The genus *Plectopyramis* differs from the preceding *Sethopyramis*, its ancestral form, only in the peculiar double fenestration of the shell, the large primary meshes of which are separated by strong bars, and filled up by a very delicate arachnoidal network, composed of small pores and very thin threads between them. This double lattice-work often exhibits a very remarkable regularity. As in the preceding genus, the number of radial ribs is commonly six or nine, rarely twelve to twenty or more.

Subgenus 1. Hexapleuris, Haeckel.

Definition.—Pyramidal shell with six radial main beams (sometimes five or seven in individual varieties).

1. Plectopyramis magnifica, Haeckel.

Polycystina magnifica, Bury, 1862, Polycystins of Barbados, pl. xi. fig.

Shell smooth, slender, pyramidal. Cephalis large, ovate, pointed, separated from the thorax by a very deep collar stricture, with few irregular pores. Thorax with six strong and straight radial beams, which are connected by about twenty horizontal, hexagonal rings. The large meshes so produced are regular, square, and filled up by an extremely delicate secondary arachnoidal network, composed of regular square pores (as in Pl. 54, figs. 7, 8).

Dimensions.—Cephalis 0.06 long, 0.04 broad; thorax (with twenty transverse rings) 0.4 long, 0.12 broad.

Habitat.—Fossil in Barbados.

2. Plectopyramis hexapleura, n. sp.

Shell thorny, slender, pyramidal. Cephalis large, ovate, blunt, with deep collar stricture. Thorax with six strong and straight radial beams, which are connected by numerous (twenty to thirty) interrupted transverse bars. The large meshes so produced are irregular, quadrangular, and filled up by irregular, delicate, secondary network, with small polygonal pores.

Dimensions.—Cephalis 0.05 long, 0.03 broad; thorax 0.3 long, 0.1 broad.

Habitat.—Central Pacific, Station 265, depth 2900 fathoms.

Subgenus 2. Enneapleuris, Haeckel.

Definition.—Pyramidal shell with nine radial main beams (sometimes eight or ten in individual varieties).