the base (ζ) of the cell; the edge is abrupt and as if cut away, so that it has a polyhedral contour, with generally six sides (Pl. XI[b]. *Figs.* 11 and 16 θ ι), and each side fits exactly against the several sides of the cell (δ η). In consequence of the arrangement of the lenses in a spherical contour, these sides are not parallel to the axis of the lens, but converge slightly from the anterior convex face backwards, so that in a view from behind (*Fig.* 11) there appears to be a double outline (ι). The anterior convex face ($\varkappa$) does not touch the outer end (δ) of the cell, but there is a very shallow space (ε) between the two. The posterior plane face is perforated by a comparatively broad aperture (*Figs.* 11 and 16 ν) leading into a cylindrical cavity (λ), which occupies the axis of the lens, and penetrates a little more than two thirds of its thickness in a direct line toward the anterior face, and terminates abruptly. The sides of the cavity are convergent backward, and trend parallel to those of the lens, and the transverse diameter is a little more than one quarter of the breadth of the lens. When seen from the posterior face (*Fig.* 11), this cavity appears to be divided into as many compartments (μ) as there are sides to the lens; but we find that these compartments, or diverticuli, are superficial (*Fig.* 16 μ), and proceed from the posterior end of the cavity, near its aperture (*Fig.* 16 ν), close beneath the flat face of the lens, to the sides (θ ι), and strike them perpendicularly half way between the angles. The outlines of this cavity are rather irregular, especially in the diverticuli (μ), and, being more or less wavy, they produce the effect of a wall, in profile. It is this cavity which has the appearance of being a mesoblast, in the centre of each cell, when they are looked at endwise (*Fig.* 7 h^1). If the eye is cut to pieces, the lenses drop out, and may then be turned in every direction for the study of their shape. In this manner we have been enabled to turn a lens up on one of its sides, and trace the actual curvature of the anterior face (*Fig.* 16 $\varkappa$); and we found this curvature to be spherical. Here, then, we have all the elements of an optical apparatus, sufficient to produce a distinct image. No one will pretend to deny that the eye of an insect is a true eye, having all the properties of distinct vision; and if so, we are fully justified in claiming for the eye of Aurelia the same faculty. Curiously enough, too, the relations of the different parts of this apparatus are the same as among higher animals; but whether the several parts perform similar functions we will not pretend to affirm. First, we have the cell of the outer wall (*Fig.* 16 α), with its outer face for the cornea and its contents for the anterior chamber of the aqueous humor; then the posterior wall (β) of the same cell (α) and the anterior wall (δ) of the cell (η) containing the lens, combined, would be the membrana pupillaris, which is imperforate; next, the space (ε) between the membrana pupillaris and the front of the lens would be the posterior chamber of the aqueous humor; then comes the crystalline lens (θ ι);