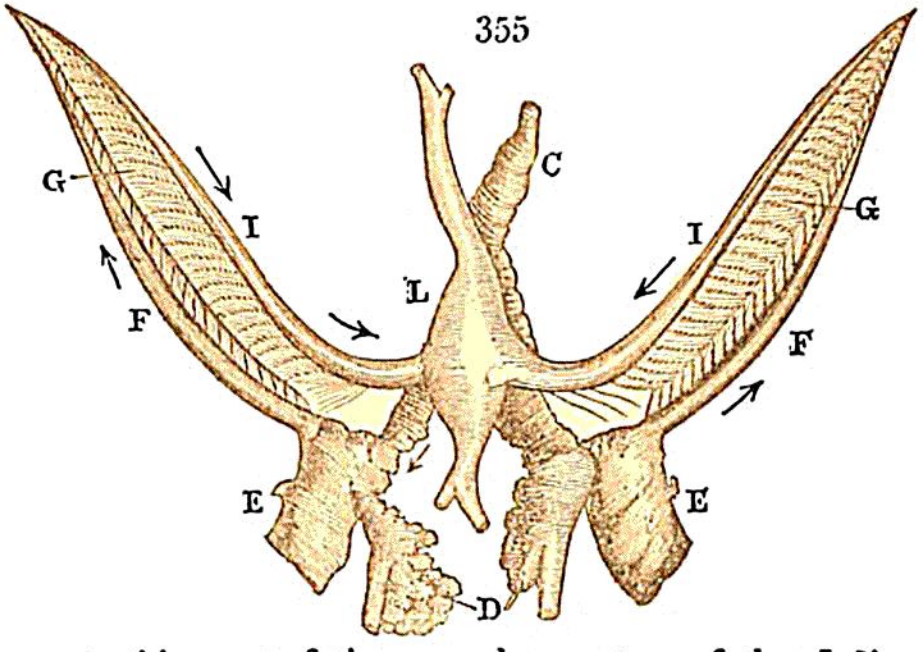
the requisite power is supplied by two additional hearts, situated on the venæ cavæ, of which they appear as if they were dilatations, immediately before the branchial arteries are sent off.* They are shown at E, E, Fig. 355, which re-

355



presents this part of the vascular system of the *Loligo*, detached from the surrounding parts; the course of the blood being indicated by arrows. c is one of the three trunks constituting the venæ cavæ, proceeding from above, dividing into two branches as it descends, and terminating, conjointly with the two venous trunks (D,) which are coming from below, into the lateral or branchial hearts (E, E,) already mentioned. Thence the blood is conveyed by the branchial arteries, (F, F,) on each side, to the gills (G,) and returned, by the branchial veins (I,) to the large central, or systemic heart (L,) which again distributes it, by means of the systemic arteries, to every part of the body. The cuttle-fish tribe is the only one thus furnished with three distinct hearts for carrying on a double circulation: none of these hearts are furnished with auricles.

The remarkable distribution of the muscular powers which give an impulse to the circulating fluids, met with in the Sepia, constitutes a step in the transition from Mollusca

* These veins are surrounded by a great number of blind pouches, which have the appearance of a fringe; the use of this singular structure is unknown.