ency of its cells. The subsidiary layer (Pl. 9e, fig. 6, *n*, o^1) differs in nothing from that of the last embryo, (Pl. 9d, fig. 1,) excepting that it is not separated from the vertebral layer (f^1) by a hollow space; but this arises, as we have shown before, from the inequality in the development of the different organs.

In another embryo, which in some respects is no farther developed than the last, that part of the spinal tube which forms the brain (Pl. 12, fig. 3, e^1, fig. 3a, e^1) is closed over at the most anterior part; but the meeting edges are as yet not obscured, and a slight depression (c^1) remains at the extreme end of the fold, though it does not appear to amount to a passage-way into the brain cavity. The posterior part of the spinal marrow is much more extended backwards than in the last, and narrowed into a distinct band, still open and spreading at the hind end. The dorsal vertebræ are more marked, both externally and by a growing transparency in the centre, (Pl. 12, fig. 3, 3a, 3b,) and the backward extension of the vertebral layer is more defined and distinct from the subsidiary layer. We have already mentioned the wings (Pl. 12, fig. 3, 3a, a^5, a^6) which stand out on each side of the anterior part of the body, but again call the attention of the reader to this point, in order to explain the singular appearance of that region in another embryo, of about the same age (Pl. 12, fig. 4). Here the inequality of position and configuration of the projections that stand out from the body arise from the slight turning of the embryo upon its axis, and the consequent tension of the wings.

In a phase a little farther advanced, (Pl. 12, fig. 7,) in addition to the increased closing over of the tube of the spinal marrow at the posterior end, the farther multiplication of the dorsal vertebræ behind, and the increased backward extension of the anterior edge of the closing over ventral cavity, a new feature appears — a glimpse of which has been given in a younger stage, (Pl. 9d, fig. 1, *h*, j^2; Pl. 9e, fig. 5, j^2) — upon the upper surface of the subsidiary layer, in the form of a broad, transverse band, (Pl. 12, fig. 7, *i*,) connected at its middle with a longitudinal one, (*h*,) which forks (*j*) as it extends towards the head. A closer examination shows that this band is a hollow tube, and contains a movable, granular fluid, indicating the first steps towards the development of the circulatory system. At this time the circulation is not continuous, but moves simply backwards and forwards, in compliance with the impelling force of the periodical contraction and expansion of the longitudinal portion of the tube, (*h*,) which is the heart, without doubt. Beyond the outlines of the body, this figure represents the dark, clear space (*d*) mentioned in a former page, (p. 538,) and also the thickening of its outer edge (i^1) in the subsidiary layer. It will be noticed, that, on each side of the body, this thickened ring curves inward towards the transverse portion (*i*) of the circulating system within the body. The meaning of