

arrangement of the arms about it, although, in the specimens represented by figure 1b, the bases of several arms are present on what appears to be the inner side of the summit of the body. The arms are formed of two series of plates that slightly alternate in relation to each other, as shown in fig. 1b. Casts of short pinnulæ are seen along the side of several of the arms—a pinnule to each plate on the side at which it occurs. None of the arms show an ambulacral groove. Stem or pedicle unknown.

The specimens collected are from a pinkish argillaceous shale and have been injured by distortion and compression. Plates of the same general type were found 1,000 feet lower in the strata in the Ely Mountains associated with *Olenellus Gilberti*; also, at Parker's quarry, Georgia, Vt., associated with *Olenellus Thompsoni*, *Olenoides Marcouii*, *Protypus senectus*, &c.

The reference of this species to the genus *Eocystites* is entirely provisional, as the genus was founded on loose plates of a cystid found in the St. John Formation of the Lower Cambrian System. The St. John Formation plates are more strongly ridged than those of *E. ? ? longidactylus*, but I know no way of generically distinguishing them, or either of these, from the plates described as *Protocystites Menevensis* Hicks (Quart. Jour. Geol. Soc., vol. xxviii, p. 180, pl. v, fig. 19). Under the circumstances I prefer to wait until more is known of the described genera before definitely expressing an opinion on the generic relations of *P. ? ? longidactylus*.

Trochocystites Bohemicus Barrande (Bull. Soc. Géol. de France, 2^e sér., t. xvii, p. 537, pl. viii, fig. 1) appears to be distinct from both *Eocystites* and *Protocystites*.

Formation and localities.—Middle Cambrian. Chisholm mine, southwest slope of the Ely Mountains near Pioche; also, in the Highland range, eleven miles north of Bennet's Spring, Nevada, associated with *Olenoides typicalis*, *Bathyriscus producta*, *Ptychoparia Piochensis*, &c.

BRACHIOPODA.

Genus LINGULELLA Salter.

Lingulella Salter, 1861. Memoirs Geol. Surv. Gt. Brit., p. 333.

LINGULELLA CÆLATA Hall (sp.).

Plate vii, figs. 1, 1a-d.

Orbicula cælata Hall, 1847. Pal. N. Y., vol. i, p. 290, pl. lxxix, figs. 9a-c.

Obolella (O.) cælata Ford, 1871. Amer. Jour. Sci., 3d ser., vol. ii, p. 33.

Lingulella cælata Ford, 1878. Amer. Jour. Sci., 3d ser., vol. xv, p. 127.

Original description.—"Orbicular, small; apex excentric, depressed along the center, and subpublicated near the margins; surface marked by