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THE CALIFORNIA



APICULTURIST.

VOL. I. No. 3.

APRIL, 1882.

TERMS: \$1.00 PER YEAR.
IN ADVANCE.

Our Workers.

[For the APICULTURIST.]

THE HOME OF THE HONEY BEE.

THE INCALCULABLE GOOD THE LATE RAINS HAVE DONE—BEE-KEEPERS SHOULD EXPERIMENT WITH HONEY-PRODUCING PLANTS—INTERESTING ITEMS FROM WILLOW APIARY.

BY A. W. OSBURN.

IT is with much pride I hail the adventure of a home journal devoted to bee culture, and think how surely it is the duty of every apiarist of this coast to give it every support he can. If every bee man will put his shoulder to the wheel there will be no trouble about its going ahead. At this time the weather is just clearing up, after one of the finest rains California has been blessed with for several years. Coming as it has—this time in March—there can be no two opinions as to the great amount of good it will be to our great and glorious State. Who can calculate the amount of good feeling that takes possession of the heart of every man, whether he be merchant, mechanic, or bee man, all are happy; and last, though not least, the little bee gives evidence of their gratitude by the energy they display in hastening to gather the sweets from the newly-opened flowers, while they are yet wet from the rain.

Our bees have not done quite as well this Spring as usual, owing to so much cold weather, and of course, owing to the same cause, the Willow has not secreted as much honey. But the Italian and Syrian bees are not easily discouraged, and if there is any nectar flowing in their reach

they are pretty apt to find it. Of the Syrians I can say we are well pleased. We certainly think they are sure to rob the Italians of the honors they have so long and so credibly worn. The work of building up weak colonies, preparing our selected stocks for drone rearing, and stimulating our choice queens for queen rearing, is now in order, for we must be ready for the harvest that is fast approaching. To this end we are now working, and when the bald sage begins to bloom in the mountains, we hope to be on the ground with plenty of workers to gather the crop, so that next Fall we can add our report to the great number that shall swell the sum total, and that it shall be an honor to our State as a honey-producing section.

I fully agree with friend Rumford, that "we need to know of some honey plant that can be cultivated to advantage as bee feed." And who will lead off in this great and useful experiment? It is, I think, the corner-stone upon which rests our hopes of ever being able to secure a honey crop every year in California. With me the idea of planting or sowing for honey is not at all impracticable. I have corresponded with several parties East who have experimented with and tested several different plants. They are very confident that plants may be had that will grow and do well, even in our mountain districts. With a climate unsurpassed in the known world, and the natural home of the honey bee, shall we, without an effort on our part, submit quietly to these frequent losses on account of dry years? Or shall we spend a little time, and some money, to see if there is not some way out of this perplexing situation? I for one hope that never again will such a report be published of the honey crop

of California as was published in an Eastern bee journal last Fall.

Now, in conclusion, I would suggest that every man who keeps bees and has the interest of the cause and honor of his State at heart, try one or more experiments with honey-producing plants, and this Fall report progress through the APICULTURIST.

El Monte, March 20.

[For the APICULTURIST.]

THE "THREE-QUARTER LANGSTROTH HIVE."

OR, THE HIVE I USE AND PREFER.

BY WM. MUTH-RASMUSSEN.

WHEN I settled in this county, after leaving Los Angeles, and commenced bee-keeping anew, I bought bees in frame hives, which however had not been made by a practical bee-keeper, and were therefore wanting in uniformity and relative proportion between the frames and their respective hives. The surplus frames were also of a different size from that of the brood-frames. Having to make new hives, I considered that I might sometime want to produce comb-honey for sale, and that the one pound section would be the most preferable package in which to place this article in the market. At the same time I knew, that on account of insufficient shipping facilities, general difficulty of shipping comb-honey and probable future preference for extracted honey, my product for the present would be principally the latter article. Not liking the regular Langstroth frame, on account of its shape and size, and inconvenience in hanging it right side up in the extractor, I decided on a frame which would hold six one pound sections, instead of eight, and which

therefore would be alike adapted to comb and extracted honey. I mean, of course, that the frame for comb-honey should be two inches wide, and used only to hold the sections, while the frame for extracting and brood combs would be seven-eighths to one inch wide, but the size in length and depth would be the same for both. The one-pound section is four and one-quarter inches square outside measure. My frame, made of three-eighths inch stuff is eight and one-half by twelve and three-quarters inside, and nine and one-quarter by thirteen and one-half inches outside measure. The top bar is fifteen and a quarter inches long, and the side pieces (eight and one-half inches), are nailed between the top and bottom bars. I do not use the triangular comb guide, which adds only more work and expense to the frame, with comparatively little additional strength, but make instead (unless I use comb foundation), a thin comb guide of wax, painted into the frame with a small brush of feathers. This comb guide takes nothing away from the interior space of the frame, and I have never had the bees fail to follow it. I use one and one-quarter inch finishing nails for the frames; and have yet to see a frame come apart by ordinary careful handling.

My hive takes ten of these frames, and is therefore fifteen inches long from front to rear, fourteen and a quarter inches wide, and ten and one-eighth inches deep, inside. It will be observed, that there is an extra one-eighth of an inch in the depth, which I allow for shrinkage, after the hive is nailed together, and therefore make the space under the frames one-half inch. The entrance is in one of the ends of the hive, parallel to the frames, and is three-eighths of an inch high by six inches long. By arranging the entrance thus, I need only one division board to diminish the size of the hive for nuclei. Six-inch pieces of ordinary frame stuff are used to contract the entrances in winter, or for entirely closing them, when necessary. For convenience in moving, the bottoms are nailed on. A small board, two inches wide, six inches long in front and eleven inches behind, is nailed in front of the entrance, the nails going through the bevelled ends of the doorstep and driven only partly in, so that the doorstep can be easily taken off,

when the hives are to be moved in a wagon. This hive has a capacity of two thousand and eighty-four inches. It is otherwise made exactly like the style of Langstroth hive, introduced into Los Angeles county by Mr. John Beckley, and extensively used by bee-keepers there. The upper story corresponds to the lower, and takes the same frame, but for extracting I use only nine frames above. My hives rest upon four small blocks, cut from waste pieces of scantling, and placed directly upon the ground.

It will be seen, that this makes a very compact, nearly square hive, easily made, convenient to handle, and with a shape and size of frame, which suits all requirements. If a honey-rack is used, the hive will hold twenty-one one-pound sections in one tier, and another tier may be placed on top by clamping them together. If wide frames are preferred, the upper story will hold seven of these, containing forty-two sections, and a brood-frame or division board, inserted to fill the one-inch space, left in one end.

