

the coal. These sandstone roofs are comparatively rare in America, as in Europe.

From Union, we went to Brownsville on the Monongahela, a large tributary of the Ohio, where the country consists of coal measures, like those at Union, both evidently belonging to the same series as those more bent and curved beds at Frostburg before described. I was truly astonished, now that I had entered the hydrographical basin of the Ohio, at beholding the richness of the seams of coal, which appear everywhere on the flanks of the hills and at the bottom of the valleys, and which are accessible in a degree I never witnessed elsewhere. The time has not yet arrived, the soil being still densely covered with the primeval forest, and manufacturing industry in its infancy, when the full value of this inexhaustible supply of cheap fuel can be appreciated; but the resources which it will one day afford to a region capable, by its agricultural produce alone, of supporting a large population, are truly magnificent. In order to estimate the natural advantages of such a region, we must reflect how three great navigable rivers, such as the Monongahela, Alleghany, and Ohio, intersect it, and lay open on their banks the level seams of coal. I found at Brownsville a bed ten feet thick of good bituminous coal, commonly called the Pittsburg seam, breaking out in the river cliffs near the water's edge. I made a hasty sketch of its appearance from the bridge, looking down the river, in which the reader will see (*a*, Pl. VI.) the coal, ten feet thick, covered by carbonaceous shale (*b*), and this again by micaceous sandstone (*c*). Horizontal galleries may be driven everywhere at very slight