

reversed until the section is filled out to the bottom and partially capped, then by reversing, the bottom becomes the top.

CARE OF BEES BEFORE SETTING OUT IN SPRING.

SEVERAL have asked what they should do to keep their bees quiet until the weather is suitable for setting them out. Some are wintering in cellars, others in repositories. The doors and windows may be opened at night to keep them cool where the temperature is too high. They should be opened gradually to prevent a current of fresh air rushing in and exciting the bees, but by opening them slowly, taking about five or ten minutes to do so, the bees are not excited and the temperature of the room may be reduced in this way at the same time giving the bees plenty of fresh air. Where it is not convenient or possible to open the windows or doors at night the temperature of the room may be kept down by placing snow or ice in sacks and elevating them to the top of the room. Some of our bee-houses not provided with refrigerators have the temperature reduced in this way. In the spring we take ordinary grain bags, fill them with snow or ice, placing the bag on the end of a board, rail or crotch allowing the bag to bend over the end of the board, which board or rail should be long enough to press the bag against the ceiling the other end resting on the ground or floor; by this means the snow is elevated to the top of the room and as the warm air ascends it is cooled. A room with a temperature of 60 to 80 may be reduced to 45 by so placing a few bags containing snow or ice against the ceiling. Some place water in large tanks; this does not cool the room near as readily and is more troublesome to prepare. I have reduced the temperature of rooms 35° by the former method in a short time. All this work should be

performed in the evening after dark, as it is very injurious to allow a glimmer of light to enter the repository especially when the temperature is higher than it should be.

REPORT OF WINTER QUARTERS.

SO far this has been a trying winter for colonies outside. The extremely cold spells have been of longer duration than they were either of the past two winters, severe as they were.

I have 30 colonies wintering outside, and 60 in a good cellar. Those in the cellar are all right yet at this writing, February 28th, quietly "hibernating," *a la* Clarke, having been in winter quarters since Nov. 25th. Those outside are all right so far as I know. I "called up" some of the more dubious ones just after this last cold snap, and they responded to the toast in good health. Nearly all, both inside and out, have pollen, more or less. If the other conditions are right I do not fear pollen in wintering. The outside hives are mostly packed in chaff and saw-dust, except the Jones double-walled hives which, with me, have invariably carried their colonies through safely with no other outside protection save the snow shoveled up about them during the coldest weather. I am satisfied this is the hive *par excellence* for outside wintering; also for successfully encountering the vicissitudes of weather in spring and fall, and indeed also the extreme heat of summer. With such a hive "spring dwindling" and the exigencies of outside wintering are very profitably and effectually discounted. In striving to solve the problem of successful wintering, my habit of late years has been to leave the very strong colonies outside and house the rest, and this, notwithstanding that my bee-cellar is large enough, and an excellent one. The present partitioned-off compartment is 10 x 20 and seven feet high, dry and frost-proof. There are three exhaust pipes six inches in diameter, one of which is connected with the kitchen stove-pipe above. The other two, which are directly connected with the outside atmosphere, are filled in during very cold weather with saw-dust cushions, thus preserving the heat and at the same time permitting the escape of moisture at all times. I make one of these pipes serve a very important and useful purpose periodically through the whole season during which the bees are confined in the cellar. About every two weeks, sometimes oftener, depending upon the weather, selecting a day when the atmosphere is dry and clear, and a good breeze stirring, I remove all the saw-dust stuffing