

storey will entice the bees up more readily, but we have rarely found this necessary, more especially if no queen excluder be used.

Equally good results may be obtained by placing the hive of empty combs under the stock hive.

As soon as these two storeys are pretty well filled with bees add a third, but in this place your frames at $1\frac{1}{2}$ to $1\frac{3}{4}$ inches from centre to centre, as these combs will only be used for extracting, the two lower storeys, giving the queen ample room for egg-laying. It will not be long before the bees will be ready for a fourth storey, which is filled with empty combs and put between the second and third, bringing this last to the top.

The top hive will be filled and finished first and when all the combs are nicely sealed over the hive with its full combs is removed and another with empty combs placed between the second and third storeys. The combs can be extracted at once, or if we have plenty of these empty in stock the extracting can be left until later in the season. Some may imagine that it would be impossible for bees to fill such large hives, containing as they do about forty standard frames, but it is not so. These hives are after all not so very much larger than those so extensively used in some parts of Switzerland and France, and known as the Layen's hives, which are not found any too large. In these the queen has full liberty to lay to her utmost capability, the bees are never cramped for want of room, and swarming is entirely prevented.

It is true that all queens are not so prolific, and are not all able to keep such a large hive supplied with brood, but we do not tolerate such queens. We raise our queens only from the best stocks that have proved themselves most prolific, and all those not up to our proper standard are replaced by them. In hives with young queens bees are not so inclined to swarm, and this is one of the reasons why we have been able to work our apiary year after year without getting any natural swarms.

When we have left it to others swarms were not prevented, and we have a curious instance of this. In 1884, when we were away during the whole summer, we left instructions that no swarms should be allowed. Our man did not give the bees room in time and the consequence was that we had a very large number of swarms, which he said he could not prevent. In 1885 we were at home during the swarming season, and by giving the bees plenty of room in advance of their requirements we had not a single swarm, and the bees never once showed any inclination to swarm.

We may safely say that with our system, if properly worked, there is no desire to swarm; and there are and have been, beside ourselves, for a number of years bee-masters who have not only succeeded in preventing this desire, but have also worked with this object in view.

To prevent swarming we must have young and vigorous queens, and these must have sufficient room to lay their utmost. The bees must not feel cramped for room when honey is coming in, but must have as many empty combs as they are likely to require for storage; and if these requirements are complied with, they will not only not swarm, but what is much more important, will have no desire to swarm. Much valuable time is frequently lost in preparations for swarming, which also unsettles the bees, and this at the most valuable season of the year, when perhaps they might be collecting 15 or 20 lbs. of honey a-day.

To work this system to the best advantage it is necessary to have a large number of frames of empty comb. We have several hundreds of these which we use over and over again, and all the storeys consist of the same sort of hive.

There is a great advantage in giving the bees a full supply of ready-made empty combs. When the honey flow commences they can at once begin to store it in the empty cells, just as fast as they bring the honey from the fields. No time is lost, and as they have plenty of storing room, there is no need for them to crowd the queen out of her breeding space by depositing honey there. If, however, we give an empty hive or comb foundation, the case is very different. It is true there is plenty of space, but before the bees can make any use of it they will have to build the combs. It takes twenty-four hours to transform the honey into wax, and although it does not take the bees quite as long to construct combs from foundation as when none is given them, there is a great deal of time lost. The collecting bees on returning, finding no empty cells in which to deposit their loads, take the opportunity of placing the honey in the cells of the hatching bees, and thus rob the queen of her breeding space. When the bees find that the queen is getting short of cells for laying her eggs in they acquire a desire to swarm and make preparations for doing so.

We have used shallow supers (Neighbour's frame supers with straw sides), 6 in. deep with frames, and some $4\frac{1}{2}$ in. deep, because we had them, also Carr Stewarton body boxes, which we worked in 1875 very much in the same way, but we found that ordinary hives did just as well, and there was the great advantage of using only one size of hive and one sized frame, which