rising together and constricting at their base, form a globular sac with a short and moderately thick peduncle. In the mean while, the space between the walls has gradually increased in size, but is constantly filled by the egg, which develops at the same rate, until the medusa has matured (*Fig.* 16), when the egg occupies about four fifths of the whole bulk of the projecting body. In this state the inner wall (*Fig.* 16, *h*) is inverted upon itself, and constitutes a shallow, saucer-shaped basis for the egg. The chymiferous cavity (h^4) penetrates to the extreme edge of the saucer, where, in profile, it appears like an incipient stage of the radiating chymiferous system. In later stages, when the segmentation of the yolk is going on, the saucer gradually diminishes, and finally becomes a mere disk (Pl. XXXI. *Figs.* 5, 5^a, 6, and 6^a, *h*) or truncate termination (*Figs.* 7 and 8, *h*) of the interior wall, and, at the same time, the yolk mass gradually fills the space left by the retreating saucer, and, finally, becomes a globular mass (*Fig.* 8, *ac*).

The egg (Pl. XXXI. *Fig.* 2, *ac*) is always more or less flattened, even at maturity (Pl. XXX. *Fig.* 16, *ac*), when upon the point of undergoing segmentation. It consists of a dense mass of minute yolk granules (Pl. XXXI. *Fig.* 2, *ac*), and a large, tough, clear Purkinjean vesicle (*Figs.* 2, *p*, and 2^a), which contains several irregular, scattered mesoblasts, and, within each of the latter, one, two, or three very minute granular entoblasts. The process of segmentation is very easily traced, on account of the moderate degree of opacity of the yolk; it commences by forming a furrow (Pl. XXXI. *Figs.* 3, 3^a, and 3^b, $a\ a^1\ a^2$) across the yolk on that side which lies next to the peduncle of the medusa, that is, on the abactinal side. The division proceeds very rapidly; in fact, it could actually be seen, for, in one hour, not only had the yolk separated into two, but each half had divided again into two (*Fig.* 4, *b c d e*), by furrowing transversely (*f g*) to the primary constriction ($a\ a^1$). That the segment masses are not always of equal size among themselves, may be seen in two of our figures (*Figs.* 5 and 5^a), which were drawn carefully to illustrate this point, and lettered correspondingly with *Fig.* 4. It will be noticed that the first and second constrictions (*Fig.* 4, a, a^1–f, g) pass through the yolk in planes which are parallel to the axis of the medusa, but at right angles to each other. In the next stage, each of the four segments divides in a direction either directly (*Fig.* 6, $b\ c$, $b^1\ c^1$) or obliquely transverse (*Fig.* 6^a, $d\ e$, $d^1\ e^1$) to the axis of the medusa, so as to form eight segments. As the self-division goes on, the yolk gradually becomes less opaque, so that, by the time it is separated into thirty-two masses (*Fig.* 7, *ac af ag*), the granular contents (*Fig.* 7^a) of each segment may be seen without difficulty. Here, too, as in former stages, the segment masses vary considerably in size; some of them (*ag*) being fully one third greater in diameter than others (*ac*). It is, also, a very notable fact that the yolk, as a whole, diminishes in bulk, as segmentation proceeds (compare *Figs.* 6, 7, and 8) and the