about 1875. Subsequently it passed through many different hands until it came into the possession of the Blue Valley Slate Company, the present owners. It was shut down at the beginning of the World War. Recently exploratory drilling has been carried on at the north edge of the opening.

The mill and finishing equipment at the north end of the quarry were being leased to the Keystone Slate Company by the owners of the Blue Valley quarry, when visited in 1927.

Figure 16. Typical folding of the slate beds, as illustrated in the east wall of the Eureka quarry near Slatington.

Eureka and Mountain Quarries. Three quarries lie close together about 1200 feet east of the Blue Valley quarry and on the strike continuation of its structure and beds. Beginning at the west, they may be designated a, b, and c.

Quarry a is the Old Eureka quarry. It is rhomboid in shape, and about 200 by 350 feet in size, with the longest dimension northwest. Depth to water level is about 135 feet. Beneath 8 feet of glacial overburden bedrock is exposed. This shows the same two folds noted in the Blue Valley quarry. The axial planes strike somewhat more northerly here, approximately N.65°E. Detailed observation in the syncline shows that the cleavage planes flare, fan-like, downward. In this fold joints striking N.70-80°E. are seen to dip 5-15°S. on the south limb and 10-20°N. on the north limb; their attitudes thus appear to be definitely related to the folding. At the north edge there is again the flattening observed in the Blue Valley quarry, for the beds strike N.72°E. and dip only 3°5°S.; evidently the anticlinal axis mentioned in describing the Blue Valley opening is not far north of the northern edge of the Old Eureka quarry.

The strata exposed include the same three big beds as at the Blue Valley quarry. The Lower Star is the highest bed of the anticline to reach the surface; the Klondike is the big bed in the synclinal axis; and the Upper Star outcrops midway between the two.

This quarry is not now operated.

Quarry b is smaller, being approximately 125 feet wide and 210 feet long. It is the New Eureka quarry. As this opening lies only about 100 feet east of the Old Eureka, and directly along the strike continuation, it shows essentially the same structure, the Lower Star big bed coming to the surface at the anticline. Quarrying has not been carried far enough north to expose the Eureka syncline, however, and so the Klondike big bed is not worked, the clear stock being furnished by the Lower and Upper Star big beds.

Near the axis of the anticline prominent openings parallel to the beds are filled with quartz. Here, too, numerous joints are observed striking parallel to the axis and dipping generally about 20°N. or 20°S., in this respect resembling those mentioned in describing the Old Eureka opening.