

with, in ascending an inclined plane must be apparent. The firming of the rails then, and the procuring of a level to lay them on, seem the great objects. The first is obtained by firmly fixing the termination of each rail in an iron supporter; which supporter is spiked to square blocks of stone bedded below the surface: the approximation to a level is obtained, by excavations, cuttings, embankments, bridges, viaducts and all the operations necessary to alter the natural undulations of land surface. When these obstacles to a perfect Railway are considered, the magnitude of the work appears more apparent, and the immense expense incidental to such undertakings becomes obvious. Hence we find that the entire expence of the Liverpool and Manchester Railway, a distance of 32 miles, has been stated at about £820,000 including its warehouses and other appurtenances. After this preliminary notice we proceed to our survey of the line.

The first station of the Rail-road line at Liverpool commences at Wapping on the bank of the Mersey. Here is a yard for the receiving and delivering of coarse bulky articles; and an elegant pile of Warehouses for finer goods. The Rail-road runs in a cutting of the earth, under the Warehouses, the floors of which are supported by rows of cast iron pillars; in this covered area the Engines are placed to receive their finer loads, which are lowered to them from hatchways in the floors above. A little beyond the yards and Warehouses, is the entrance of the *Great Tunnel*; at a little distance it seems the mouth of a Cavern; on the ground immediately above which, a high house stands. On exploring the Tunnel it appears a vast and beautiful arched way, running under the busy City of Liverpool, and from end to end measuring one mile and a quarter and fifty yards! This alone were a work sufficient to distinguish an age, but when we think of the splendid line of which this only forms a part, it is difficult to express appropriately, our admiration of the improving enthusiasts who commenced and accomplished the Herculean labour. The road of the Tunnel is smooth, covered with sand, its sides and arch are whitened, and it is lighted by numerous gas lights. Its appearance when lighted is said to be exceedingly fascinating; the near jets of light flowing strongly on the parts contiguous to them, and leaving the intervening spaces in comparative darkness, afford an optical illusion—by which the vista appears like a succession of superb pillars and arches; the lights as they recede seem to approach each other, until in the distance they appear like a continuous bright red flame; the promenaders along this magic road, and the occasional whirling by of the seemingly enchanted locomotives, all help to form a most uncommon scene. Of a clear day, in the absence of the gas lights, the scene is scarcely less attractive; the Tunnel rises in an inclined plane for about a mile; at the bottom of this plane the light at the end of the Tunnel may be observed, gleaming like the moon seen through clouds, and diminished almost to a speck; a half a mile further