METHODS OF OUTDOOR WINTERING.

The elements of success in wintering bees have now been outlined, and the beekeeper may winter his bees in any way he likes, so long as he observes these principles. He may winter out of doors or in the cellar, and if out of doors he may place packing around each hive separately or around groups of two, four, six, eight, or any other number that suits his convenience. Many successful winterers use the individual case, others pack two in a case, and others four in a case. Larger cases than these are not recommended as being less convenient in many ways. In addition to the points mentioned above it is important to note that the hive should not be moved far from its summer stand for packing. The winter cases make sufficient change in the appearance of the apiary to cause the bees enough confusion when they fly afterwards without also changing the location of their entrances.

The Quadruple Case.

The quadruple case described in the following paragraphs has been found very successful by a number of beekeepers. The four hives are placed tightly together in one box, two facing east and two west. This box provides for about 3 inches of packing on all sides of the four hives, and 8 or 10 inches on top. There is no packing between the hives or under them. The stand, which is eight inches high and made solid, prevents drafts of air underneath. The entrances open out through the sides of the box, so the bees are always able to fly when weather permits. They are packed up as soon as possible after supers are off, then fed all the sugar syrup they will take early in October.

Preparation of Hives.

The size of the box will depend on the dimensions of the hive used. The ten-frame Langstroth hive as made in Ontario is 20 inches long, 16⅝ inches wide and about 9½ inches deep. The bottom-board is 22½ inches long and 13¾ inches deep. These are outside measurements. The space inside the bottom-board is ⅝ inches deep. If the frame-rests in these hives are so arranged that the tops of the frames are even with the tops of the hives, that is, if the beespace is underneath the frames, the space between the bottom-bars and the floor of the bottom-board will be about one inch, which is sufficient for wintering. If, however, the beespace is above the frames and the bottom-bars come even with the bottom of the brood-chamber the space will be only ⅝ of an inch, and should be increased by tacking half-inch strips on the rim of the bottom-board all around, or by using the wedges which are frequently used to enlarge the entrance for swarm control in summer. The entrance of the hive is left full width and this extra depth all winter. The projecting bottom-board is bridged over by means of a ⅜-inch board, 2½ inches wide and 16⅝ inches long, laid flat, and extending from one side rim to the other, so as to make a tunnel from the entrance of the hive to the flight hole in the end of the box. After all four hives have been fixed in this way they are ready to put into their box.