken from the name of a contagious disease that is prevalent in some parts of the state.

J. C. Stewart, of Hopkins, Mo., vice president of the Missouri State Bee Association, is in St. Joseph working in the interest of the bill. People interested in bees were asked to write to their senators and representatives urging support of the measure.

BEE INSPECTOR.

The bill provides for a bee inspector under the care of the board of agriculture. It requires the inspector to examine all colonies that are diseased and to treat the same.

The "foul brood" is said to be the worst known bee disease and is very contagious.

At the meeting of the state society at the World's fair the bill as introduced in the legislature was unanimously recommended.

Mr. Stewart is prominently mentioned as inspector if the bill becomes a law.

The office will carry with it a salary of \$2,000 a year.

OLD BEE DISEASE.

"The 'foul brood' disease is known to have existed for 1,000 years and is prevalent in five different localities in Missouri. A remedy has now been discovered which saves the lives of both old and young bees, the hive and

wax.

Eight states now have inspectors or bills have been introduced with this object in view. New York alone has three inspectors but most of the states have but one.

Although the house of representatives has not taken a vote on the measure, yet it is confidently expected by Mr. Stewart that the bill will pass.

FOR BEE INSPECTION.

INDUSTRIOUS LITTLE INSECT IS SUBJECT TO DISEASE.

Mr. Stewart of Hopkins Favors the Passage of the Bill Introduced by Senator Vories—He Hopes to Be Made State Inspector.

From The News and Press.

To him who has been stung by a honey-bee, news that this industrious insect is subject to diseases, some contagious, all more or less deadly, will come as cheering information: John C. Stewart of Hopkins, Mo., vice-president of the Missouri Bee Association is authority for the statement, and the upper house of the legislature is persuaded of its truth, for it has passed a bill providing for a state inspector of apiaries, or bee doctor, whose duty it shall be to travel over the state, examine the various colonies with reference to possible pathological conditions, and prescribe a remedy.

Baby bees, it seems, are more pervious to disease than the adult insect. In the larva state honey-bees are sometimes attacked by two diseases, "foul brood" and "black-brood." The adult bee, however, is heir to only one, so far as the knowledge of Mr. Stewart goes, and this is something like locomotor ataxia. When a bee gets

locomotor ataxia, or paralysis, as the malady is technically termed, it is no longer able to improve each shining hour, and becomes a public charge upon the colony.

Mr. Stewart, who was in St. Joseph yesterday, is doing a little boosting for the apiary inspector bill. He is asking his friends to write to their representatives in the lower house and urge them to give it their support. If the bill becomes a law Mr. Stewart hopes to be appointed inspector.

"Missouri ranks fourth of the honey producing states of the Union," he said. "Only California, New York and Illinois rank ahead of it, and as bee-keeping is such an important industry, every precaution looking to its protection should be observed. I have 225 colonies of my own, and last year produced 13,000 pounds of honey.

"For years I have fought in my yard the disease known as 'foul brood,' which is the most damaging to the bee-keeper. The first year I destroyed thirty colonies—bees, hives, honey and all, burning them in deep pits dug for the purpose, and working at night so that the healthy bees could not get a taste of the infected honey. The next year it appeared again, but in a much less virulent form, and the fourth year I found it necessary to destroy only one hive.

"The disease of 'foul brood' has been known for a thousand years, but only within the last seventy-five years has there been any remedy for it save the bon-fire. It is a disease of the immature bee. The young bee takes the contagion through its feed, and dies in the larva state, giving off an offensive odor. The old bees seem to strong to succumb to it.

"It is a spore disease. Bees robbing honey from distant hives carry it with them, and I believe the disease can cross the state in ten years.

"Drug remedies are of no avail.

The best remedy, I believe, is that of William McEvoy of Toronto, which is to start new colonies on new frames, compelling the bees to build all over new again, and destroying all the old comb, and disinfecting all tools, clothing and hives."

The bill now in the legislature provides for a salary of \$4 per day and expenses for the time actually spent by the inspector in the discharge of his duties. Representative Walmsley of Kansas City, it is said, will champion it in the house. It was introduced in the senate by Senator Vories.

To the Members of the N. B-K. A.

The Chairman of the Board of Directors is in receipt of a letter from Mrs. G. W. Brodbeck, dated Feb 11, 1905 announcing the death of her husband, Secretary G. W. Brodbeck and enclosing the following results of the ballot taken last November for officers of the National Bee-Keepers Association.:-

President—J. U. Harris having received a plurality of the votes cast for president was elected president. 252 out of 355.

