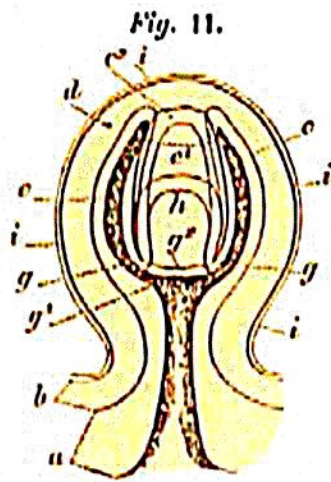


and wood-cut 11, c c^1 c^2) have become twice as long as they are broad, and, in addition to this, a new feature is introduced, in the form of a broad and short



hernia (wood-cut 11, h), which arises from the bottom of the cup. The four channelled lobes, or radiating chymiferous tubes, as they are designated in the full-grown medusa, press closely against the hernia. From the relation which this hernia bears to the radiating tubes, and its position in the bud, it is evident that it is the proboscis of the growing medusa, and as such we will hereafter designate it, even though it is not yet open, as in the adult. The chymiferous fluid circulates freely in the proboscis, and may be seen, at various times, whirling to and fro, in gyratory currents.

with greater or lesser velocity.

On account of the position of the medusoids, it is not easy to obtain a distinct end view of them, except now and then, when they are situated on the neck of the hydroid, which is not so dark as the head. In this position we have observed a medusoid, hardly older than the one just partly described, which may very well serve to illustrate the peculiar relations which the radiating tubes bear to each other and to the proboscis. These tubes (Pl. XVIII. *Fig. 8^a*, and wood-cut 12, c) are a great deal broader than at the time they were formed (wood-cut 10, c); they are, in fact, so much expanded that they touch each other at their extreme edges (wood-cut 12, k). In consequence of this, the single wall (wood-cut 10, iw), which was quite conspicuous between the chymiferous tubes of the earliest stages, is here almost evanescent. In a transversely sectional view, the chymiferous tubes are semi-cylindrical, and have the flat side (*Fig. 8^a* and wood-cut 12, m^1) next to the proboscis (m). The channels of these tubes are also segments of a cylinder. The rectangular disposition of these tubes corresponds with the shape of the proboscis, which has a square outline, with sides (m) running parallel to the faces of the tubes. Its cavity (h), however, does not accord with the contour of the wall, but is perfectly circular in outline. The space not occupied by the proboscis is still filled by the thickening of the outer wall (Pl. XVIII. *Fig. 8*, and wood-cut 11, d ; *Fig. 8^a*, and wood-cut 12, m m^1). Presently, however, this thickened part becomes hollowed, at the region opposite the proboscis, to such an extent, that only a moderately thick layer (Pl. XVIII. *Fig. 9*, b^1 n , and wood-cut 13, b^1 n) is left as a lining to the cup (a) formed by the inner wall and its hernia, the proboscis (n^1). An ideal vertical section through the medusæ-bud, cutting the walls at two opposite points, between the radiating tubes, may lead to a clearer view of the relations

Fig. 12.

