

It is clear that all eggs laid in the 21 days next preceding July 15 will raise bees that can not touch that harvest; and as workers do not take to the field till 16 days old, we can add that 16 to the 21, making 37, so there's no use in having the queen lay after June 18, which is 37 days before July 15. But, is it true that bees do not become field workers till 16 days old? Although that may be what ordinarily happens, is it not governed by the needs of the case? I have seen bees five days old carrying in pollen, and I suspect that those same bees might have been kept from field work till they were much more than 16 days old. Even if they do not go to the fields for 16 days, they can do housework during that time and allow just that many other bees to go, that but for them would be obliged to stay at home. But, theoretically, there ought to be a gain on that harvest, to stop the queen laying to her full capacity 21 days before the cessation of the flow; for during that 21 days none of the eggs will hatch into bees, and it costs honey to feed the brood and bees to nurse it, which bees might otherwise be at work in the field. You see that the argument that bees may work in the field before 16 days old works in favor of contraction at this point.

But then comes the question: "If the queen is limited at this time, will it not work against the future prosperity of the colony?" When I have practiced caging queens, time and again my assistant has insisted that this colony and that colony had swarmed, when I knew that it was nothing but the rapid depletion taking place without any young bees to replace the older ones that had worked themselves to death. Will not such colonies continue to be weaker?—weaker for winter? weaker for the next spring?

But for all that I have said, contraction may be right and I don't think theory would have made me give it up. I had the theory all straight and expected good results from it; but somehow the bees were so stupid they didn't seem to see the advantages I was offering them. Facts are stubborn things, and I don't understand now why my theories haven't worked better. I don't understand why, last year, I didn't get as much from two colonies united at the beginning of the harvest as I had reasons to expect from the same two colonies if they had been kept separate.

I know that, in all my attempts at contraction however varied, I have not done as well as when I allowed each colony to have ten frames all the year round. I may as well say here, by way of parenthesis, that I don't believe I want larger than eight-frame hives, but I can't take time

just now to explain. The difference in seasons is so great that it may account for all, but I doubt it.

Then there are those two miserable Frenchmen down at Hamilton, allowing their queens to lay all over creation, and yet getting big crops. True, they work for extracted honey, but they have it stored in supers and don't disturb the brood-nest. I read also of the big crops harvested in France, in the Layens hive with its 20 or more frames, and nothing like the labor given to the contraction system.

To sum it up, contraction makes more work and I can't feel sure that it makes more honey. I am an expansionist, and it's only fair to say that all true contractionists are; but when it comes to contracting down to any less space than I feel, to say the least, that I am in doubtful company.

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A Handy Wax-Extractor.

THROUGH the death, on New Year's morning, of my father who was a bee-keeper for the last twenty years, I have come in possession of the last two volumes of B.B.J., his hives and bees, and, as I have not seen any mention of a cheap and efficient wax-extractor, I send you particulars of one I made in the fall of 1890, which, in my opinion, and also experience, is very handy wherever there happens to be a boiler in the house. It is after the principle of Professor Gerster's, and consists of (1) a perforated zinc basket, (2) a shallow milk-dish, and (3) a stand made out of a ring of hoop-iron, with three legs attached to it (or three bricks will do as well).

After sitting the stand inside the boiler, I run water in till it is on a level with the top of the stand, then place the milk dish (with a little water in it) on the stand, and, having filled the basket with the combs broken in small pieces, insert it inside the dish, cover up with the lid, get the water to boil, and let the steam do its work, refilling the basket from time to time as required. Wire handles may be affixed to the comb-basket to lift by.

The wax comes down nice and pure, and of a pretty color, while the dross can be flung aside, and the basket refilled. It acts all the quicker when the combs are not pressed or squeezed too solid, the steam getting the more readily to the centre of the mass.

I have not given any measurements, as these will depend on the size of the boiler to be used. Should you approve of this method of ex-