ments of the works, but on further examination none were found to comply fully with the absolutely necessary conditions, and the stipulated premiums for the designs of primary merit having been awarded, the engineer appointed by the Corporation was instructed to prepare independent designs. This duty would in all probability have been assigned to Mr. Bunning, the City architect, but that gentleman had temporarily vacated his office, never, as the result proved, to resume it, for he did not recover the effects of a severe cold caught in the previous winter.

In his absence, the Corporation deputed Mr. William Haywood, the engineer of the City Sewers Commission, to act for them, and subsequently to prepare the necessary plans to accompany the Bill they proposed to deposit in November, 1863. This Bill contemplated the acquisition of all necessary property between Furnival's Inn and the Old Bailey, and comprised a scheme for the widening and raising of Holborn from Bartlett's buildings to St. Sepulchre's Church, a distance of about 1500 ft. This alteration was to commence on Holborn-hill with a semi-circle 170 ft. in diameter, from which, diverging to the left, a street 60 ft. in width was to run downwards to Farringdon-road, opposite the new street, constructed under the Market Improvements Act, to the dead meat depot at Smithfield.

From Newcastle-street, one of the narrow thoroughfares leading off to the east from Farringdon-street, the gradients were to be raised to meet the new level of the street running to the Smithfield Market, which involved the raising of the original ground surface 10 ft. at its extreme point, and 6 ft. underneath the iron bridge which was to cross Farringdon-street.

From St. Sepulchre's Church, too, another street was to run westwards towards Farringdon-street. It was decided that Shoe-lane, the raising of which to the level of the viaduct was contemplated, should run under that structure, and extend, widened and straightened, until it intersected the new street running towards the Smithfield market.

Under a subsequent Act obtained in Session 1866-67, the Corporation obtained the powers to construct another new street extending from the Circus at the Holborn end of the improvements, and running downwards with a width of 50 ft. to Fleet-street. Such was the general scheme for which Government sanction was obtained, and which has been carried into execution in accordance with the original deposited plans. The work may be divided into three classes: First, the new streets which have been constructed to take the place of the old thoroughfares, and which lead by comparatively easy gradients to and from the ends of the viaduct; second, the brick work of the viaduct itself; and, third, the ironwork, comprising the bridge spanning Farringdon-street, that over Shoe-lane, and the trough conveying the gas and water pipes—otherwise laid in the subway—over the branch of the Chatham and Dover Railway from Charles-street Station to Ludgate-hill.

The Farringdon-street bridge, which is the most important engineering work upon the improvements, is illustrated on Plate XLV. The design was finally decided upon by the Corporation after a prolonged consideration, and a structure with three arches was considered, on the whole, as preferable to a bridge of only one arch. Probably a question of gradient ruled the decision upon this point; the unavoidable raising of Farringdon-street, and the necessary headway to be given to the bridge, made it impossible to avoid a fall of about 3 ft. left and right of the crown of the bridge, towards Holborn and Skinner-street; and had a structure requiring a greater depth in the centre been adopted, the extreme falling gradient down Holborn-hill into the old valley of the Fleet would have been replaced by a rapidly rising gradient to the centre of the viaduct.

Four alternative plans were prepared by Mr. Haywood and submitted to the consideration of the Corporation. A single arch spanning the whole width of Farringdon-street, a bridge of two arches with central piers, a structure of horizontal girders, carried on columns, and the design carried into execution.

The distance between abutments on the skew (the angle at which the bridge crosses Farringdon-street is one of about 60°) is 112 ft. 8 in., divided into three spans, two of which cross the foreshoots, with a clear opening of 18 ft. 4 in., and a central opening of 61 ft., the rest of the space being occupied with the two rows of piers, 5 ft. wide, and the plasters on the abutments, with projections of 2 ft. 6 in. The width of the platform is 80 ft., on the square, corresponding to that of the new roadway, and is carried upon six groups of cast-iron longitudinal arched girders, arranged in pairs, and placed 15 ft. 7½ in. apart. Cross girders every 4 ft. are bolted to the upper sides of these girders, and carry in their turn corrugated cast-iron plates supporting the roadway.

The foundations, which were excavated 36 ft. below the ultimate level of Farringdon-street at the point of crossing, were carried down to the London clay, and laid with 6 ft. of concrete. Beneath the hexagonal piers supporting the bridge, the concrete was laid in a trench, extending the entire width of the work 12 ft. broad, and of the depth before mentioned. Upon the concrete were built brick piers almost up to the level of the roadway, and these supported the pedestals of the columns—hexagonal blocks of grey Cornish granite. Upon each of the pedestals is laid the base of the column in black Guernsey granite, contrasting with the columns, which are of red polished granite from Mull. The capitals are