Now I would not advise anybody already having an established apiary of uniform and well made hives, or of any certain style, used to some extent in his neighborhood, to change from what he already has, unless the demand and price for comb-honey in one-pound sections should become such as to justify him in going to the trouble and expense of such a change; or unless he sees some particular merit in my hive over the one he is at present using; but to anyone making a start in bee-keeping, and having no particular favorite among the hives already in use, I would recommend my hive for consideration, and I seriously think, that it fills the bill for a hive, suited to this climate and to the various purposes for which it may be used, better than any other hive with which I have become acquainted during my twelve years' experience in bee-keeping. I call it the "Three-Quarter Langstroth Hive," because the frames are three-fourths the size of the regular Langstroth, and it has already become the standard hive in this locality. No patent, gentlemen. Use it if you like, and criticise it, if you think it has any defects. Perhaps you can thereby help me to improve it in some particular, which I may have overlooked.

[For the APICULTURIST.]

THE NECESSITY OF UNIFORMITY IN THE APIARY.

BY R. TOUCHTON.

THE bee-keepers of this county have kept pace with the improvements of the day in bee culture. Most all have adopted the Langstroth frame, but the hives are not all made alike. The most common style of hive now in use is a simple box to hold the frames, with cover and bottom board alike, to be used either as a loose or tight bottom hive. They can be tiered up to any height desired, as the supers are made the same as the hives. The size of hives ranges from 8 to 10 frames, but this is unimportant; the main thing is to have the frames of uniform size, so that in buying or selling bees there will be no trouble with odd-sized frames. If the style of hive don't suit, the buyer can furnish his own hive and take nothing but the contents.

Since the advent of comb foundation, it is doubly important that frames should be of uniform size, as it would then only require one set of machinery, and all sheets of foundation being cut the same size, the expense of manufacturing would not be so great as where several different sizes had to be made.

We are getting uniformity in other things pertaining to bee-keeping as well as in hives. Our extracting houses, tanks, extractors, and other implements of the apiary are all fashioned somewhat after the same model. Not that there is any great virtue in this, but it shows that we let no improvement go by unnoticed. If we have not got ingenuity enough to devise our own implements, we are not ashamed to borrow from our neighbor. I make it a point to visit my neighbor bee-keepers at least once a year, and gather up all the loose ideas I find laying around. Sometimes a suggestion on some simple device will save the bee-keeper many steps during the season.

An extracting house, like a kitchen, can be made very handy, or very unhandy, but I prefer to have everything handy, so that extracting can be done with as few steps and little lifting as possible. Take advantage of nature and roll everything down hill or on a level. The honey cart, with comb basket, should stand on

a level with top of hive. In the extracting house the comb basket (with side open) should stand with bottom on a level with uncapping table and extractor, so that from the hive to the can there will be no lifting, except of single combs, and then only on a level. In uncapping I rest the end of the frame, near the center, on a sharp pivot, so that I can turn it to any angle I wish without its slipping, and uncap both sides without lifting, to turn it around. By leaving the comb a little beyond perpendicular and using a thick or dull-backed knife, the cappings will fall clear of the comb by the force of gravitation.

You see, Mr. Editor, that we can bring Nature to our assistance in a great many ways. We use the sun's rays for melting wax and evaporating honey; and our apiaries being situated in the mountains, we have the advantage of the down-hill road to the sea.

Santa Paula, March 21.

[For the APICULTURIST.]

DR. GALLUP ON ITALIAN BEES.

BY ELISHA GALLUP, SANTA ANA.

IN an article by I. B. Rumford, of Kern County, I notice that he says that "many bee-keepers lost all their bees from the ravages of the moth; and that not more than a week should pass without a thorough looking over them, etc." Now, we take it for granted that they were black bees, and black bees breed moths. The sooner such colonies are Italianized or destroyed by the moth the better for all practical purposes. I have not examined a single black swarm or colony in this part of the state that was in ever so good condition, but that was more or less damaged by the moth. The remedy is to Italianize and keep them in good close-jointed, well-make hives. The expense of getting a good queen to breed from is but trifling, now a days, and the genuine Italians are no humbug. Neither can the moth miller humbug them.

Now, if I was going to select an Italian queen to breed from, I should select a dark leather colored one, with a long, round and very pointed abdomen. I never yet have had any satisfaction in breeding from very light colored queens, even if they were imported.

Our Eastern bee-keepers with but very few honorable exceptions, went into breeding for color alone, without any regard to other good qualities, and the consequence was, a race of Italians was produced in many cases, that were inferior to the black or native bee. In early times when all the rage was for color alone, I received queens from nearly all parts of the East and South, on trial as a gift, and in no case did I get queens that I would keep in my apiary, except from Adam Grimm and Dr. Hamlin (both of whom are now deceased). I received queens from some prominent breeders and it would take three of them to keep a stock in ordinary working condition, let alone increase or profit. We do not want such Italians, neither do you, Mr. Editor. A person can breed for good color and good working qualities combined, but avoid the extreme light color. That the extreme light colored ones can be handled more easily without stings has proved a fact with me, but in the language of the late Adam Grimm, I say, "I want bees for profit as well as for fancy." The dark ones can be easily enough handled, and they are a perfect protection against the moth. No need of examining them for moths so long as they have a good queen or the material to raise one from.

It took me two seasons to work up an ordinary apiary, as we find them here in California to my standard, but I preserved and accomplished what I started in for, and now I have to do the same thing over again, as I sold out in Ventura Co., rather than to move them over 100 miles to my present home.

March 20, 1882.

[For the APICULTURIST.]

LAS FLORES CAMP.

BY C. M. DRAKE.

CHAPTER I.

THE TWO B. MASTERS.

THE two B. Masters, as they are called, live in the Las Posas hills, in Ventura county. Their father located a bee camp in the hills, in the fall of 1878, when all California had the bee fever; and the large yield of that year made many an embryo bee-keeper who was destined to freeze out the following year.

With more money than good judgment, Mr. Masters had purchased two hundred colonies of bees, an extractor, honey tank, etc., for the sum of twelve hundred dollars. Moving them near a spring in White Sage Canyon, he built a cabin and a honey house, spending about eight hundred dollars more before the spring of 1879. That year was a total failure, and he lost three-fourths of his bees through ignorance and bad management. In 1880 he had a chance to make half a crop but a too great anxiety for increase, nearly destroyed the value of his apiary until late in the season, and left him so much in debt that when 1881 proved to be a bad year, so that the honey he made barely left him even with the world, he became utterly discouraged. No rain of any consequence fell during the latter part of 1881, and in January, 1882, utterly discouraged at the prospect, he took sick and died, leaving his two boys, Bob and Ben to care for their mother and the ranch.

Just one hundred stands of bees, in pretty fair condition, were left at the camp when the 1st of February, 1882 came, and the hills looked dry and parched for want of rain.

The boys and their mother held "a council of war," as one of the boys called it, to determine what should be done; for want stared them in the face, and the honey prospect looked more than doubtful.

"I am in favor of sticking to the bees, mother," said Bob, the younger of the two boys, but by nature the more daring, and generally the leader of their joint ventures. "But what can we live on until August, even if we have a honey crop, which is doubtful?" asked his mother.

