

SECTION II.

THE MEDUSOID BUDS OF CLAVA LEPTOSTYLA.

The medusoids of *Clava leptostyla* are the most simple of all the Tubularians except those of *Rhizogeton fusiformis*, which are almost identical in the arrangement of their walls. (See Pl. XX. *Figs.* 17-21.) They are simple, rounded, and closed buds, attached to the main stem by a tapering pedicel, and may be compared to incipient *Medusæ*-buds of the types in which the buds become true *Medusæ*. But in this genus they are not freed, and do not assume the form of an open bell. In their most highly-developed state, there is only a single wall (Pl. XX. *Figs.* 11-15, *a*¹) in the spheroidal buds, and this is homological to the disk or umbrella of the spheroidal free *Medusæ*. This wall, when followed along its course, becomes continuous with the outer wall (*a*) of the pedicel and the body. It is of uniform thickness throughout, and equal, in this respect, to its continuation on the pedicel and body. The only point where the walls may be said to be double, is next the junction of the peduncle (*a b*), at what, homologically, is the top of the disk of a common *Medusa*. From the base of the proboscis (*d*) its own single wall dilates, and passes a short distance down the inner surface of the wall of the disk, and thus forms a narrow, sharp-edged ring (*b*⁵), and, moreover, renders the disk double-walled at this point. The proboscis (*d*) projects through nearly the whole depth of the bud, and is almost uniform in breadth throughout, there being only a slight dilatation near its tip. It usually occupies from one fourth to one third of the transverse diameter of the cavity of the bud. Its single wall is as thick as that of the disk, and is uniform from tip to base, at which latter point it dilates, as we have described above. There is no mouth at the tip of the proboscis, nor any means of exit, for the circulating fluid, which bathes its inner surface, except to return backward through the way by which it entered. The cavity of the bud, in the males, is filled by the spermatic mass (*Fig.* 16, *b*²), or, in the females, occupied by either two or three eggs (*Fig.* 11, *b*³), or segmented masses (*Figs.* 12 and 13, *b*³), or planulæ (*Figs.* 14 and 15, *b*³), according to the age of the Medusoid. These imperfect *Medusæ*, which, from their relations to their Hydroids, are as truly *Medusæ* as the *Sarsisæ* arising from *Syncoryne*, exhibit the most striking resemblance to the so-called gonocalyx of the Siphonophoræ.

The pedicel, in connection with the medusoid, forms a pear-shaped figure, the former constituting the narrowing, inverted, conical portion. The greater bulk of this cone is formed by the inner wall (*Figs.* 11-15, *b*), which, at the base (*b*⁶) of