

correspond with each other, and the strength of the hinge, and the thickness of the frame, will always be proportioned to the weight of the door.

The more carefully we study the arrangement of these parts, the more perfect does the work appear. If we examine the circular margin of the door, we shall find that it slopes inwards, so that it is not a transverse section of a cylinder, but of a cone; and on the other side, that the frame slopes outwards, so that the door exactly applies to it. By this structure, when the door is closed, the tube is not distinguishable from the rest of the soil, and this appears to be the reason that the door is formed with earth. Besides, by this structure also, the animal can more readily open and shut the door; by its conical shape it is much lighter than it would have been if cylindrical, and so more easily opened; and by its external inequalities and mixture of web, the spider can more easily lay hold of it with its claws. Whether she enters her tube, or goes out, the door will shut of itself. This was proved by experiment; for though resistance, more or less, was experienced when it was opened, when left to itself it always fell down and closed the aperture. The advantage of this structure to the spider is evident, for whether it darts out upon its prey, or retreats from an enemy, it is not delayed by having to shut its door.

The interior surface of this cover to its tube is not rough and uneven like its exterior, but perfectly smooth and even, like the walls of the tube, being covered with a coating of white silk, but much more firm, and resembling parchment, and remarkable for a series of minute orifices,\* placed in the side opposed to the hinge, and arranged in a semicircle; there are about thirty of these orifices, the object of which, M. Audoin conjectures, is to enable the animal to hold her

\* Fig. 90, a.