elongated cavity, and the vertical tubes extending along the base of the tentacular apparatus, constitute, indeed, most complicated pieces of machinery, in which hydrostatic power, elastic levers, and the contractions of the motory cells, give rise to highly complicated combinations and most diversified phenomena.

In the first place, the cavity itself from which each of the two tentacles issues (Pl. II^a. *Fig.* 15 *j j*^{1}, *Figs.* 22 and 23 *j*) is a wide, elongated, fusiform sac, the rounded extremity of which is turned towards the actinal pole and bent obliquely sideways, so that its flat base is turned towards the vertical axis, and its open extremity towards the abactinal pole and sideways. In this cavity, to which the surrounding water has free access through the opening *j*^{1}, the tentacle with its complicated base is attached by a broad surface to the inner side of the sac. And though the central chymiferous cavity communicates freely, through the interambulacral tubes, with the base of the tentacular apparatus, there is no free passage from one of the cavities into the other. The fluid which is injected into the tentacular tubes runs back through the same channels into the main trunk, and the water which fills the cavity of the tentacular apparatus empties through the same opening by which it is introduced. In a state of dilatation, water penetrates from without into the tentacular sac, and diluted chyme is injected from within into the tentacular tubes; and in a state of contraction, the chymiferous tubes are emptied at the same time that the water is pressed out. During these alternate contractions and dilatations, the tentacle itself may be coiled up in the cavity or drawn out at full length, though in the most dilated state the threads generally hang out. There seems to be also an antagonism, in a middle state of dilatation, between the filling of the tentacular chymiferous tubes and the protrusion of the tentacles themselves. But I was mistaken formerly, when supposing that the chymiferous tubes penetrate into the basal dilatation of the tentacles:[1] they only extend along their basal disk. The filling of these tubes may, however, cause the whole tentacular apparatus to protrude into the sac to which it is attached.

Nearly two thirds of the length and breadth of the proximate side of the actinal or closed end (*Fig.* 87 *j*^{2} to *j*^{3}) of the tentacular socket is occupied by an oblong disk (Pl. II^a *Fig.* 15 and *Fig.* 87 *β β*′ *β*″ *β*‴, *γ γ*′ *γ*″ *γ*‴), from the mid-length of which the tentacle (*g γ*′ *k*) arises. The distal side (*Fig.* 15 *β*) of the disk, or that which faces toward the periphery of the body, is convex, with a shallow furrow (*Fig.* 15 *γ*), extending from the base (*g*) of the tentacle to the actinal end (*γ*″) of the disk; and the proximate side (*Fig.* 87 *γ*‴), or that which faces toward the axis of the body, is a plane, immediately beneath whose surface and next to the edge

[1] When comparing the plates of my paper in the Memoirs of the American Academy, allowance should be made for this mistake, which is especially noticeable in *Figs.* 1 and 2 of Pl. IV.