



LIBRARIES

UNIVERSITY OF WISCONSIN-MADISON

The California apiculturist. Vol. 1, No. 5 June, 1882

Oakland, California: Apicultural Pub. Co., June, 1882

<https://digital.library.wisc.edu/1711.dl/WID7ZQLXQZQGL9A>

<http://rightsstatements.org/vocab/NKC/1.0/>

For information on re-use see:

<http://digital.library.wisc.edu/1711.dl/Copyright>

The libraries provide public access to a wide range of material, including online exhibits, digitized collections, archival finding aids, our catalog, online articles, and a growing range of materials in many media.

When possible, we provide rights information in catalog records, finding aids, and other metadata that accompanies collections or items. However, it is always the user's obligation to evaluate copyright and rights issues in light of their own use.

THE CALIFORNIA APICULTURIST.

VOL. I. No. 5.

JUNE, 1882.

{TERMS: \$1.00 PER YEAR.
IN ADVANCE.

Our Workers.

[For the APICULTURIST.]

THE BLISS EVAPORATOR.

BY W. W. BLISS.

AS I have been asked to give a description of my sun evaporator in the APICULTURIST, I will try and comply with the same:

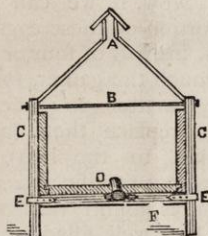


FIG. 1.—END VIEW.

In sketch No. 1, A is an opening two inches wide, covered with wire cloth extending the whole length of the tank, and the whole is covered with a narrow roof, to keep out the rain; B is an iron rod to hold the upper part of the tank together and keep the roof from spreading; C C are posts, 3x4 in.; F is a piece of 3x4, extending across from post to post under the bottom, and is let into the posts 1½ inches, to support the weight; D is a honey gate; E E are pieces of iron bent around the posts, and bolted to F to keep it from spreading apart at the bottom. Or instead of these bent irons, an iron rod as at B, may be run through the legs below the tank, or both rods and bent clasps may be used and thereby secure additional strength.

Sketch No. 2, A A A A are window glass, B B B are the posts; C C C are the ends of the bolts; D is the honey gate. The tank is made of two-inch plank, and is 7 ft. long, 3 ft. wide, and 20 inches high, all inside measure. The ends should set back from the ends of the sides about two inches, and let into the sides and bottom about ¾ of an inch. The roof should be made tight, so that it will not leak; one side is made of boards; the other side has glass in it, so as to let in the sun, and should face the south.

HOW TO PUT IN THE LINING.

Go to the tin-shop and buy some sheets of I. C. tin, and have the tinner turn the edges for clinching, as they do for roofing. Lay the bottom out on a floor, hammer down the clinches, and solder all tight. Take the measure of the inside of the tank, and then turn up the edges and ends of your bottom to that size, making it ¼ inch smaller all around than the inside of your tank. Now put the bottom lining in its place; begin on one side and put in the rest of the lining, one sheet at a time, clinching and soldering as you go. The lining should be bent over the top of the tank, and nailed to the outside with lath-nails.

A tank like the above ought not to cost more than \$15.00 and will hold about 3000 lbs of honey. When completed the whole of the wood-work should be treated to one or two coats of black or some other dark colored paint that will absorb the sun's rays and add to the evaporating powers of the tank.

It would be difficult to tell just how fast it would ripen newly extracted honey; it would depend upon the weather and how thick the honey is when extracted. If the weather is cloudy, cold, and

damp, it would not ripen the honey as rapidly as it would if it was clear, hot, and dry. Here in Los Angeles County, an evaporator the size as described above would (if full) ripen rather thin honey in about 4 or 5 days; it depends upon how thin the honey is, and how thick you want it. You can extract the honey before it is capped over, if you have clear weather to ripen it in.

Los Angeles, Cal., May, 1882

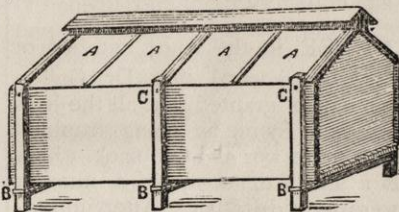


FIG. 2.—SIDE VIEW.

[For the APICULTURIST.]

CHICKENS AS MOTH EXTERMINATORS.

BLEACHING BEESWAX.

BY MRS. HILTON, LOS ANGELES.

I SEE by your neat little journal that a brother in Kern County is troubled with moths among his bees. If he will have a few hen-coops put in his apiary, then shut up a hen with a lot of chicks in each coop, he will find that the moths will be materially lessened. When we lived in our fruit garden, we thought our chickens were of so much bother that we killed them all off; but we soon found that our fruit and bees were overrun with insects, so we got a lot more chicks (we found the Brahmas the best among fruit, as they are not scratchers) and the insects were soon *non est*. Another thing I want to mention and that is if white comb for foundation is

wanted, melt the wax and while hot pour it into a tub or vat of cold water: it makes it look like a great sponge; lift it out carefully and put it where the sun will shine upon it and the dew wet it till it is bleached, which will be in a few days. Now turn it over and the other side will whiten, too. The darkest comb I have whitened in this way, and it is very little trouble, I can assure you. A slanting roof is a good place to spread it. When white enough, melt, and strain if necessary. It will then be ready for business, and it is so much nicer than having dark foundation.

March 18, 1882.

[For the APICULTURIST.]

ITALIANS AGAIN.

ARE THEY ABLE TO KEEP THE MOTHS OUT?

ISAAC B. RUMFORD.

I SEE in the April number of your journal that Dr. Gallup takes it for granted that all the bees reported by me as being troubled with moth worms were black, which is a mistake, for quite a number were hybrid-Italian. After importing and breeding some half dozen queens received from the east, I have not yet been able to get a strain that is moth-proof, but did succeed in getting very much more swarming last spring than I wanted, which our most experienced bee-keeper here believes was caused by the introduction of these imported queens. He goes on from year to year with a regular number of about two hundred swarms and no trouble with either moth, worms or swarming, though he has about all black, probably here and there one or two banded bees, from the effect of an Italian queen introduced many years ago.

