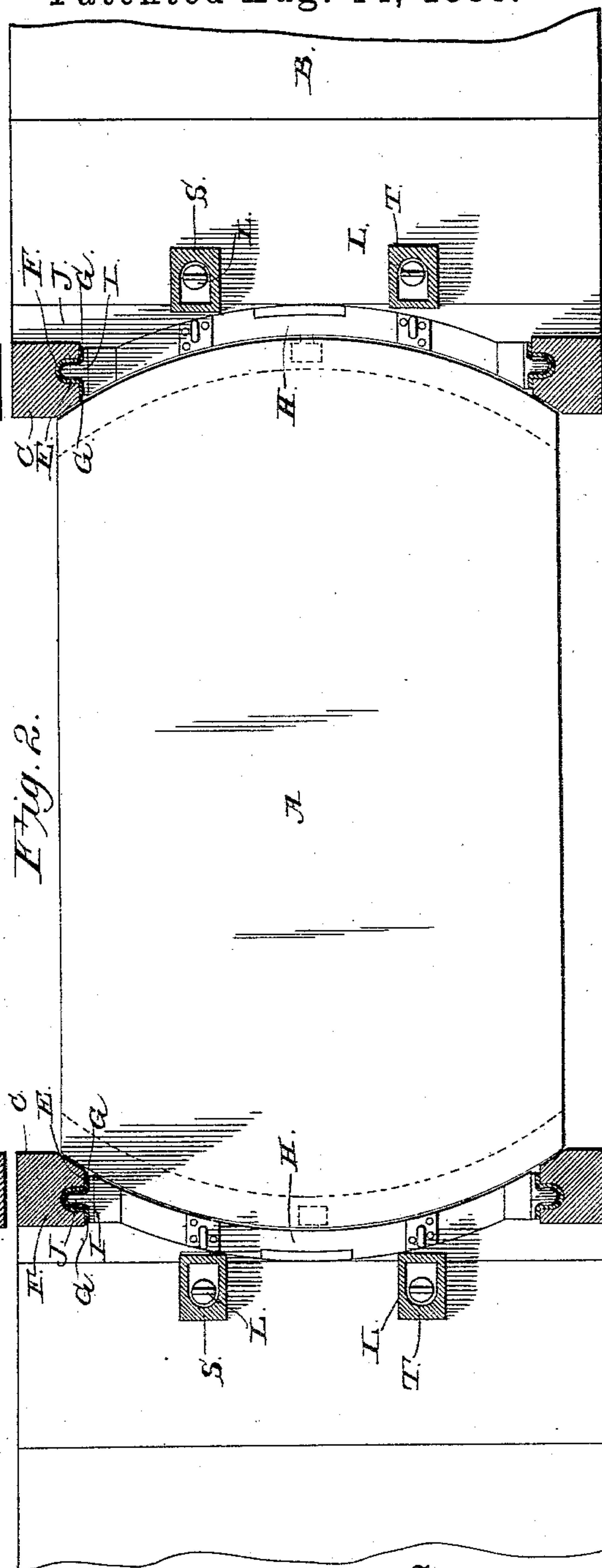
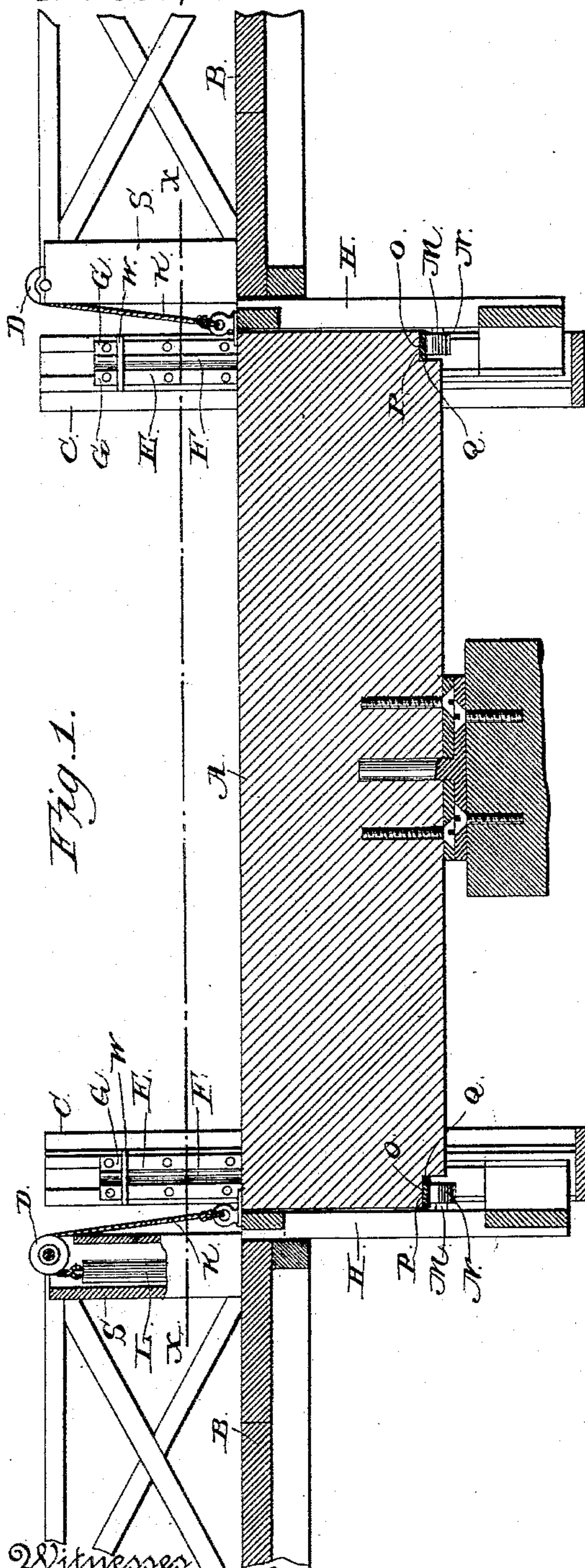