Vice-President—C. P. Dadant having received a plurality of votes cast for vice-president was elected vice-president. 251 out of 355.

Secretary—W. Z. Hutchinson having received a plurality of the votes cast for Secretary, was elected secretary. 203 out of 359.

Gen. Manager—N. E. Franse having received a plurality of the votes cast for Gen. Manager, was elected. 336 out of 349.

Directors—E. Whitecomb, R. L. Taylor and Udo Topperwein having received the greatest number of votes for Directors to succeed those whose terms expired were elected.

(E. W. 100 out of 165.)

(R. T. 102 out of 256.)

(U. T. 189 out of 311.)

The result of this ballot should have been declared last December but owing to the fatal illness of Secretary Brodbeck it has been delayed.

W. F. MARKS,

Chairman of Board of Directors.

N. E. France asks PROGRESSIVE BEE-KEEPER to publish above in your Journal. N. E. F.

Conversations With Doolittle.

FROM GLEANINGS IN BEE CULTURE.

"Say, Doolittle, is it not against the very nature of bees to have so many "traps," by way of separators, T tins, queen-excluders, etc., in the production of comb honey?"

"Possibly, but what are you trying to get at?"

"Just this: Do not these things lessen our yield quite materially, and place the bees to a great disadvantage above what they were with the large open boxes, holding from 15 to 25 pounds, of our father's?"

"When I first began bee-keeping, comb honey was not put up as at the present day, as a part of the boxes used were made to hold 15 to 20 pounds as you have just said, while the smallest boxes then made in this locality held fully six pounds. Some of these had glass sides, while others had only a small piece of glass over an auger hole, so that the owner of the bees could see through this glass to tell when the combs were completed, or when the honey was ready to take off. As time passed on, the thought originated in some enterprising bee-keeper's head that honey would sell better if stored in smaller boxes than those weighing six pounds, so we soon had the four-pound glass box, having four corner-posts and glass on all four sides. These were very tasty, and took well in the market, as the customer could see the honey on all four

sides, the same being very attractive and captivating to all who saw it."

"I never heard of such a box. It must have been quite a pretty sight."

"It was. But bee-keepers were not content, so that the next we had was the Harbisan box, or one holding three pounds, the same having glass on two sides. This box was used the same as its predecessors had been; namely, with the glass sides separating each from all others, while it was made long enough to hold only one comb, which was $2\frac{1}{4}$ inches thick when completed."

"Did you find this as good as the larger ones?"

"With this box I had very little success, for the bees seemed very loth to work in it; and when they did so they would often try to put in three combs, which made it in very poor shape for market. For this reason I decided that it was not in accord with 'nature' for the bees to be cut up in such little clusters (as the boxes were glassed before placing in the hive) and have their combs as thick as $2\frac{1}{4}$ inches. Consequently I went back to the six-pound box again, and left the matter of small boxes to others."

"And you found you were right, did you not?"

"We shall see, When the two-pound section with separators was introduced (these were the first sections in reality,) I considered them as being still worse than any preceding them, for it seemed to me that the bees were divided into still smaller clusters than before."

"That is the way I reason, exactly."

"So did I; but one night while lying awake thinking on the subject I believed that I saw a difference between this way of using boxes and the old way, where glass was used on both sides of the box; for in using separators the bees were not, properly speaking, divided into little clusters as before."

"Why not?"

"Because, as the separators lacked $\frac{1}{4}$ inch of coming within reach of either the top or the bottom of the box, the bees and warmed air could pass from one to the other, to a certain extent, just the same as if no tin were there. But I feared that the tin would be a hindrance after all, so I went slowly the first year."

"What was the result with those you tried?"

"Greater than from hives worked in the old way, on an average; but as I used only a few hives I feared I was not sure in the matter, so I tried only about double the number of the year before, the season following, working the rest of the apiary with the six-pound box as before. At the end of that season I found that the sections with separators gave me the largest yield again, and the combs in these sections were simply perfect, and sold in market for two to three cents per pound more than did the six-pound boxes."

"Well, from that I suppose you adopted the sections with separators for the whole apiary?"

"No. I still had fears in the matter, so the next year I worked about half each way; but when fall came, and I found that sections were still ahead as to yield, and the same as to price, I could hesitate no longer, and adopted sections entirely for the future."

