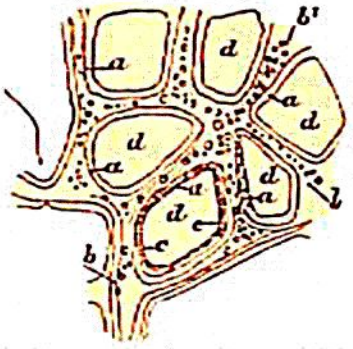
The inner wall (*Fig.* 3, *b*) is very thick, and constitutes the greater bulk of the body; it has the same extent as the outer wall, and is in more intimate connection with the active functions of the whole colony, forming the immediate lining of the digestive cavity (*d*), which receives the chymiferous fluid, in common with the other hydroids. Its inner surface is lined with an irregular layer of brownish-red, coarse granules, of the same nature as those (*Figs.* 5ᵃ, *g*, and 5ᶜ, *c*, wood-cut 34, *b*¹; Pl. XXVI. *Fig.* 18, *b*¹, Vol. IV.) seen in the ramifying canals and the sterile hydroids. The same may be said of the cells of this layer as of those of Coryne mirabilis (p. 205).

Fig. 34.



The retiform stolon of Hydractinia polyclina. From nature, by H. J. Clark.

a outer wall in profile, at the edge of the depressions (*d*). — *b* inner wall hollowed by the chymiferous canals. — *b*¹ granules circulating in *b*. — *c* cells of *a* in profile. — *d* depressions in the outer wall, which appear sometimes to be pierced.

From the 15th of December, 1855, to the 30th of April, 1856, the fertile hydroids on our coast were free from medusæ-buds, but from July to September, 1854, they were budding copiously. At Charleston, South Carolina, they were found budding from December, 1851, to February, 1852. During the unproductive season, we have found the sterile hydroids just as fully developed as at any other time. We have never known any instances in which the tentacles appeared to be resorbing, or indefinite in outline, except when the colony was attached to a shell which was cast ashore by the tide, or dragged about by the Hermit-crabs. In tide-pools, among the rocks to which they are attached, they flourish most luxuriantly, and do not exhibit any signs of unhealthiness. Each medusa-bud arises singly, in the form of a hernia, from the walls of its parent, either closely together, and nearly on the same level with each other (*Fig.* 2, A B C, 4, 4ᵃ, and 4ᵇ), or scattered along the length of the body (*Figs.* 1, A B C, and 3).

Excepting that they contain spermatic particles instead of eggs, the medusoids of the males do not differ from those of the females, but owe their dissimilarity simply to the fact that the fecundating mass, which fills them, is yellow, and uniformly diffused, whilst the eggs of the females are grayish, and present the appearance of several distinct masses. During this season the colony is much more crowded, and seems more densely packed than at any other time. Near the margin of the colony the reproductive hydroids are higher, and even equal the sterile forms in stature. Compare *Fig.* 1, A B, with D. Some of these have no buds on them (*Fig.* 1, E), but in other respects are not different from the gravid ones (Compare *Fig.* 1, E with A, and *Fig.* 2, A B C), not even in the apparently exclusive peculiarity which they possess, usually toward the outskirts of the colony, of frequently bending upon themselves till the head touches the base. On the extreme border of the colony they are not restrained in their contortions, and may be