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THE CALIFORNIA APICULTURIST.

VOL. I. No. 6.

JULY, 1882.

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IN ADVANCE.

Our Workers.

[For the APICULTURIST.]

FOUL BROOD: ITS CAUSE, EFFECT, PREVENTION AND CURE.

BY W. W. BLISS, LOS ANGELES, CAL.

I SHOULD not think that it would be necessary for me to describe this dreaded disease, for I should think that every bee-keeper on this coast would recognize it at once; but for those who do not know it when they see it, I will give a full description of it. Putrid foul brood is a disease which attacks the young brood of the hive, showing itself fully after the larvæ have been sealed up. It may be known by the viscous, gelatinous and yeast-like appearance of the decomposing brood, the unpleasant odor arising from the hive, and by the sunken covers of the cells, which are of a deeper color than the covers of the cells containing healthy larvæ, and are often seen with a small hole about the size of a pin in the center of each cap. Some bee-keepers claim that foul brood is nothing but chilled brood, or that it is generated by chilled brood; but I think that any one who has had any experience with genuine foul brood will agree with me, when I say that no case of putrid foul brood was ever caused by chilled brood. Take a piece of comb containing foul brood from a hive (fresh), and insert a small stick into a cell containing foul brood, and when it is withdrawn the putrid matter in the cell will be drawn out in a dark, stringy, offensive mass, which in chilled brood it will never do.

* "The cause of foul brood has been until recently involved in doubt; but late discoveries in Germany have thrown much light upon its origin. Mr. Lamprecht alleges that he has discovered the cause of the disease. His theory is this: 'The chyme, which the workers prepare from honey and pollen by partial digestion, and with which the larvæ are fed, contains a nitrogenous, plastic, formative substance, from which all the organs and tissues of the larvæ are derived and composed * * * and precisely because of this, its complicated composition, it is peculiarly susceptible of rapid decomposition when exposed to the air and moisture; that is, to undergo fermentation and putrefaction. It is hence obvious that pollen, even though having undergone only partial decomposition, must affect the bodies of bees and larvæ differently from what it does, or would do in its natural condition; and there is no longer a doubt that it is from pollen thus partially decomposed that the foul brood originates. That it can readily undergo decomposition is manifest. Moisture emanating in part from unsealed honey, and part from the perspiration of the bees, becomes condensed in the hive from external cold, and in the Fall and towards Spring it is frequently found hanging in drops on the combs, just as we find it condensed on the windows of our dwelling houses. If one of these drops falls into a cell containing pollen, decomposition of the latter commences, and is then communicated by the bees to the pollen in the other cells; and the cause of foul brood is hence abundantly present in a hive under this circumstance.'"

* This quotation is from "The Household and Farmers' Cyclopaedia," by Daniel R. Shafer, A. M., 1881. Page 316.

Mr. Lamprecht may be correct as to the origin of foul brood; if he is, then, to prevent the disease, we must have no leaky covers to our hives, and enough bees in each hive to keep their hives *dry* and warm.

The cure of the disease, to the careful bee-keeper, is not so difficult, but with those who are careless it is apt to spread faster than they can exterminate it, as it is very contagious. The disease does not effect the old bees, but the honey, comb, hive and frames, in fact every thing about the hive is infected: and just so sure as a bee from another hive gets a taste of the honey, or crawls over a comb from a hive thus infected, just so sure will the hive to which he belongs have the same disease. Whether it will ever be exterminated or not I cannot say, but I think that it never will be until there is a law to compel the careless bee-keepers to take proper care of their bees that are infected with this disease.

I have had several stocks that were infected, and I treated them as follows: Three on which the disease made its appearance early in the Summer I starved out the disease in this wise: At sundown I shook all the bees into a new hive, gave them three or four frames to cluster on, but no comb, and left them thus for 60 hours; then gave them frames of foundation. In twenty-four hours more I gave them two sheets of brood from another hive, and they have never shown any signs of the disease since, that was fifteen months ago. All of the others I discovered to be infected with the disease in the Fall and Winter, and they were treated to the sulphur pit. If you are very careful the old combs can be melted into wax, but it should be done in a

tight room where no bees can enter. The hives and frames can be purified by being boiled in hot water, not boiling water poured on them. The honey will do to feed bees if it is boiled and skimmed. All outdoor work with diseased stocks should be done in the evening at about sundown.

I think that most of the diseased stocks that I have had has been brought home by the bees from other apiaries. After the disease has reached a certain stage, the bees become disgusted with their home and leave, the other bees finding the hive ungarded step in and carry home the deadly stuff, and so it spreads from hive to hive, from apiary to apiary, until nearly every apiary is affected.

I consider the question of foul brood of more importance than "the coming honey package," for if our bees are all destroyed with this disease, where will we obtain the honey to fill this package? And it behooves us, one and all, to do our best to rid ourselves of this most dreaded disease.

[For the APICULTURIST.]

MY METHOD OF INTRODUCING QUEENS

BY J. D. ENAS, NAPA, CAL.

IN working among bees one should not hurry, but do everything deliberately. Once, in caging a queen, I thought I would see what effect a considerable number of bees would have, caged with the queen, as I am often asked the question, "Should any bees be caged with the queen?" My rule has been *invariably* to cage the queen alone. Upon opening the hive and removing the frames, I found I had smothered all the bees and the queen, as I placed the combs too close together. Since then I manage with one comb less than the usual number, and spread them, giving the bees a chance to pass over the surface of the cage, to feed the queen, if so inclined, for sting her they cannot.

ENAS' QUEEN CAGE.

To make the cage, get some strait-grained half-inch stuff, cut a piece two inches wide, and three inches long; nail that to a piece one-half inch larger each way. Get some strips of tin one-half inch

wide, and ten and one-quarter inches long, put them around the aforesaid block, so that the ends lap one-quarter of an inch. Solder the ends together as tightly on the block, as possible. Cut some wire cloth of about 12 or 18 meshes to the inch, tinned is the best (it should never be painted) two and one-half wide by three and one-half long. Cut one-quarter inch square out of each corner, bend the edge over all around, one-quarter inch, place it on the block so that the one-quarter inch laps over the edge of the tin and solder. When all soldered, slip the cage off of the block. Get four three-quarter inch brads, or nails (pins may answer) and fasten one in each corner inside, so that the points will project just three-eighths of an inch, and the cage is finished.

