

most important parts to be nearly complete;\* and the same analogies might be traced through the other genera of chambered shells.†

\* The air chambers and siphuncle are, in both these families, essentially the same.

In Belemnites, the anterior extremity of the fibro-calcareous shell, which forms a hollow *straight* cone, surrounding the transverse plates of the chambered alveolus, represents the hollow *coiled-up* cone containing all the transverse plates, which make up the alveolus of the Nautilus.

The anterior horny cup, or outer chamber of the Belemnite, surrounding the ink-bag, and other viscera, represents the large anterior shelly chamber which contains the body of the Nautilus.

The posterior portion of the Belemnite, which is elongated backwards into a fibrous pointed shaft, is a modification of the apex of the straight cone of this shell, to which there seems to be no equivalent in the apex of the coiled-up cone of Nautilus. The cause of this peculiar addition to the ordinary parts of shells, seems to rest in the peculiar uses of the shaft of the Belemnite, as an internal shell, acting like the internal shell of the *Sepia Officinalis*, to support the soft parts of the animals, within the bodies of which they were respectively enclosed. The fibrous structure of this shaft is such as is common to many shells, and is most obvious in the Pinnæ.

† Comparing the Belemnite, or internal shell of *Belemnosepia* with the *Sepiostaire*, (*Blainville*), or internal shell of the *Sepia Officinalis*, we have the following analogies. In the *Sepiostaire*, (Pl. 44', Fig. 2, a. e. and Figs. 4, 4', 5), the small conical apex (a) represents the apex of the long calcareous posterior sheath of the Belemnite, (Fig. 7, a.) and the calcareous plates, alternating with horny plates, which form the shield and shallow cup of the *Sepiostaire*, (Pl. 44', Fig. 2, e. and Fig. 5. e.), represent the hollow fibro-calcareous cone or cup of the Belemnite, surrounding its alveolus.

The margin of the horny plates, interposed between the calcareous plates of the shield and cup of the *Sepiostaire*, (Pl. 44', Fig. 4, e, e', e'), represents the horny marginal cavity of the