"Mr. Brown offered me a dollar a day if I would care for his hogs a month or six weeks, and let them feed upon the acorns in these hills," said Bob, who was a stout, manly-looking lad, about fourteen years old, his brother being a year younger. "That and the butter and eggs, ought to keep us, and we won't have hives to buy this year you know."

"Nor swarms to fill what we have. I am afraid," sighed his mother, "But I don't know if we can do better than to stay here now, and try to live as economically as we can, and we can be together, that is one great comfort."

The Las Posas (springs or wells)

hills lie to the north of the great Las Posas and Simi Ranches, and on the south of the Santa Clara valley—the largest valley of Ventura county. They are covered over with white and button sages, buck-brush, mountain laurel, and other honey-producing plants. An abundance of alfileria grows in the little valleys, and different varieties of mint, bluet, vinegar plants and rattleweed brush cover the hills.

At Las Flores bee-camp are a few acres of "cienega land" as it is there called, where grow a number of willows, and where the garden is placed. A great abundance of oak trees are scattered in the canyons, and also hundreds of wild walnut trees, or brush rather. On the leaves of both the oak and the walnut is found at times an abundant supply of the so-called honey-dew.

In fact, few better ranges can be found in the country than that around Las Flores camp. The apiary was placed upon a gently sloping bench of land, which faced the south east. It received the sun early in the morning and late in the afternoon, two very important points.

The hives were arranged in rows of twenty each and were named by a letter and a figure, the letters naming the hives east and west, and the figures telling the number of the row north and south. Every hive had its name painted upon the front and upon its cover. The covers were slated so that temporary records could be kept upon them to be copied into the apiary record book at some leisure time.

Ben and Bob Masters had taken care of the bees for nearly two years, under their father's guidance, and a portion of the apiary had been really their own; and their father's bee books and papers had been carefully studied for help in caring for their bees.

The hives, too, were of their own manufacture, except a hundred which had lost their inmates, and the ones in the apiary.

The hives in the apiary were all supplied with supers which the boys had left on, feeling that the bees would care for the combs better than they themselves would be likely to. Still it is rather hard on the poor little fellows to make them try to keep warm in so large a hive all through the cold winter. Heat will ascend and escape through the cracks at the top:

and the bees will often ascend into the upper hive and make their winter quarters there.

Bob and Ben had raised the brood combs of about twenty colonies into the upper hive and put the store combs below, as an experiment, and it had seemed to work well; but the bees did not clean the combs below them like they did combs above their brood.

"Now, Bob," said Ben, as the council of war broke up, and the boys went out to chop some wood, "We will show the world what two young B. Masters can do with bees." Santa Paula, Cal.

(Continued in our next.)

[For the APICULTURIST.]

MURMURINGS FROM THE BEES OF NAPA COUNTY.

EARLY HONEY PLANTS—CALIFORNIA BEE-KEEPERS BACKWARD IN SOME THINGS—NEW SECTIONS REQUIRED—REVIVING FAMISHED OR STARVED BEES—SQUARE GLASS HONEY JARS—DISCUSSION ON HONEY PACKAGES WANTED—BROOD FRAMES—ETC.

BY J. D. ENAS.

BEES in this section did not breed after the middle of October, and until the first week in January, some a little later. At this date, February 26th, young bees are making their appearance, and some are working outside of the hive. There has been but little bloom so far. I have kept mine along through the Winter by uncapping the surplus brood, or store combs, and giving them to the bees, late in the day, after they had stopped flying. By doing this robbery is not encouraged.

FAMISHED BEES.

I found one of them without stores, and bees apparently dead, but on breathing on them found them not gone entirely. Lifted bees and all into an empty hive, and took them in the kitchen for a whole day. Revived the bees by the heat of the stove, and fed them by laying an empty comb on its side and pouring diluted blood-warm honey into the cells and draining the comb before giving it to the bees. By holding the vessel containing the honey several feet above the combs, the honey, in falling, forces the air

from the combs, and very little escapes on hanging the combs right side up. By leaving the hive indoors all night, the bees were ready to be placed on their stand the next morning. The bottom board being ventilated, the entrance was closed for several days. They are now working vigorously, and protect their hive from robbers.

Now is the time for bee men to get hives and sections ready for the busy season. At the East our craftsmen are very much ahead of us in the manner of putting their honey in the proper shape for the market. It should not only be white and clear, but the section box, or package, should be as neat and attractive to the eye as the honey.

NEW STYLE OF SECTIONS REQUIRED.

From the different journals devoted to the production of honey, we learn that the thin, dove-tailed, light, one-pound sections, command the highest prices. Californians have made no improvement for a long time in the old Harbinson section. It has done very well for the past, but to keep pace with the advancement of the industry, I think the trade should demand a better and still lighter section. While at Sacramento, some two years ago, I found the retailers making an allowance of one-quarter of a pound on each section of one and one-half or two pounds of honey, as tare for the wood, which was about three-eighths of an inch thick. The Root section is one-eighth of an inch thick, and makes a very good package, and I understand sells for net weight with the honey, no tare being allowed. I have used the Harbinson section, one-quarter of an inch thick. Some don't weigh two ounces. I have not had to allow for tare. I have sold all, so far, in my home market.

Another style is the one and two-pound square honey jars (glass), for clear honey. The jars being flint glass, shows the honey to advantage. I have disposed of six gross without any trouble, and shall use them in the future. They can be sent, packed in sawdust, to any part of the world. I find the ten-pound tin cans very useful for a darker grade of extracted honey. Purchasers want to know that it is a pure article, and when it comes direct from the apiary they will take it in preference to the manufactured article,

or put up especially for the grocery trade. I have sold the last of my last year's crop, though the last was candied solid, and the purchaser just having bought a can of honey from the grocery, where it was kept on draught. An explanation of gloucase did it. I never force a trade, always let folks have time to think whether they want it or not. Could have sold five or six thousand pounds if I had it, and can sell to the same parties again.

BROOD FRAMES.

I am very well aware that the L. frame is very popular, and is universally used, especially at the East. I have used it, and still have them. There are points in the L. style of hive that will hold good for time to come, but my experience with the frame, in our long wet seasons, and very warm summer days, has not been very satisfactory. I find a shorter frame will answer as well, for general use, and for building up in spring, or for driving the bees into the sections, the shorter frame is ahead. The L. frame moulds badly in a wet season, while a shorter frame will not so likely do; and I find 15 lbs. of scaled honey sufficient to last a swarm, until honey becomes plentiful in the spring. I have some old honey in the hives every spring until the blue sage comes in bloom, and the hives are full of young bees. In working for section honey with the L. frame, I find considerable scaled honey in the brood department, which has to be removed and which disturbs the bees in sections, but with my present frame I have less trouble, and the bees fill nearly every comb below with brood.