Now, I would like to know if Dr. G., or any other bee-keeper, has faith enough in their doctrine to send me a moth-proof queen—one that they can warrant to keep them out for at least one season, and the price of said queen, with all particulars as to treatment. As Mr. Enas made a similar statement in an article in *Rural Press* last year, as those made by Dr. Gallup, I will make this proposition to the two

gentlemen: They may each send to me in May* a tested moth-proof queen of any breed—black, Italian or hybrid, and I will introduce on hatching brood and build up as soon as possible to a strong colony, and if those swarms keep clear of moth-worms until next October, I will then send the regular price to each for a tested Italian queen and also give for publication a report upon their action, etc. Of course, with the prospect of a good year, all is in their favor; but it may turn out different. Though we had two or three swarms that were not troubled last season, which was the worst year we have had since I have been in the business, still, I am willing to try the experiment and pay for the queens in the fall if they hold their own, just to see what the difference may be between their stock and mine, if any. And perhaps a queen will probably be received by me from G. M. Doolittle, to show what she can do in the contest for moth-fighting honors. If the gentlemen of California are willing, I will agree to pay the full prices due for both queens to the one that keeps her hive clear in case the other fails; if they both fail, paying nothing, unless they show some other quality more valuable than my present stock for breeding from.

Bakersfield, April 15.

*This communication was intended for the May number, but was unavoidably crowded out of that issue. Mr. R., we presume, will not object to try the experiment he speaks of during this month, if he is not convinced by this time that the Italians are by many odds the best, excepting perhaps *Apis Californica*. We shall be pleased to hear from the Doctor and from Mr. E., not so much that they can give us any new information on the superiority of the Italian over the black and the common-bee but that we expect they may be able to show the great superiority of the "coming bee" which we have taken the liberty of calling *Apis Californica*.—ASSOCIATE EDITOR.

[For the APICULTURIST.]

WORKING FOR STRONG COLONIES AND PLENTY OF HONEY.

BY R. TOUCHTON, SANTA PAULA.

NOW that the prospects for a honey crop seem favorable, with the swarming season at hand, the question arises, "How shall we manage our bees to get the best results?" From the present outlook it would seem that the bees could not make much of a success of swarming until the purple sage begins to bloom. Ordinarily, the bees do most of their swarming prior

to the blooming of the sage; but this year there is a scarcity of flowers and will be until the sage blooms, at which time the bees should be strong and ready to store surplus honey instead of swarming. I have rambled over the hills considerably, watching the progress of the different honey plants, and have concluded that the flowers do not justify a very big increase. We must have our colonies *strong at the right time* if we wish to get big results. And in my opinion, it will be better to equalize and breed up all colonies to a certain standard of strength, turning their swarming propensities into account by rearing young queens to replace old and worthless ones, than to make much increase. It is not the number of hives that give big yields of honey, but it's the number of bees in those hives, and a given number of bees will gather more in one hive than in two; therefore, we want our hives full of bees during the honey season, and to this end we must have prolific queens. A queen bee is somewhat like a hen—capable of laying a given number of eggs during her lifetime. Now, if we can get the greater portion of these eggs laid in two years, instead of four or five, we are that much the gainer, for it's a very easy matter to rear young queens to replace them (and this also applies to the hen), but all queens are not prolific, and whenever a queen is found that will not keep her hive well filled with brood during the honey season, no matter what her age is, she should be superseded. It will be found very convenient to have a lot of nuclei set aside for queen rearing during the whole season, so that whenever you find a queenless colony or a worthless queen, you may have queens on hand to fill the vacancy, thus leaving no colony without a laying queen for any great length of time.

FORMING NUCLEI.

In forming nuclei, I take two combs of hatching brood from a strong colony, with the adhering bees, and set them into an empty hive, adding two empty combs or combs of honey. Now shake down in front of the nucleus the bees from three other combs; the old bees will return to the parent hive, leaving an abundance of young bees. You can add a division board and

have two in a hive; but you can get along without a board for one. As they get strong add more combs and when fall comes you will have a full colony.

I make my swarms in the same way, only I build them up with combs of brood as fast as they will care for them. In this manner I have a strong colony by the time the queen is laying, and no colony has suffered for the want of the brood and bees thus taken. We must not draw too heavily from any colony at one time if we wish them to breed up to their full capacity.

April 20, 1882.

PROFITABLE BEE-KEEPING.

BY G. M. DOOLITTLE.

FAILING to find a purchaser for what I considered a fair price, my honey was shipped on commission to parties in New York, Boston, Philadelphia, etc., where the most of it sold for 20 and 22 cents per pound. Having just received returns for the last lot, it was but natural that I should look over my account, kept with my bees to see how well they had paid me for the season of 1881. After footing up the whole receipts and deducting therefrom all the expenses I had laid out on the bees, I find I have an average profit of \$29.63 for each colony I had in the spring, as the cash receipts, free of all expense. In getting this average all expenses were counted except my own labor. Thus it will be seen if a man can care for 100 colonies of bees, which I claim can be done, he would receive \$2,963.00 as his income for a year. But to be safe, we will say he can care for only 50 colonies. At this low number this would give him a salary of \$1,481.50 a year. As the year 1881 was better than an average year for honey in this locality, we will strike off the \$481.50 for this, so as to be sure that we do not get the figures too high, and we still have left \$1,000 as an average yearly income for one man.

As proof that the above is not overdrawn, I will say that I have cleaned, on an average, over \$1,000 each year from my bees, for the past 9 years, with an average of less than 50 colonies each year. That I have a better locality than others

I do not admit, for I know of several localities in this county, and in different parts of the State, which I consider far preferable to my own. I stay where I am on account of an aged father and mother who need my help in their old age.

Fearing anyone should think that all they have to do to make a fortune is to buy a few swarms of bees, I will say that riches does not come in any pursuit in life without labor. Bee-keeping means work—energetic work—a place for everything and everything in its place; and also a thorough knowledge of all the honey resources in your locality, so you can do things just at the right time and in the right place. We also want the best bees, the best bee-hives, and all the modern appliances, so that we need leave no stone unturned that would secure to us a pound more of honey. Again, a person must like the business. No man will ever make bee-keeping profitable who had rather lounge about a country store or tavern, listening to the gossip there, than be at work in the apiary. In fact, a person will not succeed in any business unless he has enough love for it so he will be diligent and faithful in his calling. King Solomon said to his son, "Seest thou a man diligent in his business; he shall stand before kings," and the saying is as trite to-day as it was at that time. If a person is not willing to devote the time on bees which they require, they had better keep out of the business, for sooner or later they will turn away from it in disgust if it is undertaken on the plan "that bees work for nothing and board themselves."

Borcedino, N. Y., March, 1882.

THE BEST COUNTRY IN THE WORLD FOR BEES AND HONEY.

