

## A Wintering Repository Above Ground

The following article in "The Bee-Keeper Review," copied from "The Farmer", St. Paul, Minn., will be of interest to some of our readers, who have been enquiring about the possibility of having a satisfactory wintering house above ground.

"The past winter has been one of continuous cold all through, yet if the bees were in a frost-proof cellar, or bee-house, with food enough, they will be in as good condition, or better, than they would had it been changeable, warm or sloppy, like the winter before.

I think the question of wintering bees outside in chaff hives or sawdust packing is settled for good after such a winter as the one just passed.

Every hive of bees in this vicinity left outside was dead long ago, no matter how packed. Chaff hives and sawdust packing will do where the climate is such that the weather often warms up to above the freezing point, or at least as often as once in thirty days, thus giving the bees a chance to change their position and have a flight, but during the past winter the thermometer here has not been above freezing point for 120 days. All stocks that I have had a chance to examine starved and froze to death with plenty of honey on all sides of them, but had worked their way to the top of the frames above the cluster, and were too benumbed to move sidewise to other combs of honey.

I read in the bee journals of bee-houses for wintering bees above ground made frost-proof by sawdust packing on sides and on top, but which cost \$150. So, for the benefit of those who have no cellar under dwell-

ing, entirely frost-proof, or those living on bottom lands, where cellars would fill with water, I will give a description of my present wintering receptacle.

I built it in June, here in the woods, out of logs, 12 x 20 x 8 inside, chinked between the logs and plastered up smooth outside and inside with clay, plaster. It has a good shingled roof, door in end, windows in gables. It was used for extracting and storage of honey during the summer.

In putting on the rafters, which were hewed poles, they were left extended three feet outside the building, roof made of cull boards and shingled down to ends of rafters. On October 1st I set 2 x 4 studding (in my case I used poles) up two feet from the outside of the log building, boarded it up, and filled this two foot space with wet sawdust, pushing it down tight, and packing full, snug up under the eaves, and the same at the ends, eight feet high, making a second door outside the other one. A floor was put in above and two feet of sawdust piled overhead. Two ventilating tubes, six inches square, were put in four feet from each end, but these have been closed all winter. No floor was laid below. The hard clay was scraped level, and four inches of sawdust put down for a carpet. Two hundred colonies were put in November 13th. A thermometer was hung up in the centre of the room, which showed a temperature of 34 degrees after the two doors were fitted closely and tightly closed. Examinations have been made weekly. The thermometer has not been below 41 or above 46 in all winter. The bees have at all times been unusually quiet, a low hum can be heard when one is inside with the door shut. The dead bees have been swept up four times during the winter.

At such times a light was used, but it did not rouse the bees so they came out. The weather here has been most