B. F. & S. B. BETSER.

DRAW-BRIDGE GATES.

No. 183,111. Patented Oct. 10, 1876.

Fig. 1.

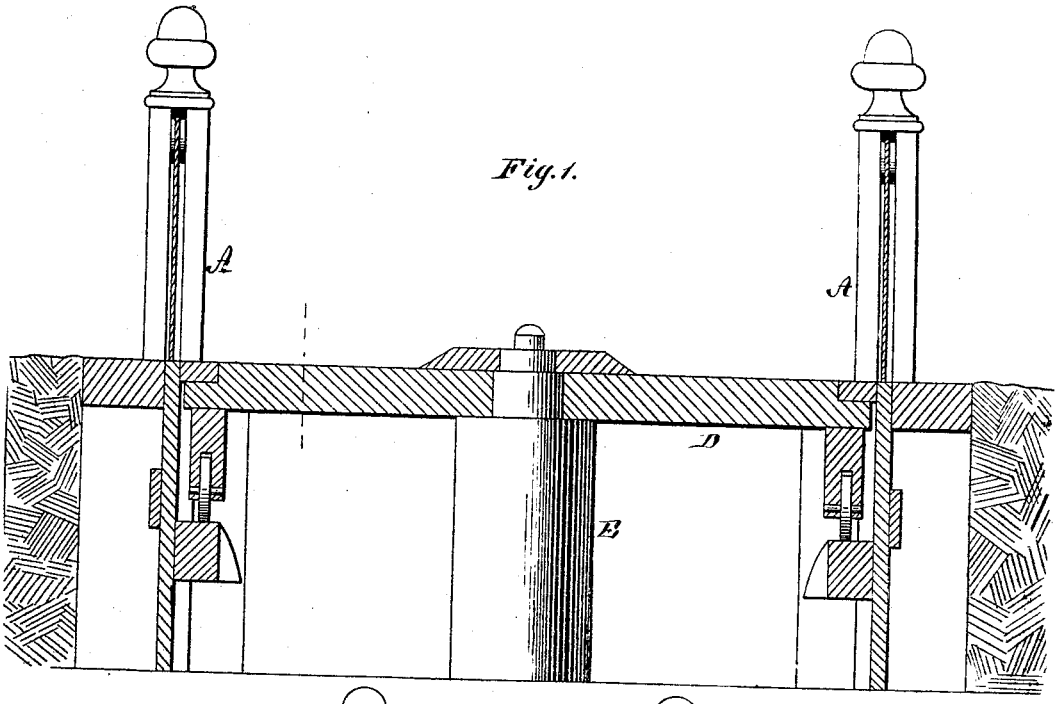


Fig. 2.

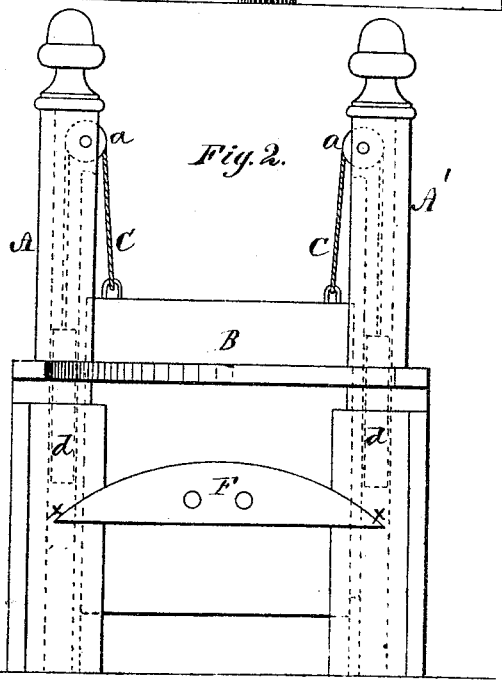
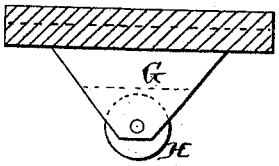


Fig. 3.



WITNESSES

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BENJAMIN F. BETSER AND SHEPHERD B. BETSER, OF BLOOMINGTON, ILLINOIS; SAID BENJAMIN F. BETSER ASSIGNOR TO SAID SHEPHERD B. BETSER.

IMPROVEMENT IN DRAW-BRIDGE GATES.

Specification forming part of Letters Patent No. **183,111**, dated October 10, 1876; application filed September 23, 1876.

To all whom it may concern:

Be it known that we, BENJAMIN F. BETSER and SHEPHERD B. BETSER, of Bloomington, in the county of McLean, and in the State of Illinois, have invented certain new and useful Improvements in Bridge-Gates; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of our invention consists in the construction and arrangement of gates for bridges in such a manner that said gates will rise and fall automatically when the bridge is opened and closed, as will be hereinafter more particularly described.

In the annexed drawings, making part of this specification, Figure 1 represents a longitudinal section; Fig. 2, an end view, and Fig. 3 an appendage to the under side of the bridge.

In the figures, A A′ represent four posts, which are erected upon the abutments at the four corners of the bridge. These posts are made hollow, and near their upper ends are located pulleys *a a*. Cords C C pass over these pulleys, and then down into the posts, and have weights *d d* secured to their ends. The other ends of these cords are secured to the gates B B by means of staples or hooks, or other convenient means. F represents cams, which are secured to the gates on their sides which face each other. D represents the bridge, which is supported at its center by means of a post, E, which acts as a pivot, upon which the bridge turns. The ends of the bridge are supported at the abutments in any of the known and usual ways.

Beneath the bridge, at each end, depends a frame, G, in the lower end of which is secured a roller, H. This roller is so situated that it will ride upon the cam F when the bridge is being opened and closed, and while at rest, closed. The cam F is in the shape of an arc of a circle upon its upper side, while it is curved on its inner side, to agree with the cord of the moving bridge. When the bridge is closed, the center of the bottom of roller H rests upon the center of the cam F; but when it is moved in either direction the roller passes down, or on the circle of the cam, and the weights *d d* cause the gates B B to rise, so that the passages to the bridge are always automatically closed when the bridge is open. When the bridge is being closed, the roller H rides down the cam F, and causes the gates to descend and disclose the passages.

Having thus fully described our invention, what we claim is—

The combination, with the pivoted bridge D, having frames G and rollers H, of the hollow posts A A′ A A′, the gates B, cams F, cords C C, pulleys *a a*, and weights *d d*, all constructed substantially as and for the purposes set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 15th day of February, 1875.

BENJAMIN F. BETSER.
SHEPHERD B. BETSER.

Witnesses:
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