will melt away everything; not even snow will stay there. An hour or after a snow storm the front will be open. The weaker the colony and the lower the temperature the more danger.

Mr. Heise—I think Mr. Sibbald has struck the vital point. I believe my loss was from that very cause. The temperature got very low and it continued there for weeks and weeks at a time and there wasn't sufficient heat. The bees couldn't generate sufficient heat to dispel the moisture and the result was their vitality was so reduced that while they came out clean and fine in the spring yet all of a sudden they went to pieces.

Mr. McEvoy—Did you winter these outside ?

Mr. Heise—Yes.

Mr. McEvoy—Was that top fast on the brood chamber ?

Mr. Heise—It was simply sitting on the rabbit on top of the rim. I use a hive for wintering outside without any packing whatever at the bottom or sides, but I have abundance of leaves on top; and while I have wintered successfully in those hives for a number of years I am ready to admit that in a winter like last that hive is not sufficient. I have yet in my yard possibly about seven or eight sawdust-packed hives that came through without a loss, while in the others I sustained a loss of about 40 per cent.

Mr. Purvis—Do damp cellars have anything to do with loss of bees over that of dry cellars ?

Mr. Holterman—The more moisture there is in the atmosphere the greater necessity of having higher temperature. The next thing a great many people make a mistake about is what they call a moist cellar. There may be moisture in parts of the cellar and yet the atmosphere not so very moist. One danger in connection with low temperature is condensation of moisture on the walls instead of passing off through a proper channel of ventilation. It stays there and the atmosphere stays moist.

Last year we tried some stocks leaving the cover on, and that is five-eighths inch wood and a galvanized top; we set them up at the back so that they had ventilation, too. Those stocks seemed to winter with perfect success in the cellar and I have almost decided to put all in the cellar next winter leaving the cover on.

Mr. Purvis—And give no ventilation at all ?

Mr. Holtermann—Not from the top.

Mr. Chadwick—My ventilation to the bees is all in front. I have a foundation five inches from the cellar bottom. I put down the first five then the next on top of the honey boards of the one below, five feet deep. I have a room about twelve by sixteen feet that I expect this year to put 100 in. Last year I had a chain pump log with a hole of about an inch and a half. I had that extending from the cellar through the window and outdoors; all around it at the window was thoroughly packed with sand and loam. The Saturday before Easter I got a three-inch pipe to go through there. I thought probably they would require more air in the cellar. I govern that from the outside; if it is extremely cold I shut it up tight from the outside. Would a three-inch bore be sufficient in ventilating a cellar out through the window that way ?.

Mr. Holtermann—Our cellar is specially built and there are no openings in it as there are generally. The wall is not built tight and the ventilator runs about 100 feet, eight feet under ground, it enters a central chamber, from which it is distributed and the cellar can be heated when necessary, by means of a stove which stands in this central chamber. If you have taken your bees out of winter quarters without signs of breeding then I would