dip 80°S., and in the bottom at the northwest edge they dip 55°N. Cleavage strikes N.75°E. and dips 67°S. Grain trends N.37°E. and dips 82°E.

Many joints are observed, with strikes parallel to the strike of the cleavage and north or south dips that are rarely in excess of 45°. The joints of this south synclinal limb flatten strikingly to the south and steepen northward. They are the loci of considerable weathering which takes the form of “rusting.” Jointing is most marked in the larger beds.

The beds worked are again the two big beds of the Star “run.” School slate is made from some of the darker beds.

Equipment includes two mills, one for making school slate (the National School Slate Company’s mill) and the other situated southwest of the old quarry, for making roofing slate and some school slate.

Most of the production from this quarry goes to the factory of the National School Slate Company, the largest school slate producer in the United States. This is located on the west outskirts of Slatington, north of Trout Creek.

Cambridge Shafts. Three small shafts, each about 30 by 50 feet in surface area, lie just south of the Ridge Road, some 2000 feet northwest of the Slatington post office and 100 feet apart. The east shaft is 195 feet deep; the two westerly ones show the same dimensions; they are reported to be 220 and 225 feet deep, but were not being worked and were therefore inaccessible in 1927.

At the surface in the east shaft the beds strike N.70°E. and dip 27°S., whereas the cleavage strikes like the beds and dips 82°S. In its descent the shaft passes through the Upper Franklin big bed and, after traversing 29 feet of “ribboned” slate, it encounters the Lower Franklin big bed, here 23½ feet in actual thickness. In the shaft this bed strikes N.50°E., dips 11°S. It is followed northward by a tunnel 275 feet long in 1927. Whereas the tunnel remains horizontal for some distance north of the shaft, the bed continues to rise, until its top is above the roof of the tunnel. This is at a distance of 175 feet from the shaft. Beyond this point, however, the beds dip northward and the tunnel now is driven on a slope so as to follow the dip of the bedding, which averages about 17°N. for 100 feet, where the “breast” was located at the time when this field work was done. The fold with crest as described appears to pitch west at a gentle angle.

The cleavage strike is N.71°E., and the dip is 85°S. Jointing is common. The fractures are of two sets, one virtually horizontal, the other striking N.70°E. and dipping 53°N. Locally these latter shatter the slate greatly, making the underground operations hazardous.

The width of the tunnel-incline is about 100 feet parallel to the strike. In breaking the rock neither drilling nor bronching are resorted to, only explosives. Two accessory pulleys are used for hauling large blocks out to the shaft from the “breast.”

Surface equipment includes a mill, roofing slate shanties, a storage shed for roofing slate, a boiler house, and a good blacksmith shop. The three shafts have been operated since 1912 by the Cambridge Slate Company. They represent true underground mining of slate.

The Cambridge shafts have been idle until recently but a new shaft is now being operated by Bachman Brothers.

Shaft of Fairview Slate Co. The most important new operation in the Slatington district since the publication of Behre’s report in 1933 is the shaft of the Fairview Slate Co., formerly the Slatington Slate Co. It is located a short distance east of the Cambridge shafts of Bachman Brothers. The shaft was sunk after considerable core drilling had been done to determine the depths and the quality of the Franklin beds underlying the property. The untimbered shaft is 175 feet deep. The Lower Franklin bed, which here is 32 feet thick, is