WHY SOME "BEE-KEEPERS" ARE NOT SUCCESSFUL—PROFITABLE TO THOSE WHO KNOW HOW TO MANAGE—BEEKEEPERS SHOULD READ MORE AND ATTEND CONVENTIONS—FUTURE OUTLOOK.

BY J. E. PLEASANTS, ANAHEIM.

THE ardently wished and so very long waited for bee-journal is at last edited and published

in California. For years have the Pacific bee-keepers felt the want of such a publication. In the past they have been dependent on local papers for whatever they wished published relating to the honey interest. In the past the bee-keepers have had many difficulties to contend against, but now let them "rejoice and be exceeding glad," for unto them new hopes are born in the shape of the CALIFORNIA APICULTURIST, therefore they should simultaneously stretch forth a helping hand and each one contribute his mite for the support of this young Hercules, and in time it will ascend from where it now stands, at the foot of the hill, in fear and trembling, to the top of our highest Sierras, and from there unfold—not 12 pages but 12 times 12, and be a tower of strength to its supporters. Many of the bee-keepers of this State take one or more eastern publications devoted to apiculture; and while admitting that they are greatly benefited by the information contained in these journals, still they say that their wants are not wholly supplied. Much of the time of the eastern bee-keeper is devoted to blanketing his bees, putting them in or taking them out of the cellar, while in this State such is not the case. This is the best country in world for bees and honey; but many a bee-keeper is injured by having such advantages as he is blessed with here. Why? Because he depends too much on the favorableness of the seasons. He is also very wise in his own conceit; he thinks it is of no use for him to read the bee-journals; he says those men who write do not know as much as he does; he will not spend his money to subscribe for such books; he will not waste his time attending bee-conventions: what can he learn at such meetings. Unfortunately, there are too many such old fogies here in California. They have kept bees for years and years, and to-day are not able to compete with the skillful apiarist, who is more than willing to read every item that pertains to the bee business, thereby getting information from men who have made bee-keeping a life study. In time the broad-minded bee-keeper will succeed, while the narrow-minded one will be driven to the wall, and, by so doing, prove the Darwinian theory of the survival of the fittest.

MONEY TO BE MADE IN BEE-KEEPING.

There is more money to be made in the bee business than in any other, in proportion to the capital invested; but he who would succeed in this pursuit, as in any other, has to devote time and energy to it. It were useless to deny that the frequent drouths which have been experienced in the last few years have a discouraging look for the business, but a man can scarcely be called wise who neglects to gain wisdom from his failures, and disasters are often of value in the way of experience, and many a lesson has the *pobre abejero* learnt from the drouths which, even in this much favored country, he is freely treated to.

In the last 7 years there have been two total failures in the business—'77 and '79 and a partial one in '80. As a natural consequence, many who were engaged in this pursuit got very much behind financially and they were looked upon with pity for being so simple as to be engaged in such a precarious occupation, and the question was often asked of the poor bee-keeper by thoughtless ones, "Why don't you have an orange orchard or a vineyard, such business' pay much better all the time?" The prudent bee-keeper thinks of the wise proverb, "Speech is silver—silence is gold," and refrains. If he would, he could say: "There is no human undertaking that is certain. In this vale of tears every occupation has its lights and shadows, and our turn will eventually come." It has come. The future now looks very bright for the bee-keeper. He has had a long rest of more than a year, therefore he is more than ready to put on his visor and buckle on his armor and go into service with renewed strength and vigor, for his prospects are very encouraging. The yield of honey will be large judging from appearances up to date.

[For the APICULTURIST.]

LAS FLORES CAMP.

C. M. DRAKE, SANTA PAULA.

CHAPTER III.

BREEDING UP FOR WORK.

DOWN came the rain, the glorious rain, filling the dry canyons with muddy streams, cheering

the hearts of despondent bee-men and ranchers. Two, three, five—nearly six inches of rain that made the hills put on their spring robes, and look fresh and cheering to the eyes of those who had almost given up hope.

The bee-keepers shook hands and talked honey; the farmers told of fabulous crops of grain and beans; the merchants gave trust to customers they had shut down upon while the dry weather lasted—all seemed to share in the cheering prospect.

"We must stimulate, mother," said Bob, when the rains came. "Let us get down those two cases of honey we took out of the sun-extractor last year, and mix a little water with it and just set our bees to booming."

"But if it should only be a little rain, we would hurt the bees, my boy," said his mother.

"But it is going to be a big rain," persisted Bob; "We can get two weeks start by beginning now, and two weeks may be worth three or four hundred dollars to us."

So, after considerable discussion, it was decided to stimulate the bees and the boys prepared some simple feeders for each hive, and into each of these feeders they put at first an ounce of honey each evening, and gradually increased the feed to an ounce and a half per day. Not very much, many will say, but with what honey the bees brought in from the hills, the queens began to lay eggs in abundance; drone larvæ could be seen in choice colonies, and all the apiary became wonderfully full of life and activity.

The boys gradually uncapped the old honey in the hives and sprinkling the honey with warm water returned the frames to the hives.

This induced the bees to use their stores for breeding purposes, for sealed honey to bees is somewhat like a twenty-dollar piece is to some men—they don't like to break it, but after it is broken they will quickly use it up.

The boys tried to confine the drone brood to three or four of their best colonies, doing in this as they would be done by, for it is probably true that very few queens in an apiary get impregnated by the drones from that apiary, as they seem to fly quite a distance on the wedding tour, much further than the drones fly. Yet when the swarm-

ing fever first begins to be felt, a couple of weeks or so before the bees build their queen-cells, the bees will often insist upon raising drones if they have to tear down worker comb and build drone comb in its place, or they will even raise drones in worker cells.

So the B. Masters found it easier to go around the apiary about once in ten days and cut the heads off of the drone brood they did not wish to hatch. Or they would cut out an offending bit of drone comb and replace it with a piece of worker comb cut to fit in the place of the other and put the drone in the super, for the drone comb is certainly the best for the bees to store honey in, as they have to do less wax-work to complete and cap the cells in proportion to the honey they contain. As the weather grew warmer, the boys went to a neighboring bee-keeper who had a comb-foundation machine, and exchanged some of their wax for freshly made foundation. They were aware that foundation newly made will be drawn out into comb much more readily than if it is even two weeks old.