W. J. BRIGGS.

DRAW BRIDGE.

No. 387,852.

Patented Aug. 14, 1888.



Witnesses.
M. Fowler.
E. G. Siggers.

Inventor,
William J. Briggs.
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his Attorney

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

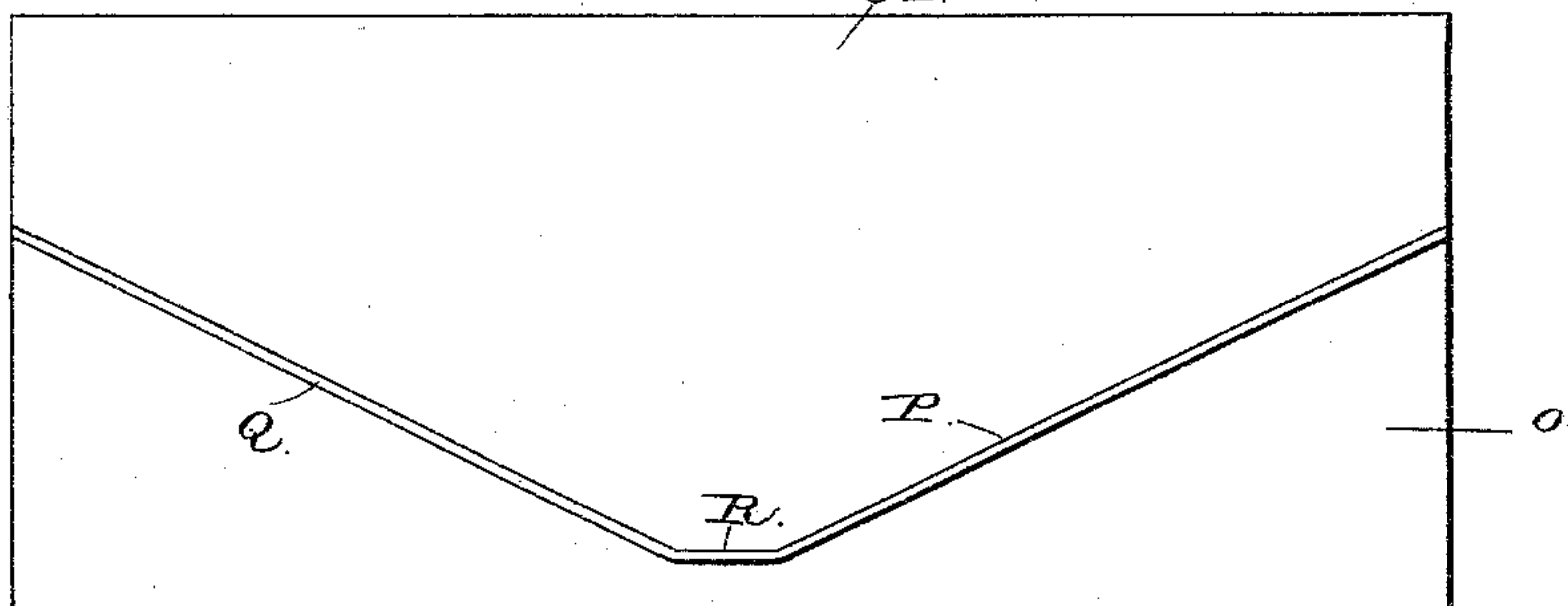
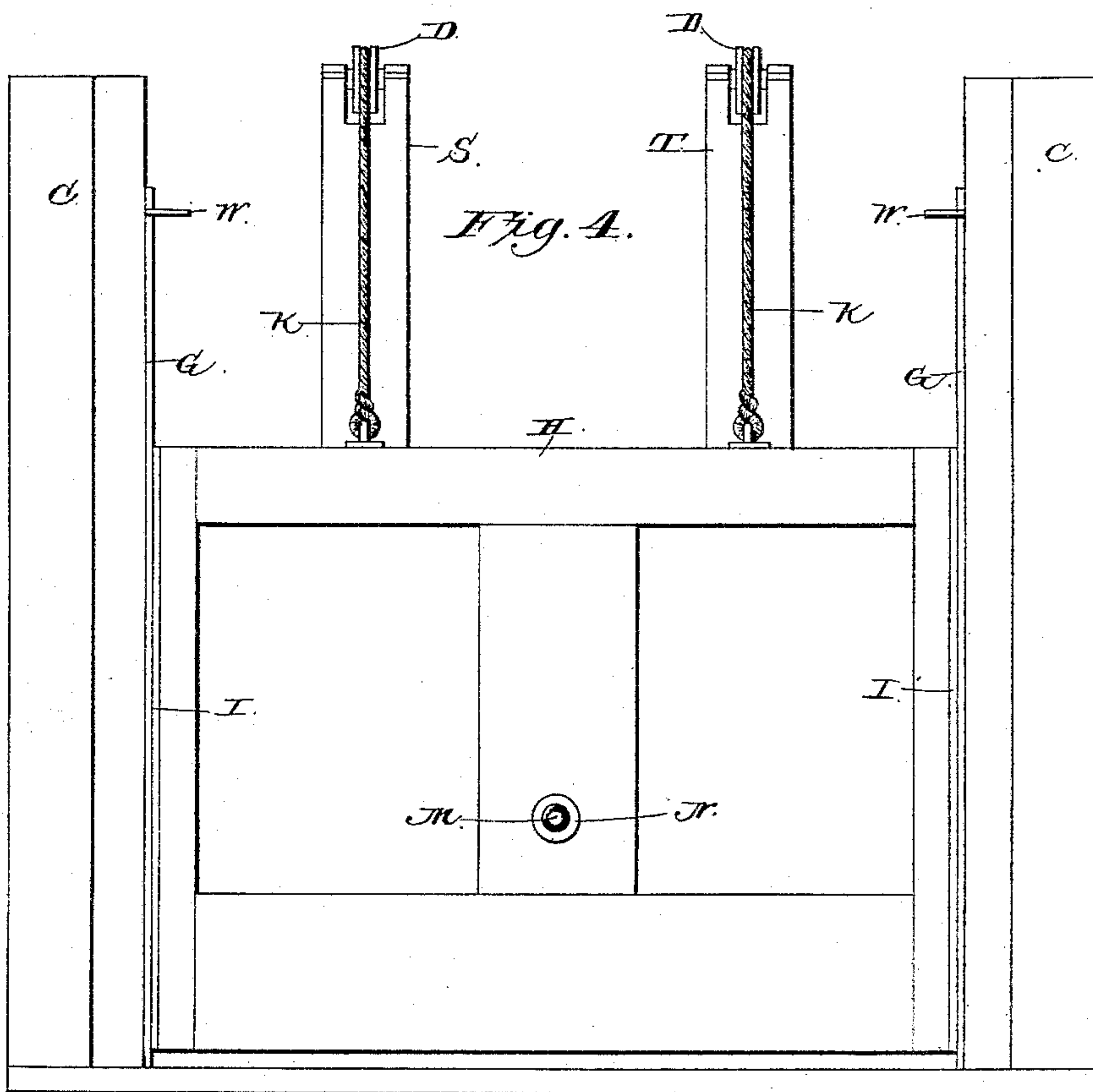


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM J. BRIGGS, OF SOUTH EVANSTON, ILLINOIS.

DRAW-BRIDGE.

SPECIFICATION forming part of Letters Patent No. 387,852, dated August 14, 1888.