HOW TO USE THE CAGE.

Get a comb from the hive where the queen is to go, with all capped brood and just hatching bees. Best shake all bees back into the hive, or on a board in front; take the comb without bees into a room, before a window if possible, not in the sun, let the queen run from the shipping cage, on the comb. Place the introducing cage over her to confine her, move it carefully over a part where the young bees are gnawing through, so as to inclose some uncapped cells of honey, that she may feed herself in case the bees do not feed her. Press the cage close to the face of the brood, so that she may not escape nor the bees of the hive enter. The nails or points, at the corners, will hold the cage to the comb, and kill only such brood as the points enter. After seeing that you have not mashed the queen, and she is traveling about in the cage, take the comb, with the queen, to the hive. Spread the combs (after taking out an extra comb) and place the comb, with the queen, in the hive, taking care to leave space enough for the bees of the hive to pass between the surface of the cage and the adjoining comb. Regulate the combs and close the top of the hive and regulate the entrance to prevent robbing. In 48 hours open the hive and spread the combs carefully till you see the cage; lift the comb and examine. If the bees seem quiet, and natural, raise the edge of the

cage so as to release the queen, in case she has not been released by the bees, as is often the case. When she goes with the bees, and they feed her she is safe, if they ball her, release her, and cage another 24 hours, when you can release her with safety. Examine all combs and cut any queen cells which the bees may have started, then close the hive, after replacing the combs as before, at least one full week, when you can examine again if you wish. This is a safe way, and will do especially for young beginners.

There are more queens lost or injured in introducing than by any other cause. I have not opened hives for four days, sometimes, and then found the queen on the combs among the bees.

AN INSTANCE OF TWO QUEENS BEING IN A HIVE AT THE SAME TIME.

About two years ago I took several queens to the State Fair at Sacramento, and introduced them on my return. One very fine queen I had out of her hive fourteen days, and introduced her finally in a hive, temporarily, that had a laying queen. As I could not open the hive before four days, on account of other business, I expected to find her dead, or both the queens, of course. What was my astonishment to find the cage empty, and the new queen in one side of the hive with her circle of workers, and the old queen near the other side of the hive, quiet, as though she was the only queen in the hive. The bees had released the queen by gnawing under the edge of the cage. I raised some fine queens from the same queen since.

BREEDING QUIET BEES.

I aim to breed a race of bees of quiet dispositions. When I find a swarm disposed to be cross, I hunt up the queen, pinch her head, and then overhaul the drone combs, cut their heads off in the combs, return the combs, and the bees will clean out the cells; and then I go for the balance of these drones every day until not one is left.

The requisites for a good honey crop are a hive full of comb, spaces between combs full of Italian bees, abundance of flowers and favorable weather.

[For the APICULTURIST.]

LAS FLORES CAMP.

C. M. DRAKE, SANTA PAULA.

CHAPTER IV.**INCREASE.**

IT always delights the young apiarist to have lots of swarms, even though veteran bee-keepers may tell him that he must pay a good round price in honey for the swarms he is so proud of.

Though the boys really tried to prevent swarming, and succeeded in a great measure, yet they hoped the bees would swarm in spite of their efforts; and swarm they did in all sorts of ways, with queens and without, singly and two or three at a time, big swarms and little swarms, gentle and cross.

And the swarms from the hills and from the neighboring apiaries seemed to gather in towards Las Flores Camp, for no less than seventeen swarms came from other places and clustered near the apiary. The boys put up empty hives and boxes in trees, but though they read of bees going in such places, yet these bees didn't seem to fancy those boxes. But more or less swarms had always come to cluster at Las Flores, and seemed to appreciate the fruit trees, the good water, and perhaps the presence of other swarms. The boys succeeded in preventing most of the colonies from swarming more than once, by cutting out the surplus queen cells, and by taking away a portion of the brood from other colonies many of the hives cast no swarms. A very few colonies were divided so as to make one new colony from two old ones, by taking those sheets of brood that were about to hatch and putting them, with a ripe queen cell, into a hive placed by itself, adding a few bees from the stronger hive. Where the hives are close together, and have no particular distinguishing marks, it is probable that one queen out of every five gets lost by entering the wrong hive on her return from her wedding trip. Working bees, too, frequently mistake their hives, and an empty hive placed in the midst of an apiary will receive many a caller.

The boys also floured a number of bees belonging to a hive near

the center of the apiary, and discovered that they were going into neighboring hives in an hour or two. A loaded bee will often enter the first hive it comes to, and be well received for the wealth it brings and the outside row nearest to the chief honey pasturage will often produce twenty per cent. more than the back rows.

The boys also tried a great number of experiments, for no bee-keeper is really worthy of the name who simply accepts the conclusions of another, without test or trial. As the methods they used in making experiments may not be without interest to some of the younger bee-keepers, a few of them are narrated below, omitting the results in order that those who feel inclined to try similar experiments may have the stimulus of independent discovery. One experiment is never enough upon any point, and care must be taken when trying to find out the effect of a certain cause, to shut out the possibility of the result coming from other causes than the one under trial. The boys had no observatory hive, but they did as well as they could without, and as the conditions of heat, light, etc., are seldom normal in an observatory hive, perhaps the conclusions they reached were fully as trustworthy as any, though they often varied from the results laid down in bee books.

"The egg is the first thing to begin with," said Bob Masters, "and we wish to ascertain whether the sex is really in the egg at first or whether it is the result of a larger house, different food or other causes."

So the boys marked cells containing newly-laid eggs (worker and drone), and transferred worker eggs to drone cells and drone eggs to worker cells. They put drone eggs in queen cells, and the eggs in queen cells they moved to other cells. They also tried to transfer the food from drone to worker, and the reverse; to put the eggs just after they were laid into a little cage until they should hatch, and then to remove the cage so that the bees could feed the larvae; they even tried to feed the larvae, but it is hardly necessary to say that they failed here. They observed the time it took for the various kinds of eggs to hatch out; the time the bees continued in the larval stage,

and how they looked every day until they were hatched. The boys had pocket microscopes, consisting of three lenses folding into a rubber case, which is about as powerful a microscope as a boy can handle profitably without special instruction. The boys also tried to draw upon paper what they saw, and though their first attempts were poor, with practice they became more and more skillful, until they had quite a handsome series of drawings illustrating every stage of bee growth.