"Do you still use the two-pound sections?"

"No."

"Did you find that the bees worked as well in the one-pound section with separators as with the two?"

"Yes. But I was very loath to make this change, not so much on account of fearing that the bees would not do as great work in them as because this change would very nearly, if not quite, double the work of getting a thousand pounds of honey ready for

market as was required with the two-pound sections. There was double the number to make, handle, scrape the propolis and crate; and I never could see aught but a mistake, on the part of bee-keepers, in rushing into these one-pound sections in advance of any call for the same from the consumer. It was simply a matter of seeing to how much greater an extreme one could run than his predecessor. And this craze went so far that some put forth a half-pound section, and cried 'Eureka!' over it. Mind you, the bee-keepers were doing this—making themselves four times the work of the past, that one could get a little ahead of the other on a small-sized section, without a single consumer asking them to go into such folly of quadrupling their work. This has always been one of the wonders to me."

"But the half-pound section did not come into general use, did it?"

"No. The bees 'kicked' against being cut up into quite so small clusters, and would not work to so good advantage as in the pound-section, and so all seemed to settle down on the latter; and after the consumer got used to these small pound sections the call for two-pound sections ceased although there were some in New York city that called for the latter some time after they ceased to appear in market."

"Well, if the bees kicked on the half-pound why not on the pound and on the two-pound, to a proportional extent?"

"It would seem that they should; but from practice I find that, so far as the yield of honey is concerned, as much can be produced in these smaller sections as in any thing larger."

"Do you still use tin separators?"

"Yes."

"But is not the claim made that fences are better?"

"Yes. Theory argues along the same that you are doing, that all the

'traps' used in modern bee-keeping are a hindrance to the bees; and so the fences have been put forward to overcome this partially, by allowing the bees to pass through between the boards, and thus allow of a greater circulation of heat and bees than was possible with the old whole-tin separator."

"And does this not prove correct in practice?"

"Not with me. If it did, the Bet-singer arrangement, with wire cloth having meshes of a size to admit bees freely, used as separators, should as far surpass the fences as daylight does moonlight: but after a thorough trial of both, I can not see enough in favor of either, over and above my old tin separators, which have been in use since the latter seventies, to pay for an exchange. Yea, more! I can not see a particle of difference as to the yield, perfect capping or perfect filling, in favor of either, when mixed up in any super on the same colony, or under like circumstances with like colonies. If a colony is in good condition to produce fancy comb honey with one of the plans, it will produce equally nice with either plan. But I am well aware that theory, and reasoning from man's standpoint, would say that the greatest success would be given where the wire cloth was used, as with this the bees are inconvenienced, apparently little, if any, more than they were in the days of our fathers with their 25-pound box."

"Well, I am surprised at this. But how about the queen-excluding honey-boards?"

"When these first came before the public I tried them slowly, as I did the sections with separators, using more and more each year, till, so far as I am able to see, I can say that, with me and in my locality, they do not decrease my crop of comb honey. But I am not speaking for others, only to

advise them to do as I have done in testing the matter, if they think there is a chance that, in their locality, these would not work the same. The old saying, "Prove all things, hold fast that which is good," is as valuable to you as to any one, and as good to-day as it ever was; and if you have doubts in this matter, this is the thing for you to do. However, he who can commence where the best bee-keepers of to-day leave off has the advantage of those who have gone all the way proving these things for themselves—at least their financial success may be greater.

Skunks as Enemies to Bees.

Until I was ten years old I lived on a farm in the state of New York. At evening it was my duty to bring up the cows from the pasture and place them in a yard that was situated some ten rods or so from the house. Extending from the cow yard along the path leading to the house was a rail fence of the worm pattern of construction. Many an evening as I was passing along that path did I notice a small animal with two white stripes along its back and a bushy tail frisking along on the top rail and creeping around the stakes at the corners. I presume it was afraid to venture upon the ground because of dogs. The rail fence ended against the hog pen and then the fence was continued by pickets to the barn. In a corner of the rail fence a few feet from the hog pen and on the opposite side of the path, were four or five colonies of bees. They were in the old box hives and rested on a bench formed of sawed-off chunks of logs and planks, which came near the fence, so that the animals could step handily off onto them. There were notches sawed in the lower edge of the box hives to provide an entrance for the

bees. Our bees never swarmed or had any honey to spare but my father often bought of neighbors by "patent pail" full.

