which is flattened at the base of attachment.[1] In this condition it is easy to observe that each cell is covered exteriorly by a single layer of exceedingly minute granular bodies (Pl. II[a] *Figs.* 7, 9, and 12 *f*). As the tentacle contracts, the lasso-cells become mutually compressed; at first but slightly (*Figs.* 16 and 17), but finally so as to be sharply polygonal (*Fig.* 13 *a*). The granular coating is so dense that the coiled thread within is not so conspicuous as in the lasso-cells of the Discophoræ. Even with a magnifying power of five hundred diameters, it is very difficult to detect the thread whilst the cell remains attached to the tentacle, and then it is seen foreshortened; for a profile view is out of the question, except when the tentacle is stretched to the utmost, and then, owing to its activity, only a mere glimpse can be obtained. The only convenient method of observing them is by cutting off one of the fringes, when with unusual readiness the lasso-cells drop away from their attachment. If now they are placed upon a glass slide they may be rolled about in every direction, and thus exposed in any desired position. No satisfactory elucidation of the nature of these cells can be obtained by using objectives of ordinary definitions, for the granular coating is confounded with every thing else;[2] but, in order to plunge into the midst of the contents

[1] It is not possible to see these cells in this condition unless the objective of the microscope is plunged without ceremony into the water of the deep jar in which these animals must be kept. By gradually cooling the water until it becomes icy cold, a small quantity will serve to keep Medusæ in the full vigor of life, and then they may be observed without mutilation. Unless the brass-work be varnished, the chemical reaction of the sea-water invariably disturbs the animal, and causes it to contract very closely. With a little care, a power of from three hundred and fifty to five hundred diameters may be used.

[2] Gegenbaur, who was the first to publish any thing about these cells (Wiegmann's Archiv, March, 1856, p. 179, Taf. VIII. *Fig.* 12 *e e'*), gives a very meagre account of them, and shows that he does not know their typical difference from the lasso-cells of the discoid Medusæ and all Polypi. His brief notice of the lasso-cells of what he considers a new species of Cydippe — but which is probably a new genus — reads thus: "Both the cirrhi and the margin of the appendage are covered by round nettling cells, 0,005‴ in diameter (by mistake for 0,005″, no doubt), which inclose a smooth, spiral thread. If the thread extrudes, it shows the peculiarity of not straightening out at once, as do all other lasso-threads observed by me, but remains for some time in a long drawn out spiral. The end remaining, during protrusion, within the vesicle, stands in connection with a number of round granules, which are grouped in a blackberry-like form." Later in the same year, Dr. T. Strethell Wright (Edinburgh New Phil. Mag. October, 1856) also published a brief notice of these cells, which repeats the errors of Gegenbaur, and adds nothing new whatever. The animal which he examined was a genuine Pleurobrachia, if it was the same as the one he refers to in the July number of the Journal of the same year. He says: "These cells were spherical, and opaque from the presence of molecular matter in their interior. When ruptured by pressure, they were found to contain a simple short thread, more or less closely coiled in a spiral form. The application of distilled water burst the cell walls and uncoiled the threads." From the above it is evident, that neither Gegenbaur nor Dr. Wright had studied the lasso-thread whilst coiled