THE SMITHFIELD MEAT MARKET.

PLATES XXXVIII, XXXIX.

By the Metropolitan Meat and Poultry Act of 1890, the Corporation of London were authorised to acquire property at Smithfield, and to appropriate part thereof for the sale of hay and straw in wagons, and another part for a market house for the exposure of meat, poultry, and other provisions. Also to enter into an agreement with any railway company for carrying out the necessary works for a station, with approaches thereto, under the market floor, and communicating with it by hoists; provided that the said station were not used by ordinary passengers. The same year the Metropolitan Railway Company applied to Parliament for powers to execute this work, including a junction line from Farringdon-road Station, the radius of which was proposed to be 3 chains only, and the gradient 1 in 38, and the London, Chatham and Dover Railway Company obtained powers for forming a junction also. The following year Acts were obtained by the Metropolitan, Great Western, and Great Northern Companies for constructing the depot, and by the former company for executing the junction line with a 10-chain curve on 1 in 100 gradient, and for extending the line through the market to Moorgate-street. In 1863 land was taken to allow the Metropolitan Railway proper to be carried outside, and clear of, the market, and in 1868 powers were sought by the Metropolitan Company to construct the junction curve from the London, Chatham, and Dover Railway at Snow-hill, originally intended to be carried out by the latter company. These successive Acts are landmarks indicating the gradual development of the complete system now in active operation.

Referring to the general plan of the depot, which we give on Plate XXXVIII., it will be seen that one pair of mixed gauge lines—the Metropolitan Railway widening, with which the London, Chatham, and Dover Railway makes a junction—ran in at the north-west corner, and emerged at the east end, from which point they were continued to the Moorgate-street Station of the Metropolitan Railway. With the exception of these two main lines, and the necessary cross-over roads, the whole of the northern half of the depot was worked from the first on the narrow-gauge system, whilst the remainder, belonging to the Great Western Railway Company, was laid out with mixed gauge lines throughout, but the broad gauge rails were afterwards removed. On each side of the main lines a platform is placed, available for passenger traffic to the market as well as for goods, the communication in the former instance being provided for by a double flight of wide stairs, and in the latter by hydraulic 30-cwt. hoists, as at all the other platforms. The total number of hoists distributed over the entire area is fifteen, of which seven are 10 ft. square, and the remainder 10 ft. by 6 ft. Ample machinery is provided for unloading and forming trains with rapidity, there being no less than fifty-five hydraulic 2-ton and 30-cwt. cranes, three 5-ton hand cranes, eighteen hydraulic capstans, three hydraulic traversers, and twenty-two turntables. The sets of machinery for the Metropolitan and Great Western halves are kept quite distinct, with separate engines and accumulators, 17 in. diameter by 17 ft. stroke.

The southern half of the depot is accessible to vans by means of a circular approach road 40 ft. wide, on a gradient of 1 in 24, leading to a 45 ft. road running the entire length of the market. The retaining walls to this approach (Fig. 1, Plate XXXVIII.) are founded on concrete, and up to a certain height are constructed in solid brickwork. As the excavation deepens, concrete backing is added to the brick wall, till the type construction of the Metropolitan Railway—the recessed wall—becomes the more economical system. The crossing under the 60 ft. road surrounding the meat market is constructed in brickwork; the depth from road to rail level, which is also that of the lower end of the approach, being 24 ft. 3 in., sufficient headway is obtained for three arches 24 ft. span, 9 ft. 6 in. to springing, and 17 ft. 6 in. to the soffit of the arches, which are five rings thick throughout, except immediately under the market wall, where two additional rings are inserted.

The size of the market inside the walls is 625 ft. by 240 ft., and that of course is the nett size of the depot underneath. The sides of the excavation are retained by vaults 24 ft. 3 in. high from rail to surface of pavement, about 15 ft. from centre to centre, and 25 ft. deep (Figs. 3 and 4, Plate XXXVIII.). The thickness of the piers is 3½ bricks throughout, with the exception of a length of 4 ft. 6 in. from the face, where they are thickened to 5½ bricks for the piers supporting the main girders, and to 4½ bricks for the intermediate ones.