

In describing my method of rearing queens in upper stories, I shall omit describing the building of queen cells in upper stories above fuil colonies. To do so minutely, with all the paraphernalia required to conduct this particular work, would require too long an article. I will therefore confine myself to the hatching and fertilizing of queens in the upper story. I use four apartments, or nuclei over each full colony. I take a half-depth brood chamber-such as are often used for extracting supers and divide it into four apartments-for my hive of twelve frames-for a nine or ten frame Langstroth hive, two or three apartments are all that can well be made, in order that each apartment may admit of three combs, unless the combs for this purpose be short and used crosswise. In that case, four or five apartments could be made but I would advise but four, in order to have the entrance open at four different points of the compass. On the botthese of apartments Ι tack tom wire screening and in some cases I have used perforated zinc excluders for bottoms. but so far, I prefer the wire cloth with 1 in. mesh. One of these is now placed over a colony and a comb containing brood in all stages of development with adhering bees isgiven each apartment together with a comb containing honey and pollen. In forming these nuclei, it is important that given bees sufficient young be each apartment to care for the brood them. bees given Less are required however for this method, than where the nuclei are set on the ground or on blocks; owing to the fact that the colony below helps to keep the nuclei warm. After these nuclei have been formed forty eight hours, a matured queen cell may be given them, and in due time the queens will hatch, become fertilized and commence to lay. The greatest difficulty I have had with this method, has been in the loss of queens when they take their first flight. The percentage has been much greater with this method than with the old way of setting the single nuclei boxes inby places here and there.

I have succeeded in raising queens in these upper stories by using zinc excluders between the upper and lower stories as

mentioned above. But about twenty-five per cent of the young queens would either be killed as soon as they are hatched-and as I suppose by going below—or, the old queen herself would be killed, or in some cases a swarm would issue. I have cases a swarm would issue. noticed a great difference in the disposition of bees in working this method, some colonies over which I have raised queens seemed to be indifferent to what was going on above them, and I have over such clever colonies raised two or three sets of queens while other colonies seemed to be determined not to allow young queens above them, while a laying queen was below. (I am speaking now of where the zinc excluders were used.) If I could succeed with the zinc as well as with the wirecloth (which cuts off all communication between the two) I would prefer the zinc because it is less work and care. Since with this method, the bees from the same colony go up through the zinc excluders and care for the brood given above and also care for the young queens. Saving the apiarist the care and work of looking after the honey supply above.

There is another method which I am in hopes will prove more satisfactory than that where a single zinc is used, and that is to place an extracting super between the brood chamber and the queen rearing apartment, with a sheet of perforated zinc under and over the extracting super. In this way the young queens are so far removed from the old one, that I hope there may be less danger of quarreling or swarming. I tried this double method with but one colony late last season. It worked well then, but once trying does not always prove a thing either good or bad, when experimenting with bees. I shall give this double plan. a more thorough trial this coming season.

I have no difficulty in hatching queens over full colonies that have a laying queen by using a zinc between the lower and upper stories. My queen cells however are all built under the swarming impulse, and when matured are cut off the combs and each cell is hung in a small cage: which I call a nursery cage. Sixteen of these small cages just fill one of my half depth-uppercalled a nursery frame. story frames, These nursery frames when full or partially filled with cages containing cells, are hung in an upper story-usually an extracting super-by removing an extracting comb and placing the nursery in its place. sometimes have four or fiveof these nursery frames in one super. Here, the queens will hatch as well as though they had been left in their own hive, each queen being by herself in one of these removable cages.