To the boys' surprise, they found the eggs of different queens, as well as eggs from the same queen at different periods of the year, varied in the hours they required to hatch. The eggs in the center of the brood nest hatched sooner than those at the outside, and exposure outside the hive during a cold night did not always kill the eggs and sealed brood, but arrested their development to a certain extent, during the time they were exposed. The just hatched larvæ were much tenderer.

The fertilization of queens received much attention from the boys, and though they never saw the queen in the act of mating, yet they saw her leave and enter the hive on her wedding trip. Uniting swarms was tried in various ways as the season for extracting drew near: for the boys reasoned rightly that one strong swarm was worth half a dozen weak ones to gather surplus honey.

"You see, Ben," said Bob to his brother, "it takes about so many bees to do the housework and raise the young ones properly; and if the whole hive has to tend to that, of course there is no surplus honey. Now, if we have another swarm to do outside work, they can give their whole time to laying up riches worth all the way from five cents to a bit a pound."

"Two bits, if it is nice comb honey," corrected Ben.

"We have long since settled it as a magnificent economical fact," said Bob, piling on the big words without due regard to their meaning, "as a fundamental principle of bee politics that it is cheaper to raise extracted honey at one-half the price of comb honey, all things considered."

"Opinions differ upon that point, my erudite brother," replied Ben,

"but we will discuss the honey question later. Now we wish to ascertain the best way of uniting weak swarms, in order that they may begin to store surplus honey, as their stronger neighbors are already doing."

So the boys consulted their bee books, and the back numbers of their journals, and tried each of the various plans they saw suggested there. Nor did they condemn a plan because it did not work well the first time they tried it, but rather laid the failure to some fault of their own, in not observing the directions carefully enough, or, as was more often the case, the printed directions omitted some necessary steps in the process.

Very few writers clearly state all the steps of their processes, because they suppose others know some elementary facts as well as they themselves do.

The boys kept a record of all their experiments and the date of each trial, as the time of the year makes considerable difference. "But what is the use of this kind of work?" some bee-keepers may ask; "for these facts are all told in the bee books, and we can get them there with one-tenth of the labor." But they will not be yours. Second hand knowledge is like other second hand goods—better than none, but worth far less than first hand. Such experiments possess a money value, too; for one who has the benefit of the training of such an experience can get more pounds of honey from his bees in a year, than by the common way of half guess, or rule of thumb.

Those who have a reasonable enthusiasm will succeed far better in any calling than one who is simply interested over the money side. A wholly sordid view of any work does not pay best; for after all, comfort is what we are working for, and he who takes present comfort, with a moderate degree of wisdom for the future, is wiser than he who works only for the future, which his past life prevents him from enjoying when it comes.

By the middle of May the boys found their apiary increased to one hundred and eighty colonies, of which one hundred and fifty were in excellent condition. The other thirty the boys doubled up to ten good strong colonies and six nuclei,

which were kept to unite with any colony which might become queenless during the honey season. Extractors and tanks, honey knives and boxes were put in readiness for the honey which now began to come in.

(To be continued.)

[From the American Bee Journal.]

THE NON-PROGRESSIVE BEE-KEEPER.

MRS. A. M. SANDERS.

I S'POSE all these progressive folks
With their patent hives and lotions,
Call me a stiff old foggy,
'Cause I don't adopt their notions;
I've kept bees nigh on forty years,
And yet these Yankee nobbies
Think they can teach me something new,
With their new-fangled hobbies.

They say they've got some kind of thing—
I guess they call extractor—
That slings the honey from the combs;
And, then, it is a fact, sir,
They'll drain the honey from the cells
Then let the bees refill it,
And almost every day or two
They'll go and rob and steal it.

I give my bees the first best chance
To make their own free living,
Then take whatever they have left,
And thank them for the giving;
And then they've got a patent stove
That, when they choose to make it,
Will pour a mess of stifling smoke
Into the bees—"plague take it."

I have been told they melt up wax,
And call it comb foundation;
And quilts, and clamps, and other sorts
Of fools' conglomerations.
They've got to swindle honest folks,
And get their hard-earned money,
With striped bees and hives that hold
Two hundred pounds of honey.

When you have lived as many years
As I, I think you'll see
That patent hives are not the things
That they're cracked up to be;
Those monstrous yields of honey
From one hive they receive—
Well, I want to see it 'fore
I say that I believe.

I stick to my old hemlock gums,
Without chaff or any fixtures;
And I don't have to feed my bees
With flour and glucose mixtures.
But I suppose the world will move
On in the same old way,
For swindlers they will advertise
And make their business pay.
Sheridan, Mich.

THE APICULTURIST is winning laurels wherever it makes its appearance, for its neatness and the intelligence of its correspondence. What we want now is more admiring subscribers, backed up with the almighty dollar.

[For the APICULTURIST]

WHAT ARE THE BEES DOING?

BY W. W. BLISS.

THE quickest way that I can answer the above question is by the accompanying table. On the 15th of last May I placed one of my average swarms on a pair of scales (the same swarm that I weighed last Summer), and have taken their weight each evening from that time until the 21st of June. By a glance at the table you will see how much honey I shall have this year—not enough to eat:

May.	lbs.	June.	lbs.
		1	78¼
		2	78
		*3	77½
15	76½	4	77
16	77	5	77
17	77½	6	76¾
18	78	7	76½
19	79	8	75½
20	79¼	9	75
21	80	10	74¾
22	81	11	74
23	80¼	12	74½
24	80¼	13	73
25	80	14	72
26	80	15	71½
27	79½	16	70½
28	78¾	17	70
29	78½	18	69
30	78½	19	68¾
31	78½	20	67½
		21	66½

* I found them queenless and gave them a laying queen at once.

Los Angeles, June 1, 1882.

GO LEARN APICULTURE, YOUNG MAN.—This year I expect to have a small army of students, and I am surprised that more young men do not serve their time at learning the business. If we had fewer mechanics and more bee-keepers, we should be much better off; and no mechanic can make as much on a small investment as can a trained and successful bee-keeper. We have millions of dollars worth of honey going to waste, and thousands of people injuring their health eating vile adulterated sweets; thousands of young men leading an idle, miserable, profligate life for the want of some legitimate employment. Now, if they could be induced to learn apiculture they would be a great benefit to the country as well as themselves; and to those whose inclinations lead them to steal, I would say that bee-keeping is the only way I know of that a man can steal his living honestly.—D. A. Jones in *Gleanings in Bee Culture*.

