

elongate, narrow, postero-lateral limbs; palpebral lobes small; ocular ridges well defined and terminating nearly at the front of the glabella; frontal limb comparatively narrow in the young and broader in the older and larger specimens.

Thorax with 19 segments in two specimens 30^{mm} and 40^{mm} long, respectively; another specimen, 18^{mm} long, shows 17 segments; the segments are nearly transverse, except at the geniculation on the pleural lobes, where the falcate extremities bend slightly backward; axial lobe moderately convex; pleural lobes flattened half-way out and then curved downward to their margin; pleural groove of medium width and continued well out towards the extremity of the segment.

Pygidium small, semicircular; axial lobe with 3 or 4 segments; lateral lobes small and marked by furrows indicating about 3 united segments.

Surface apparently smooth except on the frontal limb and free cheeks, where fine, irregular striæ radiate towards the margin.

The large number of segments in the thorax, 19, is a marked peculiarity of this species, the usual number of segments in the genus being from 13 to 15. The expansion of the frontal limb with the increase in size is also very suggestive, as, in the adult, we have the broad, campanulate limb, and, in the young, the narrow limb with an elevated outer margin; a variation that would be given as specific if the intermediate forms were absent. The small pygidium resembles that of *Ptychoparia Emmrichi* (see Syst. Sil. Bohême, vol. i, pl. xi, fig. 4), except that it is proportionally smaller.

Formation and locality.—Middle Cambrian. In an argillaceous shale, at the Chisholm Mine, on the southwest slope of the Ely Mountains; also, on the western slope of the Highland Range, 8 miles north of Bennett's Spring, Nevada.

PTYCHOPARIA sp. ?

Associated with *Olenellus Gilberti* in a gray, granular limestone, at Pioche, there is a species of *Ptychoparia* that is closely allied in the head parts to *P. Adamsi*. The material is too imperfect to determine satisfactorily, at present, its specific relations.

PTYCHOPARIA ? PROSPECTENSIS Walcott.

Plate xxvii, fig. 5.

Ptychoparia ? Prospectensis Walcott, 1884. Monographs U. S. Geol. Survey, vol. viii, p. 46, pl. ix, fig. 20.

The general outline of the head is moderately convex, semicircular, the width being about twice the length.

The glabella is subconical, truncate in front, and marked by three pairs of short, slightly impressed, glabellar furrows; occipital ring distinctly defined by a narrow, lightly impressed, occipital furrow; fixed cheeks broad, of equal elevation with the glabella, and extending be-