As regards the details of the anatomy of this hydroid, what has been said of Parypha crocea (p. 250) might be repeated here, with a few modifications, which we will now point out. The proboscidal tentacles, not less than fifty, in the oldest hydroids, do not all take part in the formation of the converging ridges which run to the mouth, but only those of the uppermost series, while the bases of the others are merged into the proboscis lower down. The ridges which are formed by their decurrent bases project to a quarter or less distance down the proboscis, according to the size of the tentacles from which they originate (*Fig.* 4, *a*).

Below the terminal globose expansion of the stem, the interior wall has a very remarkable structure, which has no parallel in any other of the Hydroids. Upon making a careful transverse section with a very sharp scalpel, we were surprised to find that at least two thirds of the stem within the boundary of the outer wall is filled by a solid central mass, composed entirely of large polygonal cells (Pl. XXIII^a. *Fig.* 8, g^4). At the periphery of this mass, there are several longitudinal channels (j j^1), disposed at pretty regular intervals, and varying in number, according to the age of the hydroid, from fourteen downwards. One of these channels (j^4) is always much larger than the others, and is equal to one fourth the diameter of the whole cellular mass (d g^4), while the smaller ones (j) have one half this diameter. The larger channel is the only one present during the earliest period of growth of the young hydroid, and at that time constitutes the broad chymiferous cavity of the stem. Unlike the smaller channels, it extends for the whole length of the stem, in unbroken continuity, and has, in its course, no connection whatsoever with them; whereas the smaller channels fork, from time to time, as they pass upward, thus increasing in number according to the age and length of the stem. All these channels may be seen with the naked eye (Pl. XXIV. *Fig.* 1); but with a low magnifying power the difference between the larger channel (*Fig.* 1^a, a^1) and the smaller ones (a) becomes very apparent.[1] The large channel varies from cylindrical to broadly ovate, and in the latter case the broader diameter trends toward the axis of the stem. The smaller channels (Pl. XXIII^a. *Fig.* 8, j) are broader, in a direction trending toward the axis of the stem, than they are

[1] We find the large, and the small channels also, in a very closely related species, the Tubularia indivisa of Europe, sent to us by Sars from the coast of Norway; and if the observations of Dr. T. S. Wright, which are published in the Edinburgh New Philosophical Journal for January, 1858, p. 113, Pl. III. *Figs.* 2 and 3, were made upon this same species, then his discovery, although very interesting, was only a partial one. It hardly seems possible that he could have noticed the channels, from the outside of the stem, without seeing also the single large one, which is very conspicuous, and thus have been led to inquire into the cause of this difference by a more careful section than the crushing blades of a pair of scissors, however sharp, would afford.