In Council.

[For the APICULTURIST.]

VENTURA COUNTY BEE-KEEPER'S ASSOCIATION.

A CALLED meeting of the Ventura County Bee-keepers' Association was held at Santa Paula, Saturday, June 10th.

In the absence of the president, Mr. Wilkin took the chair and stated the object of the meeting. He said the association had been called together for the purpose of devising means to rid the country of foul brood. As the present was not a very busy time for bee-keepers, owing to the failure of the honey crop, he thought it a good time to make a united effort to get rid of the disease, and prevent if possible, its spreading to the mountains. He thought if it once got into the trees and rocks it would be impossible to check it, and bee-keeping would become a very precarious business. He suggested that a

"FOUL BROOD INSPECTOR"

be appointed to examine all apiaries where the disease existed, or was suspected to exist, and assist the owner to obliterate the disease.

Mr. Corey thought it too big an undertaking for one man; he thought there could be found eight or ten men in the country with sufficient experience to assist in the work. And an inspector, if appointed, should be vested with power to appoint a sufficient number of deputies to assist in the work, that it may be more thoroughly and speedily accomplished.

Mr. Strathearn thought that all the apiaries in the country should be examined and certificates of health issued to those whose apiaries were found free from disease, and if anyone refused to have their bees examined, it would be an evidence that their bees were diseased, and that they were concealing the fact in order to sell out, but if no one would buy bees except from those who could show a certificate from an inspector appointed by the association, the practice of selling diseased bees would soon become obsolete, and all would be anxious to have their bees examined and the disease exterminated.

The convention coincided with Mr. Strathearn's views and voted to appoint an inspector, vested with power to appoint deputies and issue certificates to those whose bees are found free from disease.

R. Touchton was nominated for the position and elected by acclamation.

Mr. Corey moved that a tax of one cent per hive be levied on the members of the association and requesting that all other bee-keepers in the county contribute and forward to the secretary a similar amount, for the purpose of creating a "foul brood fund," to defray the expenses of the inspector and his deputies. Motion carried.

It was also thought advisable where but few diseased colonies were found to destroy them entire, and the loss thus sustained to be made up by the association in bees, the owner bearing his proportion of the loss. As to the extent of the disease Mr. Edmondson reported that he had had the disease in his apiary very bad, but thought he had got it reduced to less than a dozen cases, but was not certain, said he would be very glad to have them examined by an expert, and the diseased colonies destroyed.

Mr. Grimes said he thought he had got entirely rid of the disease, but nevertheless would be glad to have them examined, and if any cases were found he would destroy them; he expressed his willingness to assist in the work of eradicating foul brood, as did also Mr. Corey and others, who had had experience with the disease.

As there was no other business to transact, the convention adjourned to meet at Santa Paula, the first Saturday in August.

R. TOUCHTON, Sec.

[For the APICULTURIST.]

LOS ANGELES COUNTY ASSOCIATION.

APIARISTS VS. MIDDLE-MEN.

THIS Association met June 17, 1882, pursuant to adjournment, at the office of C. N. Wilson. President C. N. Wilson in the chair. The secretary being absent, G. M. Ried was appointed secretary *pro tem*. Minutes of last meeting read and approved. Gen. J. H. Shields was enrolled as a member of the society.

Report of special committee relative to the honey market was called for, whereupon the chairman of said committee submitted the following report:

WHEREAS, Through the manipulations of unprincipled honey dealers, the interest of apiculture has been seriously injured, and the products of the apiary reduced below living rates; and

WHEREAS, It has now become necessary to adopt decisive measures for self-protection, by combination and unity of action, in protecting our general interest; therefore,

Resolved, That we, the apiculturists of Los Angeles County, Cal., do hereby pledge ourselves to make no more shipments of honey to San Francisco, unless satisfactory prices are first fully guaranteed.

Resolved, That we will place our honey on the market in such shape as to reach the consumer as direct as possible, by putting it in small packages, neatly labeling the same just what it is, and thus avoiding middle-men.

Resolved, That we urge our brethren throughout the State to co-operate with us in carrying out the above resolutions.

Your committee would suggest that all apiarists adopt and endeavor to enforce the resolution adopted by the District Association, in 1879, that the tare of 14 lbs. on 120-lb. cases was just and equitable.

N. LEVERING, } Committee.
R. HALL, }

The report was received and the committee discharged.

Gen. J. H. Shields suggested that every producer brand his own honey and that the same be inspected by an inspector appointed by the association, for that purpose, and that the brand of the association be placed on each package by the inspector, as a guarantee to the consumer that the honey is just what it is represented to be by the producer. This suggestion was heartily concurred in by the members present.

N. Levering gave notice in writing that at the next regular meeting a proposition would be submitted to change that clause of the constitution relative to the time of meeting, from the third Saturday to the first Saturday of each month.

Meeting adjourned to meet at same place, third Saturday in July, at 1 o'clock, P. M. G. M. REID, Sec.

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Editorial.

THE APIARY FOR JULY.

IN Southern California the principal honey season closes this month with the sumac bloom, which like most of the other honey producing plants that have preceded it, will not yield much honey this season, judging from present indications and state of the atmosphere. It has been our observation for several years past in this country that when the first flowers of the season fail to secrete nectar those that follow usually fail too. The weather continues cool with occasional indications of rain—this state of things debar all hope for but little more honey than perhaps will be needed to carry the bees through the winter with. In alfalfa localities bees will doubtless store some surplus.

No honey should be taken from the brood chamber unless it is where they are honey bound (such cases will be rare this season), and then only enough to give the queen a sufficiency of room to rear brood sufficient to keep up the requisite number of bees.

GUARD AGAINST ROBBING.

