TRENTON BRIDGE. (Plate 9.)

This bridge was built across the Delaware River at Trenton in the year 1804, by Lewis Wernwag. It is supported by five trusses, leaving four intervals for two carriage-ways and two footpaths. Each truss consists of a single arch composed of eight planks $4 \times 12$ placed in contact with each other. The roadway is suspended by chains of $1\frac{1}{8}$ inch square iron, the links of which are about 4 feet long, and 5 inches wide, passing flatways through the arches and between the chords and counter-braces; a key passing through the link on the top of the arch.

The counter-braces are in pairs $6 \times 10$, spiked to the chords at the lower ends, and connected with the arch at the upper end by means of iron straps $2 \times \frac{1}{2} \text{ inch}$.

The chords are also in pairs $6\frac{1}{2} \times 13\frac{1}{2}$, placed in contact; between them the links of the suspension-chains pass.

The floor-beams are suspended below the roadway under the chords, and held in place by the suspension-chains, the lower links of which pass around them.

The chords are connected with the arches at the end, by means of long straps of iron passing around the end of the arch at the skew-back, and bolted through the chords. The width of each carriage-way in the clear is 11 feet, and of each footpath 6 feet.

On the sides are large spur arches, of the same dimensions as the main arch of the truss, extending from a point 8 feet outside of the truss on the abutments and piers, and terminating within 44 feet of the centre—spiked at the point of intersection to the arches of the main truss. During the present year changes have been made by removing the outside truss on the lower side, to a sufficient distance to convert the footpath into a carriage-way. Cast-iron shoes were also placed under the ends of the counter-braces.