Pentacrinus this expansion takes place near the top of, but entirely within the basal ring, the radials having no share in the protection of the chambered organ, though they surround the lowest portion of the plexiform gland which rises out of it (Pl. VIIb. figs. 1, 4, 5; Pl. VIIIa. figs 6, 7; Pl. XXIV. figs. 7–9; Pl. LVIII. figs. 1–3; Pl. LXII.). Within this central funnel of the radials, and closely enveloping the plexiform gland, is a kind of plug formed by numerous irregular limestone bars which are developed from the inner faces of the radials. In *Bathycrinus* it is practically little more than calcified connective tissue (Pl. VIIb. figs. 1, 4, 5, *c*), but it becomes very solid in *Rhizocrinus*, and has been wrongly described as a basal rosette (Pl. VIIa. fig. 7; Pl. X. figs. 1, 4, *br.*). It is also well developed in *Pentacrinus* (Pl. XXIV. figs. 8, 9, *rp.*), and is lodged in a small depression upon the upper surface of the basal ring, which is formed by the truncation of the inner ends of its component pieces (Pl. XX. figs. 2–6, 9).

Among the Apiocrinidæ the cavity which lodged the chambered organ is bounded in varying proportions by the basals and radials. In some species, such as *Millericrinus milleri*, this structure must have lain altogether upon the ventral aspect of the basals. These form a complete ring, just as in the aberrant Comatulæ, *Atelecrinus* and *Thaumatocrinus;* but in both these types the basal ring is on the ventral side of the chambered organ, which is precisely the opposite condition to that of *Millericrinus milleri.*

A. The Basals.

The basals of the Neocrinoidea vary considerably in the extent to which they are developed. In all the Palæocrinoids the radials are separated from the top stem-joint by one complete ring of plates, to which a second is often added. But in the Neocrinoids no basals may be visible at all upon the exterior of the calyx, as in most Comatulæ; or there may be a single complete ring of high plates as in *Rhizocrinus* (Pl. IX. figs. 1–3; Pl. X. figs. 2, 3; Pl. LIII. figs. 7, 8); or there may be two rows of plates of variable size as in *Encrinus, Extracrinus*, and *Marsupites.*

The absence of external basals in most recent Comatulæ is due to their having undergone metamorphosis into the well-known rosette, which is concealed between the centro-dorsal and the radials. But the occurrence of this condition in a stalked Crinoid would appear somewhat improbable. Personal examination has convinced me that in two cases[1] at any rate the supposed absence of basals in fossil Pentacrinidæ is merely the result of defective observations; but this may not be invariably true. No basals are visible externally in the Jurassic *Isocrinus pendulus*, Meyer,[2] nor in the *Pentacrinus pentagonalis personatus* from the Brown Jura, which is figured by Quenstedt[3] without

[1] These are (1) *Pentacrinus fisheri*, Forbes, from the Kimmeridge Clay of Weymouth; and (2) a fine specimen from the Chalk, which is figured in Dixon's Geology of Sussex (1878 edition, pl. xix. 22).

[2] Isocrinus und Chelocrinus, Museum Senckenbergianum, Frankfurt, 1837, Taf. xvi. figs. 1, 2.

[3] Encriniden, Tab. 98, fig. 137.