

thread to be the best, after much experimenting. They must be made true and straight, and of wood that will remain so. The ends are rounding, so that the bearing against the frames will be central. If this was not so, the frames would move up and down when we turned the screws. I tried metal screws, and I much prefer the wood to any kind of metal that I had. A good zinc screw could be made, no doubt, and if for as low a price as the wood, and like it in form, I see no objection to it. We have now used these wood-screws two years, and through the wettest seasons, and in very damp cellar, and we found not the least trouble from swelling. During winter in a very damp cellar, the frames will swell some, and we winter in the cases right side up,—that is, with the frames resting on the tin rests, and loosen the screws so that they let the frames expand all they please; all will move freely in spring.

Now, if your hives are provided as ours are, and you manage them as follows, you will have no trouble. First, place your hives that side up, that the frames rest on the tin rests, and when they need inverting, first give the screws a twist, and as at that time the bees have been in the hive a time, and any shrinkage that was due has taken place, if your frames were made of dry lumber, you will have no trouble of frames dropping down. Two years ago, we used a part of our cases with no tin rests, and nothing to support the frames either side up but the screws, and we had none of the trouble Mr. Pringle has suffered, but we added the rests, as the best thing with which to keep the frames in position when the screws are turned back for manipulation. In my opinion, these screws are the only practical arrangement for holding the frames for the purpose of inverting.

I cannot see how Friend Pringle came to the conclusion that in the adjusting of these frames there was more liability of crushing bees, unless it be that he is so much used to the suspended frame, and as much unused to this style, and has not yet "got the hang" of the bearings. When the frames are rightly inserted, there is not the least possibility of crushing bees between the frames and the ends of the cases, nor between the frames and each other, and as the frames approach the tin rests, there is a quick little movement that is almost a sure preventive of ever catching a bee. We feel, now that we have become acquainted and habituated to both, that we need less time and care in adjusting the new frames, than the old suspended L. frames. But when the principles of the new hive are all taken together, it becomes obvious that we need not move the frames of this hive one-tenth as often as we do those of the old styles.

I wish to say here, that relative to the great system of contraction spoken of in last No. by our Editor, there are no fixed times for the performance of that act, as localities differ so widely, and each will soon learn at what time the manipulation is of the greatest advantage to him. It is all a question of raising stock to be fit for use when we have use for them, and *not* rearing them to become only a burden and useless expense.

I thank friend Pringle for his kind words in his last sentence. It seems to me that the same is the sense of all bee-keepers.

JAMES HEDDON.

Dowagiac, Mich.

The samples of wood-screws have been received, and they are certainly of nice workmanship. They are a trifle larger than the ones we send out, which, by the by, are the same size as in the sample hive received from Mr. Heddon last spring. We have another letter about them, this time it comes from "the other side of the line," and we give it place below. Probably friend L. has had a hive with the smaller screw.

The C. B. J. always comes to me with pristine newness, and I always read it with pleasure and profit. Your idea of maleable iron screws instead of the wooden ones adopted by Mr. H., will be a great improvement. If made of the same dimensions as these, you may put me down for enough to supply three hives and six supers complete. The wooden screws, will prove an entire failure, at least mine have thus far, (and this though I thoroughly oiled and partly painted them before using), they swell so by dampness that they will not turn in the matrix, and on using a wrench for that purpose I broke several.

I was several times on the point of writing to Mr. H. or to you about it, and to suggest nickel or brass instead, but did not wish to be too previous. Now, since you have the idea, let me suggest that the new screw strike a metal plate instead of the soft wood of the frames; and that some means be devised that will arrest the further turning of the screw when the frames are secure, as the leverage of these will disjoint the hive if pressed beyond a given point,—which point cannot be judged in the case of a swollen wooden screw, though perhaps it may with a metal one. At any rate, the *screw and its bearings and its manipulations* are matters to be overhauled, and I am sure will be. Apart from this, my *experience*, though limited is *entirely* in favor of the Heddon hive, but not more so, than was my impression of it after I had read Mr. H.'s book.

JOSEPH LUX.

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