

(No Model.)

W. S. BRELSFOARD.
BRIDGE.

No. 531,768.

Patented Jan. 1, 1895.

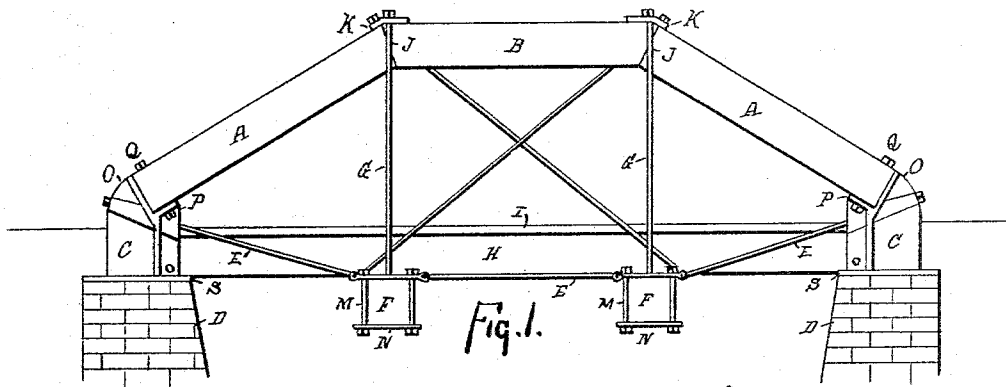


Fig. 1.

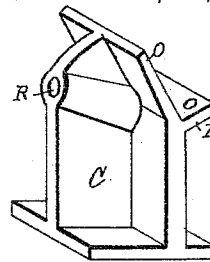


Fig. 3.

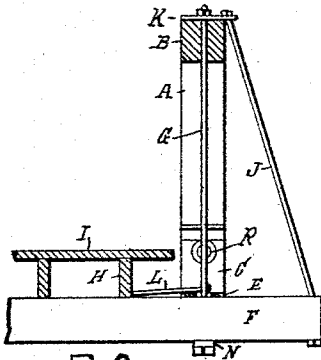


Fig. 2.

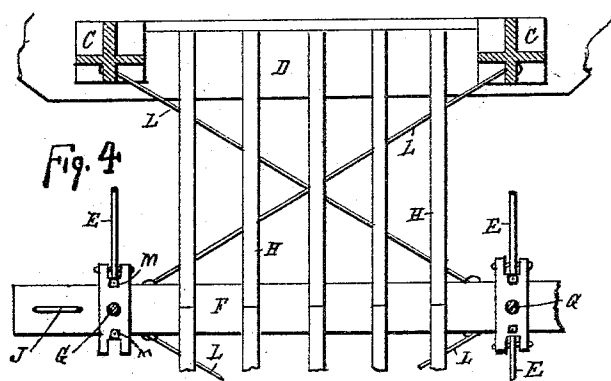


Fig. 4.

WITNESSES.

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SPECIFICATION forming part of Letters Patent No. 531,768, dated January 1, 1895.

Application filed June 30, 1894. Serial No. 516,168. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. BRELSFOARD, of Jacksonburg, Butler county, Ohio, have invented certain new and useful Improvements in Bridges, of which the following is a specification.

My invention relates to that class of bridges wherein the roadway is supported by side trusses, and the objects of my improvement are embodied in the form of construction and manner of adjusting the trusses and in the manner of supporting them on the abutments. These objects are attained in the following described manner as illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the bridge; Fig. 2, the portion of a transverse vertical section thereof, and Fig. 3 an enlarged perspective view of one of the imposts that supports the trusses; Fig. 4, a plan of portion of the roadway with floor removed to expose the lateral braces.

In the drawings A represents the springer beams and B the key beam of the arch of the truss; C, metal imposts movable on the abutments D to support the ends of the trusses; E, adjustable tie rods spanning the distance between the imposts; F, cross beams suspended from the arch of the trusses by means of rods G; H, the joist and I the floor thereon. The ends of the joist rest on the cross beams and on the abutments and together with the floor form the roadway of the bridge; J, lateral braces for the trusses secured to the extended extremities of the cross-beams; K, metal plates to cover the joints in the arch of the trusses and form attachments for the top of lateral braces J.

Lateral movement of the roadway is prevented by braces L that are extended diagonally under the joist and are attached to the cross-beams and to the imposts.

The tie rods E are articulated or jointed at the cross-beams and they are secured thereon by means of side bolts M and bottom plate N.

The various rods and braces used in the construction of the bridge are provided with the usual means of adjustment such as interposed turnbuckles or terminal nuts.

The imposts C are each formed with top wings O and P at right angles to each other to form a seat for the extremity of the respect-

ive springer beams A. Wings P are formed with bolt holes for the passage of bolts Q that secure said beams thereon. Tapered openings R for the passage of the tie rods are extended at an angle through the respective imposts. The inner end of said openings is widened to permit the tie rod to move laterally up and down therein during its adjustment by means of the nuts on its opposite ends. Plates S cap the abutments and form a plane surface for the movement of the imposts that are loosely seated thereon. The vertical height of the imposts is sufficient to carry the springer beams above the level of the roadway and out of contact with the influences of the soil that would soon cause them to become decayed.

By means of the nuts on the ends of the tie rods the corresponding imposts may be moved toward each other and the trusses contracted in length. This adjustment of the trusses causes the ends of their members to fit snugly together and distributes the weight on the roadway over the cross-beams proportionately between the arch of the trusses and the tie rods. If the depending rods G are shortened by means of the nuts thereon to raise the cross-beams, the sag in the tie-rods will be lessened and unless correspondingly shortened the length of the trusses will be permitted to increase.

This manner of constructing and adjusting the various members of the bridge distributes the duty to be performed proportionately among the various members according to their strength, as the strut of the arch of the trusses is relieved by the tensile strength of the tie rods and in proportion to the amount of their sag.

Having fully described my improvements, what I claim as my invention, and desire to secure by Letters Patent, is—

In a bridge, a metal impost movably seated on the abutment and formed with a seat above the level of the roadway for an extremity of the arch of the truss and containing a tapered opening at an angle therethrough for the insertion of the tie rod.

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Witnesses:

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