

ng perceptibly, from which we may infer that, by placing hives close to each other in clamps, cellars, etc., they will keep warmer than when a greater distance apart. I thought, too, that after all, keeping the bulbs in the water gave safer indications of the rate of cooling, so I determined to try it over again once more.

In the third experiment the hives were placed on beds of ashes as before; but I now packed soft wet snow around each hive, and crowded it up against the walls every hour to prevent air-spaces forming. The bulbs of the instruments were placed in the water as in the first case. This experiment I regard as the most reliable of the three. The times of cooling down 75° were as follows:

Single-walled hive.....	503 min.
Straw-packed "	570 "
Cork-packed "	675 "

When Count Rumford made his elaborate experiments on the conductivity of materials used in clothing, about 100 years ago, his method was this: "A mercurial thermometer was suspended in the axis of a cylindrical glass tube ending in a globe, in such a manner that the center of the bulb of the thermometer occupied the center of the globe; the space between the internal surface and the bulb was filled with the substance whose conductive power was to be determined. The instrument was then heated in boiling water, and afterward being plunged into a freezing mixture of pounded ice and salt, the times of cooling 135° were noted."

My experiments were imperfect in this respect. Although the hives had been kept over night in the kitchen, there was a great difference between their temperature and the temperature of the water placed in them. Owing to the difference in material and thickness of the walls, the amount of heat absorbed by the walls in each case was not the same. If I could have placed the whole in a large oven, so as to heat all the materials to the same degree, as was done in Rumford's experiment, the result obtained would have been more reliable. As it is, however, the experiments give some indications of the comparative warmth of the different hive-walls.

S. CORNEIL.

Lindsay, Ont., Feb. 20.

HOW TO KEEP BEES AWAY FROM WATERING TROUGHS.

Among some of the good things we learned at Keokuk last fall was a little hint worth remembering from A. N. Draper. He is an extensive honey-producer—a man who owns several out-apiaries. Said he: "People have had a good deal to say about keeping bees away from watering troughs. I will give you a secret that is worth them all. Take a weak solution of carbolic acid, and paint it around the edges of the trough, and then they won't bother your neighbors. If you get them out of the habit of visiting such places, they will stay away." We have used enough carbolic acid in the apiary to feel pretty tolerably certain that this will work. Put this down in your note-book, and try it next season and report.—*Gleanings*.

A pigeon fancier in Hamme, Westphalia, made a wager that a dozen bees, liberated three miles from their hive, would reach it in better

time than a dozen pigeons would reach their cot from the same distance. The competitors were given wing at Rhyndern, a village nearly a league from Hamme, and the first bee finished in a quarter of a minute in advance of the first pigeon, three other bees reached the goal before the second pigeon, and the main body of both detachments almost simultaneously an instant or two later. The bees, too, may be said to have been handicapped in the race, having been rolled in flour before starting for purposes of identification.

Catalogues Received.

A. I. Root, Medina, O.—Seventy-second edition catalogue and price list of everything in the apiary—revised to January, 1891.

W. T. Falconer Man'g Co., Jamestown, N. Y., U. S.—Simplicity hives, bee-keepers' supplies, etc. Catalogue, 1891.

Dr. G. L. Tinker, New Philadelphia, Ohio.—Eighth annual circular and price list aparian supplies.

Orange Judd Co., 52 & 54 Lafayette Place, New York.—Catalogue of Rural Books.

Lambton Bee-Keepers.

The Lambton Bee-Keepers' Association will hold its semi-annual convention in the Watford council chamber, Watford, Ont., on the 11th of May 1891. All interested in bee-keeping are cordially invited.

W. E. MORRISON, Secretary, Alvinston.

Central Michigan Bee-Keepers.

The Central Michigan Bee-Keepers' Association will be held at Pioneer Room, at Capitol Lansing, on Wednesday, May 6th, '91, an invitation is extended to all.

W. A. BARNES, Secretary, Lansing.

WANTING—a situation by a practical Beekeeper, one who has had experience in all branches. Good references given. Address Box A, Mellis Corners

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