

The invention of comb foundation has finally and forever put an end to crooked combs, wherever it is used. Comb foundation forces them to build combs which hang in the frames "as straight as a board." Indeed, it has even one advantage over natural comb, it is more regular. This was said very truly by one of our leading beekeepers at an Eastern convention.

There are, however, some attentions necessary in order to derive the full benefit of the comb foundation in obtaining straight combs. For instance, the hives should be perfectly level from side to side, so that the foundation will not hang out of the comb, but will remain perpendicular in it until the bees have it finished and well fastened to the sides. It should also be well fastened to the centre of the top-bar. This is done by pressing the edge of it down on the under side of the bar with a knife, while the wax is warm enough to be quite pliable.

When foundation is given to a strong natural swarm, it should be given sparingly, not more than 2 or 3 inches deep in each frame, for if a full sheet be given, the large numbers of bees that will cluster on it will cause it to sag. Full sheets can be given safely to colonies which have been divided, or even to full colonies in early spring before they have attained full strength.

But in order to secure straight combs, it is not absolutely necessary to give more than a small strip of foundation on each frame running along the full length of the frame. With such strips on each frame, and hives set perpendicular from side to side, straight combs will be secured *every time*. It is, however, advisable to set the hive somewhat slanting forward. This will cause the water from rain or moisture to run out of the hive, and will not prevent the combs from keeping perpendicular, since the slope will be in the length of the frames, and not across them.

C. P. DADANT.

Hamilton, Ills.

The above from friend Dadant shows clearly that he has given the matter careful study. If the frames hang untrue so that the comb is not built fair in the centre, run a thin bladed knife up the side bars of frame, cutting the comb loose and pressing it back straight in the frame. We prefer not to have wax too warm when pressing it down, but have the top bar warm. Hot wax dropped on a cold bar can be peeled off, cold wax dropped on a hot board will melt and incorporate in the wood so it cannot be removed. We can fasten the foundation much tighter to the top bar by having the

wood warm and the wax cold, as the wax will then stand a greater pressure. Mr. Dadant's remarks in reference to giving full sheets to colonies in the early part of the season is most excellent advice and should receive more attention than it usually does. In fact, it would be an advantage to those who use full sheets of foundation, or even half sheets, to have them placed in the colonies and drawn out before the swarming or dividing season commences. We place full sheets of foundation in our strongest colonies just before they swarm and do not have them break down. The way we do it: We part two frames of brood, slip a frame with foundation between, crowd the brood up so close on each side that the bees may rest their weight on the brood comb and work on the foundation. Placing the combs so closely makes them draw out the foundation much more quickly, but it is too close to allow them to draw the cells out full length. It is desired to have them taken out full length, after they have them drawn out about half length, by moving the combs slightly apart they will be completed, but this is not necessary to have them drawn out full length for when the cells are formed, say one-quarter inch deep and well attached to the top and sides of the frames, there is no danger of them breaking down when hiving the strongest colonies. As we said before this can be done without any loss to the colony. To do this only requires a little trouble and attention in placing in a sheet of foundation, and when sufficiently completed, remove them to hives to receive their swarms.

From Gleanings.

FALL INTRODUCTION OF QUEENS.

FOR years it has puzzled me to introduce queens late in the fall when there was no brood of any kind, and no honey coming in so as to make a sure success of it. To be sure, I could do it by the nucleus-box plan, and succeed every time in getting the queen accepted; but after the brood is all hatched out, and the bees have become largely inactive for winter, it is a slow tedious job to get them to properly fill themselves with honey to that degree necessary to make the introduction of a queen a sure thing. Besides, the work required is so great that I have never recommended the nucleus-box plan, simply for queen introduction.