Cephalopoda. These were chambered shells, some of which were curved and some straight. We give an example of each. Fig. 173 shows the Lituites cornu-arietis.

Fig. 174 represents an Orthocera, which was straight, yet divided into chambers. This has been found six feet long and six inches in diameter; which must have had an animal around it larger than any living cephalopod. As many as seventy chambers have been counted in it. Bronn mentions 153 species; ten in the Lower Silurian, thirty-two in the Upper Silurian, forty-three in the Devonian, thirty-one in the Carboniferous limestone, eight in the coal measures and seven in the Trias, where it disappeared.

Fig. 174.

Orthocera.

Echinodermata.—The living animals of this class, are the star-fishes, which are found as low as the Lower Silurian, and extend through all the rocks. But the most remarkable animals of this class are the Crinoids, or Encrinites, so named from the resemblance of some of them to a lily (*κρινον*) of which the common stone lily (Fig. 263) is an example. The head was supported by a flexible column, that was made up of a vast number of bony rings, and at its lower end was fastened to the ocean's bottom, or to a piece of wood. The head was composed of five articulated arms, which were divided into fingers, and were used for obtaining food. The stem of this species was circular, but that of the Pentacrinite was five-sided, and its arms or tentacules vastly numerous. The number of little bones or joints composing the head of the lily Encrinite, was 26,000; but in the Briarean Pentacrinite, they amount to 100,000, and those of the side arms to 50,000 more. If each of these, as in the higher animals, required two muscles to move it, they would amount to 300,000; while the muscles in man amount to only 540.

Fig. 175 is a representation of the *Pear encrinite* or *Apicrinites* as it appeared when attached and in full life at the bottom of the ocean.

Prof. Pictet, in his great work on Palæntology, has grouped the Crinoids into nine families, as follows: 1. The Comatulideæ, or those free and without stalk; 2. The Pentremitideæ; 3. The Cystideæ; 4. The Cupressocrinideæ;