

J. B. BAUSMAN.
Suspension Truss-Bridges.

No. 155,634.

Patented Oct. 6, 1874.

Fig: 1.

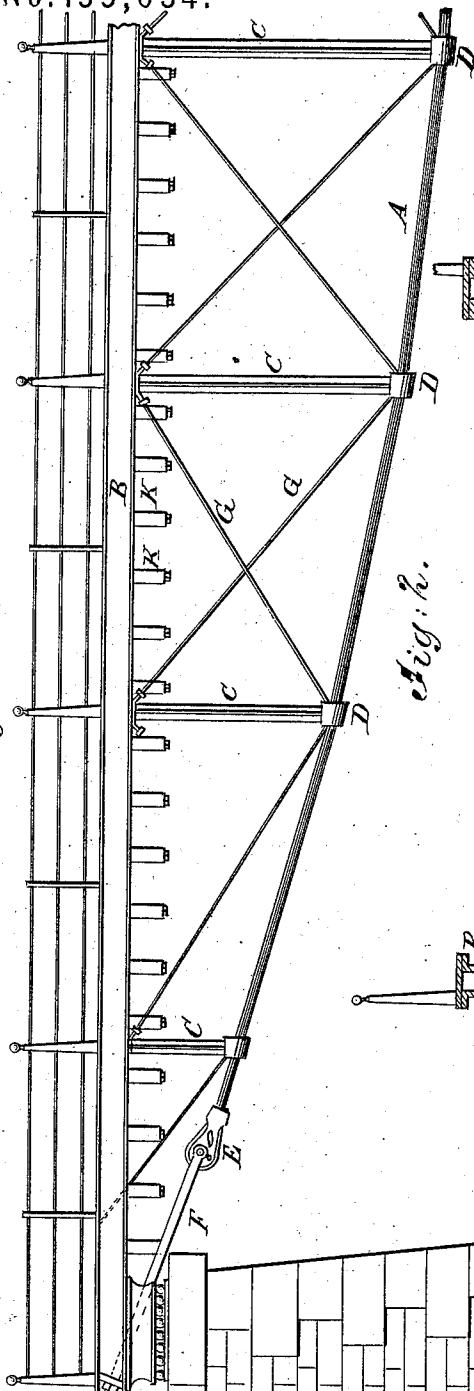
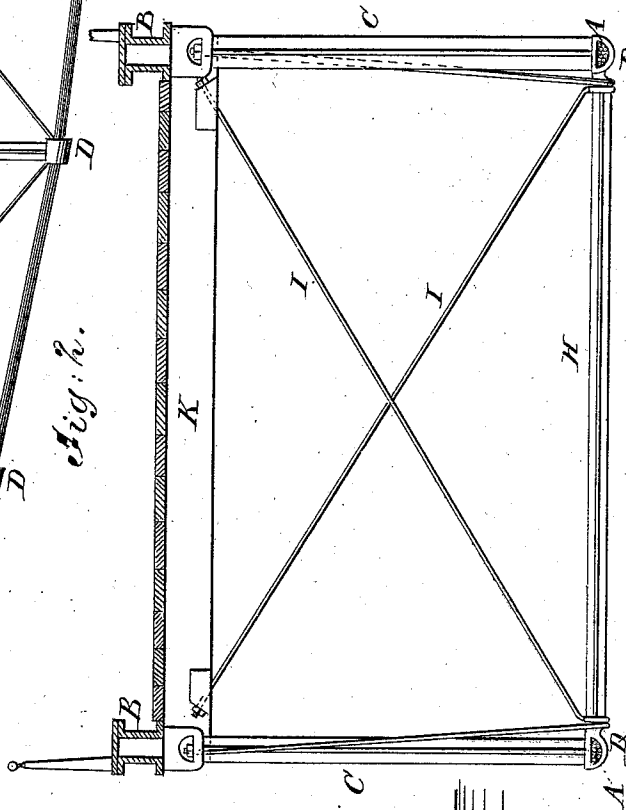


Fig: 2.



WITNESSES:

*Chas. Nida
C. Edgwick*

INVENTOR:

