more prominently the growing differentiation of the two opposite portions of the embryonic disc known as the cephalic and the caudal amniotic hoods, in contradistinction to those parts situated between them and at right angles with them, another feature develops itself, under the form of a sharply marked, superficial, short furrow, beginning near the cephalic end, (Pl. 9e, fig. 3, *b*; Pl. 11, fig. 3, *b*,) and trending thence backwards; thus dividing the body into two equal portions, which correspond to the right and left halves of the whole system. The elongation of this furrow continues for some time, (Pl. 11, fig. 4, 5, *b*; Pl. 9e, fig. 4, *b*,) and reaches almost to the caudal end, before any other peculiarity in any way related to its growth appears at the surface. A transverse section of the embryo, at the two periods just mentioned, shows that the longitudinal furrow (Pl. 9e, fig. 3a, *b*, 4a, *b*,) is not a hollowing out of a channel in the depth of the germinal layer, but that the whole thickness of the latter is depressed in the form of a sharp fold, which projects like a ridge on the lower side. But, beneath all this there is an important change going on, which has the closest connection with the furrowing above. In the younger of the two embryos just quoted, (Pl. 11, fig. 3; Pl. 9e, fig. 3, 3a,) at the upper side of the thick subsidiary layer mentioned above, (p. 536,) a broad band of its component, loosely packed, granule-like cells, as thick as the germinal layer above it, has become separated and combined into a more firm stratum, (Pl. 9e, fig. 3, $f^1$, 3a, $f^1$,) equalling the length, and following the curve, of the whole embryo, but falling considerably short of the breadth of the same, and only occupying about one third of its whole breadth on each side of the middle line or furrow. The anterior and posterior ends (Pl. 9e, fig. 3, $f^1$) of this band still remain continuous with its original basis, the subsidiary layer, (Pl. 9e, fig. 3, $o^1$,) but laterally it is clearly and sharply separated (Pl. 9e, fig. 3a, $f^5$). It is important to notice, that, in this instance and in others of a similar kind, this proceeding is not a splitting up into thinner membranes of an already well developed cellular tissue, but a secession, a withdrawal of a certain amount of loose, unconnected cells from a larger bed or heap of the same materials. However, inasmuch as these cells are evidently arranged for a certain purpose, we do not intend to deny that there is a determined relation among them, though still in an incipient state.

In the older embryo, noticed above, this broad band still follows the curvature of the lower side of the body, (Pl. 9e, fig. 4, $f^1$,) which, up to this time, is greatest, and more folded in, at the cephalic end, whilst it has become more extended laterally (fig. 4a, $f^1$, $f^5$). Its central axis beneath the furrow appears to be differentiated in structure, since, when seen from below, it presents a sharply defined, narrow strip, having a tint dissimilar from that on each side of it (Pl. 11, fig. 5a, *b*, and Pl. 9e, fig. 4a, *g*). This is doubtless the chorda dorsalis, the