I have had eight out of ten frames filled with brood and eggs, nearly from corner to corner, and two tiers of sections, of twenty-seven sections each. My sections are got out of sugar pine or spruce plank, 1½ inch thick, planed at both sides, then sawed with a fine saw, just ¼ inch thick. I cut with a mitre box to just 5½ inches long, "Harbinson style," making a section 5½ high, 6 long, 1½ wide. The bees enter them very readily.

The frame I use is 15 inches long by 9 inches deep, top bars project one inch at each end, and rests on hard wood rabbits. The bees just fasten them enough so that they will remain in places while being moved about in the apiary.

(Written for the APICULTURIST.)

THE ARIEL OF THE SPRING.

BY ALBERT F. KERCHEVAL.

TIRELESS toiler, with thy wing,
Winnowing soft the breath of spring,
Darkling doubt is over, sing!—

Sing of bright and summer hours,
Sing of dreamy summer bowers,
Sing of fragrance-haunting flowers,

Laden with their nectar sweet,
Glad that wait the lips to greet,
As when trembling lovers meet;

Sighing, beck'ning everywhere—
On the mountain slope afar
Lifting high its mighty bar,

In the valley, on the plain,
Nestling 'mid the seriel grain,
Kist by sun and dew and rain,

Wreathing Nature's smiling face,
Bending with their tender grace
Over each lone vacant space.

O, thou ariel spirit fleet,
Flitting swift from sweet to sweet,
Every flowery queen to greet,

Sipping nature's fairy wine;
O, that thy sweet life were mine;
Even brief and bright as thine!

One sweet revel all the hours
'Mid the dreamy, tender bowers,
Then to die 'mid dying flowers!

Los Angeles, March 20, 1882.

HOW TO TRAP SKUNKS.

BY CHAS. R. BALLOU.

MY way is to take a steel trap, and set it near the hive with a small stick at the end of the chain, so that he may not drag it from the hive and carry it away. Set at night, and in the morning you will find him tight and secure. It is dangerous to have strychnine about honey, as it is not to be played with, still it may be used by those who are careful. I find this on page 193 of "Every Day Wants:" "Take an old barrel and place it on its side on a triangular stick of wood about seven inches high, fastening the bait on the bottom of the barrel. When the skunk goes for this bait, as soon as he passes the center the barrel turns up with the skunk, without making any scent. When thus trapped, take it by the tail and do with it as desired. Care must be taken not to place the barrel too high, as it might throw over and not remain upright. The more skunks you catch in the same barrel the better it becomes as a trap.

Halfmoon Bay, March 16.

In the Field.

(For the APICULTURIST.)

WILL CULTIVATED HONEY-PRODUCING
PLANTS SECRETE MORE NECTAR
THAN UNCULTIVATED ONES?

BY MELISSA, MONTA VISTA.

MR. EDITOR—Permit an inquirer to ask for information about plants of any kind that could be raised here for bee-food. It does seem that in such a rich honey country as this, thousands of colonies of bees, and ten thousands of dollars should not be left at the mercy of our capricious "rains." Why can we not plant a few varieties of honey-producing *trees*, and several kinds of annual or perennial plants, that will flower at different times, so that our little workers may not starve in the frequent unfavorable spells of *honey* weather? One time it is too dry, then it is too cold, when the flowers they frequent are just opening, when the nectar "is not secreted." Would not cultivated honey plants be less susceptible to the above influences?

At the east we call the bass-wood honey and the white clover, the finest of all. I am told white clover will not stand our dry season, but has any one planted basswood trees here? This tree, called the American Linden—*Tilia Americana*—is no mean ornamental tree, as its leaves are large and its flowers abundant, and *trees* are never worthless in Southern California. Nurserymen could supply them of small sizes at low rates. The tulip tree is also said to be very rich in honey. I will not intrude further upon your space at present. I only wish to draw out useful information from those of more experience than myself.

[We are pleased with your questions, as they are just what is wanted to draw out a discussion on this vital topic. Southern California, especially, needs additional honey-producing plants. We think the time is near at hand when apiarists will give the subject the attention which it merits. We hope that some of our readers who have had experience in growing the above plants, particularly linden or basswood, as it is called, will give their experience with the same in these columns.—Ed.]

(Continued on page 28.)

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Editorial.

APRIL WORK.

SWARMING usually begins this month, in this latitude. It is more than likely that in consequence of the backwardness of this season that there will be but little swarming before the first of May. The careful apiarist will now give his bees close attention. If hives are not in readiness, they should be at once, as bees mean business and will not delay. Should natural swarming be allowed, close watching will be necessary from 8 o'clock A. M. to 2 P. M. Swarms seldom issue earlier or later in the day.

Swarming is usually indicated by the crowded condition of the hive, which in the middle or warmer part of the day cause the bees to hang or cluster in front of the hive. From one to three days prior to their exit there may be heard the piping of the queen—which may be recognized as quite similar to the faint peeping of a newly hatched chicken. The morning of the day on which the swarm issues, there will be heard a great commotion in the hive—a loud buzz, and little or no work go-

ing on. They may be said to be packing their baggage for the trip and taking leave of old friends. In making their exit, the queen does not lead as many suppose, but is lead, and usually makes her appearance at the entrance when the bees are about half out, when she may be caught and caged and the cage placed in the hive. The bees after flying awhile and not finding the queen will return to the hive, when they may be divided; and the queen placed in the new hive or colony.

The methods of settling are various. The primitive method was the jargon sounds of tin pans, bells, etc., and which are used yet to a limited extent. A swarm will usually settle of its own accord, but if a disposition is shown to leave, the best method that we have found is to throw water, dirt or sand among them, or otherwise "throw dirt in their eyes." This will confuse them and bring them to a hasty settlement. The hive in which the swarm is put should be clean and cool and placed in a shaded situation, otherwise the bees may abscond. When they manifest such a disposition, there is but one method that we have ever found effectual in compelling them to remain, and that is to fasten them up, giving plenty of air, and place the hive in a dark room, if possible, for the space of three days. Darkness in the hive will produce more tranquility and less commotion among the bees than anything else. They should be let out on the evening of the third day. When bees swarm they provide themselves with three days' rations for the journey. When closed up for the time specified, their supplies are consumed and they are obliged to go to work, and will remain. We have never known this method to fail in a single instance.

