

conical cavity in the upper part, and that the shaft consists of a series of successive concentric layers.

Such are the usual characters of these fossils in the examples of most frequent occurrence. They vary in size from the small, delicate, transparent, species, *Lign.* 102, figs. 3 and 4, to massy opaque specimens, several inches in circumference, and ten or twelve inches in length. They present also considerable variety of form; some are regularly cylindrical, as the chalk species, *Lign.* 101, fig. 1; others broad and flattened, as fig. 4; others subfusiform, as *Lign.* 102, figs. 3 and 4. The small end is slender and pointed in some belemnites, and in others is obtuse, or rounded, with an abrupt projecting point. In general there is a longitudinal groove, or furrow; and some species have a furrow on each side (see *Lign.* 102, fig. 2.).

But the fossils above described are only a part of the original structure of the Belemnite. When in a perfect state, the cavity seen in *Lign.* 102, fig. 5, is occupied by a chambered conical shell, called the *phragmocone*, composed of a series of shallow concave cells, of a nacreous or pearly substance, pierced by a siphuncle, which is situated at the margin: see *Lign.* 101, fig. 2 (*Bd.* pl. 44, fig. 17 *b.*). This conical chambered shell is enveloped in a sheath of opaque calcareous matter, which passes upwards into a thin, horny, laminated case, or receptacle, that contained the ink-bag, and other viscera: see *Lign.* 103 (*Bd.* pl. 44, fig. 7 *b.*).