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DEEP vs. SHALLOW COMBS

By J. E. Hand.

Ever since bee-keeping has become an occupation of any note, much time and talent have been devoted to the discussion of the proper shape and dimensions of hives and brood frames, some even claiming that in the selection of a hive and and frame of the right proportions will rest in a great measure our success or failure in our chosen avocation. A noticeable feature of the case is the wide diversity of opinion that exists among the rank and file of bee-keepers as to what constitutes a correctly proportioned hive and frame. Perhaps nearly all will agree that during the summer season the form of hive and frame should be adapted to the convenience of the bee-keeper in the performance of the necessary manipulations, but at the same time the idea largely prevails that there are certain natural laws that govern the successful wintering of bees, the violation of which will inevitably result in disaster and less to the bee-keeper. This point is abundantly demonstrated in an article ir the C. B. J. page 135 by Samuel Simmins, in which he declares that the Langstroth frame is entirely inadequate to the requirements of bees at any season, and especially during the winter.

A noticeable feature of the article mentioned is its seemingly contradictory statements. For instance, after declaring that the Langstroth frame is too small for the best results in any location, he makes the statement that the 10"x16" frame (which is still smaller) would fulfill

all the economic conditions required in a modern bee hive. Again after going to considerable length to show wherein a deeper comb than the Langstroth would give better results in wintering he (perhaps inadvertently) makes use of the strongest kind of argument in favor of very shallow combs for wintering. For instance, he says in part, "Let it be con-"sidered that during cold weather the "combs are really unnecessary except "as store cupboards. Under normal con-"ditions during late autumn, at the cen-"tral lower portions of the combs the "cells are all empty just as vacated by "the later hatches of brood. As the cold "weather comes on, the bees form upon "that portion of the combs, the nearest "possible approach to an unbroken clus-"ter, some of them occupy the empty "cells and rest head to head on opposite "sides of the centre walls of the combs, "while others crowd between. Thus they "make the best of the situation as they "find it; but careful experiments, con-"ducted over a series of years, have "always shown me that the bees prefer "to cluster in winter where there are no 'combs at all to intersect them, and in "this situation they have less difficulty in "maintaining that animal heat so neces-"sary for the preservation of life."

I quote Mr. Simmins, verbatim, at considerable length because I regard this particular quotation as about the strongest argument in favor of very challow frames for wintering that I have yet heard of. If I have a correct understanding of the English language, the above statement is equivalent to saying that combs of solid honey five inches