(No Model.)

E. KEATING.

GIRDER FOR TRUSS BRIDGES.

No. 530,425. Patented Dec. 4, 1894.

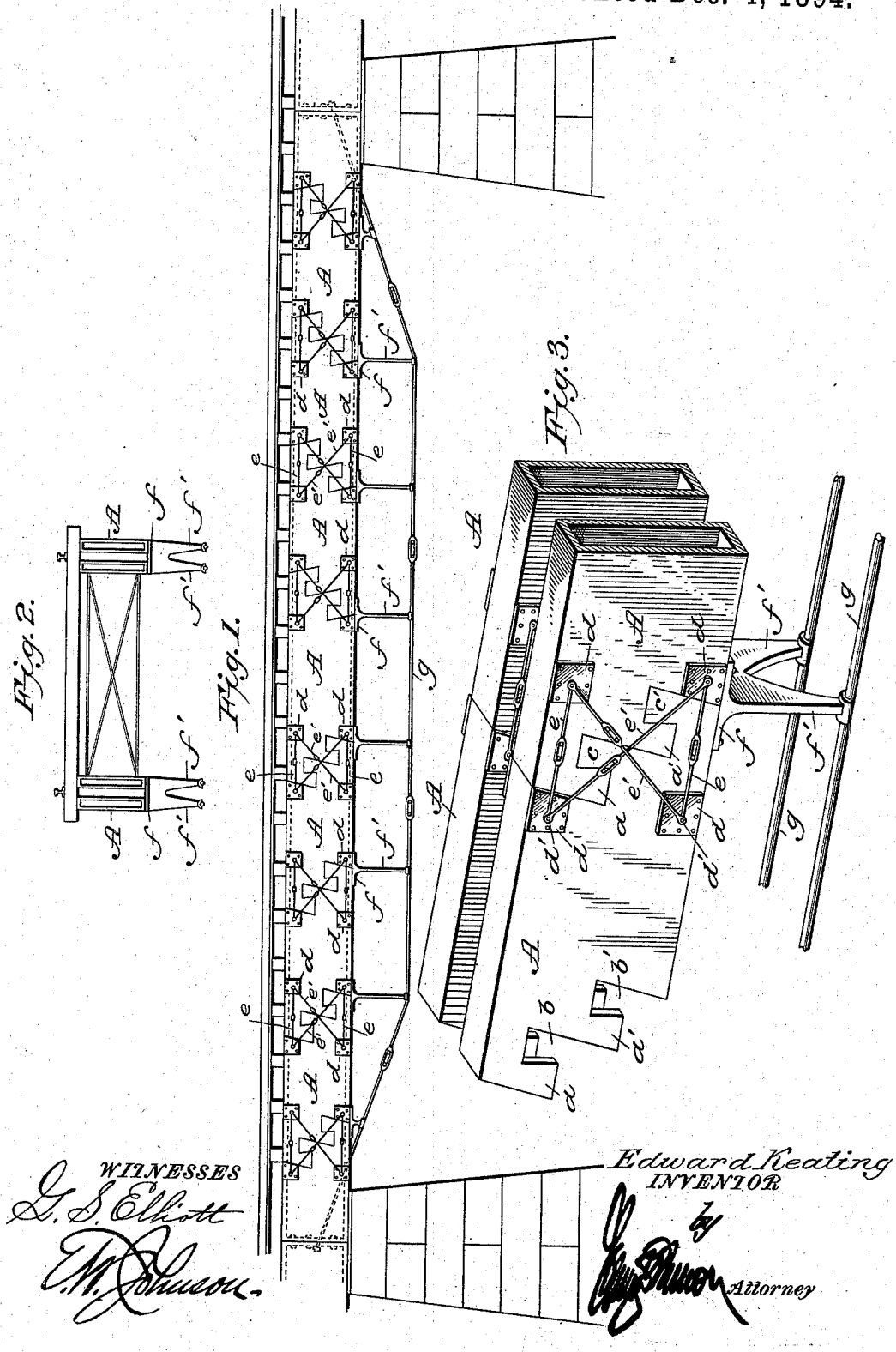

Fig. 2.

Fig. 1.

Fig. 3.

WITNESSES
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GIRDER FOR TRUSS-BRIDGES.

SPECIFICATION forming part of Letters Patent No. 530,425, dated December 4, 1894.

Application filed November 1, 1894. Serial No. 527,657. (No model.)

To all whom it may concern:

Be it known that I, EDWARD KEATING, a citizen of the United States of America, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented certain new and useful Improvements in Girders for Truss-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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a bridge which is made up of a series of metallic blocks which are so shaped as to provide interlocking joints, braces or connecting-bars being also employed for rendering the joints more stable; and the invention consists in the construction and combination of the parts as will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings, forming part of this spec fication, Figure 1 is a side elevation of a bridge or span constructed in accordance with my invention. Fig. 2 is an end elevation, and Fig. 3 is a sectional perspective view.

The blocks A are preferably made of cast metal and are hollow, the ends being cut away so as to present a configuration with dovetail depending portions a and a' and dovetail recesses b and b', and the opposite ends of the blocks are of a corresponding configuration to present dovetail recesses in which the dovetail portions a and a' of the adjacent blocks will lie, while the dovetail projections c and c' will lie in the recesses b and b'. The hollow blocks thus constructed are adapted to interlock or engage with each other by a sidewise movement of one block upon the other, and when placed in engagement they will be held against vertical displacement.

To render the joint more secure and prevent lateral displacement plates d d are attached near the corners of the blocks, and from the center of these plates project bolts d' with which engage rods or bars e and e' having turn-buckles. These rods not only prevent lateral movement but also render the joints more rigid than they would be without them, and the plates d not only provide a connection for the bolts but also give a sufficient projection to permit of the turning of the turn-buckles. At the joints on the under side of the blocks are secured brackets f having depending members f' the lower ends of which are curved to form bearings for the truss-rods g, the ends of said truss-rods engaging with the flanges on the end blocks of the span or girder immediately above the pier or support.

In practice it is preferred to use girders or spans constructed in accordance with my invention in pairs, as is fully shown in Figs. 2 and 3 of the drawings; but instead of using them in pairs a series of such girders may be used where greater strength is required.

The bridge span or girder constructed in accordance with my invention is extremely convenient and being made up in sections can be put together with small cost. It can also be taken down readily, and by reason of the special construction is especially adapted for building bridges or spans in such places where the cost of transportation would prevent beams in one piece being used.

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

1. A hollow block or girder section having dovetail projections and recesses on each end so as to interlock and prevent vertical displacement, and means for holding the blocks in engagement with each other against lateral displacement, substantially as shown and for the purpose set forth.

2. In combination with a plurality of blocks having interlocking ends, plates d attached to the blocks and provided with means for securing tie-rods thereto, together with tie-rods e and e', substantially as shown.

3. In combination with the blocks A which are secured to each other to prevent vertical and lateral displacement, of brackets f secured to the under side of the blocks at the

joints, said brackets having depending portions f' with which truss-rods engage, substantially as shown and for the purpose set forth.

4. In combination with the blocks A having on one end depending dovetail portions a and a' the walls of which form dovetail recesses b and b', the other end of the block having upwardly-projecting dovetail portions c and c' forming dovetail recesses which receive the depending portions of a correspondingly-shaped block, substantially as shown and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD KEATING.

Witnesses:

THOMAS GIBNEY,

THOS. F. RONAN.