We prefer artificial swarming, for the following reasons: First, that it obviates the necessity of watching

the bees—thus a great saving of time. Second, it prevents the absconding of swarms, and thirdly, it obviates the difficulty and trouble of hiveing when bees settle in a not very accessible place. The usual method, or the one practiced by many, of making two out of one, is objectionable, for the reason that it leaves both colonies too weak to be self-sustaining under all circumstances. This, however, may answer when you have but one colony. We have always recommended making one out of five. Hives that contain ten frames in the brood chamber, may have two taken out of each of four hives, the fifth hive should be the stronger one. The frames or combs removed should contain brood and honey with the bees adhering thereto. Great care should be taken not to allow more than one queen with the new colony—if no queen is given them they will soon provide one for themselves, if fresh eggs are in the combs. Two empty frames may be given for the new colony to fill up. Now let the fifth hive be removed a few feet, (twelve or more,) about the middle of the day while the bees are at work in the fields, and put the new one in original place; the fifth will catch the returning bees. The new colony thus formed becomes as strong and self-sustaining as the old ones. As soon as the empty frames given the divided colonies are filled, they are ready for division again. Swarms should always be made strong and kept so. Let it be remembered that strong colonies are the great desideratum for the successful apiculturist.

BEES ASSIST NATURE.—Bees assist in the fertility of flowers, by distributing their filaments and causing the distribution of pollen; they are important requisites to a full crop of fruit.

FAILURES.

THE failures of a full honey crop for the last three or four years have been very discouraging to many of our fraternity who entered the business with much zeal and hopes of unbounded success — without thought of defeat, and when it came they were unprepared to receive it. Their hopes were unstrung and they wandered down the cold stream of disappointment, abandoning the pursuit under the false idea that apiculture “was played out” in California. They never stopped to think that failures attended every pursuit, and that the most discouraging failures often bring the best results. We well remember the failures of the honey crop for three or four consecutive years in the East while we were engaged in the business there. We buried all hope of success there and left for California, the paradise of bees, and where grim defeat had never trod. Here we had not long fancied ourselves in sweet security, and layed plans for the future, when we were again aroused from our sweet reflection with the cry of failure. Failures in the East have learned bee-keepers there to study more the wants of their bees, in wintering, guarding against disease, the raising of feed, etc., so that they are better prepared for any emergency that may follow. And so here in California, failures will show to the practical bee-keeper the importance not of how to winter, but how to summer his bees, the raising of feed, the closer observation of the season, that he may the better know what is coming and the necessity of adding some other pursuit appropriately connected with apiculture, — the cultivation of fruits, flowers, vegetables, chickens, etc., so that in case of failure in the honey interest, he has another source to rely upon.

Failure marks every pursuit for its victim. We have seen it in agriculture, horticulture and apiculture.

Now when the waves of adversity roll upon us, we should not abandon the ship, but remember that “there is many a slip between the cup and the lip,” and try again. Success will eventually crown our efforts in the end.

RAIN AND HONEY.

AT this writing (March 13th), the rain is descending in torrents, accompanied by sharp flashes of lightning and loud claps of thunder, something quite unusual in Southern California. In the past six years of our residence in Southern California, we do not now remember of being in so close proximity to the vivid flashes of lightning and loud peels of thunder as now, but only seeing and hearing them at a long distance off, and that seldom. Croakers will now draw their heads under their shells and beg pardon of the Weather Clerk for their incredulity, and dream of Noah’s ark or some lofty mountain peak. Mother Earth we think, will drink largely from the life-giving rain by the time the outpouring elements are bottled up, which will cause her to yield an abundant flow of milk and honey as in days of yore. Previous rains have prompted Dame Nature to unroll her robes of downy green, which must now soon be decked with countless flowers of every hue, lifting their tiny heads as if in praise to Him who gave them birth and a brief existenc. But like man, they perform their part or fill their mission ’ere they return to that bosom from which they spang. Soon they’ll lift their velvet cups o’reflowing with nectar as pure as that of the God’s, to which the busy bee will be an invited guest to banquet—to sip and sing, without money and without price. When the pretty flowers have filled their mission, and no longer enrich the breeze with sweet odors, they droop their heads, and, like the little bee that kisses away their sweetness,

they fold their soft wings in death.

Now with the drenching rains that we have had and those that are most likely to follow, and provided Old Boreas is held in check by the balmy breezes of the south, we may confidently hope for at least an average crop of honey.

WHAT WILL THE HARVEST BE?

WHAT will the honey crop be this season? is the almost daily inquiry made of us. In a general answer we reply that we are not a prophet, or the son of a prophet, but will venture the prediction that it will be an average one, at least, judging from present appearances. The past three or four years’ early rains have produced early flowers—the cool winds and the cool state of the atmosphere during flowering season prevented the secretion of nectar, hence the failure. Now that the rains are late and copious, flowers will necessarily be late; the atmosphere more favorable, flowers will escape cool weather and doubtless yield the usual amount of nectar. The outlook is propitious,—every preparation should be made for it—everything got in readiness for the “sweet bye-and-bye.” Subscribe for the APICULTURIST and you will find it a valuable auxiliary, paying a large per cent. on the amount invested.

HOLY LAND BEES.

CHARLES STEWARD, writing from Big Pine, Inyo county, under date of February 13th, 1882, says: “We had a successful season last year with bees, they threw off more new swarms than I ever knew in one season in this valley, and made a large amount of excellent honey.

I wish to inquire not only the price of Queen bees, but some one who breeds pure-bred domestic fowls of different breeds—some one who can be relied upon to deal fairly and squarely; also a description, characteristics, etc., of the Palestine bees, in what consists their

superiority over the Italian and the black bees."

We are glad to learn of the prosperity of bees in your portion of the State. Our failure here in Southern California for the year '81 is well known throughout the world.

In the APICULTURIST you will find the card of J. D. Enas, a breeder of bees, who, we are informed, is a reliable man. As to fine bred fowls, we will hand your letter to a friend who is in the business, and will write you. His card will probably appear in the APICULTURIST soon—this will be a sufficient guarantee to his honesty and square dealing.

The Holy Land bee viewed with the naked eye, is the same to all appearances as the Italian, when viewed under the microscope, the queens especially exhibit more hair on their back than the Italians. Their superiority over Italians and blacks consists in early work, early breeding, producing drones from two to three weeks earlier than Italians. A friend in the northern part of this State to whom we sent a Holy Land queen last season, writes us that he examined her about the first of this month, (February), and found her laying eggs and rearing brood nicely. Our own experience here is the same. They are greater honey gatherers, fly farther and more swiftly, and are therefore more vigorous. They doubtless are of the same origin or parentage as the Italian, but having been separated for perhaps centuries, in different climates, has necessarily created a corresponding difference in the bees.

WHAT WE ARE.—Some of our friends are laboring under the impression that the publishers of the APICULTURIST are not practical apiarists, but are honey speculators, etc. We reply most emphatically that such is not the case, and that each one concerned in it are practical apiarists and devoted to the best interest of the science.

BEES AS WEATHER PROPHETS.