I remember of once accompanying him to a neighbor's for a pail of honey. A part of the hives which were a very tall kind were sitting in front of the house, on the lawn, as it were, while there was a long line of hives to the right of the house along a rail fence, with brush and woods just over the fence. The pail was filled by opening the side door of the hive and cutting out chunks which were thrown in promiscuously. In the conversation my father remarked that those hives sitting out in the open were in danger of being upset by the wind. The bee-keeper answered that while that was true still those were the hives from which he obtained the most honey.

It was thirty years later, and after coming to California before I came to realize that there was a method in the actions of the little animal that I saw on the fence, and I suspect there may be a hundred thousand farmers in the United States who have a few hives of bees that do not seem to be any more account than my father's; and, as they have heard that bees do best when "let alone," they have practiced the plan until the bees are almost totally neglected, especially during the harvesting, corn-husking and fall plowing season. If it is the custom of the farmer to keep the corners of the fences or garden ever so clean, as soon as a few hives of bees are placed there, they are nearly sure to be allowed to grow up with briars and weeds which furnish excellent protection for these little animals to creep toward the hives or to retreat from them if pursued. These animals secrete themselves during the day under piles of boards, logs or wood, hay-stacks, stone piles and under buildings. In woodchuck, badger,

and wolf holes and hollow logs or stumps; and in the evening begin to search the fields for insects and the vicinity of human dwellings for anything suited to their appetite. I suspect there are a hundred thousand persons in the United States today who are keeping a few colonies of bees with the expectation of getting a little honey from them now and then who are allowing them to be exposed to natural visitation and destruction by these little animals, by setting the hives in an out-of-the-way spot, but easy of approach from one or more of the above mentioned hiding places. There are probably few farmers where several of these animals do not live; not excepting those of the prairie states.

In Iowa I knew them to visit with considerable regularity the wood shed to inspect the slop buckets for milk and remnants from the kitchen table. Here in California, in dry times, they come into the porch for water and when the door remained ajar have often come into the house and proceeded to nosing about for eatables. In some cases pieces of brood from the hives were placed where they could find it. They continued to take it time after time, finally becoming tame enough to take it from the hand.

Of the sixteen different apiary locations which I have occupied in this state nearly all required attention to protect the bees from skunks. Even the two locations which were near the city limits of Pasadena and Los Angeles were not exempt. One year an out apiary of 43 colonies remained unmolested until about the middle of August when they came in suddenly, five or six together, as soon as it was dark. Having no other means of defense at hand, and knowing the benefits which they were in catching mice worms, grasshoppers etc., in the field I thought to dissuade their intentions

by throwing stones and sticks. This was tried ten or fifteen evenings. While they were frightened out for the moment, they returned in an hour or so or late in the night and worked at the most outlaying colonies until I finally was compelled to use strychnine.

So far as my observation goes I believe that skunks become bee enemies from the standard of intelligence, and not instinct, as is supposed by some writers. They learn to attract the bees out of their hives by scratching on the fronts or otherwise creating a commotion before the entrance. Then when the bees come out, they smash them against the hive with their feet or pick them out of their fur with their long claws and stamp them in the ground to kill them. Still I have seen them stand before the hive and pick them up in their teeth, but do not believe they continue by that method very long. These nocturnal visits can usually be easily detected by the appearance of the earth before the hives, but not always.

One fall noticing signs before a hive I went out several times with a lamp in one hand and a gun in the other but saw no skunk. Knowing that they are not cunning and seldom move until a person approaches within ten feet or so, I concluded that that one must be an unusually smart skunk. One day, late in the afternoon I happened to go out in the apiary at a very lively gait and found a silver gray fox snapping up the bees as fast as they came out of the entrance. "Don't believe it!" do you say? Well, you may believe it when you are told how they do it. But they do not "gobble them up" as the A. B. C., of Bee Culture says skunks do. Nor have I ever seen a skunk that did not handle bees in a most cautious, painstaking, one-at-a-time manner. And I never expect to see them operate in any other way before I find a man that

will take a running start and attempt to jump through a barbed wire fence. They do not roll them under the tongue, the first instant, on account of the actual "fear of stings."

