

ginal border strong and produced behind into a medium-sized, sharp spine; central area slightly convex, and marked by striæ that radiate from the base of the eye towards the margin; anteriorly the border narrows to a slender point.

Thorax unknown.

Pygidium subquadrilateral in outline, with strong, slightly-diverging spines extending back from the postero-lateral angles; sides nearly straight, slightly converging posteriorly to the base of the spines; posterior margin a little concave between the spines; axial lobe prominent, convex, and reaching five-sixths of the distance between the front and back margins; the sides converging very little towards the obtusely-rounded posterior end; divided by fine transverse furrows into five segments and an obtuse terminal point; the pleural lobes are grooved by the extension of the grooves crossing the axis; the terminal spines appear to arise from the extension of the anterior segment of the pygidium. There is considerable variation in the strength and direction of the postero-lateral spines, but I find this to be true of the corresponding spines on *Crepicephalus Iowensis*.

Surface of head and pygidium with papillæ of different size scattered over it, sometimes so thickly as to give a granulose appearance to it.

This and associated forms are the only ones we know of this type in the Middle Cambrian. The type is found in the Potsdam horizon of Nevada, Wisconsin, and Alabama, and will be fully described in the review of the Potsdam or Upper Cambrian fauna.

*Formation and localities.*—Middle Cambrian. In limestone associated with *Olenellus Gilberti*, near Pioche, and also eleven miles north of Bennet's Spring, on the west side of the Highland Range, Nevada.

#### CREPICEPHALUS AUGUSTA n. sp.

Plate xxviii, figs. 2, 2a, b.

Glabella and fixed cheeks sub-quadrilateral in outline exclusive of the postero-lateral limbs; glabella truncato-conical, sides tapering moderately to the front, height and width at the occipital furrow about equal; marked by four pairs of glabellar furrows; the two posterior pairs extend obliquely inward and backward, the third pair being opposite the anterior end of the palpebral lobe and transverse to the axis of the glabella; the fourth pair are very minute and resemble elongate pits opposite the terminations of the ocular ridges; occipital furrow well defined; occipital segment strong, thickened at the center, and showing a small central node or point near the back margin; dorsal furrows distinct.

Fixed cheeks broad, convex; posteriorly they broaden out into the short postero-lateral limbs, and anteriorly merge into the frontal lobe, which is narrow in front of the glabella, expanding a little laterally; frontal margin slightly convex, and broadest in front of the glabella, narrowing towards the facial sutures, separated from the frontal lobe