

EARTH WINTERING.

SOMETHING AFTER THE FASHION OF THE
MCFADDEN SYSTEM.

PROBABLY incited to it by the reading of the articles printed in the BEE JOURNAL as coming from Daniel McFadden, away up near the Arctic regions, Wm. Raitt, one of the editors of the *Record*, (British), decided to bury a couple of colonies of bees as an experiment, and in the last number of that journal he portrays, in readable style, the result of his experiment :

Neither earth nor cellar wintering are, we know, new things in this country, and they are quite common in America, Russia and other countries having more severe winters than ours. So that in venturing on experiments in this direction we did not mean to have it supposed we were after something new ; we only resolved to resuscitate ideas that have somehow slumbered, with a view to testing whether there might not be something in them suited to our modern system. In referring to our proposals, a leading writer in the *British Bee Journal* seemed to question, whether the system of underground wintering might not be too much trouble. The very opposite was our idea. We hoped to be able to do away with much of the trouble connected with preparing our bees for winter. Should we succeed, we argued that it would be very much easier to carry our compact little hives into and out of the cellar than to pack them on their summer stands, and do all the watching of entrances, etc., necessary during the alternations of snow and sunshine we are generally subject to. We further expected to prolong the lives of a large proportion of bees that would otherwise die off as the result of these recurring changes, and so bring our stocks out in spring nearly as strong as when we put them in in early winter. And we had before us the oft-repeated assurance of American bee-keepers that such was actually the case in successful cellar wintering. In the CANADIAN BEE JOURNAL for March 7th, for instance D. A. Jones assures us that in one of his cellars just examined, containing 125 colonies, he did not find more than two quarts of dead bees on the floor, which means but a few bees to each colony. True, in another case, an experiment in wintering with a high temperature approaching 70° he reports two painful to as many colonies. But even this is a small loss compared with our usual dwindling in open wintering. Then also we had the not inconsiderable saving in stores

before us and the expectation that in an even cool temperature, there would be little or no untimely breeding, thus giving us in spring stocks whose queen and bees are both in prime condition for doing rapid up-building. In this we had every sort of reliable evidence from American writers, and from the fact so patent in their reports that they were so soon able to get their bees ready for the honey harvest.

So far our experiments, crude as they have been, have verified our anticipations. We buried two stocks in a "pit" on November 23rd, and exhumed them on March 30th. Both had wintered safely, the one having decreased only five pounds in 18 weeks, the other eight pounds. The former, a skep, had not lost over half a teacupful of bees ; the other, a frame hive, had lost probably three times that quantity, and was in rather a soiled condition for reasons quite patent. Neither had any sealed brood, the frame hive only showing a few eggs the next day.

We had intended to open the pit at the end of sixteen weeks, but as we formerly observed we were then suffering from the severest snow storm of the season, and even on the 30th it was still wintry weather. Our impatience, however, combined with the prospect of a good day following led us to rather premature action. For it turned out that the next day, while sunny, was yet bitterly cold from a north-westerly wind, and a good many bees from the soiled stock flew and were beaten down. We intensified this trouble from our anxiety to join this unlocated stock to a queenless one, we did not well know how otherwise to save. The other stock in the skep behaved beautifully, the bees flying strongly from the first.

The following were the conditions under which the hives were wintered : Happening upon an old packing case large enough to contain both, we sunk it about a foot into the earth, spread an inch or so of moss litter on its bottom for dryness, divided it into two by a close-fitting box lid lying handy, put in the hives after weighing and taking notes, covered the case first with pieces of board, then a little straw and a few short branches, and lastly shovelled the excavated soil and some litter over all, finishing with a coating of sods to throw off rain and keep the fowls from scraping off the covering.

No warm coverings were put on the hives only the usual summer quilt and an extra bit of sack- ing. Thus each hive wintered in an air chamber fully double its dimensions. One difference, however, there was, slight but important. Before covering all up, we noticed on the side where the skep lay, a broken part of the box, through which one might put a hand. Thus