Farther along in the same paragraph it says that skunks "get hold of the bee with its sweet morsel of honey in its honey-sac." I doubt if there is a dozen skunks in California or any other state that ever got hold of a bee having a full honey-sac. As has been already said, in this article, skunks do not molest bees until the ground becomes too dry and hard to dig for other insects. At that time it is so dry that that plants have nearly ceased yielding honey. There is no likelihood that the hives contain bees having their honey-sac filled with honey at such a season; and if there were such bees in the hive, they would be the last ones to come out to attack an enemy.

If you have ever seen a dog catch a fly that was pestering him by trying to alight on his nose you are to understand that it is the way a fox catches a bee, except that the bee is picked from the front of the hive or off the alighting board. He secures the bee between or just within his front teeth. Then a downward convex movement, (with the same force that throws the honey out of a comb when in the extractor,) holds the bee against his front teeth until his nose reaches a downward direction. The fox opens his mouth and the bee is thrown on the ground with a force that knocks the life out of it and the fox proceeds to gobble it down. Should there be some life left a little pressure of a foot will finish it.

About two months previous I had put a good swarm in this hive and took away the old queen the swarm had and introduced one of the finest of young queens. The fox had been catching bees long enough to ruin the

colony, as there were not more than a jill of bees remaining. There were eggs and brood scattered through six or seven combs, which indicated how rapidly the colony had been depopulated.

Astrophies of the affair we have two tanned fur skins which brought more smiles to my wife's countenance than the harvesting of several tons of honey.

On farther examination I found several colonies at another corner of the apiary to which skunks were paying regular visits; one very fine colony having only about a pint of bees remaining. The only outside indications being a spot of dirt plastered on hive just above the entrance. Foxes are most likely to enter the apiary from the rugged mountains or dense woodlands, preferring the undisturbed leaves rather than beaten paths. When pursued they may travel beaten paths or walk the fences or enter the most impenetrable thickets. Skunks choose the beaten paths following them to the apiary a mile or more distant. In the absence of paths they may travel long distances on the narrow edge of a board fence. Still, if they are compelled, they cultivate boldness and cross the open fields.

Many a reader, perhaps the bee-keeper, who prides himself in the belief that he is taking the so-called "short-cuts" of the business will read the foregoing and cast it aside as worthless trash. Now I have written it because it has been a part of my dollar and cent experience. I have put in such examples as I thought may have been the experience of others in other lines of business, in which the reader may have attained more skill than in the present instance. This was for the purpose of arousing his enthusiasm so that he will begin to look closer and get hold of the same or even

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A Question Box.

S. E. MILLER.

About a month ago I suggested to the editor and manager of THE PROGRESSIVE BEE-KEEPER that a question box might be a desirable addition to THE PROGRESSIVE and advised him that if he approved of it he might mention it in the February issue. He advised me later that he approved of it and in the February issue inserted a short notice to that effect. I will now make the suggestion that all such questions be directed to me at Buffton, Mo., instead of to the publishers at Higginsville, Mo. This will save time and also relieve the editor and manager from the necessity of reading them over. I would also say to those who may wish to ask questions, make your questions short and to the point. That is do not use any more words

than are actually necessary in propounding a question. At the same time make your questions so plain that there will be no doubt as to what you wish to know. Send your questions so as to reach me on or before the first of each month and I will try to have and the answers appear in the following issue. That is questions reaching me on or before April 1st. will appear in the April issue etc.

In undertaking this work I do not feel that I will always be able to give the most wholesome advice but I shall advise to the best of my ability in all cases and when it comes to questions that I am unable to answer intelligently I will resort to Dr. Millers' phrase, 'I don't know. I might mention in the beginning that I have had little experience and less success in wintering bees in the cellar, yet I have read considerable on the subject and have an idea of what the general requirements are to successful wintering. I have no suitable cellar for the purpose and to this I attribute my failures in attempting cellar wintering. While I have studied the subject of Foul Brood for a number of years, so far as one may study a subject by simply reading about it I have never seen a case of it and am not prepared to give advice from actual experience.

BEES WORKING ON ORANGE BLOOMS.
Bees were working on orange bloom at Buffton, Mo., March 1. Now lest some of the readers think that this is a fable I will explain that I have an Otaheite orange tree in bloom which I set out on the porch on the above date. It was not long until the bees were fairly tumbling over one another to get to the flowers.

Have you examined your bees to see how they have wintered?

EXAMINING THE BEES IN MARCH.

