described by McConnell and Dawson. Farther south, in Utah, stands the Wasatch Range of the same Laramide system. The accompanying map of the Wasatch is a reduction of the colored geological map in the Atlas of the Report of the Fortieth Parallel Survey under Clarence King, and the highly instructive facts here presented are from King's volume.

The Wasatch Mountains extend for more than a hundred miles along the east side of the Great Salt Lake Valley. They face west with a bold front, rising abruptly from the plain to a height of 5000 to 6000 feet, which is 10,000 to 12,000 feet above tide level. At the western foot are Ogden, Uinta, Salt Lake City, and Provo. The eastern slopes are more gradual. East of its southern half stretch away the Uinta Mountains for 150 miles, a great east-west plateau, or table-land, feebly anticlinal in structure, and 10,000 to over 13,000 feet high. Only one fourth of its length is within the limits of the map. North of the Uinta Mountains there is the great "Wasatch Eocene basin," lettered W on the map, 5000 to 7000 feet above the sea level, and south of it the "Uinta Eocene basin," nearly 10,000 feet high, lettered U.

One remarkable feature of the Wasatch Range is its backbone of Archæan rocks along its western front, — a mountain range of Archæan origin which stood there, submerged or emerged, through all the rock-making and mountain-making of Paleozoic and Mesozoic time, the prototype and modeller of the later Wasatch Mountains. There are four Archæan areas in sight along the range, indicated on the map by the Nos. 1 to 4, and by a covering of small v's.

Commencing at the north, Nos. 1 and 2 are short, but No. 3 has a length of 25 miles. Between No. 3 and No. 4, and nearly abreast of the Salt Lake City site, comes the *great gap* of 15 miles in the Archæan. South of the gap, No. 4 has a height of 11,295 feet, but just to the east of it is Clayton Peak, also Archæan, 11,889 feet.

The rocks of the Wasatch Mountains include those of the long series from the Cambrian to the Upper Cretaceous. The Cambrian areas are lettered C; they are the black areas finely lined with white. The Carboniferous are lettered Cb (Cb^1, Cb^2, Cb^3); the Cretaceous, Cr (Cr^1, Cr^2, Cr^3, Cr^4); the Silurian, S; the Devonian, D; the Triassic, Tr; the Jurassic, J. The distinguishing markings of these areas will be learned by means of the lettering.

The flexures of these rocks in the structure of the Wasatch Mountains are not all the usual up-and-down flexures; there is, besides, an in-and-out series between and about the Archæan summits, as well as upon them. They may be traced by following the courses of the black Cambrian areas. Commencing at Ogden, there is first an eastward bend toward Weber, then a westward, back to the summit of the mountains; then, all the formations are gathered into an east-west trough, or syncline, which heads through the Gap, — the strata that lie in the Gap dipping from the north and south toward its center. The head, or western termination, of the bend passed the summit, disastrously to the extremity of the flexure. South of the Great Gap, the Cambrian and the rest of the formations lie around Clayton Peak

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