In extracting great care should be taken not to induce robbing, otherwise the cheerful hum will be turned into a war cry, and the peaceful city of bees into a fearful battle field of death and carnage. If Italian bees, they will make things lively, as they are old veterans, and fight nobly, they act upon the principal that "to the victors belong the spoils" and all weak colonies will have to succumb to their power. If when extracting, bees show an inclination to go on the war path against the sweet homes of their neighbors, the utmost precaution should be taken to guard against it, no honey should be dropped about the hives; the combs when taken from the hives, should

be covered up until removed to the honey house or place of safety, and returned in the same careful manner, or in the evening after the bees have ceased to work. If honey boxes are removed the bees should be brushed off at once or then smoked. Should they not be easily removed in this way, place the boxes in a barrel and throw a cloth over the top, the bees will collect on the cloth when they may be shook off and the cloth replaced, until the bees are all removed.

TO PREVENT ROBBING.

When robbers attack a hive they may be driven away with water squirted upon them with a syringe or a squirt gun, this will cause them to think that the rainy season has set in and they will hunt their homes very quickly. Each colony should be examined and seen that they are in good working condition as the sumac comes in this month, bees should be prepared for it, as it is the last of the leading honey-secreting plants of the season that produces marketable honey. As soon as the sumac honey is gathered all surplus honey should then be removed and put up in a neat and attractive shape and labelled just what it is. It is then ready for the market and will command a fair price.

BEARS AND BEES.

THE apiary of W. S. Harper, near Pasadena in Los Angeles county, has for sometime back received frequent nocturnal visits from a grizzly, that seemed to have a "sweet tooth" in his head, and a "weakening" for apicultural pursuits. Mr. H., not desiring his assistance and wishing to inform him of the fact with the muzzle of his rifle, laid in wait for his bearship for several nights, but bruin scented danger and failed to put in an appearance. Mr. H., apprehending the cause, con-

cluded to abandon the watch and leave his card for the consideration of his shaggy visitor, which he did in the shape of a piece of fresh lamb, highly seasoned with "cold pizen." Bruin finding the way clear on the evening of the 9th ult. entered the apiary, and after inspecting several hives and regaling himself luxuriously on their contents, proceeded to take in the lamb as dessert, after which he felt somewhat indisposed and concluded to retire to his dormitory. He did not proceed far before he became spasmodic, from which he rallied and tried locomotion again. He was finally compelled to yield up the ghost, and he was found next morning by Mr. Harper. He was quite fat and was supposed to weigh about 400 pounds. He was not very large, but large enough to destroy about 30 colonies of bees. Mr. H. cut off one hind foot which he showed us as a trophy of victory.

Bears in the Sierra Madra range of mountains have been quite annoying to the apiaries in that range. Many devices have been resorted to for the purpose of protecting the apiaries against the attacks of these formidable denizens of the mountains, who, like honey dealers, propose to have honey on their own terms. Barbed wire has been stretched around the apiary, but bruin did not regard it any more than he would so many cotton threads. Mr. H. is of the opinion that fresh mutton, saturated with poison, is the most effectual way of destroying them. We are of the opinion that poisoned honey would be equally as good. A friend in the northern part of the State writes us that he has been much annoyed with bears in his apiary, but by building platforms in the trees and building out so that bruin could not climb above them. When the bees were upon these platforms they were entirely safe from the grasp of bruin's huge paws. We have recently heard of many bees being destroyed by

these pesky creatures, and we are pleased to learn that several have been killed. For our part, we have no desire to come in contact with one of the formidable creatures, and especially to fall into his embrace. We prefer a little tapering and snowy arm, incased in dry goods around our neck, to bruin's honey snatchers.

THE HONEY TRADE.

WE gather the following interesting items from the price current issued by the commission house of Stearns & Smith, San Francisco, May 27, 1882.

"Number of cases of honey received, San Francisco, during the years 1878, 1879, 1880 and 1881 were 84,220." These cases would average \$120, equal to \$10,106,400.

"Number of barrels and kegs for past two years were 1,156, for the year 1880 and 1881; 456½ kegs for 1880, 126 for 1881; total number of barrels 1,612; total kegs, 209. Now average the barrels at \$200 each, and kegs at \$100, and we have \$343,300.

"Receipts from January 1st, 1882, to date (May 27), 1,503 cases, 58½ barrels, 17 kegs." Which would equal \$192,060, making a grand total of \$10,641,860. It should be remembered that the four years named would not average a half crop. They further add as to exports, as follows:

Exports for the past four years by sea and land from San Francisco, and by rail from interior points have been

Cases.	By Sea from San Francisco.		By Rail from S. F. & interior.	
	Lbs.		Lbs.	
1878..	4,978	518,714	1,254,989	
1879..	13,675		214,216	
1880..	7,890	150,806	861,050	
1881..	8,849	62,700	378,370	

Of last year's shipments overland 233,170 lbs. were sent from San Francisco, and 106,000 lbs. from Los Angeles, and 39,200 lbs. from Sacramento.

Exports for 1882 to date, by sea, 1,024 cases from San Francisco; by rail, exclusive of May shipments, 52,020 lbs. from San Francisco, and

72,700 lbs. from the interior, 71,710 lbs. of the latter amount being from Los Angeles. The amount shipped outward by sea from Southern Coast points during the past year is an unknown quantity, but presumably small.

Editor's Portfolio.

GLUCOSE AGAIN.—GRANULATED HONEY.—After paying us a flattering compliment, the *A. B. Journal* has this to say, concerning Glucose and California honey:

"It has become a fixed maxim in the Eastern, Northern and Central States, that pure honey will granulate to a greater or less extent, and with this as a test, it is becoming an easy matter to dispose of pure extracted honey at all seasons; but California honey has become more difficult of sale, because of its usual liquid state, and the claim put forth that it does not granulate. Its most extensive sale in our Eastern markets has been to unprincipled parties, who have bought it solely with a view to mixing it with glucose syrup, and retailing as strained honey. With a pure article, put up in neat, popular packages, there will be no necessity for California apiarists to discount the prices of any other country in the world."

We have noticed that California honey will granulate as often as it does not. It depends a good deal in what shape the honey was when it was extracted; if fully ripe it is more apt to candy sooner. From a circular letter we received from H. K. & F. B. Thurber & Co., of New York, we are informed that "the bulk of extracted honey is used for manufacturing purposes." This includes, no doubt, the manufacturing of glucose as well as of canned goods. We intended to give the above named letter in these columns as some parts of it are of interest to our apiarists, but having been published already in the *A. B. J.*, *B. K. M.* and the *B. K. J.*, we deem it hardly advisable at this date to reproduce it.

