

works on bee-keeping. Next get together all your C. B. Journals for the past year (the December number of which I trust will be properly indexed) and bind them. Now select the question you wish answered or information upon, and with the aid of the index turn up and carefully read everything that has been written about it during the year. If you can also get *The Bee-Keepers Review*, or *Gleanings in Bee-Culture*, or *The American Bee Journal*, any or all of them for the past year or other recent years, go through them in like manner, and so with all other questions you wish to post yourself upon. If after doing this there are still some questions unsatisfactorily answered, take them with you to a bee-keepers' convention and have them threshed out there.

Visit also some successful honey producers, particularly specialists if any are within reach, and see how they do. Examine into their methods and see if they have not some ways of doing things better than you have, and if so plan to adopt them.

If you have the ability to practically apply the knowledge you have thus gained after having studied out this whole question of "profitable honey production," you are now in a better position to make bee-keeping pay, or else know why you cannot, then you may consider the one subscribing himself to this article as a false prophet.

Wintering Bees by Burying Them in Clamps.

By W. Z. Hutchinson, Flint Mich.

For many years I have wintered bees by burying them in the ground, much as farmers bury potatoes and other vegetables. I don't remember where I first got the idea, but I do remember having some correspondence on the subject with C. J. Robin-

son, of Richford, N. Y. He very persistently urged me to give no ventilation. He asserted that the bees would winter better with no ventilation—that the hibernation would be more perfect than in a "sea of oxygen." I was very loth to take this advise; and it was with many misgivings that I finally ventured to risk six colonies with no ventilation except that which would come through the earth. At the same time I buried a dozen other colonies, giving them ventilation by means of a four-inch tube laid along the bottom of the trench, and extending out into the outer air. There was also a similar tube at the top, extending from the bottom of the pit up through the earth some three or four feet. I remember that I had a thermometer hung, by means of a string, in this upper tube, and that I often climbed up and drew up the thermometer to learn the temperature. The outside temperature had very little effect upon that inside the pit. When the mercury stood at zero in the open air, thermometer drawn up from the clamp showed 43°. It did not vary three degrees from this in all winter.

The bees wintered perfectly in both clamps. It seemed as though they were just about the same as when set in the previous fall. The straw around them, and the hives and combs, were dry and clean and free from mold. My belief in the ability of bees to pass the winter with no ventilation was greatly strengthened. The next winter I put 32 colonies into one clamp, and wintered them perfectly with no ventilation. This brought my confidence up to such a height that, the next winter, I put 66 colonies into one clamp and lost nearly all of them. There were 16 hives that had live bees in them when dug out in the spring. These were weak in numbers, and several of them

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