

they are more or less rounded, so that the surface of the wall appears papillate. If a piece of a tentacle is cut off, it soon disintegrates, and these cells assume a spherical shape (*Fig. 1<sup>a</sup>, A B C*). In this condition their contents may be studied with great facility. When thus isolated, one can determine absolutely that the lasso-cells (*a b b<sup>2</sup> c d*) are within the cavity, or at least within the superficies of the cell. There is good reason to believe that the lasso-cells are not strictly within the cavity of the cell, but are imbedded in the thickness of the wall; but this is so extremely transparent that we have not been able to define its inner boundary with certainty. We have succeeded much better with the cells of the outer wall of the stem (*Fig. 4, b*), where the cell wall (*Fig. 6, c*) appeared to be quite thick, and, at the outer end, so incrassated (at *b*) as to include the whole length of the lasso-cell (*a*) which stood transverse to the surface. This thickening may not be, properly, a part of the cell wall, but a lining of it; on this point, however, we are much in doubt.

A larger part of the contents of the cells of the outer wall of the tentacles are coarse, irregular, granular, oily-looking bodies, some of which (*Fig. 1<sup>a</sup>, c*) are as large as the lasso-cells. The lasso-cells belong to the same type as those found in *Hydractinia polyclina* (Pl. XVI. *Figs. 10 and 11*), to the description of which we will refer for the details in regard to these bodies. The inner, or axial layer of the lower tentacles, is composed of very peculiar cells (*Figs. 1, c, 2, c, and 3, c*). Upon taking a profile view of the tentacle, these cells, at first glance, appear to be irregularly and sharply polygonal (*Fig. 1, c*), but, by plunging toward the centre of the tentacle, we find that they have a much greater diameter transverse to the axis than along the same, and hence that they are four or five-sided prismatic bodies. They do not all converge toward a central line, but trend parallel with each other, and extend from a plane which is parallel to the flat side of the tentacle, to the plane of the axis. In a view from above or below (*Fig. 2, c*) the tentacle, their longer diameter is displayed, showing, in a more direct way, their elongate prismatic form, and also another peculiarity, not easily to be discovered from any other point, namely, that they all have a greater or less inclination toward the tip of the tentacle, so that the two rows of superimposed cells meet at an obtuse angle, in the perpendicular plane (*c<sup>1</sup>*) of the axis. By taking advantage of the bending of a tentacle in its multiplied contortions, one may get a view of a most perfect transverse section (*Fig. 3*). The opposite sides of these cells are not often parallel with each other, one side making two or three curves in its course, while the other side makes but one or two curves, or sometimes is nearly straight; and again, the ends alternate irregularly, one end being broader or narrower than the opposite one. The walls are much thicker than those of the outer layer of cells, but we have never been able to see each one singly, so