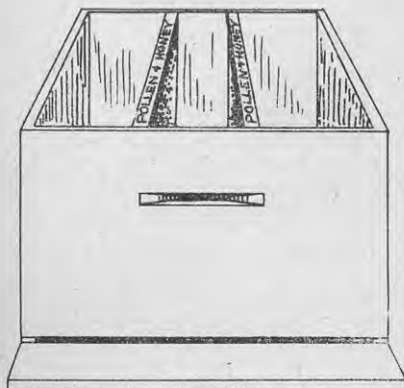


# Seasonal Work for Beekeepers

## Raising Queen Cells

**B**EFORE swarming, the bees usually build queen cells along the bottom edge of the brood-combs or where there is some irregularity of the comb surface. Eggs laid by the queen in cell cups prepared by the bees hatch in approximately 72 to 76 hours, depending upon the temperature maintained in the hive. When hatched,



Cell-starting colony. First position of pollen combs.

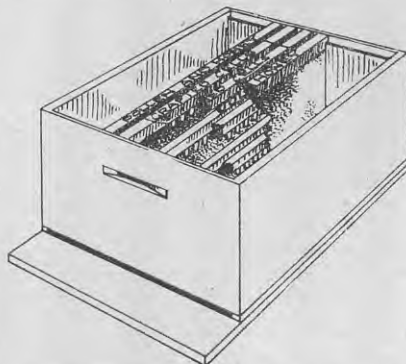
the larvae are fed by nurse bees with a concentrated food called "royal jelly" for the next five and a half days. The queen larvae actually float in a bed of food, and in both natural and artificial queen production the best queens are produced when there is an extra strong force of nurse bees able to prepare this special food in abundance.

At the end of the feeding period the bees seal over the cells, and each young larva, after consuming a further quantity of food, spins a silken cocoon, lining the cell, and then takes a complete rest for about 24 hours, when the outside skin is shed. The body parts and some of the appendages, although not fully developed, are now visible, and the pupa, which is white at this stage, gradually changes colour and develops into an adult virgin queen ready to hatch on the sixteenth day. During this briefly-described stage of development it is very important that the queen cells should not be handled or bumped in any way. They may, however, be handled with safety on the fifteenth day, provided the cells are kept warm in a natural hanging position and not jarred unduly.

### Methods Used

As indicated in last month's notes, queen cells taken from colonies preparing to swarm may be used to advantage, but this practice is not recommended, because the tendency to swarm excessively may be carried on to the next generation. It is therefore desirable for the beekeeper to raise cells for requeening purposes from selected stocks in the apiary. There are many successful methods used, and the following method, known as the Pritchard forced cell starting colony, and described by Jay Smith, is quite good.

"All combs, including the bees, brood and queen of a medium colony (not a strong one) are removed from the hive. Two combs of pollen and honey are selected and placed back in



Cell-starting colony. Position of grafted cells and pollen combs.

the hive. Two frames for holding cell bars (without the cell bars) are placed in the centre of the hive and the pollen and honey combs moved over next to them. A division-board feeder containing thick syrup is then placed on either side, and the remaining space filled with empty combs or division boards.

"The two cell bar frames are now removed, and all other combs of brood and honey are shaken free of bees into the space vacated, taking care not to get the queen which should be caged.

"The brood and the caged queen of the original hive are now put in the upper storey of a strong colony over a queen-excluder for safe keeping. In from half an hour to one hour's time, or as soon as the bees in the made-up colony set up a roar of distress when they have discovered their loss of

queen and brood, the two cell-bar frames are supplied with prepared cells, and are placed in the open space in the centre of the hive.

"The queenless and broodless bees are in excellent condition to carry on with feeding, and will immediately accept and supply the prepared cells with the right food. The two feeders containing thick syrup and the two combs containing pollen and honey will give the bees all that is necessary for making more food to place in the queen cells.

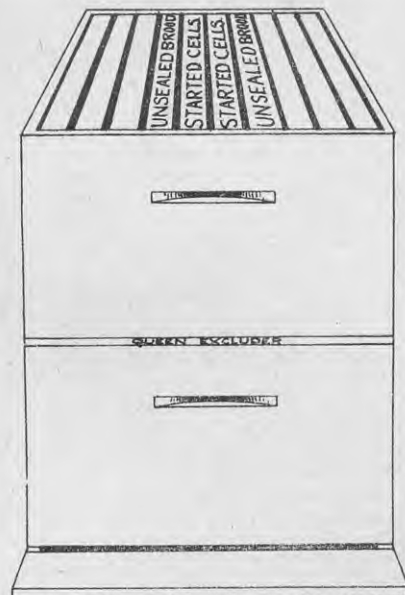
"The prepared cells will usually be accepted and lavishly supplied with food in about 24 hours. When nicely started, they should be removed and placed in cell-finishing colonies, and the brood and the queen should then be restored to the colony.

"While this method of starting prepared queen cells saves extra equipment, and may be practised at any time when conditions are right without confining the bees, fundamentally the principle is the same as the swarm box method."

The secret to successful acceptance of cells is proper feeding, and also that an ample supply of fresh pollen is available to the bees, not only when the graft is given, but for at least three days beforehand.

### Grafting

Colonies selected for grafting should also be fed for two or three days be-



Finishing colony. Position of unsealed brood and started cells.