W. E. THOMAS.

Improvement in Bridges.

No. 129,374. Patented July 16, 1872.

Fig. 1.

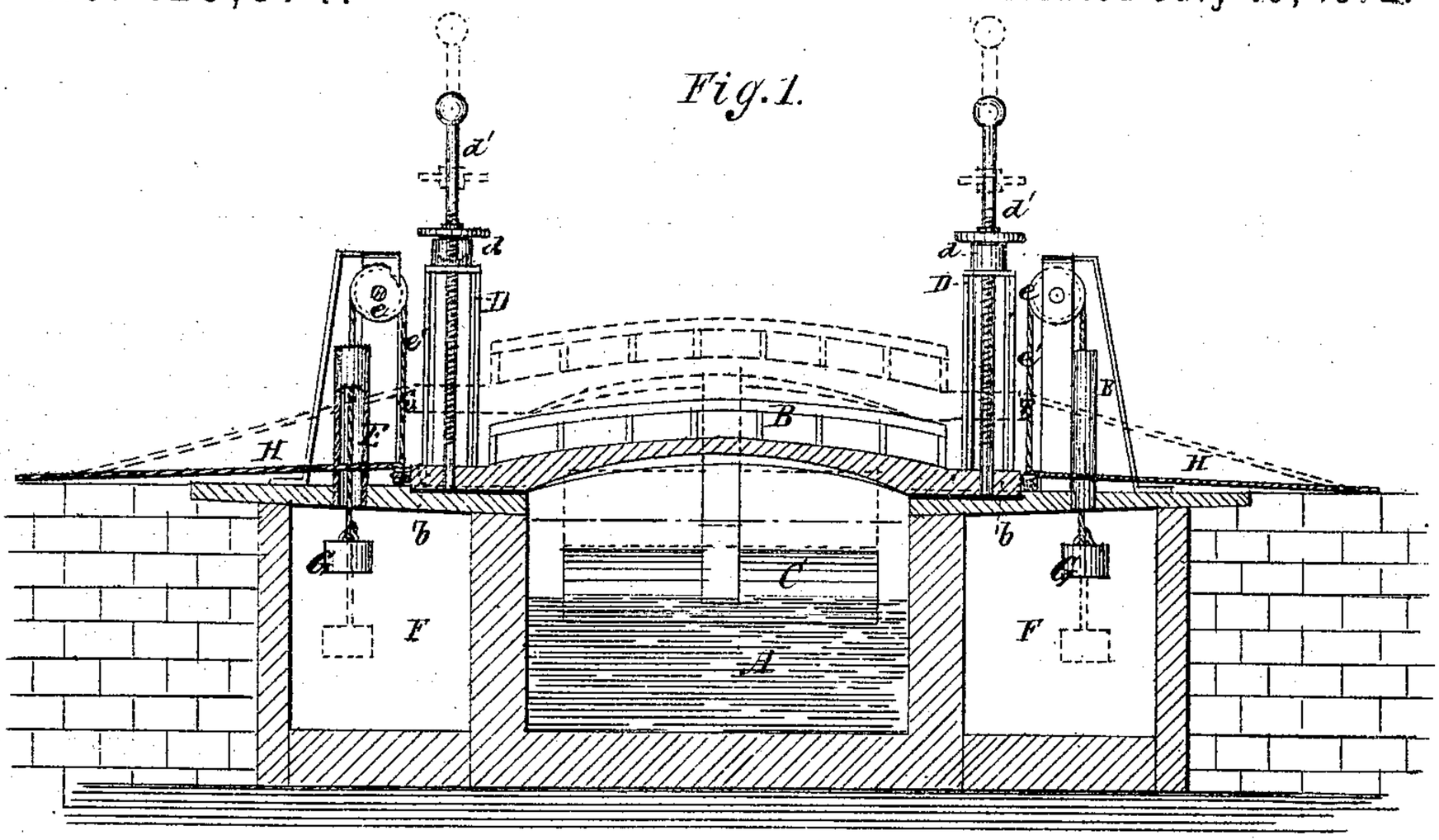
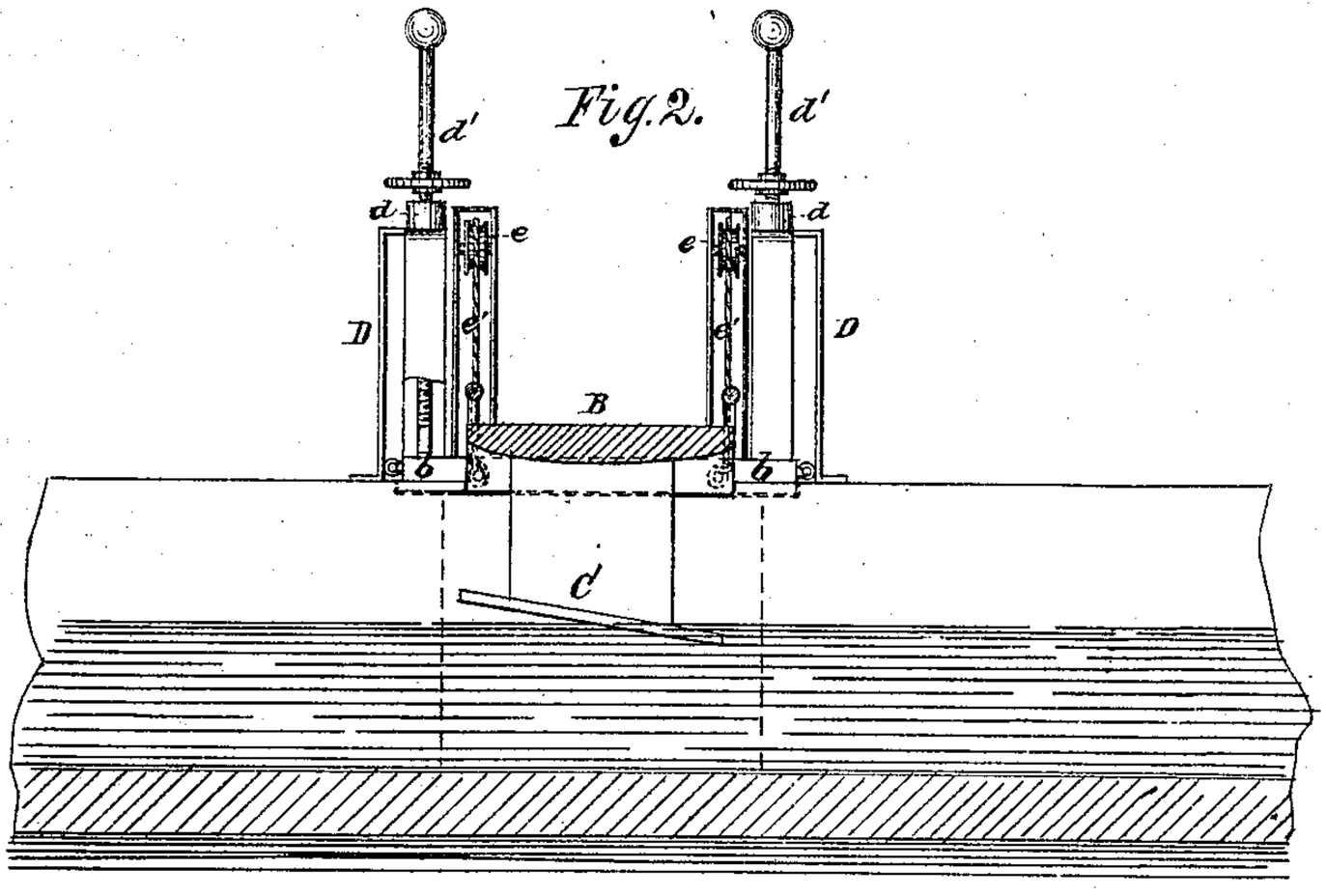


