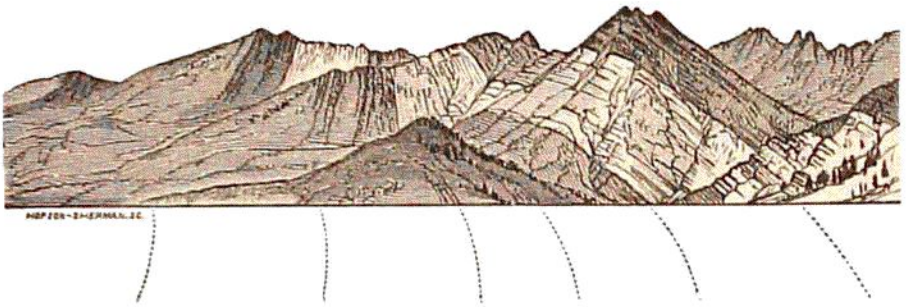
Denver, first by Marvine (1873), is of the Laramide system; and it is continued south through Huerfano County, into New Mexico along by the Raton coal-field (C. S. Hills). Still farther south upturned Cretaceous beds extend along the trans-Pecos region of western Texas, and thence into Mexico. But the limits of the several ranges and their relation to the Laramide system need further study.

The sketch in Fig. 337, from the west slope of the Elk Mountains, in Central Colorado, shows a sigmoid twist in the stratification of the rocks, the highest in the series being the Cretaceous; the warping of the strata is strikingly exhibited. W. H. Holmes has sections of flexures and flexure faults of the Elk Mountains in the Hayden Expedition Report for 1874, two of which are closely like the form obtained by Daubrée in his experiments (Fig. 326, page 351).

337.



Upturned strata of the west slope of the Elk Mountains, Colorado. The light-shaded stratum, Jura-Trias; that to the right of it, Carboniferous; that to the left, Cretaceous. Hayden's Report.

Igneous ejections attended the mountain-making in many parts of the upturned region, from Wyoming southward, and some volcanoes may date from this epoch.

4. Tertiary Orographic Movements along the Pacific Mountain border.

1. *The great geanticline.* — At the close of the Cretaceous period the latest beds lay at or near the sea level; and after the making of the Laramide mountain-chain the region was still but little above this level. During the Tertiary era following, especially after the Miocene period, a gradual elevation of the mountain region went forward; and now, as the result, the same Cretaceous strata in some parts of Colorado are 10,000 to 11,000 feet above the sea. From this level the height slowly diminishes to 4000 feet and less near the Arctic coast and to twice this in Mexico.

The region thus placed these thousands of feet above the sea level probably included *the whole of the Pacific mountain border, from the line of the Mississippi Valley to the Pacific coast line, and outside of this line for one or more scores of miles.* The vast geanticline was made without corresponding flexures of the rocks; there were only minor local bendings, upturnings, and faults. It was a very slow movement upward, continuing probably into the Quaternary. That it made little progress in Eocene time is proved by