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of the insects, helped itself to a meal at slight cost, pecking three holes; one at 18, the other at 22.5 and the last at 30 cm., below the top of the branch. Notwithstanding the precarious condition of



Fig.8.—a Holes made by woodpecker. a' Id. covered with pieces of resin (b'). b Pieces of resin forming barricade. I-6 Cells separated by resin partitions. the stalk, opened at not less than four points, an insect thought it still serviceable and turned it into a nest for its progeny—and it must be owned, it did it well.

One cell had been built at the bottom of the canal. A piece of resin formed the floor, a transverse partition of the same substance the ceiling. Up to the present time my observations of Hymenoptera making their nests in pithy plants have not yet furnished me with any instances of an Apoid using resin for the construction of partition. A bee, however, it was, since some yellow powder, which remained in a cell, was proved by microscopic examination to be pollen dust. In Europe the *Heriades truncorum* L. is said to use resin for the same purpose.

After this first cell had been constructed, the insect seemed to feel some misgivings concerning the ultimate fate of its progeny, and left unoccupied that section of the tunnel which extended as far as the lowest orifice bored by the woodpecker. Here the wonderful instinct of the bee reveals itself. It placed a first resin stopper just below the level of this aperture, a second one in the hole itself and a third above. The stopper applied to the orifice closes it, but imperfectly, and does not fill the whole tunnel on the inside. But the two other pieces, above and below, are quite cylindrical and close the tube hermetically. All danger of intrusion from below being thus removed, the bee constructed

five other cells above this barricade. Once more it did not make use of the whole length of the tube between the two lateral openings, but stopped its work 2.5 cm. below the second hole. A straight