

The general principle of dividing and subdividing the ribs, in order to multiply supports as the vault enlarges, is conducted nearly on the same plan, and for the same purpose, as the divisions and subdivisions of the ribs beneath the *groin work*, in the flat vaulted roofs of the florid Gothic Architecture.

Another source of strength is introduced in many species of Ammonites by the elevation of parts of the ribs into little dome-shaped *tuber-*

Pl. 37, Fig. 1 and 6. Here each rib is single, and extends over the whole surface, becoming gradually wider, as the space enlarges towards the outer margin, or back of the shell.

The next variation is that represented (Pl. 37, Figs. 2, 7, 9,) where the ribs, originating singly on the inner margin, soon bifurcate into two ribs that extend outwards, and terminate upon the dorsal keel.

In the third case, (Pl. 37, Fig. 4), the ribs, originate simply, and bifurcating as the shell enlarges, extend this bifurcation entirely around its circular back. Between each pair of bifurcated ribs, a third or auxiliary short rib is interposed, to fill up the enlarged space on the dorsal portion where the shell is broadest.

In a fourth modification, (Pl. 37, Fig. 3), the ribs, originating singly on the internal margin, soon become trifurcate, and expand outwards, around the circular back of the shell. A perfect mouth of this shell is represented at Pl. 37, Fig. 3, d.

A fifth case is that (Pl. 37, Fig. 5,) in which the simple rib becomes trifurcate as the space enlarges, and one or more auxiliary short ribs are also interposed, between each trifurcation. These subdivisions are not always maintained with numerical fidelity through every individual of the same species, nor over the whole surface of the same shell; their use, however, is always the same, viz. to cover and strengthen those spaces which the expansion of the shell towards its outer circumference, would have rendered weak without the aid of some such compensation.