main cavity, the entrance to it is a straight line between these opposite folds (Pl. VI. *Fig.* 1). The oral aperture presents thus a longitudinal fissure, and the two arms which have a tendency to approximate one another on opposite sides, are respectively on the two sides of that longitudinal fissure. There is, therefore, a sort of bilaterality introduced in these radiated animals, in consequence of their peculiar mode of increase of the oral appendages, and their tendency to diverge from the uniform radiating disposition which they exhibited at first. The rectilinear radiation of the oral appendages, so conspicuous in the young, is also further lessened by the circumstance, that the enlargement of their margin causes them to wave to and fro in folds which widen gradually from the tip of the arms towards their base, where they are so wide as to become entirely one-sided. In this stage of their development, the oral appendages have become so thick, especially at their base, and the oral tube, which at first was quite distinct from the prolongations of the corners of the mouth, has become so intimately connected with the base of the arms, that these parts have, in a great measure, lost their prior flexibility, with the exception of the margin surrounding the outer oral aperture, and instead of hanging loosely down, the arms have a tendency to remain stretched horizontally, their tips only bending downwards; and when the gelatinous disk is strongly arched, and its margin bent inward toward the appendages of the lower surface, as in Pl. VIII. *Fig.* 1, and Pl. VI. *Fig.* 2, the arms do not project at all beyond the outlines of the body, but are, on the contrary, coiled up sideways in the concavity formed by the arching of the whole body.

On separating the mesial fold of the arms, and turning sideways their opposite margins, the short canal between them, which leads to the central cavity, appears still quadrangular (Pl. VI. *Fig.* 3). But here also, great changes have taken place in the outline of the sides of that opening, as a comparison with Pl. XI[b]. *Fig.* 17, may show. The angles of the inner opening of the oral tube are more prominent, in consequence of the closer folding of the back of the arms, and the sides of the quadrangular aperture are deeply emarginate, while they are straight in the young; and these emarginations lead to the channels, by which the genital pouches communicate with the main cavity. The main cavity itself is at first an open space between the upper floor or gelatinous disk of the umbrella, and the lower floor from which arises the oral peduncle; but in proportion as the genital pouches, which at first are only small, enlarge so far as to occupy almost entirely the central space where their inner margins are brought close together, as in Pl. VII. *Fig.* 1, the lower surface of the gelatinous disk begins to bulge in the centre, and to press down between the inner angles of the four genital pouches, until they reach the upper and inner surface of the oral appendages, with which they are brought into immediate contact (Pl. IX. *Figs.* 8 and 9 *o*), thus lessening the main