Returning to the apiary, they fastened this foundation in some new frames, leaving room at the sides and the bottom for a little sagging (for they had not yet learned to wire their frames); and, taking them to the stronger hives, they inserted them in the middle of the brood-nest, taking out one of the side frames to reserve for a swarm or to fill up a vacant place in some super.

The supers had been removed when the boys first began to stimulate, and as there were a few hives with nadirs below, the boys really had quite a number of extra combs. By inserting the foundation in the middle of the brood nest, the boys forced the bees to draw out the foundation and increase their brood. This method of forcing the bees to greatly increase the size of the brood they have to cover, sometimes results in chilled brood if the weather turns suddenly cold and the bees have to keep nearer together to keep warm. But the boys did not do this way until the hive was pretty well supplied with bees, and they had a warm sheltered location, which was usually free from frost. They also kept the colonies somewhat equalized by occasionally transferring a frame of brood, bees and

all from a strong hive to a weak one where the former could well afford it, taking care, however, not to transfer the queen also. When seven of the nine frames below were pretty well filled with brood, the boys resolved to put on some supers and see if they could not prevent swarming, if possible.

If swarms can be made at just about the right part of the season without weakening the parent colony, of course the total honey yield of the apiary will be greater; but usually a swarm costs the bee-keeper from twenty-five to one hundred pounds of surplus honey, not counting what the bees use to build the extra combs.

"If we have any swarms we will have big ones," said Bob to his brother, "We will fill both stories of the hive with bees and brood, and then, if they will swarm, we will have a rouser."

So, when the lower hive became full of brood, the boys lifted two of the combs of brood up in the super and put below a couple of frames of foundation, or empty worker combs, and by going several times around the apiary and doing this, they soon filled the hives with enormous colonies of bees.

Some, who would build queen-cells anyway, were kept in check by robbing them of the frames in which they had started the queen cells, and then putting an empty comb and one of foundation in the center of the brood chamber. This, with the brood in the super, so divided the attention of the bees that they "forgot they wanted to swarm," as Ben expressed it.

"I tell you, Ben," said Bob, who delighted in a semi-humorous kind of bragging, which was hardly half of it really meant, "If this apiary don't get piles of honey this year with the extra good management it has, it will be because there is an entire failure of the honey crop."

"Failure!" responded Ben in the same vein, "Our bees are bound to get honey if they have to rob every other apiary in the neighborhood to get it."

(To be continued.)

No one who keeps bees should be without the APICULTURIST. It will pay the apiarist ten times the subscription. This is what our subscribers say, so it must be true. Try it and see for yourself.

[For the APICULTURIST.]

BIRD AND BUTTERFLY AND BEE.

BIRD, and butterfly, and bee,
Nature's brightest darlings, three!
Where the flowery treasurers cling,
Hasting swift on fairy wing;
Ever flitting on and on,
Like a spirit, seen and gone;
Flashing like the lightnings gleam,
Fading like a tender dream,
Sailors o'er the flowery sea,
Bird, and butterfly, and bee.

Bird and butterfly and bee,
Nature's blessed trinity!
Like the brief, transient snow
Melting in the Spring's warm breath
In oblivious hush and death;
What though Creeds may veer and change
From the old, to new and strange;
What though Kingdoms rock and reel
Neath the blows or warrior steel,
Moulder, crumble slow decay
Passing like a dream away;
What though Empires rise and fall,
Rules your spell, surviving all;
Still earth's byways, all ye throng
With your gleam, and flash, and song,
Care and sorrow, all forgot,
Of to-morrow heeding not;
Bird, and butterfly, and bee,
Nature's fairy trinity!

ALBERT E. KERCHER.

Los Angeles, May 24, 1882.

[For the APICULTURIST.]

WHY DO BEES SWARM?

BY J. B. RUMFORD.

WE are very busy going through the apiary now, clipping queens' wings, taking down queen cells and taking the heads off of drones, and am particularly making note of the subject of worms, to see if those that are purest Italian are most exempt, but so far am not sure that is the case, except so far as they are stronger with bees as they are likely to be, for the queens are more prolific, especially when crossed with Cyprian, as mine are, but I think they are also more inclined to swarm, and thus be reduced in quantity again. This swarming trouble is one of the worst I have to contend with, for if they would not thus divide up so much, there would probably be less trouble with the worms. This year I propose to keep them from swarming as much as possible, then double up the weakest ones as soon as the fever is over.

Why do bees swarm? would be an interesting question of discussion and observation. It is not always for want of room, because within a week

I have had swarms come out where the top was entirely empty, and bottom not full, and one fine lot of Cyprian hybrids after being hived in a new place only remained over night, the queen laying a part of a frame of eggs when out they come. I was right there with a good force pump, but water would not cool them down, and after following them a few rods my boy took to throwing dirt among them, and thus followed them for over a mile but had to let them go. Another one thus came out, but had to go back because the queens' wings were clipped, and after they were back I took away all the brood, but twice since in one day they have tried to leave, though part of the bees with the brood were put with a nucleus. After they went back the last time we moved the hive to a new place. I have no time to write much now, but will experiment and report after the busy season is over.

BLACKS, ITALIANS, CYPRIANS AND HYBRIDS ARRANGED.

I will add a few more lines to say that to-day in swarms containing twelve frames of brood, half of them so full as to leave no space for honey, and the bees plainly marked with two yellow bands I found several worms on the brood, though some of the black bees are clear of worms. My yellow bees are mixed Cyprian and Italian and black. I believe the more Cyprian there is in a strain, the faster they will breed, fly faster, travel into a hive double quick every time when emptied in front of it, will swarm four times to the black bees once, probably sting quicker too. One peculiarity that seems to mark the difference between the two varieties is, the black bees wait until the new queen is hatched or about to hatch, before they swarm, while the Cyprian swarm as soon as they get a capped queen cell, and sometimes only wait to draw one out a half inch, then off they go, seeming to care nothing for the welfare of those that remain. A little of such blood may be useful to lend activity to blacks that are too slow, but to-day I began to breed from black queens again and the one that will give bees least inclined to swarm, and most inclined to store honey, will be my favorite to breed from after this, without regard to color or pedigree.

Bakersfield, May 17th, 1882.

(Continued on page 52.)

The California Apiculturist

PUBLISHED MONTHLY BY THE

APICULTURAL PUBLISHING COMPANY

AT OAKLAND AND LOS ANGELES

CALIFORNIA.

N. Levering, - - - - Editor

W. A. Pryal, Associate Editor and Manager

Terms of Subscription:

\$1.00 per annum.....in advance
 .50 for six months..... "

Any person sending club of three will be entitled to an extra copy (like the club), sent to any address desired. Sample copies free to those who can use them to advantage.