NATURE in her generous gift and liberal economy has not endowed man alone with premonitions of changes of the weather, but to all living creatures, more or less. It is said that the swine herald the coming storm, by running to and fro carrying straw, weeds or other material for the formation of a bed. Likewise geese, by running, flying, and by a continuous quacking and clatter. But from the close experience of a learned German apiarist, it would seem that nature has endowed the "blessed bee" with more instinct in this respect than she has most of the animal kingdom. As we have never given the subject much attention ourselves we give the following from a bee-keeper who has done so:

"When on Wednesday your swarm leaves the hives, coming out of the holes in a mass, and hover about, you may be certain that on Sunday the weather will be nice, or at least, will bring a good swarming day. Should this happen on Thursday, the good weather will set in on Monday, etc. At least, here in Germany this is the case; but whether in America it is likewise, must be ascertained from observation. When bad weather is about to set in, or a scarce time for the bees, the signs are as follows: Should the bees fly later than usual in the evening, it will generally rain the next day. Should they sit thick around the entrance-holes, lift the abdomen up, flapping with their wings, or move backward or forward with the head, as if they wished to chink up the place, (we call this movement Hobeln), from eight to fourteen days of scarcity for the bees will follow, which days are noticeable for continued rain, wind and cold."

LET IT be remembered that we advertise no humbug. We do our best to avoid them.

In the Field.

(Continued from page 25.)

LACK OF KNOWLEDGE CONCERNING CALIFORNIA BEE FLORA.

THE second number of the APICULTURIST is at hand, and I am glad to see that the "child" is already growing, and promises to improve in "looks" with the next issue. But I am particularly pleased, Mr. Editor, with the botanical department, which you have introduced. This has been a long-felt want and will be appreciated by all intelligent bee-keepers on this coast. I have several times commenced making a herbarium of honey-plants, but for different reasons given it up again. Now, however, that you have started this department, I shall begin again, and by contributing my part to our botanical knowledge, be myself the gainer thereby. The flora here is different from that of the southern counties, and nobody, with whom I have conversed on the subject, seems to know the true name of any plant, except the most common bushes and trees. Sage-brush, rabbit-brush or grease-wood is generally the answer I get, when inquiring about the name of any wild-growing shrub. I trust I shall know better, before long, through the assistance of the APICULTURIST.

WM. MUTH-RASMUSSEN.
Independence, Cal.

A VALUABLE HONEY PLANT.

MR. WM. NEEVES has presented us with a package of mignonette seed of a large variety known as *Grandiflora ameliorata*. We have this variety growing on our ranch, and tested it to our satisfaction. It is a perpetual bloomer in this climate; is hardy and will grow luxuriantly without irrigation. Its tiny cups are evidently rich in nectar, as the busy bee sips from them from "early morn until the dewy eve." Thus we think it will appropriately fill the vacancy spoken of by Mr. I. B. Rumford, in our March number. European apiarists raise it extensively, and regard one acre sufficient to sustain 400 colonies of bees. We by no means believe that an acre will sustain that many, but

it will keep more bees per acre than any other honey-producing plant, perhaps. In a dry climate it should be sown as soon as the ground is moist, so as to get a good start before dry weather sets in.

We think that the past three years have been sufficient to demonstrate to every apirist in Southern California at least, the necessity of growing feed of some kind. We hope that they will give it a trial, as well as other varieties and kinds of feed—and after testing the same, give their experience to others through the columns of the APICULTURIST.

We have made arrangements with Mr. Neeves to furnish seed of the above mignonette to bee-keepers at 20 cents per ounce, or \$3 per pound. They may obtain it by addressing Wm. Neeves, Los Angeles, Cal.

While speaking of honey-producing plants we will call attention to the Rose Geranium as being also good for the bees. It is propagated from cuttings and will grow in almost any kind of soil with but little water, after it is well rooted. Among the various trees that the bees work on, we may name the Acacia and Eucalyptus or blue gum. These trees grow well without water after once started, and furnish abundance of bloom. We hope to be able in future numbers, to lay before our readers, well prepared articles on honey-producing plants, from the pens of some leading California writers who have given the subject considerable attention.

Editor's Portfolio.

HONEY CAKE, ETC.

THANKS, and many thanks to Mrs. Josephine Benedict for the delicious honey cake laid upon our table, as a present. Mrs. B. stands as A No. 1 authority in the culinary department, and her success in utilizing honey in that department has been a surprise to all who have had the pleasure of sampling the cakes, preserved fruits, etc., put up by her. Some time since we obtained her receipts. We annex them as doubtless many of our readers have never seen them:

PLAIN HONEY CAKE.—One pint honey, one pound butter, 10 eggs, 1 teacup sour milk, 1 teaspoonful of soda, 1½ pounds flour, 1 tablespoonful of ginger and cinnamon.

HONEY CHOCOLATE CAKE.—Make same as plain honey cake, and bake in tin jellycake pans. For icing take whites of 8 eggs beaten to a stiff froth, 1 pound of pulverized sugar, ¾ pound grated chocolate, ½ bottle vanilla; spread on the same as jelly.

HONEY FRUIT CAKE.—One pint honey, 1 pound butter, 10 eggs, teacup of sour milk, 1 teaspoonful of soda, 5 pounds currants, 5 pounds raisins, 3 pounds citron, 1 tablespoonful of cinnamon, allspice and nutmeg, 1½ pounds of flour.

FOR PRESERVING FRUITS WITH HONEY.—Take equal weights of fruit and honey, cook the same as with sugar.

LATE REPORTS AS TO WHAT THE CROP WILL BE.

UNDET date, March 24, C. M. Drake of Santa Paula, writes: Bees are bringing in honey and breeding rapidly from alfileria and a little mustard. Three-fourths of the hives are weak yet, but are breeding nobly. We expect about 2-3 of a crop, as the season will probably be short. I have 141 colonies left from 146 in the fall. Last year I began with 95, made 3¼ tons of very nice honey and built 1,000 new combs (I had a Root foundation machine). I hope to do much better this year.

ON MARCH 25th, Mr. Enas of Napa county, wrote us that if the weather continued warm the bees would gather large quantities of honey from the fruit bloom and wild flowers. Queens are filling the comb rapidly with brood.

VENTURA, March 21.—So far as rain is concerned, we have confidence that the 14 inches already fallen here will ensure us a crop of honey. The season will start unusually late. Bees have commenced work on alfileria. R. WILKEN.

WE have a number of other reports, all of them speaking favorably of an average crop of honey. For the want of space we have to omit them. At this writing (March 27),

the weather is as warm as it is in July or August, and all kinds of vegetation is growing with a will. No doubt but that in a few days there will be change for occasional showers and of dewy nights and all will go well.

MR. C. M. DRAKE, the author of our serial story, "Las Flores Camp," is well known to many of our readers, not only as a bee-keeper, but also as a writer of some repute. His articles in the *Pacific School Journal*, and other magazines, have awakened an interest in many to know "how doth the busy bee." Mr. Drake wishes us to say that he makes no pretense of ability to instruct a good bee-keeper, and wishes it understood that the story was written for our younger readers. Nevertheless, we are sure all our readers will be glad to peruse the chapters as they will appear in our columns, if not to gain information (which they cannot fail but obtain), then to pass a few minutes in pleasant diversion from tiresome toil and care.