* There are some things that must of necessity be repeated each year at seasonable times in the bee journals

and while I have in the past at about this time of the year called attention to the fact that we should examine our colonies at about this season I will here repeat it. By the time the PROGRESSIVE for March reaches you, you should, (if you haven't already done it) examine each colony. By examining I do not mean that we are to pull each colony all to pieces and expose the brood to rachilly atmosphere and disarrange the combs but on the first pleasant day when the bees are flying we should make an inspection of each colony. The chief points to ascertain is to see whether they have sufficient stores whether the queen is doing her duty. In the latitude of Bluffton, which is about $38\frac{1}{2}$ degrees north, latitude by the first week in March good average colonies should have a patch of sealed brood the size of your hand on each side of the comb that happens to be the center of the brood nest and the combs on either side of it should contain a proportionate amount of sealed and unsealed brood and eggs.

I examined a part of my colonies on March 2nd & 3rd and that is the condition I found them in. Some extra strong colonies contained from two to three times as much brood as above mentioned, while weak colonies had only a small patch probably two and a half inches in diameter, of sealed brood. Some seasons they may have as much brood as this a week or two earlier while in a very backward season brood rearing may be considerably retarded.

If you follow the practice of clipping the queens wings now is the best time to do it for you will have much less trouble in finding her now while the hive is not crowded with bees than you will have a month or more later when the colony is stronger. If you do not wish to clip the queens it will not be necessary to remove more than one comb and sometimes this may not be

necessary. You can generally see at a glance whether they are well provided with stores, so that all you have to do is to see that they have a patch of healthy looking brood which will assure you of the presence of the queen. If you wish to clip the queens however it may be necessary to remove several combs and in that case you should be provided with a tight box having a cloth cover a little larger than the box. Fasten one edge of this cloth to the upper part of one side of the box and on the other edge of the cloth fasten two light strips of wood, nailing them together with the edge of the cloth between them. These strips serve as a weight to keep the cloth from doubling up and falling down into the box. Whenever you remove a comb from the hive have this box near at hand. Throw back the cloth cover and hang the comb in the box and immediately cover it again with the cloth. The box should be so made that the frames will hang in it just as they hang in the hive. Now there is another cloth a little larger than your hive cover with two light strips of wood on each side, the edges of the cloth being fastened between them. While you are not in the act of removing or returning combs to the hive and even while you are removing a frame or two from one side of the hive you can keep the remainder of the frames covered with the cloth. All this may seem to some people like unnecessary precaution but I want to tell you that on pleasant days when the bees are flying and not a thing for them to work on they will be ready to dip into an open hive before the water gets hot and if you once allow them to get a taste of stolen sweets you are likely to have trouble and if they happen to find a weak colony that is not able to put up a good fight they may clean it out some day before you know it. Any colonies that are short of stores should be pro-

vided for and if you have not kept over from last season combs of sealed honey you should draw on such colonies as have stores to spare. Usually we have several such colonies at this time of year.

Be careful in replacing the combs in the hives to put them back in the same relative position that they occupied when you took them for to throw the brood nest out of its regular order thus early in the season means a back set to the colony. If you wish to practice spreading brood as practiced and advocated by Mr. G. M. Doolittle you had better wait until a little later and even then you had better be sure that you fully understand his method or you may do more harm than good.

QUEENLESS COLONIES.

I wish I knew what to tell you to do with colonies that are found to be queenless early in the season, but I don't know. Usually when a chicken gets sick, unless it happens to be a very valuable fowl, about the cheapest remedy is to cut its tail off right behind the ears, and I am not sure but what a similar remedy is the cheapest way to dispose of a weak queenless colony of bees. A few days ago I found one such colony. I gave them a comb containing brood from a stronger colony and may succeed in making a fair sized nucleus out of them and by using them for mating queens when the proper season arrives, in that way make them earn me something. Yet I am doubtful as to whether this was the wisest course. As a general rule I believe the best thing to do is to shake the bees in front of one of the nearest hives and let them join the colony, and remove the hive which they occupied. In this way they may be some help to the other colony, while if we attempt to doctor on them they are likely to prove only a source of annoyance and be of little use in the end.

THE LATEST PHRASE.

I do not know how it may be in other countries, but the American people seem ever ready to take up a new phrase and push it along. If it is spiced with slang it seems to take all the better and in a short time it becomes very much over-worked; and suffers from general lassitude and a run down constitution. Just now, "the smile that won't come off," is being very much over-worked and we could not blame it if it went on strike and demanded an eight hour day. The daily news papers, the Magazines, the Advertiser; even some of the bee journals, and I might say almost everybody is working this phrase over-time. Who would be to blame if it should take the consumption and be sent to a premature grave. Brother bee-keepers, let not your hearts be troubled. Should anything serious happen to "the smile that won't come off," let it not be laid to your door. Give it a rest.