BY

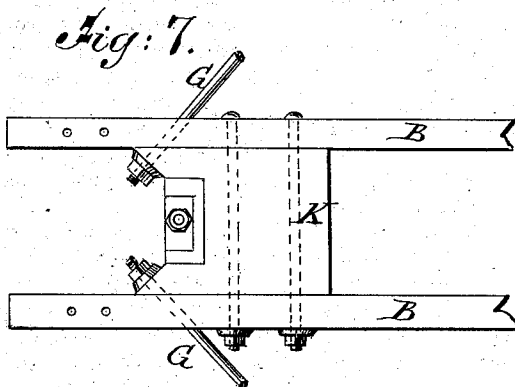
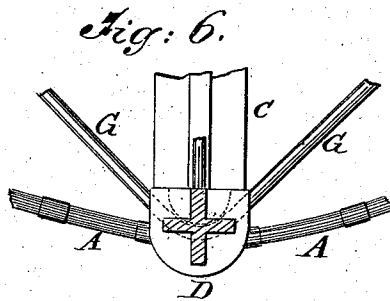
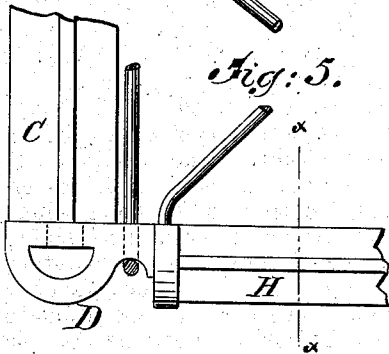
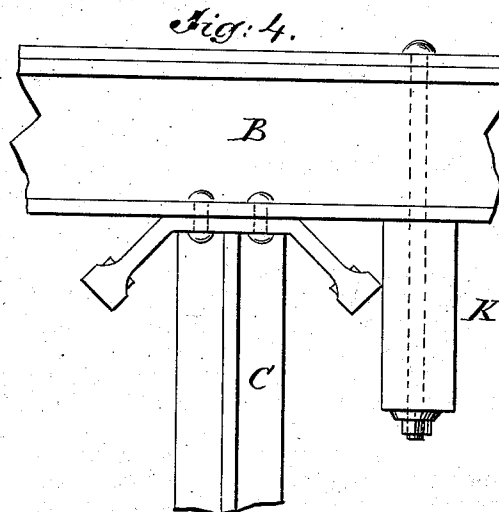
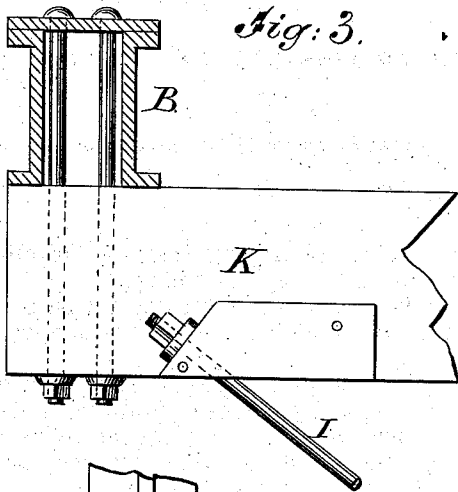
*J. B. Bausman
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WITNESSES:

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UNITED STATES PATENT OFFICE.

JACOB B. BAUSMAN, OF MINNEAPOLIS, MINNESOTA.

IMPROVEMENT IN SUSPENSION TRUSS-BRIDGES.

Specification forming part of Letters Patent No. **155,634**, dated October 6, 1874; application filed August 1, 1874.

To all whom it may concern:

Be it known that I, JACOB B. BAUSMAN, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Improvement in Suspension Truss-Bridge, of which the following is a specification:

This invention relates to the construction of suspension-bridges; and consists in the construction, arrangement, and combination of parts hereinafter set forth and described.

In the accompanying drawing, Figure 1, Sheet 1, represents a side elevation. Fig. 2, Sheet 1, is a vertical central section of the bridge. Fig. 3, Sheet 2, is a section of the truss and floor beams, showing one of the cross diagonal braces. Fig. 4 is a side view of the chord, one of the truss-posts, and cross-section of a suspended floor-beam. Fig. 5 shows the foot-block, transverse strut, and sway-brace. Fig. 6 is a cross-section of the strut, showing lower end of the post, the cable, and foot-block, and side diagonal braces, taken on the line *xx* of Fig. 5. Fig. 7 shows the floor-beams trussed to the posts, with provision for lateral and sway bracing.

Similar letters of reference indicate corresponding parts.

A are the cables, which are made of wire, and semi-cylindrical in form, as seen in Fig. 2. B are the chords, made each of two sections of $\square$ -iron, placed parallel with each other, confined together by a covering-plate. C are the truss-posts, which are confined to the chords in a substantial manner. D are the foot-blocks. The posts are connected with these foot-blocks by dowels or screws, as are also the transverse stay-pieces or struts H. The cables pass through the foot-blocks, and are connected at each end with swivel or socket yokes E, which connect them with the tension or anchor bars F. G G are the side diagonal braces, which fit into lozenge-shaped recesses in the bottom of the foot-blocks, or slip over projections at the same points. I are the transverse diagonal braces, held in place by the dowels of struts H. K are the floor-timbers.

The posts D and strut-bars H are made of

star-iron, which form gives them remarkable strength, stiffness, and durability.

With the exception of the tension-bars at each end, the cables are continuous throughout each span.

The principal advantages of this style of bridge are, a greatly-reduced quantity of metal and workmanship, and consequent reduced permanent load, cost of transportation, and expense of the completed structure.

Owing to the manner in which the lower connections are made with the foot-blocks, the trusses can be adjusted from the roadway, and the structure can be erected, when the same may be desirable, without employing substantial scaffolding, as is usual in the erection of bridges, the use of screw-bolts being confined to points which are easily accessible.

The floor-beams may be of either iron or wood, and those on either side of the posts are framed together to give additional strength, and to furnish connections for the sway-braces.

The chords may be constructed of wrought-iron, cast-iron, or wood.

I am aware that iron chords constructed substantially as shown, and star-iron posts and struts, and suspended floor-beams and yoke-sockets, have been used, and are not novel devices.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the chords B B, suspended floor-beams K, pendent posts C, increasing in length from the ends to the center of the bridge, the foot-blocks D, transverse struts H, cable A, and tension device E F, all constructed and arranged as herein shown and described.

2. The transverse struts H and pendent posts C, having end tenons for forming the connection between the cable or foot blocks D and the brace-rods G I, as herein described.

JACOB B. BAUSMAN.

Witnesses:

W. D. VAN DUZER,
A. L. BAUSMAN.