

succession of deposits by which it has been formed. If an operculum were to be constructed of a considerable size, and were connected to the shell itself by a regular hinge, it would be entitled to be considered as a distinct valve. Here, therefore, we perceive, as was remarked by Adanson, a connecting link between the univalve and the bivalve testacea. A *Clausium* is another kind of covering, serving also for protection, and consisting of a thin spiral plate of shell, attached to the columella by an elastic spring, by which the plate is retracted when the animal retires into its shell. It thus corresponds exactly in its office to a door, opening and closing the entrance as occasion requires. An *Epiphragma* is a partition of a membranous or calcareous nature, constructed merely for temporary use. It is employed for closing the aperture of the shell during certain periods only, such as the winter season, or a long continued drought.

It is remarkable in how short a time this species of *Helix* will construct this covering, when circumstances occur to urge its completion. On the approach of winter, the animal prepares itself for passing that season in a state of torpidity, first, by choosing a safe retreat; and next by retiring completely within its shell, and then barricading its entrance by constructing the epiphragma just described, and of which the outer surface is represented in Fig. 119. Having formed this first barrier, the animal afterwards constructs a second, of a membranous nature, situated more internally than the first, and at a little distance from it. If at any other season, while the snail is in full vigour, the experiment be made of surrounding it with a freezing mixture, it will immediately set about constructing a covering for its protection, against the cold; and it works with such diligence, that in the course of an hour or two, it will have completed its task, and formed an entire epiphragma.* When the genial warmth of returning spring has penetrated into the abode of the snail, the animal prepares for emerging from its prison, by secreting a small quantity of a mucous fluid, which loosens the adhe-

* Gray, Zoological Journal, i. 214.