ROBBERS.

I have noticed that when bees get to robbing early in the season they seem very loath to abandon the practice and get down to honest toil. Possibly they are no worse at that time than at any other season when there is a dearth of nectar, but it has seemed to me that they are; and I believe there is a cause for it. The bees at this time are mainly old bees that have gone through the winter and I presume they are not as full of enterprise and vigor as are the young bees. Therefore when they once get a taste of honey from a neighboring hive they will spend a great deal of time in flying around that hive; watching for a chance to dodge in and steal a load, rather than go to the fields for it. We should therefore use every precaution to prevent them from getting a start at robbing at this time of year. In working with the bees we should as

far as possible keep the bees from getting a taste of the honey of the hive or colony over which we are working.

If any colonies have died in the in the winter leaving a hive with combs in unoccupied such hives should be closed so as to exclude robbers or the combs should be taken out and stored in a safe place secure from robbers. The doors and windows of the honey house should not be left open any more than necessary for even if the screens are closed to keep the bees from entering they still get a scent of the combs and honey within and will persist in hanging around the screen door waiting for an opportunity to dodge in.

I believe in taking the necessary precaution at this time of the year we can save ourselves much worry and vexation later in the season: for if the robbers are not allowed to commence their pilfering they will be off to the field and forest with the opening of the first bud. It is well to remember that these precautions should be taken at all seasons, but more particularly early in the season before there is any nectar pollen for the bees to gather.

MORTALITY.

Here at the home yard I lost about eleven percent of my bees during the almost unprecedented severe winter, but the most of those that pulled through are in very good condition.

At Rhineland I found them all alive and only two weak colonies, while two bee-keepers near there that I have heard from lost nearly all of theirs.

S. E. MILLER.

Question Box.

Boerne, Texas,
January 5, 1905.

Dear Sir:—

Can you recommend clover as good bee-food, and if so which is the best and will do the

best in dry country. Sometimes we have here very dry time. Which is the best time to plant it? How much seed to the acre? Plant it deep or shallow? Will frost kill clover? If you have clover seed which is a rich bee food, I want you to put me in some in next order I send. Also, does it require rich land, or will poor land do, as some people say clover does on any kind of ground. If I plant I don't want it except it does to amount to some good. Hoping to hear from you soon.

J. A. MINNISH.

ANSWER—I would recommend Alsike or Sweedish clover as the best kind to plant for the bees. It stands a drought such as we have here in Missouri very well, but I can not say how it will do in Texas. I believe it will succeed anywhere that the common red or the white clover grows. Six pounds to the acre is the quantity of seed generally recommended; but I would sow eight or ten pounds. Sow very early in spring or latter part of winter and cover very little, if any. Here clover seed is often sown on wheat in March and not covered at all. Frost does not kill it. In fact I should expect it to stay green nearly all winter in Texas. I can not say just what the market price is but suppose somewhere about fifteen cents per pound when purchased in quantities. Alsike clover is a profitable crop to grow for hay and pasture, aside from the benefit the bees may derive from it and such crops are the only kind that are considered advisable to plant for bee pasturage. It should be borne in mind that we can not expect to secure any considerable amount of honey from an acre or two of plants of any kind. I would advise you to try a little of it and if it succeeds try to get your neighbors to grow it for pasturage for stock.

S. E. MILLER.

Atlanta, Kans.,
March 6, '05

Leahy & Co.,
Gentlemen:—

Please advise me as to what would be the best bee-forage to raise and send me the prices on the seeds. Yours R'sp'y,

E. W. BRAY.

ANSWER—See reply to J. A. Minnish. I should think Alsike clover would succeed in Kansas. Perhaps the editor can quote prices on seed.

S. E. M.

SKUNKS AS ENEMIES TO BEES.

CONTINUED FROM PAGE 69.

more experience than I did. His colonies may not be troubled by these animals this year, and yet, a few years hence he may change for a locality where such trouble may come by the wholesale. To this he may answer that he never expects to change locations. This is as much as to be invulnerable to all conditions and all agents. May be his neighbors are raising corn, grain and poultry now. The mice which harbor in the corn shocks and grain stacks and stubble, and an occasional visit to a poultry yard will keep a number of skunks well fed. Let the farmers turn to dairying, putting corn into the silo and buying feed for the poultry and the skunks will soon turn their noses toward the bee hives. The turning of a stream into an irrigation ditch; or the change of a tract of timber into cultivated land may bring an army of skunks right up around an apiary. And they do not sit out on the fence in plain view like a flock of crows. Then any article about skunks may be worth a dollar a line.

