5" × \frac{1}{16}''

Between the vertical plates of the chords the \( T \) irons are connected by plates 13'' × 12'' × \frac{1}{4}''.

The posts are placed between, and riveted to, the vertical plates of the chords. Near the ends of the truss there are ten rivets on each side, top and bottom, two being through the angle irons which connect the vertical and horizontal plates of the chord, and the others through the vertical plates. This number is diminished toward the centre according to the sectional area of the post.

The rivets through the posts and chords are 1 inch in diameter, and those in the diagonal bracing of the posts \( \frac{3}{4} \) of an inch in diameter.

The tie bars are in pairs, and are placed as shown in the diagram, Fig. 1. The first from the end crosses one panel, the second two panels, and the third three panels; being respectively the first ties of the three systems of braces of which the truss is composed.

These ties extend, as shown in the figure, a short distance past the centre, there being two beyond the middle panel.

This is shown by calculation to be all that is needed for counter-bracing, with the heaviest load for which the bridge is intended, or ever likely to be placed upon it.

The dimensions of the ties are as follows, commencing at the end of the girder:

Two of 8'' by \( \frac{5}{8}'' \) Area of pair = 10.00 square inches.

One ,, 9'' ,, \( \frac{5}{8}'' ,, ,, = 11.25 ,, ,, ,, 
Two ,, 8'' ,, \( \frac{3}{8}'' ,, ,, ,, = 10.00 ,, ,, ,, 
Three ,, 7'' ,, \( \frac{3}{8}'' ,, ,, ,, = 8.75 ,, ,, ,, 
Two ,, 6'' ,, \( \frac{1}{4}'' ,, ,, ,, = 7.50 ,, ,, ,, 
Three ,, 5'' ,, \( \frac{3}{8}'' ,, ,, ,, = 6.25 ,, ,, ,, 
Three ,, 4'' ,, \( \frac{5}{8}'' ,, ,, ,, = 5.00 ,, ,, ,, 
Two ,, 3'' ,, \( \frac{1}{4}'' ,, ,, ,, = 3.75 ,, ,, ,, 
Three ,, 2\frac{1}{2}'' ,, \( \frac{3}{8}'' ,, ,, ,, = 3.12 ,, ,, ,, 

The ties are at an angle of about 45° with the chords, except the first two from the end. The height between the lines of intersection of the ties and posts being very nearly the same as the length of the three panels each tie crosses.

The ties are riveted to the outside of the vertical plates of the chords, part of the rivets also passing through the posts inside of the vertical plates.