

organic shape, and the cells (*Fig. 23^a, a¹ a²*) are disposed in two parallel layers, as in the adult (*Pl. XXIII^a. Fig. 2, c*). Individually they are cylindrical, and about twice as long as thick. The remainder of the interior mass of cells (*a*) is the same as in the last stage, except that they are not so crowded. At the birth of the hydroid, the cells of the outer wall (*Pl. XXIII. Figs. 26, 26^a, and 26^b, a*) are too hyaline to be visible in a natural state. The only sign of organization that we have here, are the scattered lasso-cells (*a¹ a²*) which give the wall a nodulated appearance. At the globular tip (*Fig. 26, c*) of the tentacles these lasso-cells are crowded so as to touch each other, and their projecting ends give the surface a papillate aspect, while the lasso-threads, frequently extended, render it bristling here and there. The interior wall (*b*) is very conspicuously cellular. The cells are, however, far less numerous than in the adult; toward the base of the tentacles they are the most frequent, forming at least three layers (*b¹*) between the upper and lower side, but in the vicinity of the tip there are only two layers (*b*). The outer ends of these cells are irregularly four-sided, excepting in some instances toward the base of the tentacles, where they have a strong tendency to be polygonal. In a view from above (*Fig. 26^a*), the individual cells (*b*)—the two ranks which lie right and left—are opposite to each other, and as they are square, or at least parallelogramic, the walls of their coinciding and adherent ends form a thick partition (*b²*), which has the appearance of being a solid column, running the whole length of the tentacle. The contents of these cells are perfectly homogeneous and hyaline. The horny sheath (*Fig. 14^a, c*), which is developed just before the young escapes from its parent, is very transparent, faintly tinged with yellow, and, as far as we can see, structureless. We have a suspicion, that with improved lenses, a lamellar structure could be discovered.

The Medusoid.—In the beginning of the formation of the medusoid, the cells of the outer and inner walls are identical with those of the pedicel from which the bud springs. These characters they retain, for the most part, throughout the life of the medusoid, but there are one or two exceptions, where they undergo slight modifications. In the flat, thin tentacles (*Fig. 12^a*), those which compose the inner wall (*c*) are enormously developed, both in length and breadth, to about thrice their original diameter, and are perfectly hyaline. In a half-grown medusoid a single row of them occupies about one half the height of the tentacle, and form a broad border, just within the thin strip of the outer wall (*d*). In the proboscis of a full-grown medusoid, the cells of the wall (*Figs. 17, b, and 17^a, b*) are about half again as large as the original size, but otherwise very little changed.