But it is not advisable to wait until trouble comes before studying up the matter, lest when it arrives you may not be able to recognize it. We must not only be able to recognize trouble

itself but we must be able to recognize the preceding signs that indicate that there is trouble coming. The fastest setters of type are not those who pick up the little pieces of metal and arrange them in the stick in the shortest space of time, but those who can look ahead and see at a glance, and know from experience with the same thing a hundred times before, where the grammatical and typographical errors are liable to occur; else in the correcting, they will be obliged to go back, take time and disarrange the type, which, with anything short of re-setting, can never be as good a piece of work as if the errors never were in it. And the fact that the error was in the written copy will not make its correction any easier.

It is a somewhat longer job to search out and manipulate all the errors which may be made in the line of bee-keeping but we should not spurn the attempt to work or to be led along in that direction.

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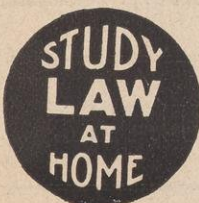
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Resp., O. W. OSBORN."

T. F. BINGHAM, Farwell Mich.

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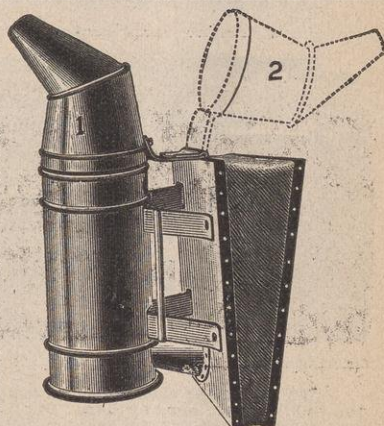
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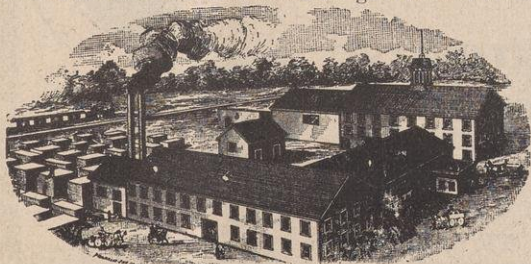
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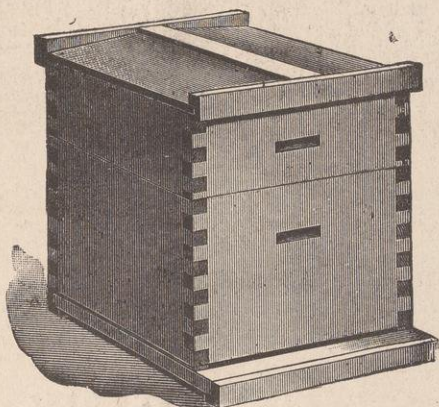
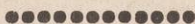
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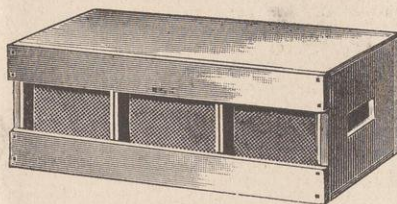
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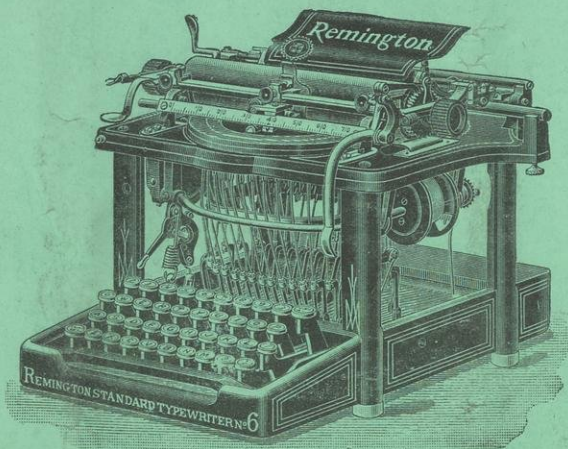
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