Remit by either money order, registered letter, express or bank draft, to the Apicultural Pub. Co., Oakland, Cal.

All business communications, etc., should be sent to the office at Oakland. Articles for publication should be sent to the Editor at Los Angeles, Cal. P. O. Box 1088.

Advertising Rates on page 55.

Entered at Oakland Post Office as second-class matter.

THIS MONTH'S CROP.

OUR WORKERS—

The Bliss Sun Evaporator.....	45
Chickens as Moth Exterminators..	45
Are Italians Able to Keep out the Moths?.....	46
Working for Strong Colonies—Forming Nuclei.....	46
Profitable Bee-keeping.....	47
Best Country in the World for Bees and Honey.....	47
Las Flores Camp—Breeding up for Work.....	48
Bird and Butterfly and Bee.....	49
Why Do Bees Swarm?.....	49
The Manufacture of Comb Foundation.....	52

IN THE FIELD—

Bee Flora of Napa Co. nty.....	52
Mustard as Bee Feed.....	53

EDITORIAL—

The Apiary for June.....	50
Muscular Power of Insects.....	50
Absconding Swarms.....	51
Who Gets the Profits?.....	51

EDITOR'S PORTFOLIO—

In the Balance Again.....	53
Another Big Smoker.....	53
Apis Californica.....	54
Glucose.....	54
Honey Extractors.....	54
Los Angeles Bee-keepers' Meeting	54

Editorial.

THE APIARY FOR JUNE.

THE attention necessary for the Apiary this month is quite the same as for May. In this locality the principal part of our extracted honey will be taken this month. There will be but little swarming after June. All colonies should be examined and seen that they have prolific queens, as it is essential that each colony should be supplied with a good queen before the drones are killed, which will insure young bees during the fall and winter months, as many bees are lost during these months from the inclemency of the weather. A vigorous queen is quite essential when the working season comes on in the latter part of the winter. It is *then* that strong swarms pay best, as they throw off early swarms that are ready to gather the first honey that comes.

INTRODUCING NEW BLOOD INTO THE APIARY.

Those who wish to rear from imported queens or introduce new blood into their apiaries will do it this month, as breeders do not generally send out queens before the 20th of May or 1st of June. Where there are many colonies into which new blood is to be infused, the most expeditious and successful method is to remove a queen that you wish supplanted. Twenty-four hours after her removal introduce your new queen. The colony from which she (the new queen) is taken, will soon be supplied with a number of queen cells. Date the time of her removal upon the hive or in a book kept for that purpose, so that there will be no mistake about the transaction. In about six days the cells will be capped over; examine how many are of good size as they produce the best queens. Then remove a corresponding num-

ber of objectionable queens. In three or four days after their removal another examination will reveal a number of queen-cells in process of construction, all of which must be destroyed, with a sharp small-bladed knife cut out the cells to be transferred; great care should be taken not to damage the cell in the least. The block of comb to which the cell is attached may be an inch square, or of a triangular form as may be thought best. Cut a corresponding hole in the comb to which it is to be transferred and insert the cell by pressing it gently into the orifice made. A pin may be necessary sometimes to hold it until the bees wax it fast. When removing the cells care should be taken not to allow the cells to chill. If the day should be cool or windy they may be carried to the hive in a small box. Ten to twelve days from the removal of the breeding queen, or commencement of the cell, the young queen will emerge. This we have noticed varies a little with the state of the weather and strength of the colony. Every six or eight days the breeding queen may be removed to another hive, as before stated, and in this manner many colonies may be Italianized with one queen in one season. New or foreign blood should be introduced into the apiary every two years, at least, as it will greatly improve the working qualities of the bees by adding vigor and strength to the colony. In-and-in breeding deteriorates bees the same as it does cattle, swine or any other stock. An occasional change is time and money well spent.

MUSCULAR POWER OF INSECTS.—

Experiments that have been made by naturalists show that the smaller the insect the greater the proportionate muscular power. The little ant is for its weight, more than fifty times stronger than a horse. A bee, when harnessed to a wagon, can pull twenty times its own weight.

ABSCONDING SWARMS.

THE great number of absconding swarms in this section of country are remarkable—never has there been so many known before. One man informs us that he has captured 32, another 20, another 13, and many others various numbers. These have been captured mostly by placing hives and boxes out upon the sides of the mountains or in tree tops. One gentleman says that he had a number of hives piled up near his house; his attention was called to a few bees, cleaning out a hive; the next day, about 11 o'clock, a swarm came and took possession of the same hive. He was clearly of the opinion that the bees seen there the day previous were members of the same swarm, and who were in search of a dwelling in which to move, and were cleaning house when first discovered. The same thing was noticed several times with like results.

In Los Angeles, a man who had a number of empty hives sitting around on his premises had 20 or more of them occupied by runaways, who, regardless of the city Bee Ordinance, took up their abode in the city of the angels and will undoubtedly contest their right *pointedly* with the city dads should they get after them with a writ of ouster. We cannot account for so many other than apiarists generally are discouraged on account of the unfavorable outlook and neglect their bees, which they should not do.

WHO GETS THE PROFITS?

THAT there is a large profit made on honey by some one, is quite evident from facts that cannot be denied. That the bee-keeper does not make it is also evident and only needs past experience to establish the fact.

We are reliably informed by residents in many of the eastern and

western states that when they purchase our honey there at retail they pay from 20 to 40 cents per pound for it. Dealers in San Francisco pay from 5 to 7 cents for it and then deduct the weight of the cans at that, leaving the producer from 4 to 5 cents per pound, after deducting freight and all other expenses. Now, *who gets the profits?* There is a profit from 15 to 30 cents somewhere, and this is not all. The San Francisco dealers often sell and reserve the cans, or repack in small packages in order to secure a larger gain, and then sell the original packages back to the producer, after having robbed him of them. This imposition has been, and is undoubtedly practiced now. The apiculturists of Southern California have openly and publicly denounced this unfairness and have asked, through their associations throughout the honey districts of the State, that a reasonable tare be adopted on cases commonly used for 60lb cans, which would be from 12lbs. to 14lbs., but their requests have been disregarded and a tare of 16lbs. to 18lbs. has been exacted, these tares including the cans.

