The general form of the girder is shown in the diagram, Fig. 2, and is similar to that already described, except that the tie bars cross only two panels instead of three.

The length of girders, = 140'.

Width between centres of girders, = 16'.

Height between horizontal plates, = 12' 3''.

This span is divided into 24 panels by the vertical posts. Two of the spaces, at one end only of each girder, are 5' 10''; the others are all 5' 8''.

These spaces are adopted to make the posts come opposite each other to accommodate the floor beams. Owing to the obliquity of the bridge one girder is placed just six feet in advance of the other. The first space or panel of the more advanced girder is 5' 8'', while to reach the same distance on the other side there are two panels of 5' 10'' each, or 11' 8''; making the difference of six feet that one is in advance of the other.

The end posts are of similar construction to those already described and have a sectional area of 30.26 square inches. The other posts are composed of two T bars each, braced by diagonal bars and cross pieces, dividing them into three spaces, and are similar to those already described for the channel span. Their sectional areas are as follows;—Two of 11.72 square inches, two of 9.5 square inches, two of 8.12 square inches, and the rest to the centre of 7.10 square inches.

The tie bars are placed in pairs and are of the following dimensions and sectional areas:—

One of 9'' by \(\frac{5}{8}'\), area of pair = 11.25 square inches.
One 9'' \(\frac{3}{8}'\) \(\frac{1}{8}'\) \(\frac{1}{8}'\) \(\frac{1}{8}'\) \(\frac{1}{8}'\) \(\frac{1}{8}'\) = 12.37''
One 9'' \(\frac{5}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) = 11.25''
Two 8'' \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) = 10.00''
One 7'' \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) = 8.75''
Two 6'' \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) = 7.50''
Two 5'' \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) \(\frac{5}{8}'\) = 6.25''
One 4'' \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) = 5.00''
Two 3'' \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) = 3.75''
Two 2½'' \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) \(\frac{3}{8}'\) = 3.12''
One 2½'' \(\frac{1}{4}'\) \(\frac{1}{4}'\) \(\frac{1}{4}'\) \(\frac{1}{4}'\) \(\frac{1}{4}'\) \(\frac{1}{4}'\) = 2.50''

It will be seen in the diagram, Fig. 2, that there are three of these ties beyond the centre. This is as far as calculation shows