in ten-frame Langtroth hives set on three-inch rims, and without cover of any sort. When I saw them in March there were visible several fins of comb built above the top bars, and the bees were sticking to these and hanging below the frames, just rousing big colonies—plenty of air, to be sure, but no dampness.

The other example is more in Mr. Briton's line. A ten-frame Langstroth hive made of glass, and having a top of wire cloth, was placed on a slat stand about two feet above the ground. Over the hive was placed a box nearly a foot larger each way than the hive. The front end of this box, except for a narrow board at the top, was knocked out. There was no bottom to it. In this hive was a good colony of bees. Shaded on all sides except the front, free circulation of air around it, with cold glass sides and ends, and entrance 14 by half an inch, and wire-cloth top allowing free draft through it, that colony throve for three summers and winters until put in to another hive. This was at Rhode Island, twenty eight miles from Mr. Britton's.

The exponents of heavy packing are asked to explain how the bees in these two instances could live, to say nothing of being exceptionally strong and healthy. It is to be hoped that they will not all speak at once. Also, they are requested not to remark that "one swallow does not make a summer" for there were in this case, and one of them made three summers and—three winters.

Four items are pretty definitely shown, however, by the symposium on wintering; namely, the need of dryness, the advantage of some means of preventing condensation above the cluster, the necessity for windbreaks, and that several hives grouped close together and packed in some "non-conductor" do accumulate heat in the packing above and near the hives. But—yes, *but!* Does the value of the packing lie in keeping the bees warm in winter, or in the spring and fall? in the fall, when they are putting the finishing touches on their supplies, and in the spring when breeding, Think twice, please, before you answer. That protection is of advantage from *early* spring until late fall has been pretty conclusively demonstrated; but what amount of protection is as yet in dispute. Some want the whole hive including supers, inside of packed walls; others want merely double walls, and still others think protection about the supers suffices.

Results suggest that colonies in hives wholly protected, even if only by a deep telescope cover or thin outer case, do better from spring until fall than those having only the supers protected. If this is correct, then it is fair to believe that results from fall until spring "wintering," we call it, are much dependent on fall and spring protection. In other word, safe "wintering" lies more in keeping the bees warm when they are getting ready for cold weather, and when they are getting ready for the harvest, than it does in trying to keep them warm in winter itself.

To summarize: We as yet have only a little and fragmentary knowledge of the real conditions which exist within the hive from fall until spring inclusive. Until we know more about those conditions we can not intelligently devise apparatus to assist the bees. Until we know those facts we are as likely to make and use unnecessary apparatus, costly to construct and costly in labor to use, as we are to omit importance. Or, to put it in the language of modernism, without exact knowledge we can not get down to a rational dollar and cent basis of beekeeping.

If our experiment stations will use their means and apparatus in obtaining the desired knowledge, they will help us far more than they have yet done. Such research work is in their line, and they can do it much better than the