These honey dealers doubtless have a ring and fix their own prices, as have the fruit packers and other dealers done. Nine-tenths of the honey producers in this part of the State are dissatisfied with the San Francisco market and are determined to ship around it to some other market. European dealers are making bids for our products, and many will try the experiment there this season. Shipments made to many of our eastern cities have been much more profitable than those made to San Francisco. No deduction for packages are made outside of San Francisco, as far as we have been able to learn. When the retailer sells our honey or other canned goods, he does not deduct the weight of the cans. Why this exaction off of the honey producer?

It is evidently a gross injustice that should not be tolerated.

Until a different system of marketing honey is adopted impositions of this kind will be practiced by the swindling rings that control the market. Why is it that the eastern bee-keeper always gets a remunerative price for his honey? The reason is plain: they place their honey upon the market in an attractive form—in small packages neatly labeled. By the small package system they reach the consumer in a more direct manner, thus avoiding the middlemen to a great extent. When we adopt the same system we will avoid swindlers and break up the rings.

THE SEASON, as we have heretofore stated would be late, in consequence of the late rains. In our locality, as in many others, the sages, wild alfalfa and other leading honey plants are now beginning to bloom and the bees have commenced storing surplus honey. We are informed that in other localities bees have not commenced to swarm, which may be attributed to their weak condition, and that some apiarists are discouraged and are rendering their surplus comb into wax. In our own apiary our bees are storing honey well, considering the season, which we fear will fall short of our previous expectations.

THAT QUEEN.—In order to give all a chance to obtain the beautiful tested Italian queen offered as a premium by Mr. Enas, we have just written that gentleman to open the competition to all persons in the United States and Canada, and we know he will accede to our request. Now, here is a chance to get a first-class *Apis Californica* grade of bees. The editor, who is also trying to make this new race of bees popular, will, if the boys work hard for the above, give one of his best queens to the person who sends the second largest list of subscribers before the 25th of September. Now, don't fail to improve your bees.

Our Workers.

(Continued from page 49.)

[For the APICULTURIST.]

THE MANUFACTURE OF COMB FOUNDATION.

Continued from last number.

BY W. W. BLISS, LOS ANGELES.

ROLLING.

THE sheets should be warm or they will crack, about 100° is the right temperature; they can be warmed by being left in a warm room, or by being placed in the sun, if it is not too hot.

If your mill is new or has been used but little you will undoubtedly have trouble with the wax sticking to the rolls, unless you are very careful. The best way to avoid this is as follows: you first need a good lubricator, for this I use soap root, prepared as follows, remove the outside hair, cut in thin slices crosswise with a *sharp* knife, use two bulbs to a quart of water, boil for half an hour, strain and let cool. Open the rolls until the sheet of wax will pass between them, so that the rolls will just a little more than touch it; the rolls are to be *thoroughly* wet with the above soap root solution or something that answers the same purpose; before you attempt to roll. After you have rolled two or three sheets with the rolls set thus, close them a little and then roll a few more, close again, then roll; continue to close and roll until you have the foundation the required thinness. The rolls are to be kept wet all the time or the wax will be sure to stick, if it should happen to stick, you will have to "pick" wax, for this use a quill tooth pick or a piece of hard wood sharpened at one end, I use the latter. If the rolls are completely covered with wax, the quickest way to remove the wax would be to remove the roll from the mill, and dip it in hot water, if you dip it in hot water, let it cool before you attempt to roll any more; or it will stick as hard as before. After you get your mill "broke in" you will have no trouble

if you are a little careful, but I can tell you it takes time and the "patience of Job" to "brake in" a new mill, at least that is my experience.

Apply the soap root with a brush, I use the yuca brush as they do not cost any thing, only the trouble of gathering them. After you have a lot rolled, pile up a dozen sheets or more with the edges even, place a board on the top the exact size you wish your sheets, and with a sharp, round pointed butcher knife, trim all around.

PUTTING FOUNDATION IN THE FRAMES.

If you use wired frames cut the sheets the exact size of your frame *outside*, from end bar to end bar, and one quarter of an inch narrower than the frame from top to bottom between top and bottom bar. If you do not wire your frames, cut the sheets the same size as before from top to bottom, but one quarter of an inch smaller than the *inside* of the frame the other way.

For wired frames, cut a board that will slip inside of the frame, lay the board on a table, the frame on the board, with the top bar towards you; place the sheet of foundation in the frame so that the edge comes just up to the top bar, and even with the outside ends of the frame.

Press the foundation down on the comb guide with the fingers enough to hold it in its place, then with a round piece of hard wood (a broad awl handle will do) dipped in the soap root, rub down the foundation smooth, turn the frame over, bottom bar towards you; and imbed the wires into the wax, for this purpose I use a button hook, with a groove filed in the back of it, place it on the wire at the top, and draw it along the wire with pressure enough to imbed the wire into the wax. Take up the frame, stand it on end with the wires to your left, and with the thumb of your right hand, bend the foundation at right-angles, press down and rub as before; reverse the frame and repeat with the other end but be sure to have the sheet in the center of the frame.

If you do not use wired frames, all that you can do is to stick the foundation to the comb guide. I should use the wired frames by all means.

In the Field.

[For the APICULTURIST.]

BEE FLORA OF NAPA COUNTY.

BY J. D. ENAS.

IN season, the hills are covered with the wild heart-ease, which gives an abundance of honey. The canyons have willows and hazel and I have seen them working lively on the azelias that grow in the canyons. Some of the live oaks secrete an nectar that the bees gather very vigorously, reminding one of swarming time. The Yerba Santa, blooms in June, when the honey immediately gets a body, the honey is slightly of an amber color, and has a slight bitter flavor which disappears when the honey becomes candied. Next comes the honey from the bear bush, as it is called. As there appears to be no other bloom, at the time it is in bloom, all the force of the hives appear to be at work on it. I have found fifty bees at one time on one cluster of flowers. I find many bees on the flowers after it is too cold to return to the hive, and the bees appear to be suffering from a chill, or it may be a narcotic. I have seen many dead bees on the ground under the ground, both old and young. As the tree is in bloom, about the last of the first half of the season, and the nights are cool, say about the middle of June, it may be that they are so eager to get the honey that they work too late and get chilled, as a single bee cannot stand much of a chill. I know many are out all night, and until they get warmed by the next day's sun, when some will return to the hive. This will end the honey season until corn comes in bloom, in the meantime look out for robbing. This is the time when bees work on fruit. I have watched and noted very carefully and find that in all cases where bees have worked on fruit that either birds or something else had been there first, and left their marks, plain and distinct. In the fall golden rod comes to fill up the hives for a winter supply. I have had a colony fill up their hive with 50 lbs. in three weeks; the honey is dark but of good flavor and splendid for buckwheat cakes or for preserving fruit instead of sugar. We have used it for several years very success-

fully. I save enough combs of it sealed over to stimulate for spring breeding. I learn that on the opposite side of the valley from where I am located, that there is a species of wild heliotrope, which gives a fine flavor to the honey. In the city the sidewalks are lined with locust and while in bloom the air is filled with its sweet fragrance. I find that my bees work on the Eucalyptus bloom. The acacias are in full bloom and pollen gathering, and brood rearing is active.