Let California bee-keepers put their honey in small packages and not insist that it does not granulate, for it is not necessary to make this claim.

"MUSIC HATH CHARMS," ETC.—An Alabama paper chronicles the latest story regarding bees. It happened in the country, not far from a pretty village of that State on a bright, sunshiny day, while all the feathered warblers were merrily chirping in the fragrant tree tops in the front garden, and in the parlor the sweet young lady of the house was at the piano, playing a selection from "Satanella," the "Power of Love" most likely. The soul inspiring music was wafted out the windows and not only to the ears of her lover who was coming up the lane, but also to the ears of the bees, a swarm of which were coming across the sweet scented pasture. Such an attraction had the music on the bees that they entered the window and settled on the piano. Verily music hath charms to sooth the heart of the "savage" bee. We wonder if that young lady left the piano in double quick time when she saw those bees putting in an appearance. We know some young ladies who would if they did, and they would too if they saw a harmless, little mouse.

AFTER OUR HONEY.—On the 26th of June, as we were preparing this number for press, Mr. Joseph M. McCaul, of the honey department of the firm of H. K. & F. B. Thurber & Co., of New York, paid us a visit at our Oakland office. Mr. McC. comes recommended to us by our old friend Mr. A. J. King, of the *Magazine*, and as he is on a visit to this coast in the interests of the above firm, to buy honey, we hope our California bee-keepers will assist him in finding out where good honey may be had. No doubt the Thurbers will give the best prices for our honey, as they have done hertofore. We wish Mr. McCaul a pleasant and profitable sojourn in our fair land, and as he comes at a time when our orchards are groaning beneath the weight of lucious fruit, he can't help but be pleased with the productions of our smiling valleys and hillsides.

TABLE OF CONTENTS.—In the May number, Dr. Butler gave his reasons for having the contents or index on our first page, as is done in the *A. B. J.* and the *N. Y. Tribune*. We have nothing to

say against the publishers of these journals having their contents on the first page; but our opinion is that the table of contents of a journal like this would be entirely out of place on the first page. When we issue a 20 or a 24-page monthly we shall have the contents on the first page, as it will contain nothing but the title and index. The contents table was unavoidably crowded out of the April and May numbers, but this won't happen again, as we will set the first column of the editorial page apart for it, and there will be no chance of it being crowded out. This is the usual place for such things and we shall adhere to this rule until we can do better.

A GOOD HONEY PLANT.—We call special attention to the letter of Rev. J. C. Nevin. The plant referred to '*Scrophularie California*,' we first noticed in 1877, during that memorial season of drouth. Bees that season appeared to recognize it as the only honey producing plant; they swarmed around it from daylight until dark and stored honey while it remained in bloom, as they are now doing where the plant exists. In consequence of its invariable productiveness it is deserving of almost reverential respect from the apiarist.

GLUCOSE, ETC.—Prof. Kedzie, Professor of Chemistry in Michigan Agricultural College, has examined seventeen specimens of table syrups, and out of that number he found fifteen made of glucose. One contained 141 grains of sulphuric acid and 724 grains of lime to the gallon. Another, *which had caused serious sickness in a whole family*, contained 72 grains of sulphuric acid, 28 grains sulphate of copperas, and 363 grains of lime per gallon. The manufacturers of the above deadly dose should be compelled to take it.

NOT ABLE TO DRIVE THE QUILL.—This number of the *APICULTURIST* has been delayed in consequence of our affliction in the form of a felon on the second finger of our right hand, which incapacitated us for writing, until Dr. W. Lindly, one of Los Angeles best physicians (who has just returned from a protracted visit to the New York and Brooklyn hospitals), gave us a thrust with his

lance, which brought relief. This was the best lick that the Dr. ever gave us. He is a good fellow to cure a bad fellow.

ANOTHER WAY TO FUMIGATE EMPTY COMBS.—While in the apiary of Mrs. J. H. Ritchie, we observed her fumigating empty comb in unoccupied hives with a smoker. The brimstone, or sulphur, was dropped into the smoker on the fire, a small cotton rag was placed upon the top of it, the hive closely covered and the smoke blown in with the smoker at the entrance. After the hive was well filled with smoke the entrance was then closed. This is a method of her own and it works well.

A SHORT CROP IN VENTURA CO.—On the 26th of June John G. Corey, the veteran bee-keeper and Corresponding Secretary of the Ventura Bee-Keeper's Association, wrote us that "after consulting with many of our heaviest producers, I come to the conclusion that Ventura County will not produce twenty tons of surplus honey. We produced 400 tons in 1878." From this it will be seen how exceedingly short the crop will be in the county mention.

NEW STYLE OF GLOVES FOR APIARISTS.—We are in receipt of a pair of bee-keeper's gloves, made by Mrs. M. F. White. They are made of oil-dressed buckskin, with rubber cloth in the gauntles, so as to draw close to the arm. They are a decided improvement on the rubber glove, are more pleasant to work in and much more durable. They are substantially made. Every bee-keeper who uses gloves should have a pair.

COOL WEATHER EVERYWHERE.—Our exchanges from various parts of the world, report cool weather, a late season and not a very flattering prospect for a good honey yield. Here in Southern California, the prospects are in keeping with those elsewhere—the weather cool and cloudy—with occasional sprinkling of rain and cool winds; a quarter crop will not be reached this season.

WE HOPE to be able after awhile to furnish cuts of most of the leading honey plants of California.

In the Field.

A NEW FEATURE.

THE plant which you left for determination is Botanically known as *Scrophularia Californica*, and belongs to the genus commonly called Figwort. The scientific name (*scrophularia*) was founded on the fact that these plants were formerly reputed remedies for *scrofula*. Only one species of the genus is known on the Atlantic Coast (*S. Nodosa*) and but one found on the Pacific Coast, as given above. So far as I know, no medicinal value is now attached to the Figwort. It is therefore interesting to know that it proves to be a valuable honey plant, and you will do well to call attention to it in your journal, as the economic uses of plants are alike interesting to practical life and scientific research. It would be well to note whether the bees work on this plant at the same time with other plants, or whether they give it a preference, or only resort to it when other sources fail. I shall be glad at any time to assist you in the classification of honey plants, and to receive your personal notes and observations in regard thereto.

