(No Model.)

J. MAISH.

BRIDGE.

No. 264,724. Patented Sept. 19, 1882.

Fig. 1.

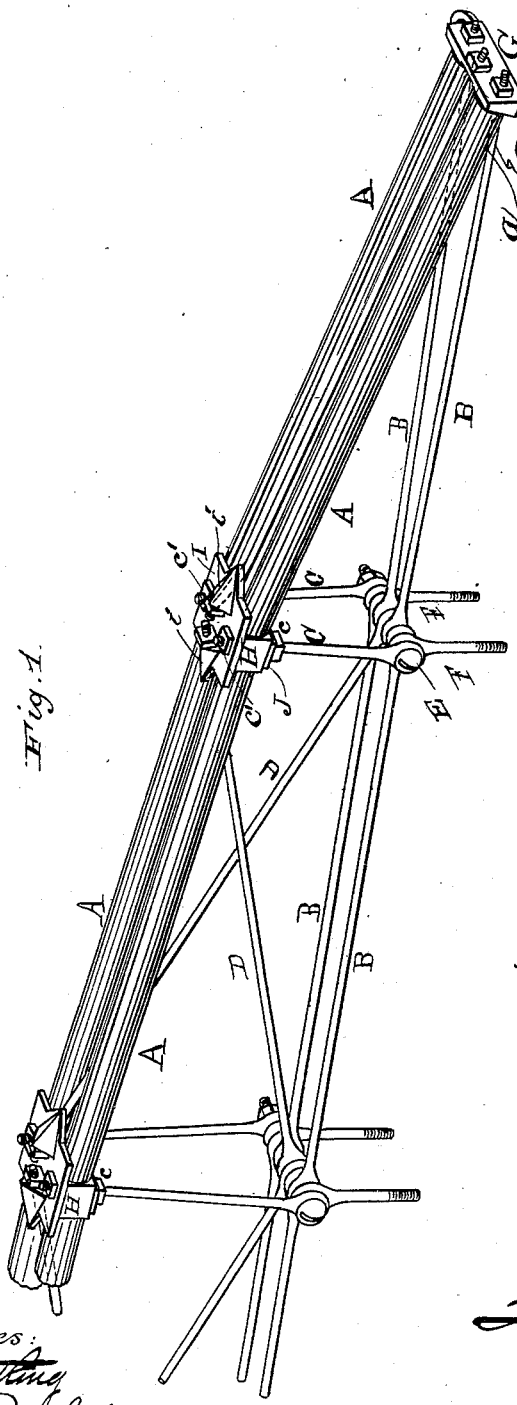


Fig. 2.

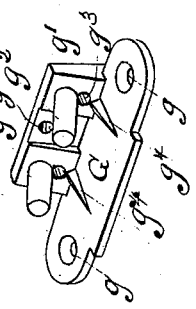
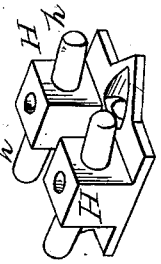


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH MAISH, OF IOWA CITY, IOWA.

BRIDGE.

SPECIFICATION forming part of Letters Patent No. 264,724, dated September 19, 1882.

Application filed April 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH MAISH, a citizen of the United States of America, residing at Iowa City, in the county of Johnson and State of Iowa, have invented certain new and useful Improvements in 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 or figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of bridges which are constructed of metal tubes and rods; and it consists in certain features, hereinafter fully described, and specifically set forth in the claims.

Figure 1 is a perspective of a portion of a bridge embodying and sufficient in extent to illustrate my invention. Figs. 2 and 3 are details.

Like letters refer to like parts in all the figures.

A A represent metallic tubes, of which the arch of the bridge is constructed; B B, the tie-rods; C C, the suspension rods, and D D the braces.

The rods and braces are, at their lower ends, secured together by the usual cross-bolts, E, which also support the bolts F for attaching the floor-beams of the bridge.

G represents the foot-plate, and its base is perforated at *g g* for the usual bolts for attaching it to the landing or pier, and it is provided with an outer flange, *g'*, the inner surface of which is provided with bosses or projections g^2, adapted to pass within the tubes A, and perforations g^3 for the tie-rods B, and brace D, and strengthening-ribs g^4 extending across the base. The pipes A are slotted a short distance at *a* (dotted lines, Fig. 1) for the reception at that point of the tie-rods, whereby compactness of arrangement, and therefore greater strength, are secured at the foot of the arch, in that the height of the flanges are reduced and the straining-point brought as near as possible to the base of the foot-piece.

H H represent coupling-blocks, provided with bosses *h h*, adapted to enter the tubes A A. These blocks are surmounted by a cap-plate, I, and rest upon a strap, J, and the strap is supported by nuts *c c* on the suspension-rods C C, which pass through the plates and blocks, and all are bound together by the nuts *c' c'*. The cap-plate I is provided with perforated ribs *i i*, for the reception of the brace-rods D D. Blocks H H and plate I may be integral. The plates I and J throughout the arch are of uniform width, so that the two lines of tubes are held parallel with each other; but the bosses g^2 g^2 of the foot-plate G are wider separated, in order to spread the tubes at that point, and thus secure greater resistance to pressure exerted laterally against the arch.

The function and operation of the elements of the bridge are too well known to require an extended description.

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

1. The combination of the coupling-blocks H H, provided with bosses *h h*, the suspension-rods C C, provided with the nuts *c c'*, the plates J and I, the latter provided with the perforated ribs *i i*, the pipes A A, braces D D, rods B B, and bolt E, substantially as shown and described.

2. The foot-plate G, provided with the flange *g'*, bosses g^2, and rib g^4, substantially as shown and described.

3. The combination of the foot-plate G, provided with the bosses *g'* and ribs g^4, with the slotted tubes A and tie-rods B, substantially as shown and described.

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

JOSEPH MAISH.

Witnesses:
ORLIN J. GOWEY,
JOHN M. RITTER.