(For the APICULTURIST.)

MUSTARD AS BEE FEED.

BY F. A. BLISS, LOS ANGELES.

THIS is, without doubt, the best bee plant in its season, as it furnishes both pollen and honey in abundance. The honey is light in color and strong in flavor; but as it blooms early, when brood rearing is the main object of the bee-keeper, its being strong in flavor is not objectionable. Our bees always increase faster when the mustard is in bloom than at any other time. We sowed a piece of white mustard last fall, after the first rain. It has been in bloom for eight weeks and will last for a week to come. The wild, or black mustard, is fast commencing to bloom. Both varieties are good, but I give the preference to the white, on account of its being earlier and the seed is more marketable. I should like to hear from some of the the readers of the APICULTURIST who have tried *white* mustard for early feed.

Editor's Portfolio.

IN THE BALANCE AGAIN.—"WHAT WILL THE CROP BE?"

DURING the past ten days we have received a number of letters that give rather a gloomy report as to the amount of this year's crop of honey. Earlier in the season the prospect for crops of all kinds seemed to be remarkably good; but a change came, and verdant grain fields, sunny hillsides that were bedecked with countless flowers, whose

colors were more numerous than those of the rainbow, and orchards, the trees of which gave token of a plenteous crop—all, in a short time changed and assumed a contrary appearance. The grain crop may be, taking the whole crop into consideration, something less than half a crop. The fruit crop, which promised to be enormous, will be up to the average, perhaps better. The grape crop was partly affected by the unusually late frosts, but we are glad to learn that the damage will be slight. But the honey crop, what will it be? We pause for an answer. It may be better than some expected it to be, but we will wait and see, at

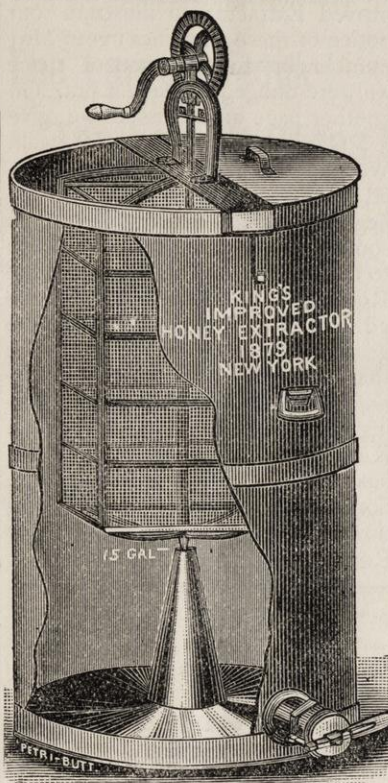
in this section will not sustain the hopes that were entertained by bee keepers a month or more ago. Like the prospective wheat crop, honey will be short. We will be satisfied this season with half a crop, and many others will not fare so well as that. In fact, we have as yet no assurance that we will have any to dispose of. Our hopes all hang on the quantity and quality of the white sage blossoms. Last year there was very little nectar in the flowers. With six hundred healthy stands of industrious workers yet to hear from we must wait for further returns before we can form any definite conclusions regarding the coming crop. The oldest apiarist avoids answering the question: "What will the harvest be?"

MRS. FAIRCHILD.

Pomona, May 20th, '82.

LOOKS DUBIOUS.—Our friend, Mr. C. M. Drake, of Santa Paula, writes to us May 10th, as follows:—The honey prospects look dubious. I don't expect more than half a crop at utmost. Fog is coming up to-day for the first time in several weeks. If it continues it will help us out, but the ground is not wet down far enough. The hills are drying up but the sages look fair as yet. I think the bloom will not last long when it does open on them. Still, all is guess work till June. Then we can tell pretty well what the crop will be.

CALIFORNIA BEE PASTURES.—We have just read in this month's *Century* a well-prepared article on "The Bee Pastures of California," by our well known and popular botanist, John Muir. The engravings accompanying the article are executed with that same degree of excellence which characterizes this world-renowned magazine. Mr. Muir deplors the wanton ravages the sheep rangers are making on the bee flora of our southern counties. Where practicable we think it would be well for a number of bee-keepers to band themselves as a company and buy or take up large sections of those mountainous regions, and thereby be able to prohibit sheep owners from pasturing their flocks on them. They can afford to improve the bee flora by this means better than by any other that we know of.



KING'S HONEY EXTRACTOR.

the same time advising those who have any to hold on to it, as the price is bound to go up. By the telegraphic dispatches we notice that "Old Nick," or something else, is playing havoc back in the east. The laugh won't be on their side this time, at any rate. We annex a couple of letters we received lately and they give about as near a solution of the problem as we can give.

NO DEFINITE CONCLUSION TO BE ARRIVED AT.—The honey harvest

APIS CALIFORNICA.—Mr. A. F. Moon, of Rome, Ga., said in our last number that one important feature connected with California is that we have "as *practical* and *scientific* bee-men as can be found anywhere in America." We felt a little egotistical when we read the above and no doubt all of our California apiarists felt proud to have such a distinguished bee-keeper as Mr. Moon express himself in such complimentary terms of our brother apiarists. In no place in the wide world does Nature offer such opportunities as is to be found in this Golden West. We have the climate, the bee-flora and THE MEN to co-operate, as it were, and bring forth great things. We have heard of many excellent improvements and valuable discoveries connected with apiculture that were made on this coast. Our associate editor believes that this State is going to produce the *coming* bee and that it will be called *Apis California*. It stands to reason that if a new strain of bees is to be produced in America it will be brought forth on the Pacific Coast. Proper attention and management will undoubtedly do it, and if our friends in the east don't look well to their laurels they will find themselves distanced. On this subject we shall say more at another time, hoping in the meantime that our readers will discuss the subject in these columns.

