draw out the foundation into comb. If there be a super on the old colony, next day transfer it to the new one, bees and all; but if the combs be for extracted honey, place a queen-excluder between the bodies.

The old hive has been so thoroughly weakened that it will have very little ambition to again swarm. The new colony is in possession of practically all the field bees, so will rush in the nectar. There is no room for it in the brood chamber, since there is no comb ready, so it is stored in the super. Just as fast as the new combs are built below, the queen is ready to take possession and fill the cells with eggs. In the meantime, in the old hive, the bees will probably permit one queen to hatch out and destroy the rest. As young bees are hatching all the time, the colony will get quite strong and possibly lay up enough stores to carry it over the winter.

At one time it was thought that cutting out all queen cells was a sure preventive of swarming, but it merely delays it. If near the end of the flow, the delay may carry it past the crisis, when the desire will vanish; but if not, then the result is rather problematical.

CHAPTER VIII.

Frames, Sections, and Foundation.

A honey-comb is about 1 inch in thickness in ordinary conditions, with a space of about ⅜ inch between each pair. In a state of nature the bees do not build them in the symmetrical form we like to get in the modern hive; the perfect comb is very largely the work of the bee-keeper. He provides a frame not the least but like anything the bees would naturally use; he compels them to build straight, and to start at a certain part of the top bar; furthermore, he limits their activity principally to the construction of worker-cells, permitting the luxury of a few drone-cells where the bees would make hundreds.

Uniform thickness of comb is secured by a self-spacing device on the upper part of the end bars of the frames, which are there 1⅜ inches wide. Now, the bees naturally glue together the end bars where they are in contact; therefore, the smaller the touching surfaces the better. If you look at an end bar you will see that the narrow side of one is flat, while that of the other is brought to an edge. In the hive a sharp edge is intended to touch a flat edge. Since frames may be turned round we must, in putting the parts of them together, point the sharp edges in opposite directions; furthermore, we must have a uniform way. The writer, for instance, when he holds up a frame for inspection, as in Fig. 10, has the sharp edge against the fingers of his right hand, but against the thumb of the left.

If a swarm be hived on perfectly empty frames, there is no reason, from the standpoint of the bees, why they should build a comb from the top bar of each and that truly in the centre. The bee-keeper forces them by fastening artificial foundation along the centre of the bar, and once they have begun they will naturally carry the comb straight down to near the bottom bar, sometimes all the way. Through motives of economy many bee-keepers use merely a strip of foundation, say an inch wide, but the present-day tendency is to use full sheets in each frame: first, to be sure of getting evenly-built combs; second, to prevent the building of drone-cells. There are many conflicting theories as to how the bees decide when they shall build drone-comb, but this much seems to be true: a swarm provides worker cells at first so that the queen may start laying, and will build no other kind for twenty-one days if she can use each cell as fast as it is made; but at the end of that time the cells first occupied are again empty, hence she may be unable to keep the new ones full, and then the comb builders may turn their