A. E. BROWN.

Compression-Members of Bridges.

No. 164,135. Patented June 8, 1875.

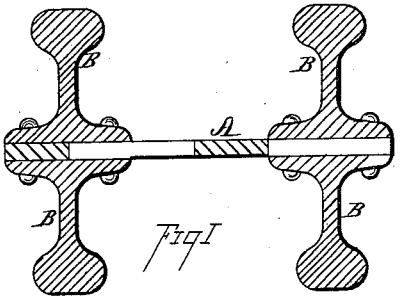


Fig 1

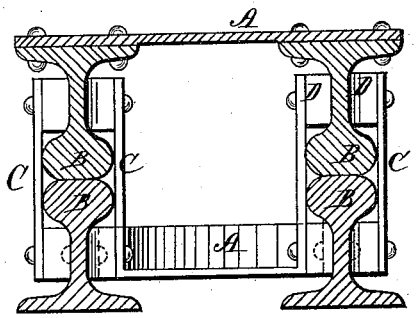
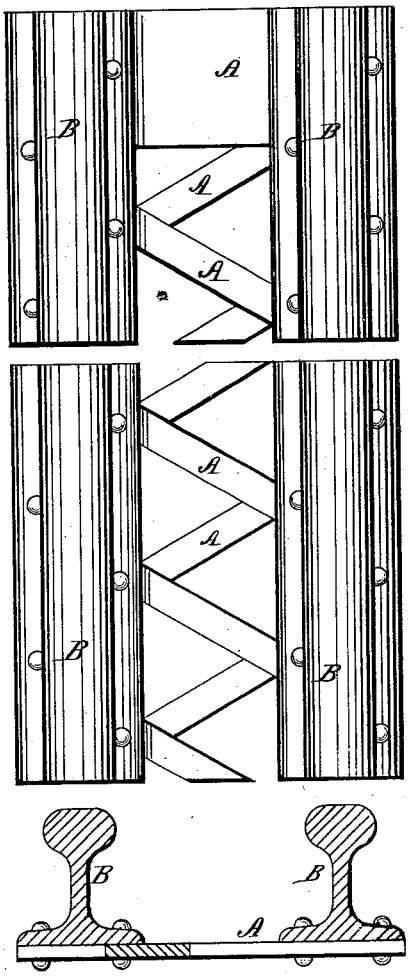
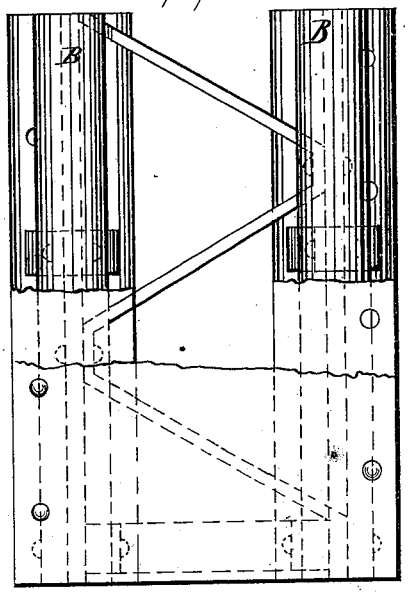
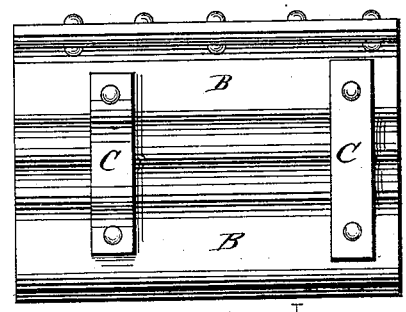


Fig 2







WITNESSES

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UNITED STATES PATENT OFFICE.

ALEXANDER E. BROWN, OF CLEVELAND, OHIO.

IMPROVEMENT IN COMPRESSION-MEMBERS OF BRIDGES.

Specification forming part of Letters Patent No. **164,135**, dated June 8, 1875; application filed May 18, 1875.

CASE A.

To all whom it may concern:

Be it known that I, ALEXANDER E. BROWN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Compression-Members of Bridges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in compression-members designed for structures, such as bridges and other trusses; and consists in the combination, with a plate or truss-work, of railway T-rails, in the manner substantially as hereinafter set forth and claimed.

In the drawings, Figure 1 represents a truss-work occupying the space between two railway T-rails, which rails are firmly bolted to the surface of the said truss-work at or near its outer edges. Fig. 2 represents either a truss-work or a plate occupying the space between four railway T-rails, which are placed opposite to each other, two and two, at the outer edges of the said truss-work or plate.

A, Fig. 1, is a truss-work of any ordinary construction, the said invention being limited to no particular construction of the said truss-work. B are railway T-rails, firmly secured to one of the surfaces of the said truss-work at or near its outer edges. In Fig. 2 is represented a structure designed to possess more strength than that shown in Fig. 1. It is composed of a central portion, A, which is either a plate or a truss-work. At or near its outer edges railway T-rails B are firmly secured upon both surfaces of the said plate or truss, so that on each edge of the truss or plate A are two railway T-rails, standing flange to flange, and projecting outward from both faces of the plate or truss-work A. The truss-work A may spring from the bottom of the flanges, as shown in Fig. 1; or the said truss-work may be interposed between the webs, as shown in Fig. 2. In the latter case a convenient form of truss-work is a single bar passing alternately from the web of one rail across to the other rail, and riveted at the angles to the webs of the rails, substantially as shown in Fig. 2. This truss-work between the webs need not be confined to one set of rails, as shown in the section at the top of Fig. 2, but it may, if desired, be interposed between the webs of the upper rails as well; or one set of rolls may be united by a plate or truss-work, as shown at the bottom of Fig. 1, and then be connected by suitable straps C to another set of rails possessing the truss-work between the webs, in which condition they would present the appearance shown at the top, Fig. 2. So, also, the straps B may either be bent to the form of the rails, or washers or thimbles D may be interposed between the webs of the rails and the straps B, so as to permit the use of the straight straps.

What I claim is, and desire to secure by Letters Patent—

1. The column or compression-member of a bridge, truss, or other structure, consisting of the combination, with a truss-work, A, of railway T-rails B, firmly secured to the surface of the said truss-work at or near its outer edges, substantially as and for the purpose described.

2. The combination, with a plate or truss-work, A, of four railway T-rails secured firmly thereto, the said rails B located two upon one face and two upon the other face of the plate or truss, at or near its outer edges, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALEXANDER E. BROWN.

Witnesses:

FRANCIS J. WING,

JOHN R. RANNEY.