

so much better than mine that my own was no longer worth discussing. It would be so much pleasanter to entertain feelings of admiration for such a man, rather than those of disgust for the writers who are constantly endeavoring to make it appear that many of the self-evidently invaluable functions of my invention are old. There was no controversy about these old (?) things, not even a word of any kind about them in any of our literature until after two seasons' of careful experience, I patented them in the United States and British possessions, and then made them known to the public. Only one who has had the experience can realize the feelings of an inventor who continually finds his valuable discoveries plagiarized and attached to the names of others, while his unpopular inventions, whether valuable or not, are always coupled with his name.

Why will some of our apicultural journals persist in this immoral work? In consideration of this question, allow me to thank your correspondent, Mr. Hoshal, as well as the editor of the C. B. J., for the fairness of the article above referred to.

Now let us, as we begin the consideration of the several points brought forward by Bro. H. again thank him for the self-evident sincerity of his arguments thrice proven by his objections and special reference to his failure in carrying out a few of the functions claimed by its inventor, and others who have reported eminent success in the very points where Brother Hoshal failed.

1st. Allow us to say to your readers that nearly all use the hive with "loose bottom boards," as Bro. H. mentions, in order to carry out the alternating principle, made possible only by the horizontally divisible brood chamber. The outside measurement of the brood chamber cases, as given by Bro. H., are correct, but the end play of the frames as they fit to the case are  $1/16$  of an inch, not  $1/16$  as is printed by typographical error no doubt.

Our friend's description of the use and advantage of the break-joint wood-zinc queen-excluding honey board, is clearly presented. Let it be remembered that being the inventor, I have used this break-joint honey board constantly, and the bee space for more than ten years, and with the addition of the queen excluding zinc attachment for half of that time, and I am sure these valuable features have come to stay.

Next we come to our friend's disquisition upon the shake out function. While I believe it was never claimed that the last bee could be dislodged in this way, we have claimed, and

others using my invention have seconded the claim, that the shake-out function is a practical success with my new hive, and with no other brood chamber, perhaps it might be well to say a possible success. However, we know it to be a positive success, if properly manipulated from first to last.

It is for just such candid and intelligent bee-keepers as Mr. Hoshal that I pen the following; To begin with the frames, put the cases in such a manner that no bees can lodge or even go behind them. The set-screws hold them in position with that absolute certainty that wedges or nothing else can, that inversion is practical and sure, one inversion of the brood-cases at the right time fills the shallow frames completely full of comb, and now no lodgement places are left. Again, we come to that useful function of the set-screws, which warrants us in shaking the brood-cases either side up, changing at will. Thus manipulated, we are all ready to try our hand at shaking out the bees. Now, there is much depending on your mental and physical knowledge of how to shake the case, you may lame your muscles and exhaust your lungs, if the case be somewhat heavy and yet not succeed completely. Still there is a little artful combination of tremble and jerk, which loosens the foothold of the little workers to a surprising extent. My own muscles are far below the average, yet I accomplish the object sought in this manipulation with comparative ease. It must be remembered that considerable depends upon the variety and strain of bees used; yet, I find myself equal to the stickiest-footed little fellows to be met with. I practised this function for years with surplus cases of section, and all will recognize that such cases average much heavier than the brood cases in question, and further than this are replete with lodging places for the bees. However, as our friend says, this divided, alternating brood chamber has no end to its wonder of manipulation, and it is usually the case that it presents a multiplicity of ways in which almost any desired end can be accomplished. However, I never use a brush.

Then, again, as to finding queens, it is safe to say that we find and capture any number, from four to eight times as quickly as the same result can be performed with any other kind of hive. Correct, the bottom board is where she will be found nine times out of ten. The sudden admission of light in such shallow cases, with no hiding places or inter-spaces, except between the bottom bars and bottom board, she seeks that locality at once, and nearly always right side up, with feet upon the bottom board.