SUPPLIES, ETC.—We are asked by a subscriber if we are dealing in apiarian supplies, and if not, where the latest and best styles needed in the apiary may be had. In reply we will say that one of the members of the publishing company that owns this journal, and who was instrumental in making it a success, is decidedly opposed to us, or in fact any one connected with the APICULTURIST, having anything to do with the supply business. Therefore we will not keep any supplies; but for this year, as the income of the journal will only pay the expenses of publication, we will sell only queens of Italian and Holy Land bees. The former we offer at \$5 for tested, and \$4 for tested Italian queens. The cards of dealers may be found in this issue.

EXCELSIOR!—Already the APICULTURIST is securing a wide circulation, and is taking its flight to the uttermost corners of the earth. Now, friends, will you not still further aid it by your subscription, and thus give it strength and vigor, that it may "run and never weary," until it has reached every apiary in the land.

ALMOST LOST.—One of our readers called our attention to a notice of the APICULTURIST in one of the Eastern bee journals, that was hid away in such a manner as though the editor thought we were a rival. Our reader said that it would almost take a microscope to find said notice, and in fact we were going to get one, when at last we found it.

Press Notices.

"WILL MEET THE HEARTY APPROVAL OF EVERY TRUE APIARIST.—We have just received No. 1 of Vol. I of this enterprising monthly. Judging from the entire "make up" and choice of materials, arrangement, typography, matter, etc., and knowing by reputation its editor, and personally some of its contributors, we prophesy for it a long and brilliant career. The "Salutatory" has the "ring" of precious metal, and the out-lined policy will meet the hearty approval of every true apiarist. The Pacific coast, that "Paradise of Bees," has long needed a bee journal of its own, and now that one is fairly established, let it be enthusiastically supported.—*Bee-Keepers' Magazine*.

"IS BRIGHT AND NEWSY."—The California APICULTURIST published at Oakland, by N. Levering, is a new journal devoted to the interests of bee-keepers, and the only one of that nature on the Pacific Coast. It is bright and newsy.—*Santa Barbara Independent*.

"MAKES A CREDITABLE APPEARANCE."—*Gleanings in Bee Culture* has this to say of us just as you see it in this small type:

The California APICULTURIST makes a very creditable appearance for its first number. Terms \$1.00 a year.

WISHES IT SUCCESS.—The CALIFORNIA APICULTURIST is the name of a new bee paper published in Oakland, Cal. It contains eight pages of the size of the *Bee Journal*, and is to be published monthly at \$1 a year. It is edited by Mr. N. Levering, who is known to our readers as a practical bee-keeper, and it is published by the APICULTURAL PUBLISHING Co. It is well filled with good reading matter, and we wish it success.—*American Bee Journal*.

ACKNOWLEDGEMENTS.—Thank you, gentlemen, for your kind words and flattering notices, which are far more congenial than a pat upon the back with one hand and called a "good fellow," while the other is used to deal a blow under the fifth rib accompanied with a shout of charity. We trust our future career as a journalist may be such as not only to retain your confidence and esteem, but add to the same as workers together in the great hive of industry and usefulness. May prosperity and harmony prevail, and your future life be sweeter than honey in the comb.

How the "Apiculturist" is Received.

PREFERS A PAPER NEARER HOME.—Enclosed I send you \$1 for one year's subscription to your new bee paper. I have spoken to several parties about it, and they expressed a desire to take it, too; but the steamer is now in and I have not time to look them up. I have been taking—but I think I would rather take a paper that is published nearer home.

JOHN FARNSWORTH.
Honolulu, S. I., March 13, '82.

EACH NUMBER WELL WORTH THE SUBSCRIPTION PRICE.—

KINGSTON, (Tex), Feb. 13, '82.
EDITOR CAL. APICULTURIST.—*Dear Sir:* Your neat little journal is at hand. Its size, style and mechanical get up is a credit to bee-journalism; while its editorial management bespeaks for it a liberal patronage. Its columns are well filled with interesting articles, from practical bee-men in your own state, as well as choice selections from other bee-periodicals; making each number well worth its subscription price for a whole year.

Wishing the APICULTURIST success, I am yours, etc.,

WM. R. HOWARD.

Books and Periodicals.

THE BEE-KEEPERS' INSTRUCTOR. One of the brightest and best bee journals that comes to our Portfolio is the one that bears the above title. The "Sunny South" should be proud in having such an able journal published in their midst. We wish it continued success.

THE AMERICAN BEE-KEEPER for February has reached us and we are glad to see that it is improving.

AMONG THE many papers received and which we would notice but for the want of space, are the *American Bee Journal*, *Bee-Keepers' Magazine*, *Bee-Keepers' Exchange*, *Gleanings*, *N. E. Bee Journal*, *Santa Barbara Independent* and *N. W. Farmer and Dairyman*.

Circulars Received.

From Smith & Moffet, Hoopston Ill., circular of supplies, Italian bees, etc. S. & M. are the successors of D. S. Given now of Los Angeles county, this State.

J. D. Enas' price-list is also before us—see advertisement.

Our Advertisers.

THE WELL-KNOWN and much praised Bellows Smoker of Bingham & Hetherington is advertised in another page. No manufacturers of smokers have advertised their wares so extensively as has this firm, and in consequence thereof they have sold more smokers than any other maker, and of course it pays them to make a good article.

COMB FOUNDATION is an article every progressive apiarist requires and W. W. Bliss makes the best and cheapest in the world. Get a supply before the price goes up.

COLLINS & TILDEN of San Francisco have special facilities for handling honey, and bee-keepers would do well to correspond with them before they send their honey to the San Francisco markets.

PREMIUM QUEEN.—Through the kindness of Mr. J. D. Enas, we will offer one of his choice tested Italian Queens, to any person on the Pacific Coast, who sends us the largest club of subscribers, between the 1st day of April and the 25th of September, 1882. Mr. E., will send this queen free of all charges, so get up clubs at once. We will give the name of the lucky person in the October number.

Honey Market Reports.

SAN FRANCISCO.

HONEY.—Comb, 14 @ 18c.; extracted, 9 @ 10c. for light, and 7 @ 8c. $\frac{1}{2}$ lb. for dark.

BEEWAX.—23 @ 24c. $\frac{1}{2}$ lb.

LOS ANGELES.

HONEY.—Comb, 17 @ 20c.; extracted, 8 @ 10c. $\frac{1}{2}$ lb.

Publishers' Notices.

BEE-KEEPERS, subscribe for your paper

BE PARTICULAR to give your post office, County, State and name, when writing to this office.

A HAND stamped here, with index pointing to this paragraph indicates that your subscription has been received, and will date from this issue.

