

and work our way towards the ocean, on which haply we will be soon sailing westward. It may here be mentioned that an overhead electric railway, with carriages a little similar to American railway "cars," which was completed only a year or two ago, and is in itself another note of the progress of the Liverpool of to-day, runs along the whole length of the docks from north to south, enabling the visitor to get easily from point to point, and affording *en route* a splendid view of the river and its sights. The overhead railway has several special features of its own which suggest an examination of them as likely to be instructive; and, in any case, the New Yorker will compare it favorably with his own elevated "road." It deserves notice as being the first successful electric railway of any size in Europe. And, speaking of railways, it has been claimed "that it is only bare justice to keep in remembrance the fact that it is to the sagacity, enterprise and perseverance of Liverpool merchants that the world is indebted for the development of railways in their present form," the Liverpool and Manchester Railway being begun in 1826, and opened in September, 1830, with Geo. Stephenson as its presiding engineer.

The dock at the extreme end of the southern system is called the "Herculaneum," and was blasted out of the solid rock,—the only instance where this had to be done. The length is 810 feet, the width 430; it has besides a branch 800 feet long, 120 feet wide; its total area is about 10 acres. It would be tedious to mention all the docks, etc., and it is therefore proposed only to describe those of the most striking character. The Herculaneum dock is specially interesting, because close to it are placed the depots for petroleum, which comes either from America or Russia (Baku). In addition to five large reservoirs or tanks, constructed for the specific purpose, and each isolated from the other, for

holding the oil in bulk, pumped up from the ships, and with a capacity of 12,000 tons in all, there are, at the base of the cliff, 60 "cisterns," or chambers, excavated out of the rock for storing petroleum in barrels, each capable of holding 1,000 barrels.—These magazines are each about 50 feet long, 20 feet wide, and 19 feet high; and each is separated from its neighbor by a wall of solid rock five feet thick. They are faced in concrete, and have impervious sills, built to the level of four feet above the floor, so forming receptacles, each capable of containing the whole contents of the barrels, should these be damaged, or the oil leak out, as it always does, as is well known, to a greater or less degree. All danger of the liquid oil flowing on the adjacent quays, in case of accident, is thus avoided, and from the general construction the risk of fire spreading is small. One trembles, however, to think what would happen if a fire ever occurred, and the burning oil got into the docks, or what would be the result should an explosion take place in the tanks, say, from a bombardment of the port. Of course, these contingencies are nearly, if not absolutely, impossible. The port of Liverpool receives about one-fourth of all the petroleum which comes into the United Kingdom. There are three graving docks in connection with the Herculaneum. Extending from it is a chain of new docks, the first of which is the Harrington, which has a water area of over nine acres, and which is noteworthy because of an ingenious arrangement of cranes for transshipping goods from the ships to the transfer sheds, necessitated by the comparative narrowness of the quays flanking this portion of the docks, which led to a double-storied shed being built. These cranes are the invention of Mr. A. G. Lyster, assistant chief engineer, a son of Mr. G. F. Lyster, Chief Engineer of the Mersey estate for over thirty years, and who has designed and car-