

place into the cold water. Repeat this process about three or four times until a cup is formed as shown at D (2). Aim to get the most of the wax at the base. After the final dip into cold water the cup is firmly gripped between the fingers and given a twist, when it will come off easily from the wooden stick. A number of these cell cups can be made at one time and stored in a covered jar or tin. In an hour 180 cups can be made up in this way. Some beekeepers may prefer to make a bar of cell-forming sticks, but this requires a special dish to hold the wax, and is justified only when thousands of cups are required. Just prior to commencing grafting the cell cups can be placed in the wooden cups or fixed directly on to bars as shown in sketch E.

Breeding Queen

The breeding queen for this season should be chosen from the colony that shows the maximum qualification, as set out in the beginning of this article. Four days prior to commencing a graft of cells a good clean-drawn-out comb should be placed in the centre of the brood nest of the selected colony, and the bees liberally fed with a thin sugar syrup. This is to secure larvae of

the correct age and to ensure that they have been liberally fed.

Cell-Starting Colony

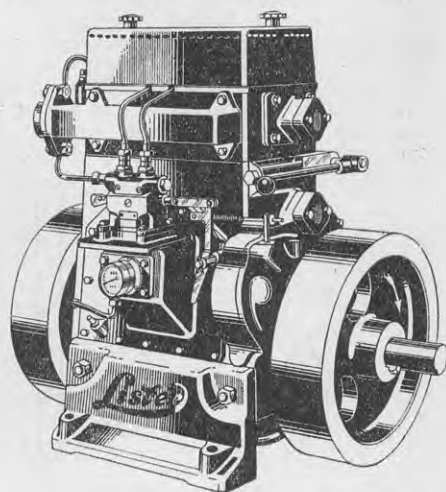
This should be a colony of medium strength, with abundance of young bees, and fed liberally at the same time as the breeding colony. In four days' time the eggs that have been laid in the empty comb by the breeding queen will have hatched out into larvae of the correct age for grafting. Now locate the queen in this cell-starting colony and take her away with all combs containing brood. Some of the bees adhering to the combs may be shaken off so as not to deplete the strength of the colony too much, but be sure the queen is removed with all the brood. The queen and brood can be placed over another colony, with a wire screen between; a small entrance being provided at the side or rear. Now readjust the combs in the cell-building colony so that it is in a single storey with frames of honey and plenty of pollen. Leave space in the centre for the frame containing the bars of grafted cells to be placed at a later stage in the day. This colony will soon get into a great state of excitement with the loss of its queen and all brood.

Grafting

In about an hour's time grafting operations can commence. Have two bars with about 15 to 20 cell cups on each. Some beekeepers place these cups in the cell-building colony as soon as it is made queenless, so that they can be polished up. Others find this is not necessary. Remove the frame of larvae from the breeding colony, carefully brushing off the bees. Do not shake them off, as this will disturb the newly hatched out larvae. Select a sheltered place with a good light and commence quickly transferring the larvae, one into each cell cup. Experience has shown that it is not necessary first to place a small particle of royal jelly in each cup. When transferring endeavour to keep the larvae as near the tip of the needle as possible, as this makes it easier to slide them off into the cups. Fig. F shows a piece of comb with eggs in row 1. Row 2 shows larvae of the correct age for transferring, and 3 and 4 show larvae that are too old. As soon as all the cups have each received a larva place the frame of cups quietly in the centre space left in the cell-building colony. Place a friction top tin feeder over a hole in the mat, and then close the hive. As it takes 15½

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