

prepared to advocate anything else to those using such with success, as they might and can do worse, although I would like them to do better.

Gradually, however, the new cotton quilt and device referred to has been discarded, at least by a great many experienced apiarists, the old propolized ones being used from year to year, while many now use no quilt at all, but instead a  $\frac{3}{4}$  inch thick pine board; and yet a few are using the ordinary flat cover, which remains on the hive summer and winter, above which is placed about a foot of dry forest leaves, well pressed down, the sides and ends being packed with the same material 3 or 4 inches thick.

If little or no upward ventilation, so called, is given, a generous bottom entrance should be allowed, and *vice versa*. I know there are those who dispute this, but until I can disprove such, I'll stick to what has proved a success with me. Keep the hive warm, especially on top, and very little moisture will condense, if provision is made for its exit elsewhere.

Do not, however, pack with any material that has a tendency to conduct the heat from the bees in cold weather. No member of this convention advocated the use of new or clean quilts, and an examination in some of the colonies in Mr. Newton's apiary, having propolized quilts several years old, and  $\frac{3}{4}$  inch boards revealed the fact that all were wintering in good shape with an entrance  $\frac{3}{4} \times 4$  inches. Some colonies prepared with a much smaller entrance in the fall, for experiment, had to be enlarged when freezing cold weather set in, but 2 or 2 colonies still have the contracted entrance, but are being carefully watched in case they require attention later on.

#### LARGE SUMMER ENTRANCES FOR HIVES.

During the past summer I used large entrances to all my hives, both at the home and out apiaries, and I liked them so well, that I am going to again use them next season. Formerly, I used the ordinary  $\frac{3}{4}$  high by  $11\frac{1}{2}$  inch long entrance, prior to the swarming season, after which I gave a larger opening by simply raising the hive from its bottom board, about one inch; and inserting a block of wood to keep the hive in position. This method left an open front and sides also, and the only reason why it was not used before the swarms began to issue was because my queens are all clipped, and I wanted to know about where to locate her, if I did not happen to be on hand when the swarm

came out. By using the tapered wedges recommended for taking comb honey, by Mr. Pettit, I was able to give a large entrance, without any opening at the sides, and still have the queen come out at the proper place. I observe that Dr. Miller and some others have been using some such contrivance for wintering purposes, and the Roots are even now advocating such a deep opening all the year around, by simply nailing on an additional  $\frac{1}{2}$  inch strip to the bottom board now in use. That would make a  $\frac{3}{4}$  inch space under the frames, the full size of the hive.

I must confess that I like lots of lower ventilation in warm weather, but I am not so sure that I would not prefer to be able to diminish it, without having to invert the bottom board, the other side of which contains  $\frac{3}{4}$  inch strips, as made and used by the Doctor, Mr. Dangenbaker and others. There is only one objection to the wedge-like strips of Mr. Pettit, and that is they are loose, making yet another piece of extra furniture to be handled in the apiary. The Dadants overcome this difficulty by having the hive body telescope the bottom board, so that when more air is required, the hive is simply raised up the thickness of the bottom, and again lowered when necessary, without removing the hive from its stand at all. The objection to this arrangement is that hive bodies or brood chambers can only be used as such; and not for supers, owing to the extra room made vacant by the removal of the bottom board, thus destroying the proper bee space between the upper and lower stories. Now I want my hives all alike in depth, in other words I prefer the entrance in the bottom board, as I now have it, so that if some inventive genius can give me what I want without having to lift the hive from its bottom in order to lessen the space under the frames, I will not feel displeased at having written so long on what may seem to some a trivial point of apiculture. I may add that I am not without hope that my own efforts may assist me out of the difficulty.

In regard to having more than  $\frac{3}{4}$  or 1 space under the combs all the year around, I might state that when using a 2 inch rim under my hives for wintering, that on one occasion, drone comb was built in this vacant space in nearly every hive in the apiary, before they were unpacked in spring. My present conviction is that as a rule too little and not too much air and shade has in the past been given colonies during