

blanket in front of the hives to dim the rays from the lamp; but if the cellar is light, a place in one corner should be partitioned off so as to make the part which is to contain the bees dark. Bees have been wintered well in cellars where the light of day was allowed to enter; but as a rule, bees winter best in a cellar into which no light from the sun ever enters while they are in it. The hives should also be up one or two feet from the cellar bottom, the bench or platform on which they stand resting on the ground, instead of being nailed to the sleeper above, otherwise the jar caused by any movement on the floor above would disturb the bees, and make them uneasy, thus causing their loss. Rats and mice should also be excluded from the cellar where bees are to be wintered; for of the two I would rather chance the jar of children playing over bees than of rats and mice running about and through the hives. Many bees are lost each year from rats and mice in cellars during the winter. The full entrance to the hive should be given where fast bottom-boards are used; and with moveable bottom-boards the same should be left on the summer stands, and the hives raised two or more inches above the bench or hives on which they rest. Where honey-boards are used, I prefer to remove them, substituting several thicknesses of old carpet, or else a chaff or sawdust cushion two or three inches thick, through which the moisture from the respiration of the bees may escape, but still keep them dry and warm. The bees should be set in about the middle of November, and taken out about the time the soft maples and elms are in bloom. Some recommended setting in later and taking out earlier; but my experience has been that the sudden changes, both in the late fall and early spring, are very damaging to bees, whether wintered in the cellar or out of doors, and it is best to avoid them where we can as well as not, as is the case in cellar wintering.

A few still recommend taking the bees out during a warm spell in winter, to give them a fly, so they can void their feces; but if they are quiet, I consider it much better to leave them undisturbed. Bees can retain their feces five months in the cellar much easier than they can three and one-half months out of doors, providing the cellar is suitable to winter bees in at all. The right temperature of a cellar to winter bees well is from 42 to 45°; but if fixed as above given, they will do very well as low as 35 to 40°. If the cellar is one where the temperature goes as low as the freezing-point, and stays there any length of time, I should prefer to leave the bees on their summer stands, unless I had some suitable means of warming it which was easily controllable; for a continued temperature at about the freezing

point, or a little below, seems to be very injurious to the bees.

UNITING BEES.

Another correspondent writes, saying: "I have some weak colonies of bees which I fear will not winter as they are. How would it do to unite two of those weak colonies together for the winter?"

This is the proper thing to do, for two weak colonies kept separate will consume nearly twice the stores which both would unite, and very likely perish before spring; while, if put together, they would winter as well as any large colony. My way of uniting such colonies is as follows: If one of the queens is known to be feeble or inferior, hunt her out and kill her, so that the best queen may survive; otherwise pay no attention to the queens, for one of them will soon be killed after uniting. Having the queen matter disposed of, go to the colonies you wish to unite, and blow smoke quite freely in at the entrance, pounding on top of the hive at the same time with the doubled up fist. When both have been treated in this way, wait a moment or two for the bees to fill themselves with honey, when one is to be put on a wheelbarrow and wheeled to where the other stands, and both opened. Now select out the combs from both hives which contain the most honey, setting them in one hive. In thus setting in, it is always best to alternate the frames, whereby the bees are so mixed up that they generally have no desire to fight, for each bee touched by another is a stranger. After the hive is filled, arrange the quilt or honey-board, and put on the cover. Next put a wide board in front of the hive, leading up to the entrance, and proceed to shake the bees of the remaining frames, taking first a frame from one hive and then one from the other, thus mixing the bees as before. After all are in, set a board up against the front of the hive, sloping over the entrance, so that the next time the bees fly they will bump against it, thus causing them to mark their location anew, so that they will not return to their old place and get lost. Also remove all relics of the old hive, so there is no homelike look about their old location to entice them back. Put the remaining combs away in some safe place for the next season's use, and the work is done.

G. M. DOOLITTLE.

Borodino, N. Y.

Some of the beekeepers in Skagit county, Washington, will take 100 pounds from each of quite a number of their colonies this season. This means \$20 per swarm, gross, which is regarded as better than 100 per cent. interest on the investment.