The horizontal bracing across the top and bottom of the two trusses is formed of T bars placed at right angles to the girders at intervals of 10½ feet, bringing one over every second post. They vary in size from 6" × 4" × 3/8" at the ends, to 4" × 4" × 3/8" at the middle of the span. Between these are horizontal diagonal braces of round iron, varying from 1 1/8" to 1 1/6" in diameter.

The vertical diagonal tie rods are 1 1/8" diameter at the ends, the rest being 1 3/8" diameter. These diagonals, both horizontal and vertical, are fitted with nuts and screws for tightening them when necessary.

This span was originally framed with a camber of 3 1/8 inches. It was built with a camber of 3 3/8 inches, measured while the girders were still on blocks and nearly completed. When the supporting blocks were removed the centre of the girders fell 1 3/8 of an inch, and after having been passed over by heavy trains they lowered 1 3/8 more, making the present camber 2 1/8 inches.

The ends of the girders rest upon cast iron plates; one end is firmly fixed to the pier, and the other is provided with rollers to allow for expansion and contraction. These castings have a packing of oak boiled in tar, in two thicknesses of 3/8" each, between them and the masonry, and are firmly secured in their places by lewis bolts passing through them into the bed stones.

The girders of this span were built in the position they permanently occupy. The great weight of the truss rendered it necessary to support the old bridge with trestles from the bed of the river during its construction. It was built entirely within the old structure, the interior bracing of which had to be altered to accommodate it. It was also necessary to raise the floor beams which carry the track, and support them temporarily on blocks until the iron work was completed.

The space in which the work was carried on was extremely confined, more so, in fact, than in any of the other spans, as this is the widest of all which were constructed inside of the old bridge.

DESCRIPTION OF THE CANAL SPAN.

The next longest span is that over the canal at the west end of the bridge.

In this the track passes between the girders, resting on the iron floor beams which connect them.