Fig. 2.



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129,374

UNITED STATES PATENT OFFICE.

WILLIAM E. THOMAS, OF QUEENSTOWN, ASSIGNOR TO HIMSELF AND ROBERT W. RASIN, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN BRIDGES.

Specification forming part of Letters Patent No. 129,374, dated July 16, 1872.

Specification describing an Improvement in Bridges, invented by WILLIAM E. THOMAS, of Queenstown, in the county of Queen Anne and State of Maryland.

The invention consists in providing a bridge with a chute inwardly inclined against the current, with adjustable bolts to assist in supporting it under pressure, and with counterbalance weights.

Figure 1 is a cross-section; Fig. 2, a longitudinal section.

A represents the channel of a stream, and B a bridge which spans it. C is a broad chute, inclined upward against the current, and attached to the under side of the bridge, so as to cause it to be lifted by the rising water. D D D D are four hollow upright guides, in which work the lateral projections *b b b b* of the bridge. To the top of each of these uprights is attached a fixed nut, *d*, and an adjustable screw-bolt, *d'*, by which the bridge may have a firm support independent of the water which bears against the chute. E E are two water-tight tubes on each side of stream, over which are placed the pulleys *e e*, over which work the cords or ropes *e' e'*. Immediately beneath these tubes are located water-tight boxes F F, in which rise and fall the counter-balance weights G G. H H are the usual pivoted platforms, which connect the bridge with the roadway, and change their angle of inclination according to the rise of the bridge.

The mode of operation is as follows: As the stream takes a rise the current rushes against the inclined chute C and elevates the bridge in exact proportion to the increase in depth of water. When a loaded wagon or other vehicle comes along while the bridge is thus elevated the wagoner screws down the bolts *d'* to such a distance as corresponds with the rise of bridge, and thus prevents the weight of his loaded wagon from submerging it.

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

1. A bridge, B, provided with a chute, C, thereunder, as and for the purpose described.
2. A bridge, B, that rises and falls with stream, in combination with the vertical adjustable screw-bolts *d'*, arranged as and for the purpose described.
3. A bridge that rises and falls with stream, combined with chute resting upon water and counter-balance weights to support it under pressure from above, as described.
4. The chute C, supporting-bolts *d'*, and counter-balance weights, combined with a bridge having the lateral projections *b*, as and for the purpose described.

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