J. C. NEVIN.

Los Angeles, June 19, 1882.

THE CLASSIFICATION OF HONEY PLANTS OF SOUTHERN CALIFORNIA is a matter of great importance to the apiculturist. We have long desired to see it done, but not being a thorough botanist ourselves, we did not feel competent for the task. Now that Prof. Nevin has kindly consented to assist us in the work, we hope to undertake it soon. Prof. Nevin is a thorough botanist, and has a large class in that study. He devoted several years to the science in China; has a collection of over 600 plants, obtained in that country, besides many obtained here. We are happy to congratulate our readers for having obtained the services of so competent a botanist. Those who may notice any new honey plant that is not familiarly known to the fraternity, can have its history correctly given by forwarding a specimen to us or to Rev. J. C. Nevin, Los Angeles, Cal.

Our Extractor.

MARKETING HONEY.

IT is almost discouraging enough to make us want to quit the bee business altogether to see the way that some of our beemen will persist in taking their honey to the market. After all that has been written, talked and urged over and over again, till the theme is threadbare from constant wear, do we see bee-keepers lugging their honey to market in most shameful, lazy—yes, and dirty—shape.

Right among us do we see men who take the bee journals, attend the conventions, and talk like intelligent, well posted beemen, taking their honey to market in the most negligent condition. One instance that I know of where the case was taken from the hive, just as the bees had been at work at it and taken to town without looking at it, and there it stands today on sale, with combs all the way from a strip an inch wide to full combs capped over; frames stuck together, honey leaking down on the floor, covered with dust and filth, an annoyance to the grocer and the buyer. It is such honey raisers as these that injure honey markets. Early in the fall these men begin to see that they are going to have quite a little dab of comb honey; then comes the rush of what are we going to do with it; can we ever sell so much? They take it to town and get what they can for it. This case I have noted was selling to the grocers at 12½ cents, they retailing at 15 cents, when we at the same time were selling every ounce of ours at 25 cents and our extracted at 20 cents. When spoken to for selling at so low a price, he said, "Why, it's all I can get." He was told to keep his honey till later and he would get a better price, and now that same honey in the dirty case is selling for 25 cents. Some of them seem to be afraid of keeping a crop of honey for awhile and are in so great haste to get rid of it as to rush off to market with it without any attempt to put it in nice, clean shape. Now, what can we do with these fellows? As for ourselves, we do not need to put up fancy show cases for display, to glass each section, or any other extra fixing, for we can sell every pound of comb or extracted honey we can get from

the house, without putting an ounce on the market. There is no use for us small producers to ship to a distant market our few hundreds or thousands of pounds of honey, for if we try only just a little we can sell all of it during a few weeks of the fall and winter and at much better prices than the commission merchants can return. I know of honey being taken to Chicago, sold at 18 cents, from which all expenses of freight and car fare had to be taken, when at the same time the honey could have all been sold for cash at 20 cents in a neighboring city. There is not effort enough made to build up our home markets with nice clean honey. If such men as I have been talking about did not take the journals, we might hope for a remedy; but they do take the journals, seem to be enthusiastic bee-keepers, and use good sections and honey boards. I wish we could give them such a rap over the knuckles as to wake them up to their duty.—Will. M. Kellogg in *Bee-keepers' Magazine*.

Books and Periodicals.

NEWMAN ON BEES AND HONEY—Editor Newman of the *American Bee Journal* has enlarged and improved his work, entitled "Bee Culture," so that it is now up with the times, and contains several new chapters, and has given the work a new title, to-wit: "Bees and Honey." For the money it is the best treatise on bees extant, and every apiarist should procure a copy.

A "BIG-LITTLE" GLEANINGS.—"How I wonder what you are"—no, not up in the sky, but just down here on this mundane planet of ours' Mr. Root, with that "Juvenile" of yours twinkling as brightly as if it was a visitor from some unknown land. And how it grows! Seems to us that if the senior *Gleanings* don't look out it will get some pretty hard knocks from the already big child. We thought our journal would be the youngest bee-paper in the United States for some time to come; but why the eleventh bee-journal is out, as we noticed in our May No., and now it comes toddling into our sanctum with a pretty steady gait and is just twice as large as when we first saw it.

Our Advertisers.

SEE the card of Burch & Boal. This is a new firm and new goods throughout. Mr. Burch is well known to our Ventura bee-keepers, where he has formerly resided and handled much of the honey crop of that county. They will handle honey here, and first-class family groceries. Give them a call.

BEE-KEEPERS who want a first-class glove with which to handle bees, or for any other purpose, will do well to give Mrs. M. F. White a call. She has no superior as a glove maker. Read her advertisement in this number.

J. D. KAUFFMAN, of Silverton, Oregon, but temporarily residing at Santa Clara, in this State, writes us that he is gathering up some subscribers for the APICULTURIST in Santa Clara county. Many thanks, brother K.; that's just what every bee-keeper should do who desires a live bee journal sustained in their midst. Who will be next to send in a list of subscribers?

BEE-KEEPERS in California owe it to themselves to sustain the APICULTURIST in its efforts to elevate the standard of their honey.—*American Bee Journal*.

THE Ventura apiarists are moving in the right direction for the health and prosperity of their apiaries. Let other counties imitate their example.

REMEMBER that all communications intended for publication should be addressed to the editor at Los Angeles, those on business to Oakland.

LIVE AGENTS are wanted every where for the APICULTURIST. Write to APICULTURAL PUBLISHING COMPANY for terms.

CORRESPONDENTS should give their names in full and written plainly.

What Our Readers Say of Us.

CONTAINS SOME SOLID FACTS.—The well known and successful firm of bee-keepers, L. C. Root & Bro., of Mohawk, N. Y., writing to us, April 18th, says: "We have just received the April number of your paper and are much pleased with its general tone. It is little wonder to us that California, with all her advantages for successful bee culture, should come forth with a live and stirring bee journal. The article on page 23, by Mr. Gallup, contains some solid facts, and is worth the price of the paper for a whole year, to any person who is not yet fully awake to the truths therein presented. We enclose \$1.00 for a year's subscription. Also an advertisement.

Wishing you abundant success,

We remain, yours truly,

L. C. Root & Bro.

[Mr. L. C. R. is one of America's best posted apiarists, is the son-in-law of the late lamented Moses Quinby, is the author of "Quinby's New Bee-keeping," and is the apicultural editor of that staunch journal, the *American Agriculturist*.—ED.]

