

converted into a wall, but portions of it, sometimes to a considerable amount, are torn away from the principal mass and cast out from the body, as if the residue of digestion. The first discharges from the intestines of the higher animals no doubt correspond to the waste matter of this young animal.

The horny sheath does not appear at any precise time, but varies considerably in this respect, as we may see in the next phase which we have to illustrate (*Figs. 13* and *13^a*); here the tentacles (*c*) are quite prominent, and yet there is not the least trace of a sheath to be observed. The digestive cavity is quite small, even less than in the last stage, and the opaque orange mass darkens the whole body to the very base of the tentacles. The cilia are still present, but immovable. In the next phase we may see that the tentacles (*Figs. 14, 14^a, and 14^b c*) develop very early their characteristic organs, the lasso-cells (Pl. X^a. *Figs. 7 a b* and *10*), and in such abundance that the parietes of the outer wall appear to be entirely composed of them. The outer wall (Pl. X. *Fig. 14 a*) of the body is very thin, and is composed of a single layer of cells, excepting in the tentacles, where the lasso-cells constitute a single layer by themselves, and the interior of the wall (*Fig. 14 a¹*), which here is very thick, is composed of an irregular mass of cells, identical with those of the rest of the body (Pl. X^a. *Fig. 8*). There are also lasso-cells scattered all over the body. The tentacles (Pl. X. *Fig. 14 c*), as far as they project beyond the general surface of the body, are almost entirely made up of a thickening of the outer wall (*Fig. 14 a¹*), the inner wall forming as yet only a short basal portion. The tentacles are so exceedingly contractile that it is next to impossible to determine whether all four of them are of equal age, or any one or two older than the others. In the figure which we have given representing the animal as seen from above (*Fig. 14^b*), the two longer tentacles would seem to be much older than the others; but when we see them at the next moment all retracted, and so merged into the walls of the body that the embryo appears like a perfectly smooth cup (*Fig. 14^c*), without the least trace of any appendages, it becomes clear, that, at this age, size has nothing to do with the degree of development at which the young has arrived. It is hardly conceivable that the simple, cup-like body with its widely-gaping mouth (*Fig. 14^c*) and perfectly smooth exterior is the same individual that a moment before bore such prominent tentacles (*Figs. 14, 14^a, and 14^b c*); and yet we have watched the transition from one state to the other without removing the eye from the microscope. The inner wall (*b*) is very thick and opaque; its interior surface is smooth and well defined, so that we may consider the digestive cavity (*d*) as firmly established and ready to perform its characteristic function. Taking advantage of the enormous gaping of the mouth, we have been able to study the cells of the interior surface of the inner wall (*Fig. 14^c d*), and find them (Pl. X^a. *Fig. 8*) to be identical with those of the