

expense, and so worked as to drain themselves, while the cars, laden with coal and attached to each other, glide down, as shown in the plate, on a railway, so as to deliver their burden into barges moored to the river's bank. The same seam is seen at a distance, on the right bank (at *a*), and may be followed the whole way to Pittsburg, fifty miles distant. As it is nearly horizontal, while the river descends it crops out at a continually increasing, but never at an inconvenient, height above the Monongahela. Below the great bed of coal at Brownsville is a fire-clay eighteen inches thick, and, below this, several beds of limestone, below which again are other seams. I have also shown in my sketch another layer of workable coal (at *d, d'*), which breaks out on the slope of the hills at a greater height. Almost every proprietor can open a coal-pit on his own land, and, the stratification being very regular, they may calculate with precision the depth at which the coal may be won.

So great are the facilities for procuring this excellent fuel, that already it is found profitable to convey it in flat-bottomed boats for the use of steamships at New Orleans, 1,100 miles distant, in spite of the dense forests bordering the intermediate river-plains, where timber may be obtained at the cost of felling it. But no idea can be formed of the importance of these American coal-seams, until we reflect on the prodigious area over which they are continuous. The boundaries of the Pittsburg seam have been determined with considerable accuracy by the Professors Rogers in Pennsylvania, Virginia, and Ohio, and they have found the elliptical area which it occupies to be