SAMPLE COPIES.--Persons receiving this paper, marked "specimen copy" on the wrapper, will please consider it a respectful invitation to send us \$1 for a year's subscription, provided the paper pleases them. Any person who sends us three subscriptions, at \$1 each, will get the paper a year free.

PREMIUM QUEEN.—For the largest list or club of subscribers sent to us by the 25th of September, 1882, from any person on the Pacific Coast, J. D. Enas will send free, one tested Italian Queen. We have accepted this offer and are now waiting for the fun. Who's ready? The winners' name will be given in our October number.

REMITTANCES to this office may be sent at our risk, if forwarded according to the following directions, viz: by P. O. money order, bank draft, or cash sent in registered letter. When none of these means can be had, we will receive postage stamps, but prefer the above, or coin or currency. One, two and three cent stamps we can use in limited quantities. In sending stamps, do not send them all of one denomination. One and two cent stamps are preferable.

RATES OF ADVERTISING.

Per one column	\$8 00 per month
" half "	5 00 "
" fourth "	2 50 "
" eighth "	1 50 "

No advertisements to count less than one inch, unless inserted 3 or more times.

Advertisements for three months, 10 per cent. less than above rates. For six months, 15 per cent. less than above rates. For one year, 20 per cent. less than above rates.

Displayed advertisements and engravings will be charged according to space occupied.

Yearly advertisers will be allowed four changes of matter.

TERMS:—Transient advertisements payable in advance. Yearly contracts payable quarterly in advance. We will adhere strictly to above rates.

All advertisements should reach us by the 20th of the month preceding the issue in which they are to appear.

We shall admit none but worthy business advertising in our columns, and keep clear of advertisements of a doubtful character.

The large circulation, the desirable class of readers, and the neat and convenient form, renders this journal a choice medium for reaching the attention of a large class of intelligent readers.

These rates are so low that anyone having anything to sell can afford to make it known through our columns

Advertisements.

HARPER, REYNOLDS & CO.

—THE—

Leading Hardware House

—OF—

SOUTHERN CALIFORNIA

Notwithstanding the FIRE, have

The Largest Stock! The Lowest Prices!

HONEY CANS, HONEY EXTRACTORS, BEE MEN'S SUPPLIES

AGENTS FOR

BINGHAM & HETHERINGTON'S

HONEY SPECIALTIES!

We have the ONLY machinery in Southern California for making cans. We propose to keep constantly on hand EVERYTHING in the HONEY LINE.

We believe in

Square Dealing and Low Prices!

HARPER, REYNOLDS & CO.

No. 1 Areadia Block,

Los Angeles St. Los Angeles.

MENTION THIS PAPER.

mar-3t

JOS. D. ENAS,
BREEDER OF
PURE ITALIAN BEES AND QUEENS.

Nuclei and Colonies in Season.

COMB FOUNDATION, BELLOW SMOKERS, BEE VEILS, KNIVES, BEE BOOKS, SAMPLE HIVES, EXTRACTORS, &c.

Address J. D. Enas, Sunnyside, Napa P. O., Cal.
jan-3t

ITALIAN QUEEN FOR FIFTEEN CENTS.

We will sell each subscriber who pays the full price, One Dollar per year, for the

AMERICAN BEE-KEEPER,

One beautiful, untested, Italian Queen for fifteen cents. Sample copy free. Agents wanted. Liberal terms. Address, E. M. HARRISON, Lebanon, Laclede Co., Mo. ap-tf.

TI TEGROF T'NOD.

The Bee-Keepers' Exchange.

This Journal begins its fourth year with a NEW DRESS, and has been INCREASED IN SIZE to THIRTY-TWO PAGES. It is A Live Progressive Monthly, and is edited by PRACTICAL BEE-KEEPERS and richly worth the subscription price, which is One dollar per annum, post paid; or three months on trial, twenty-five cents. Sample copy free.

Our price list of APIRIAN SUPPLIES is now ready, and you will consult your best interests by securing a copy before you buy.

Address, HOUCK & PEET, Canajoharie, N. Y. State where you saw this advertisement. ap-tf.

THE BEE-KEEPERS' GUIDE.

A TWENTY COLUMN PAPER.

Devoted to BEE CULTURE, with description and prices of Hives, Sectional Honey Boxes, Shipping Crates, Honey and Wax Extractors, Comb Foundation, Bee-Feeders, Smokers, Italian Queens etc. SUBSCRIPTION, FIFTY CENTS A YEAR. Specimen copy free. Address,

jan-3t. A. G. HILL, Kendallville, Ind.

THE BEE-KEEPERS' INSTRUCTOR

IS NOW PUBLISHED

IN THE SOUTH,

And is a bright, well-filled magazine of 20 pages, all for only 50 Cents a year. Obtain a free Sample Copy from

W. THOMAS & SONS,

jan-3t SOMERSBY, KY.

W. A. PRYAL,

Attorney and Counsellor at Law,

456 EIGHTH STREET,

Room 15. OAKLAND, CAL.
mar-tf.

WANTED.—WE WANT GOOD WORKING Agents for the APICULTURIST everywhere. Write for terms.

In answering advertisements please mention this paper.

QUEEN

BREEDERS'



DIRECTORY.

Cards of two lines inserted in this department 30 cents each insertion; each additional line 10 cents; or two lines for a year, \$3.00.

J. D. ENAS, Sunnyside, Napa, Cal., breeds Pure Italian Bees, Colonies, Nuclei and Queens in season. mar-ly

SPRING STREET PLANING MILL.

THOMAS STOVELL, MANUFACTURER OF

ALL KINDS OF MILL WORK, SUCH AS SASHES, DOORS, BLINDS, AND EVERYTHING PERTAINING TO CARPENTERS' WORK.

Bee Hives and Frames made a Specialty.

Prices ready for nailing: Single Hives, complete. \$.65 Double Hives, complete. 1.10 For cutting when material is furnished for Single Hives.06 Double Hives.10 Frames, per 1,000.10.00

93 SPRING STREET, LOS ANGELES, CAL.

mar-1f

COMB FOUNDATION

Made from PURE YELLOW WAX, cut in sheets of any length, and of any width, not more than nine inches.

PER POUND, - - 35 CENTS.

If wanted boxed, ready for shipment, add ONE CENT per pound to above price.

Terms: -Cash with order.

W. W. BLISS,

mar-8t

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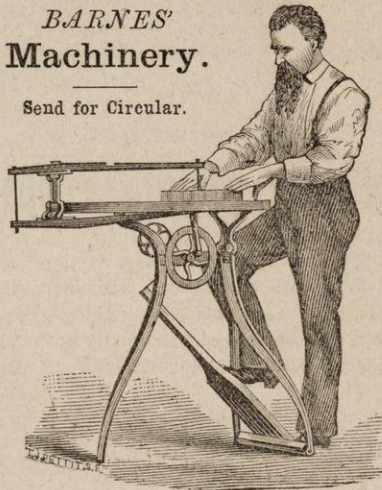
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