Application filed November 8, 1887. Serial No. 254,645. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. BRIGGS, a citizen of the United States, residing at South Evanston, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Draw-Bridges, of which the following is a specification.

My invention relates to improvements in draw-bridges; and it consists in certain novel features, hereinafter described and claimed.

In the accompanying drawings, which fully illustrate my invention, Figure 1 is a longitudinal vertical section of a draw-bridge embodying my improvements, and Fig. 2 is a horizontal section on line $x x$ of Fig. 1. Fig. 3 is an end elevation of the draw, and Fig. 4 is an elevation of the gate.

Referring to the drawings by letter, A designates the draw, and B a portion of the bridge. The end of the draw is formed in the arc of a circle, and the end of the bridge-section is cut away on a similar arc, so that the draw may swing freely past the same, as will be readily understood on reference to Fig. 2. At the end of the bridge-section, on opposite sides thereof, I erect the posts or columns C C, and on the inner opposing sides of these columns I secure the track-irons E, which are doubled on themselves longitudinally at their centers, so as to form the grooves or ways F and the lateral flanges G, which are secured to the posts.

H designates the gate, which is provided at its ends with the guide-plates I, having a longitudinal rib, J, which engages the groove F, and thereby guides and steadies the gate in its movements.

S T designate hollow columns which are erected between the sidewalks and the carriage-road of the bridge, and have pulleys D journaled in their upper ends.

The gate is supported by cables K, which are secured to its top rail on opposite sides of the center thereof and pass over the pulleys D, counterbalancing-weights L being secured to the cables within the columns S T. Near the lower edge of the gate, and midway the ends of the same, I provide the forwardly-projecting pin M, on which I mount a friction-roller, N. The lower portion of the end of the draw is cut away, as shown at O, so as to provide the shoulder P. This shoulder inclines down-

wardly from each side of the draw to the center and acts as a cam upon the pin M to force the gate downward and hold it in its lowered position. This cam-shoulder P has a wear-strip, Q, secured to its under face, so as to preserve its surface, and at its lowest central point it has a short horizontal portion, R.

The construction of my device being thus understood, its operation and advantages will be readily apparent.

When the draw is closed, as shown in Fig. 1, the horizontal portion R of the cam-shoulder thereof will be resting upon the pin M on the gate, thereby holding the gate in its lowered position. If the draw be swung to either side in order to open the same, the weight L will raise the gate and hold the pin M against the cam-shoulder of the draw, and consequently cause the same to ride up the inclined portions of the said shoulders, as will be readily understood. The draw when swung back will cause its cam-shoulder to impinge upon the pin on the gate, and thereby lower the gate. The roller N reduces the friction between the contacting parts and renders the operation of the device smooth, easy, and certain.

It will be seen that my device is simple in construction, and the efficiency of its operation is thought to be obviously apparent. The gate is caused to move in a true vertical plane by the track-irons and guide-plates heretofore mentioned, and is prevented from rising to too great a height by a stop or guard, W, projecting laterally from the inner side of the columns near their upper ends.

I am aware that heretofore draws for bridges have been provided with a projecting cam-strip which operated the gate by acting on a pin or roller on the same. This construction left an open unprotected space between the ends of the draw and the bridge-section equal to the width of the cam-strip. These openings are dangerous, for the reason that passengers over the bridge are liable to fall into the same and be injured.

By my construction the strength of the draw and the bridge is unimpaired, and I am enabled to bring the several parts in such close relation that a practically unbroken surface is formed by the top of the gate and the oppes-

ing ends of the draw and the gate-section. I thus obviate the danger of passengers being injured by being caught in the open crevices, as above referred to.

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

10 1. The combination of the posts, the track-irons secured thereto, the gate having a forwardly-projecting pin at its center near its lower edge, the guide-plates secured to the gate and moving on the track-irons, and the draw having its lower portion cut away to provide a cam-shoulder adapted to contact with
15 the pin at the lower portion of the gate to operate the same, substantially as specified.

2. The combination of the posts, the track-irons secured thereto having a longitudinal groove, the gate, and the guide-plates secured

thereto and having a longitudinal rib engaging the groove in the track-iron, substantially as described. 20

3. The combination of the gate having guide-plates on its ends, the posts erected at the ends of the gate and having track-irons engaged by the guide-plates thereon, the posts erected at intermediate points of the length of the gate and having pulleys in their upper ends, and the weighted cables secured to the top rail of the gate and passing over said pulleys, substantially as specified. 25 30

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM J. BRIGGS.

Witnesses:

GEO. M. STEVENS,

CLAYTON E. CRAFTS.