

profile (*Fig. 15 h²*) or from above or below (*Fig. 7 h²*). In profile it would seem to be similar to that of the lobe (*j² j³*) until we come to the end (*Fig. 8 h¹ h⁵ h⁷*), where it suddenly thickens to more than double its extent, as seen toward the base; but in the view from above it shows a sudden increase in thickness (*Fig. 7 h²*), which it retains especially at the base, but toward the end decreases in a measure, and then at the end thickens again as in the profile view (*Fig. 8*). The cells of the outer and inner wall below the eye are very similar among themselves, but vary somewhat according to their situation; and in the eye itself (*h*) the variation is very strongly marked. The cells of the outer wall (*h¹*), as well as those of the lobe (*j²*), may be compared to broad polygonal prisms, disposed side by side in a single layer; their contents are homogeneous and transparent, nor does there appear to be any mesoblast. At the base (*Figs. 7, 8, and 15 h⁶*) of the eye they decrease in length with greater or less rapidity according to the degree of expansion or contraction of the peduncle. Sometimes the decrease is rather gradual (*Fig. 15 h*), and they may be easily traced as cells all over the end of the eye-facets (*h*); at other times, and this is the most frequent case, they suddenly decrease in length and assume the form of thin polyhedral disks (*Fig. 8 h*), thus constituting a tenuous layer (*Fig. 8 h, Fig. 14 h¹*) all over the end of the organ of vision. The cells of the inner wall (*Figs. 7, 8, and 15 h²*) are also prismatic in shape, and vary in length according to the degree of expansion of the peduncle, and appear different according to the position in which the latter is viewed, whether from above or below or in profile: in the latter aspect (*Figs. 8 and 15 h²*) they resemble those of the outer wall very closely; but in a view from below (*Fig. 7 h²*) they have a more prismatic columnar look, and vary in length from double to thrice their breadth. Whether in one view or the other, they rapidly increase in length after they enter the faceted eye; and here they lose their prismatic shape, and take on a polyhedral conical form (*Fig. 8 h¹ h⁷*) and converge nearly to one point (*h⁷*). At the base (*h⁶*) of the facets their conical form is not so apparent; but at a short distance beyond this they are strictly conical, and all have their apex at the centre (*h⁷*) of the sphere. And now, too, another element enters into the composition of these cells: as we view them from the outside, and endwise (*Figs. 7, 14, 15 h⁴*), they appear much darker and more highly refractive, as if they were filled with some oily substance; but when we obtain a profile and sectional view (*Fig. 8 h¹ h⁷*), we find that the highly refractive body (*h⁴*) occupies about one quarter of the outer end of each cell; and all these standing side by side in one layer, each in its respective cell, produce the effect of a third wall (*h⁴*). A closer examination of these bodies reveals the interesting fact that they are lenticular (Pl. XI^b. *Fig. 16 δ ι*), and have the form of a plano-convex lens; the convex face (*x*) is turned toward the outer end of the cell, and the plane face toward