

reared some brood while in the house.

JOSHUA BULL.

Seymour, Wis., April 22nd, 1885.

Doubtless the odor arising from the chaff and dead bees had much to do with their absconding. There being too much room under the combs and the brood chamber so large that it was impossible for them to keep up the necessary amount of heat was another bad feature. We find that when combs running towards the entrance, or in other words, entrance at end of combs that the light shines in between each range of comb and that when so arranged bees have swarmed out more than they otherwise would. Others have noted the same fact. There is no necessity to have bees swarm out if properly managed. We can make almost any colony "swarm out" or prevent it, if we so desire. If the combs are placed far apart they are much more liable to "swarm out" than when combs are arranged more closely, as the farther apart combs are the more bees are required to carry on the same amount of brooding. It is not unusual for bees to "swarm out" and leave their queens behind. If instead of removing the snow you had shovelled it over them, your bees would not have suffered afterwards as they did. We do not believe that bees could be smothered under any depth of snow as we have had them buried under a depth of more than ten feet and they have come out all right in the spring. There are many points of interest in your report, which if carefully read will doubtless prove valuable. Allow us to thank you for your most excellent article and we hope to hear from you regularly in future.

KEEP YOUR PACKING DRY.

I HAVE wintered more or less bees on their summer stands every winter, except two, for the last ten years. I use the Quinby hive for a packing box, and as the packing has to be removed to examine the combs, I have had pretty good opportunities for observing condition

of the packing in early spring. No matter whether it was chaff or sawdust I always found it wet next to the outside board, caused by the moisture from the bees being condensed by coming in contact with the cold surface. The packing would gradually become more and more damp, the water soaking downwards, till at the bottom board the packing was so wet that water could almost be squeezed from it with the hand. Of course in freezing weather this wet packing would be frozen solid and the bees then would be in as bad a plight as a man whose clothing had become wet and then frozen about him. I examined what is called a chaff hive this spring, both bottom and sides being packed in this case, with sawdust. On removing the bottom, I found the sawdust frozen solid and in the sides it was wet about two thirds of the way up, placing the bees in a worse condition, in my opinion, than if they were in a single walled hive. Some years ago when Mr. A. I. Root, of Medina, O., first got the craze for chaff hives, I wrote him, telling him what I had observed. He replied, saying that the packing would dry out in summer. No doubt it would do so, but it is in winter and spring it should be dry to be of any use to the bees. Last fall I put a lining of factory cotton inside my hives to keep the packing from coming in contact with the cold outer wall. The cotton is tacked to strips half an inch square and about four inches apart, making an air space of half an inch between the packing and the wall. With our arrangements this can be very readily done and the lining can be quickly removed and rolled up with its strips and stored away for another season. I am very well pleased with the result. I had six twin hives packed with wool cushions on the sides and top, 20 packed with granulated cork and 12 packed with sawdust on the sides, all having quilts of wool on top. A single hive, previously described, had sawdust packing and a quilt of wool. Out of 77 stocks thus prepared 71 were able to fly after four and a half months continuous confinement to their hives. On overhauling them since, we united two with others, leaving 69, four of which are weak, but the remaining 65 are nearly all in that condition which makes a beekeeper smile with satisfaction on pulling back the quilt from the combs in early spring, and will be ready to attend to the clover harvest by the 15th of June next.

The wool packing was all dry. I placed a rim under the frames to raise them two inches above the bottom board. The cork in contact with the frames was dust dry. In some cases it was frozen to the depth of an inch or so on the bottom board, and in contact with the rim. The sawdust was not in a good condition. In some cases it was pretty dry, but in others it was wet