

channel span, one end being fixed, and the other movable upon rollers. Under these cast iron plates are packings of oak in two thickness of $\frac{3}{8}$ " each, boiled in tar.

In this span 1 inch rivets are used in the ends of the posts and tie bars, $\frac{1\frac{1}{2}}{8}$ " rivets in the chords, and $\frac{3}{4}$ " rivets in the bracing of the posts.

The top chord is stiffened with wrought iron distance pieces like those in the span already described.

These girders were originally framed with a camber of $2\frac{1}{2}$ inches and were built with a camber of $2\frac{1}{4}$ inches. After they were removed from the blocks and had an ordinary train pass over them the camber was $1\frac{7}{8}$ inches.

This span, like the preceeding, was built in position. As the old bridge here occupied the space required for the new one, it was necessary to remove it. To support the track and the new girders while in process of construction, a temporary trestle bridge was built under the old one; the caps being at the proper height to support the new girders. The track was supported by building up from the trestle caps with longitudinal and cross timbers, so arranged as to leave sufficient room for the riveting and also to allow the iron floor beams to pass through under the track timbers.

The foundation for the trestles was formed by driving piles into the bed of the canal, which were cut off above the surface of the water and capped.

DESCRIPTION OF THE $88\frac{1}{2}$ FEET SPANS.

There are twelve spans of $88\frac{1}{2}$ feet in length, forming the greater part of the length of the bridge.

The form of the girders is shown in the diagram, Fig. 3. They are of the same plan as those last described, with regard to the diagonal ties crossing two panels. With this exception they more nearly resemble the channel span of 177 feet.

The length of girder, = 88' 6".

Width between centres of girders, = 8' 9".

Height between horizontal plates, = 11'.

These girders are divided into 17 panels, of which the end ones are 5' 2", and the others 5'.

The end posts are similar to those before described and have an area of 28.40 square inches.