

into the water, with the well-protected eggs of birds, and still more with the growth of young mammals within the body of the mother.

317. But neither in fishes, nor in reptiles, nor in birds, does the vitelline membrane, or any other envelope of the egg, take any part in the growth of the embryo; while on the

passing off from it. At this period there exist true gills upon the sides of the neck, and a branchial respiration goes on.

315 d. The development of mammals exhibits the following peculiarities. The egg is exceedingly minute, almost microscopic, although composed of the same essential elements as those of the lower animals. The vitelline membrane, called *chorion*, in



Fig. 127.

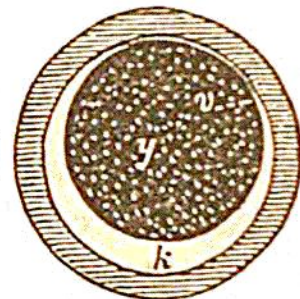


Fig. 128.

this class of animals, is comparatively thicker, (Fig. 127, v,) always soft, surrounded by peculiar cells, being a kind of albumen. The chorion soon grows proportionally larger than the vitelline sphere itself, (Fig. 128, y,) so as no longer to invest it directly, being separated from it by an empty space, (k.) The germ is formed in the same position as in the other classes of Vertebrates, namely, at the top of the vitellus, (Fig.

129;) and here also two layers may be distinguished, the upper or *serous* layer, (s,) and the lower or *mucous* layer, (m.) As it gradually enlarges, the surface of the chorion becomes cov-

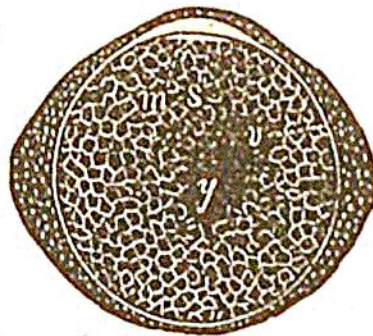


Fig. 129.

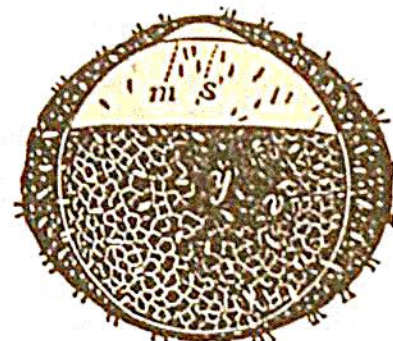


Fig. 130.

ered with little fringes, which, at a later epoch, will be attached to the mother by means of similar fringes arising from the walls of the matrix, or organ which contains the embryo.

315 e. The embryo itself undergoes, within the chorion changes