

clusion that the old bees do build more perfect cells than the young ones. Now if the old bees in superintending the work neglect their duty and allow them to educate themselves that causes them to make such work, or is it an innate principle in some bees to do their work imperfectly? Has any one ever looked into this matter or tried to fathom it? We find some cells so small and of such peculiar shape that it is impossible for the queen to lay in them while an occasional one will be double the ordinary size. We are just viewing one now which has nine sides, is slightly oblong and nearly double the ordinary size. Suppose they built this one to raise twins in to see how it would work.

OUR OWN APIARY.

WE have been making some experiments to ascertain if possible how long bees will live on one meal or in other words, when their sacs are filled with honey how long they can live if kept in the right temperature. In experimenting with foul brood and fasting bees we have had them live for nine days; perhaps they would have lived longer but just as soon as a few bees fell from the cluster and their abdomens began to look smaller we would take them out feeling assured that the disease was cured, as experience afterwards always proved. In shipping queens we find that sometimes they die within five days, at other times we find that they live from twenty to thirty days although they would have food to go to whenever they required it. Since this question came up about bees being wintered without food away up north near James Bay these things have been revolving in our mind. We thought we would make some tests as we have a bee house which we think is well adapted for this kind of work as the sub earth ventilation pipe passes about 40 rods under ground and the temperature is about the same summer and winter and the chimneys which are on the top cause a draft to pass through it. By opening the draft and allowing a current of air to pass through and closing the bee house up tightly we have kept colonies from 12 to 21 days hanging there in a cluster. Twenty-one days may seem a long time for bees to exist

without any food except what they take with them in the abdomen, yet when the right temperature can be secured and the bees be induced to cluster at the commencement we would not be surprised to find that they might be kept very much longer. We may say that the bees which fasted twenty-one days are now in good condition and from all appearances promise to survive the winter. If any one had advanced the theory that they believed bees could be kept for twenty-one days as we have done we would never have believed such a statement. Now that we have actually done it may there not be some special conditions secured whereby bees could be wintered on much less stores? We think that this is something that we can all afford to experiment a little in even though we do lose a few colonies. Who knows but the next great stride in bee-keeping might be to take all the honey from them and have the repositories specially prepared with all the desired conditions and winter our bees without stores. There would be one saving at least; they would not and could not have dysentery and if we fed them once or more we could afford to get the best possible food for them, and even if we required to feed them once or twice during the winter what a saving this would be. We do not say that all this is possible but if we can keep them twenty-one days when we supposed that we couldn't keep them more than one third of that time why may we not reasonably suppose that we can keep them throughout the winter without food? Then again suppose it is necessary to feed them once or twice during the winter we might select and give them such food as would be best adapted to their requirements and least liable to give them dysentery. Then again they would have no more food to go to and would have to be satisfied with just what they had and could not continue to gorge themselves until their bodies become so inflated that they could not retain the contents. Suppose some of our scientists turn their attention in this direction and see what the result may be. If Professors Cook, McLain and others having bees in localities where they can put them into caves far down in the earth or in specially made repositories where any desired temperature can be