## The Warren Truss

Patented in 1846 by British engineers James Warren and Willoughby Monzoni, the Warren truss and its variants constitute a commonly built metal truss bridge type of the nineteenth and early twentieth centuries. The original form of the Warren was purely a series of equilateral triangles in which the diagonals carried both compressive and tensile loads. Later, verticals were added but served only as bracing for the entire triangular web system between parallel top and bottom chords. Like the Pratt truss, the Warren truss was widely built throughout the United States from the middle of the nineteenth century well into the twentieth century, and spawned many variants, including a double intersection, or lattice, subtype in which two triangular truss systems are superimposed with or without verticals.

Research located Maryland Historical Trust historic resource survey forms for two Warren steel trusses in Maryland: the 1907 Carter Farm Bridge on Deer Creek in Harford County (MHT-HA-799; this bridge was evidently moved from another site, as were many other highly adaptable short span trusses in the United States) and the 1910 Reel's Mill Road Bridge over Bush Creek in Frederick County (MHT-F-5-8). Both bridges were riveted pony trusses built by the prolific York Bridge Company of York, Pennsylvania.