SHOULD SUSTAIN A HOME PAPER.

—Ira A. King, of San Diego County, in sending us his subscription makes these sensible remarks: "The sample copy was duly received. For a beginner the APICULTURIST makes a very creditable appearance. There are, it is estimated, some three hundred bee-keepers in this county, but judging from those of my acquaintance, I am afraid you can not expect much support from them. There are a few that take no bee paper at all, notwithstanding there are so many good ones published, and a man who does not take even one eastern bee journal is not likely to support even a home production.

Bee-keeping in the East and in California differs in so many respects that the bee-keepers here need and should sustain a paper devoted to the interest on this coast. I will do what I can to help you."

IN FOREIGN LANDS.—A subscriber who keeps bees near Honolulu, Sandwich Islands, writes us under date, May 8th, as follows:

"The steamer has just arrived from Australia, and I will go out and see

what I can do for you. I have received the APICULTURIST regularly every month, also extra copies which I have distributed to men who have a fancy for the industrious honey bee. They all express a desire to subscribe for your paper. For a paper only three months old we think it makes a very creditable showing." With the above our correspondent enclosed a remittance for six yearly subscribers.

MR. BRAY, of New Almaden, says our journal "has the genuine ring."

Honey Market Reports.

Office of the CALIFORNIA APICULTURIST, }
Oakland, June 29, 1882. }

Our latest quotations received up to the hour for going to press, are as follows:

SAN FRANCISCO.

HONEY—Comb, 13 @ 15c; light to extra white, 13 @ 17c; extracted, dark, 5 @ 6c; light to amber white, 8 @ 9c. $\frac{1}{2}$ lb. This season's crop is still scarce, there being but little arriving.

BEEWAX—No change in price has taken place for some time past. The quotable range is 23 @ 25c. $\frac{1}{2}$ lb.

CHICAGO.

HONEY—Extracted, dark, 7c; light, 9c $\frac{1}{2}$ lb. But very few calls for comb honey.

BEEWAX—A. H. Newman quotes choice lots at 25c; bright yellow, 24c; dark to good, 17 @ 22c.

Before Going to Press.

BEE-KEEPING IN CALIFORNIA.—

The newspapers and magazines of the country are giving an unusual amount of attention to the bee and honey industry of this State. In our June number we mentioned that the *Century* magazine contained a highly interesting article on the "Bee Pastures of California." We are pleased to announce that the author of this article has continued it, and in the July number of the same magazine we find part second, which is written with the same degree of excellence. The engravings are, it is needless to say, the best that have ever illustrated the "sweet subject." To those who can not conveniently obtain these two numbers, we will mail them to any address on receipt of 75 cents.

BEE FARMING.—We shall devote part of the August number to a descriptive article on California bee-keeping; the bee region, what it

takes to start a bee ranch, and, in short, everything pertaining to the luscious subject. This number will be sent only to subscribers and to others only on receipt of ten cents.

TO ADVERTISERS.—We would call especial attention to Eastern manufacturers and dealers in apiarian supplies to the columns of this journal, as an advertising medium. Our circulation is rapidly increasing in the States east of the Rocky Mountains, and our readers are as intelligent a class of people as can be found anywhere. We think we can justly claim that ours is the only journal of its kind in the world that is read from beginning to end. So if you wish to further your own interests advertise in the APICULTURIST.

THE CUTS that were to be used to illustrate this number failed to arrive on time, so we are compelled to do without them.

GRADING COMB HONEY.—The Thurber Bros., of New York, have the following to say on this subject:

Comb honey must be graded all throughout the crate of uniform color, and the sections well filled. Showing the best only on the outside, and filling the interior with a lower grade, works disastrously to the shipper and is not even policy. The more attractive in appearance the honey is, the quicker the sale, and the better the price. Honest grading tells very quickly, purchasers usually leaving orders for the whole of the next consignment of the brand which has pleased them in this respect. Thus it will be seen that while the market may be filled with a fair quality, these special brands find ready sale on arrival, whilst others drag, causing returns to come in slowly.

SIR JOHN LUBBOCK, who has made a special study on bees, says they can distinguish colors, and that they have a decided preference for blue. He reached this conclusion by placing honey on pieces of paper of different colors and deposited the papers on a lawn where the bees came for food.

SUBSCRIBE for the APICULTURIST.

Publishers' Notices.

BEE-KEEPERS, write for your paper.

BEE-KEEPERS, subscribe for your paper.

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

IF OUR readers, in answering advertisements, will mention that they saw them in the APICULTURIST, they will oblige both advertisers and us.

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.

HEADQUARTERS

FOR

Pure Italian Queens, Colonies and Nuclei

EXTRACTORS,

Bellows, Smokers, Knives, Foundation, Veils, Gloves, Bee Books, etc.

Sample Hive.

Being only 2½ hours 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.

For particulars and price list, address

J. D. ENAS, SUNNYSIDE,
Napa P. O., 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.

GLOVES.

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,
LOS ANGELES, CAL.

Bees for Sale.

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

E. E. SHATTUCK,
LOS ANGELES, CAL.

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.

BREEDERS'



DIRECTORY.

Cards of two lines inserted in this department 20 cents each insertion; each additional line 8 cents; or two lines for a year, \$1.50.

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

W. A. PRYAL,
Attorney and Counsellor at Law,
456 EIGHTH STREET,
Room 15. OAKLAND, CAL.
mar-tf.

S. W. LUITWIELER,
AGENT FOR
THE CELEBRATED
Studebaker Farm and Freight Wagons,

Also, the

Cortland Platform Spring Wagons,
BUGGIES and PHAETONS.
Cor. Los Angeles & Requend Streets,
LOS ANGELES, CAL.

Excelsior, Muth & Root Honey Extractors,
Bingham and L. C. Root Smokers,
Bingham and Muth Honey Knives,
SWISS WAX EXTRACTOR.

All at a slight advance on Eastern prices. Order at once as all orders are filled in rotation. State whose make preferred and whether two or four frames. Give outside dimensions of frame. MONEY MUST ACCOMPANY ORDERS.

Address, J. D. ENAS,
may-tf. Napa City, Cal.

COLLINS & TILDEN,
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