FARM.

ould not warrant obtained and the

PER? About two an article in one up in the spring of eing to compel the Some did not om, would carry a ulterated article of ity thus taken up teration were not ald not be given. ntal apiarian was were purchased, undance of brood clusively of buckextracting supers he brood chamber, mbs to the light. the honey under-This was the case during the early e brood chamber. chamber becomes to remove a porbability. being to

By this carrying ent of about three hould first be put o; and after they and the mixture remove the dark ioney it should be carrying up the resent time many bove, and do it at

b honey taken in proves the appearthe inexperienced in jarred in shipwill be of interest s in view were :

f supers with the r board next the supers, between

nd wood sides of more bee spaces. cent construction. ameter. During ome of wood and

APICULTURE.

During 1897 we also tested, in connection with the above experiment, a wedge placed at each side of the hive, and between the bottom board and brood chamber, the wedge being seven-eights inch square at the end next the entrance and tapering to a feather edge by seven eights inch at the other end.

The following is the result of a group of seven colonies with cloth or board and no bee-space over the sections compared with seven having a quarter inch bee space above :

Those without the bee space had decidedly more pop holes in the sections; there was also decidedly more propolis about them. Where pop holes existed, in those having no bee space above, they were much larger.

The result of seven colonies with the perforated divider and one bee-space between it and the wall of the hive, and those without the divider and additional bee-space :

The sections in the tier next the outside of the hive were much better filled where the divider and extra bee space were used. In addition to the repetition of last year's work, in a number of cases perforated metal was used in place of the divider of wood, and in no case did there appear to be any difference between the metal and the wood divider. The metal has, however, the advantage that it can be thrown into a weak solution of lye and cleaned, lasting for an indefinite time. This cannot be done with the wood.

Our or ject was two-fold in trying the wedges between the sides of the bottom board and the sides of the brood chambers. First, to increase the facilities for ventilating the hive; next, to compel the bees to go to the sides and end of the hive when coming in to unload honey. While we found them of great value in ventilating the hive, we are not prepared to say just to what extent the wedges assist in filling the outside sections. A more thorough test will be made of this next season.

PURE AIR, VENTILATION, AND ARTIFICIAL HEAT IN THE WINTERING OF BEES. During the summer of 1895 I had the good fortune to visit the apiaries and home of one of cur foremost and most enterprising Canadian Bee-keepers, Mr. C. W. Post, of Trentor, Ont. Mr. Post expressed great confidence in artificial heat for cellar wintering. He was kind enough to give his ideas and the system he thought it well to follow; and, as a result, a very thorough test was made during the winters of '95-6 and '96-7.

I am perfectly well aware that a great many have used fresh and pure air in the wintering of bees, and with more or less success. I am also aware that artificial heat has been applied. The instances on record are, however, less frequent; and I do not know of anyone who for a series of years has made a success of this; nor do I know of anyone who is constantly using artificial heat and fresh air to replace the air made impure by the bees. A combination of these should lead to success. In the application of pure air, the great difficulty has been regularity of current and temperature. When cold outside, it is necessary to exclude or partially exclude outside air to keep the cellar the proper temperature, and this we know leads to foul air. If the cold fresh air is allowed to enter, the temperature falls; and the bee keeper is often at a loss to know which of the two evils is the lesser.

Again, when the outside temperature is about the same as the inside, there is a tendency to stagnation; the atmosphere in the cellar becomes vitiated; the bees are correspondingly restless and proportionately worn out and aged. Sub-earth ventilation has been tried; but in this the above difficulties have presented themselves to a greater or less degree; and many have tried these methods for a time, only to abandon them in the end.

To cheer and comfort the fraternity (if comfort can be derived by having brethren in tribulation), I may say, in passing, that Dai ymen who require accurate temperatures and degrees of moisture in ripening cheese have experienced all our perplexities, and the more advanced in that calling are studying the question as we are. What we require is to be able to control temperature, and to secure a cheap and practical power $16 ext{ A C.}$

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