

Vertebral Column.

The upper part of the vertebral column of Pentacrinites is constructed on principles analogous to those already described in the upper part of the column of the Encrinite.*

All the joints of the column, when seen transversely, present various modifications of pentagonal star-like forms; hence their name of Asteriæ, or star-stones.

These transverse surfaces are variously covered with a succession of teeth, set at minute intervals from one another, and locking into the interstices between corresponding teeth on the surface of the next vertebræ, they are so disposed as to admit of flexure in all directions, without risk of dislocation.†

As the base or root of Pentacrinites was usu-

* The columnar joints of the Briarean Pentacrinite are disposed in pieces alternately thicker and thinner, with a third and still thinner joint interposed between every one of them. Pl. 53. Figs. 8, and 8^a, a. b. c. The edges of this thinnest joint appear externally only at the angles of the column; internally they enlarge themselves into a kind of intervertebral collar, c. c. c.

A similar alternation in the joints of the Pentacrinites subangularis is represented in Pl. 52. Figs. 4 and 5.

† The ranges of tubercles upon the exterior surface of each joint in the fragments of columns, Pl. 52. Figs. 7. 9. 11. mark the origin and insertion of muscular fibres, by which the movement of every joint was regulated. At every articulation of the vertebræ, we see also the mode in which the crenated edges lock into one another, combining strength with flexibility. In Pl. 52,