GLUCOSE.—It is beginning to be doubted whether the cans of "honey" put up by the fruit canneries of San Francisco contain the genuine article. The member of our company living near San Francisco has heard reports that men who have worked in some of these factories say that they *do* use glucose to mix with the honey they buy at a sacrifice from the produce dealers of San Francisco. A bee-keeper, in writing to our associate, says that he has seen any number of barrels of glucose in front of fruit canning establishments in San Francisco. The asso. editor has seen 2lb. unsealed covered cans of honey offered in stores in and about Oakland that sell for 30 cents apiece. On asking if they contained pure honey he was told that "it did not make much difference whether it was or not, as long as consumers could not

tell the difference." It seems to us that these factories would not care to can pure honey, for, as is well known, they are for making large profits. If the above statements are true, it is time the practice was stopped. The managers of this journal are about seeking evidence on this score and will, if they are able to make out a case, have complaints sworn out against the violators of the law. It is time that the apiarist put their honey on the market in their own small packages and reap the profits.

HONEY EXTRACTORS.—We intended to use a cut of King's Improved Extractor to illustrate our notice of these machines in our May number, but for the want of space we were obliged to leave it out. On another page of this issue we give it a place and it will speak for itself. We understand that it will be offered for sale in this State by the beginning of next season. Through some mishap, our statement relative to the gearing of the Muth and the Root extractors became a little mixed. It should have been that the gearing of Root's machine was like that of the Everett and that *Newman's* and *Muth's* have upright gearing—the two former have horizontal. King's, as will be seen by the cut, has strong upright gearing, too. Some apiarists prefer the over-motion gearing and others prefer Root's.

Bee-keepers in Council.

LOS ANGELES COUNTY BEE-KEEPERS ASSOCIATION.

THIS association met May 20th at the office of C. N. Wilson, in Los Angeles.

President Wilson in the chair. The Secretary being absent, Mr. J. W. Wilson was chosen secretary *pro tem*. Minutes of previous meeting read and approved. There being no committees to report, the secretary presented a communication from S. M. Blair, relative to San Francisco as a honey market, and requesting the society to urge the apiarists of Southern California to seek another market. N. Levering made some explanations relative to the commu-

nication. He advised shipping around San Francisco, and urged the small package and label system of marketing honey. On motion the communication was read and placed on file.

A discussion ensued between N. Levering and J. W. Wilson on the package question. Mr. Levering advocating the small package for the home trade. Mr. Wilson was of the opinion that the additional cost of small packages would not pay. Mr. Levering thought they would; that our honey would thus reach more directly the consumer, who would willingly pay the extra expense, and that we would thus avoid, to a great extent, the middle men.

On motion, the president was instructed to appoint a committee to act upon said communication and report at the next meeting. The president appointed N. Levering and R. Hall as such committee. H. Clauson and others from different parts of the country spoke disparagingly of the honey crop in their localities. On motion the meeting adjourned to meet in same place on the third Saturday in June.

J. W. WILSON, SEC.

Our Advertisers.

READ THE wants of W. W. Bliss in this issue. Bee-keepers will do well to forward him their addresses as he desires, and thus give aid in an important matter of interest to all.

On File.

Chapter IV of Las Flores Camp, on "Increase," by C. M. Drake, also Chapter V, "Showing the Apiary," of the same serial. Chapter IV, as also the following will appear in our next issue: "An Experiment, or the number of pounds of honey required to winter a colony," by W. W. Bliss; "The different styles of Comb Foundation," by C. J. Robinson; "Introducing Queens," by J. D. Enas.

Honey Market Reports.

NEW YORK, April 11.

BEESWAX.—25 @ 26c. $\frac{1}{2}$ lb.
HONEY—Clover, small box, choice, 15 @ 16c. $\frac{1}{2}$ lb.
HONEY—fair to good, 13 @ 14c. $\frac{1}{2}$ lb.
" buckwheat, 11 @ 12c. $\frac{1}{2}$ lb.
" extracted, white, 10c. $\frac{1}{2}$ lb.
" " buckwheat, 7 @ 8c. $\frac{1}{2}$ lb.

SAN FRANCISCO.

We quote: White to extra, white comb, 14 @ 16c. $\frac{1}{2}$ lb.; extracted, amber, 7 @ 7½c. $\frac{1}{2}$ lb. white, 8 @ 8½c. $\frac{1}{2}$ 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.

Advertisements.

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.

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

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

Bees for sale.

Four hundred colonies of Italian bees for sale cheap. For particulars, address,

E. E. SHATTUCK,
LOS ANGELES, CAL.

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 Arcadia Block,

Los Angeles St.

Los Angeles.

MENTION THIS PAPER.

mar 3t

HEADQUARTERS FOR

Pure Italian Bees, Queens and Nuclei in season, Comb Foundation, Bel-lows, Smokers, Knives, Extractors, Gloves, Sample Hive, Bee Books, Veils, Etc.

Price List Furnished on Application.

Being only three hours distant from San Francisco, my facilities for shipping colonies by sea can NOT BE EQUALLED. Can superintend all colonies on board steamer at San Francisco, if required.

Address,

J. D. ENAS.

June-ly

Napa City Cal.

Comb Foundation

Made from pure wax cut in sheets to suit, per pound, 35 cts. Or if wax is furnished, then only 15 cts, per pound.

Address,

J. MADORY,

SAN GABRIEL, CAL.

CLOVES.

Bee-keepers' gloves and leather gloves of every description, made to order and of the best material. Orders solicited.

Address,

MRS. M. F. WHILE,

LOS ANGELES, CAL.

WANTED.—THE NAME AND ADDRESS of every person in Los Angeles County who keeps bees, as I wish to make a full and correct report of the honey industry of this County. Write your name and address plainly on a postal card, and direct to

W. W. BLISS,

j-lt.

LOS ANGELES, CAL.

WILLAMETTA FARMER

—IS THE—

Oldest and only Agricultural Newspaper in Oregon.

1 year, \$2.50. 6 months, \$1.25.

Sample Copy Free.

S. A. CLARKE, Manager,

PORTLAND, OREGON.

O. B. SMITH.

WM. H. STEARNS

STEARNS & SMITH,

COMMISSION MERCHANTS IN

DAIRY & FARM PRODUCE

AND DEALERS IN

Butter, Cheese, Eggs, Honey, Etc.

No. 423 FRONT ST.,

Near Washington,

SAN FRANCISCO.

We have made the sale of honey and Wax a specialty for fifteen years.

