

ularly every three days, taking out the combs one by one and thoroughly sprinkling them with the liquid. In two or three weeks I could perceive a marked improvement, and in three months the disease had almost entirely disappeared, except in three or four mild cases, purposely left to see if they would get well without treatment. As they did not they were then taken in hand and cured.

Nearly a year has passed, and from frequent and very recent advices direct from the apiary, I learn that it *has not* reappeared, but that the bees are in fine condition, and give promise of great results when the season for surplus again arrives. In the experiments made with phenol, before the one I have recited, the solution was entirely *too strong*, as it turned the combs red; it was used too sparingly, and lastly it was not half sweet enough, nor warm enough, and the bees would hardly eat it at all.

Foul brood is not "indigenous" in Cuba, there not being a case on record in all the native apiaries; then how could it occur in this particular apiary? From several circumstances I am led to believe that it came through queens imported from infected districts in some of the British North American provinces. I have made many experiments, and have satisfied myself that the bacilli producing the disease belong mainly to the queen's ovaries. I would like to point out cases where re-queening is necessary in treating the disease, and make several suggestions, but as my essay is now longer than intended, I will close by recommending all interested to follow Mr. Cheshire's formula literally and accurately, and they will not regret it.

A. J. KING.

New York.

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RENDERING OF COMBS INTO WAX.

THE rendering of comb into beeswax can be effected by artificial heat, or by the sun's rays. The heating on stoves or by steam is the most usual way, but many inexperienced persons spoil their wax either by melting it without water, or by overboiling, or by using dirty iron kettles. When comb is melted over a stove, it is not absolutely necessary to have an apparatus expressly made for the purpose. Any ordinary boiler will answer. A great

deal of water should be used, and a moderate heat applied. When the wax is thoroughly melted, it can be dipped off the top, by using a piece of wire-cloth shaped like a dipper, hung in the kettle to prevent the coarsest impurities from being dipped out. We have never seen any old combs, no matter how old, that did not make nice yellow wax when treated in this manner, or by the use of a wax-extractor. As a matter of course a good wax-extractor, if properly used, will give cleaner wax at the first melting.

If steam is used to melt comb, it should not be turned directly on the comb, but into the water below it, the steam often damaging the wax, and making it grainy and green looking. This same unpleasant result is sometimes attained by over-boiling.

If some wax remains in the dregs, it is not advisable to throw away these residues. We have never yet seen any process that separated them so completely that they could be called worthless. Wax-bleachers usually press the wax out of them in a small press while hot. But a cheaper way, on a small scale, is to preserve them, or rather the best of them in a box, exposed to the weather, until more comb has to be melted, when they can be melted again with it. The exposure to the weather dissolves the foreign substances, but not the wax, which, to all appearances, is indestructible.

Cappings of honey are melted in the same manner as old combs. It is well, however, to work them, first, in warm water to separate the honey that is left. This sweetened water can be used to advantage in cider or wine making, and for vinegar. Honey-vinegar is the very best that is made.

We have many times heard it said that it did not pay to melt old combs, but this is a mistake. It is not advisable to melt them with nice new comb, but any apiarist who will try rational methods, can find a profit in melting the very oldest and dirtiest combs that can be found.

The heat of the sun, in rendering comb, makes the finest beeswax, as it not only melts it, but partly bleaches it, and we have to thank our Italian brothers for the first idea of this, as well as for the invention of the extractor. Thus far, however, little use has been made of this discovery, but the time is not far distant when the solar extractors will be as plentifully found as steam or stove extractors. This method will have the advantage of giving clean wax at the first melting, without any danger of spoiling it.

C. P. DADANT.

Hamilton, Ill.

C. W. Bates, West Sumner, Maine.—"I like the JOURNAL."