

# Extract from Description of Harpers Ferry Bridge

Baltimore 1852

The span of the suspension & truss bridge erected at Harpers Ferry is 124 ft between abutments. The length of each iron in stretch is 128 ft. The weight of each iron in the R.R. truss is 65 137 lbs of weight iron 33.527 lbs, making total weight of each iron 98 664 lbs.

& the weight iron would require little weathering; the rods from center to abutment being hit all eye at one & a series up the other end; with a weld or two between according to length. The long center rods have two handles, and one rivet for adjustment of strain & convenience in welding as well as in raising the whole.

The cast iron stretchers is set upon without rivets; and covers one side of metal. Cast in panel length & joined at the ends by a double truss, the truss being out & the truss with handles turned off in a little to the right. The ends of the truss of cylinders inserted to these centrifuges, and slightly rounded to allow a small angular movement without risk of joint fracture.

The stretchers or straining beams, the vertical posts and suspension bars comprise the essential features of the bridge each post being hung by two bars from both ends of the stretchers independently of all <sup>the</sup> others; and each post & pair of tension bars forming with the stretchers a separate truss. This system perfect in itself, is additionally connected by diagonal rods in each panel, also by light <sup>rolling</sup> castings acting as struts. The diagonal side rods might be safely dispensed with, for the peculiar merit of the truss is its perfect independence of side pressure. They are however used as a safe guard only in case of the fracture of any of the principal suspension rods.

By this combination of cast iron iron. The form is