SWING BRIDGE OVER THE RIVER OUSE; NORTH-EASTERN RAILWAY.

PLATES LXXVII., LXXVIII., AND LXXIX.

ON Plates LXXVII., LXXVIII., and LXXIX. are shown the general elevations and details of a fine swing bridge, recently completed, which carries what is now the main line of the North-Eastern Railway over the River Ouse, at a distance of about three miles from York, a point where the river is navigable for small craft.

The bridge consists of three openings, namely, one fixed span of 107 ft. over all, and a double swing span of 176 ft. over all, leaving a clear opening for vessels of about 62 ft.

The swing portion of the bridge is supported on a pier of cast iron situated on the north bank of the main girders 176 ft. in length, and 14 ft. in depth between flanges over the swivel pier, where they are connected together at the top by cross girders, carrying a platform, from which is regulated the working of the bridge. The flooring is composed of twenty-three transoms 26 ft. long and 1 ft. 8 in. in depth, which over the pier are covered by 3 in. plating, the rest of the floor being formed of bars 8 in. by \( \frac{3}{4} \) in. with openings of 1 in.

The girders and flooring of the fixed span are of the same form as those of the swing portion. The total weight of wrought iron in both swing and fixed spans collectively is 401 tons. The swing portion is moved...