

the bees, caused by swarming, has subsided; in the evening the bees will become tranquil, and the cap should be turned so as to exclude all the air at that place, unless the bees manifest a desire for more air by clustering out at the mouth of the canal. The bees will always dictate their master in regard to ventilation, in warm weather, by showing themselves outside the hive. As the cap is a perfect detector of what is going on in the hive, it should be examined occasionally, and perhaps emptied of filth which always finds its way to that place.

2nd.—As soon as winter sets in, the adjustable cap must be taken off, and remain off until the bees are ready to clean the hive in the spring. This must never be forgotten by any who would be sure to save the life of the hive; the vapor of the bees in cold weather is so dense that water forms in the hive, and runs down and freezes in the cap, and soon excludes all the air at that place; the tunnel to the canal also is very liable at this season to become obstructed, and the bees may be smothered. It would not be objectionable, but would even be desirable, that the adjustable cap should be returned to its place on the tube, at every warm turn of weather in the winter, if it is surely taken off, as soon as the weather changes cold, inasmuch as it generally keeps them quiet in the hive, and prevents the loss of a vast many of their companions which from ordinary hives sally out at this time, and are lost by being chilled.

3d.—In the spring, as soon as the bees commence cleaning their tenement, the adjustable cap must be used with care to prevent robbers, this should be examined two or three times a week until the hive is cleaned. It is proper likewise to clean the bottom board, and white-wash where the edge of the hive rests. White-wash made of good caustic lime will certainly exclude all bee moths from joints or cracks that are well coated with it, and it is not objectionable to the bees. When the hive is full of bees, moths cannot enter, and the cap may be taken off until swarming takes place.

4th.—When bees swarm, their departure often reduces the population of the old stock so much, that there are scarcely enough left to guard the tunnel of the canal, and attend to all the other necessary labors of the hive, until it is replenished by young bees which are constantly hatching at this season, hence it will be seen that the

cap must not be forgotten a single night after swarming. I have known several hives after two or three swarms had departed, to let the miller enter the tunnel, but in every case she dropped herself down into the cap where she always lays her eggs among the little flakes of comb, billets of bee bread, and other filth, precisely the substance she desires to lay her eggs in, then probably makes her escape the same way she entered, or is found dead with all her eggs in the cap. I have known moths to hatch and grow nearly three fourths of an inch in length in three or four days. During the season of swarming, and until the old stock is well replenished with bees after swarming, is the most critical time, and requires the most diligent care to preserve the old stock from an attack by their enemies. The cap must be examined two or three times a week, until the hive is reinforced, so that the bees can guard the tunnel to the canal, and keep out those nightly intruders, then the hive is safe so far as the moths are concerned. As the moths may enter some feeble hives in the spring before swarming, and through the whole summer season, it is best to examine occasionally, and empty the cap. This is scarcely a minutes' work, but "no pains no gains." No one should use this bottom board who will neglect the care of the adjustable cap, and if the cap is not used, I know of no hive that will admit the moths and robbers so freely as this. When this bottom board and adjustable cap is used with care, the healthy condition of the young broods are secured from chills in the spring and fall, which is absolutely necessary to secure profits from the Apiary. Thousands of swarms perish yearly, and are rendered weak and unprofitable by a chill among the young in the early and latter months of the breeding season; bees that hatch early perform the principle duties and labours of the summer campaign, and die before winter sets in, and those that are born late, say in August and September, are almost the only tenants of the hive in the spring following. This is a fact which may be doubted by some, nevertheless it is true, but may require a dissertation at some future time, to convince the sceptical and superficial observer. This Bottom Board is admirably fitted for southern and western Apiraries, as well as northern. I also have a large number of classes of bee hives which were patented in 1841, swarmers and non-swarmers, so constructed that they may be changed from one to the other by entering slides only, or they may be divided or subdivided into several swarms, when the season is favourable, with no trouble except entering slides, of which I may send you some cuts and specifications at a future time.

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Near Middlebury, Vermont, 1845.—*Bos. Cult.*