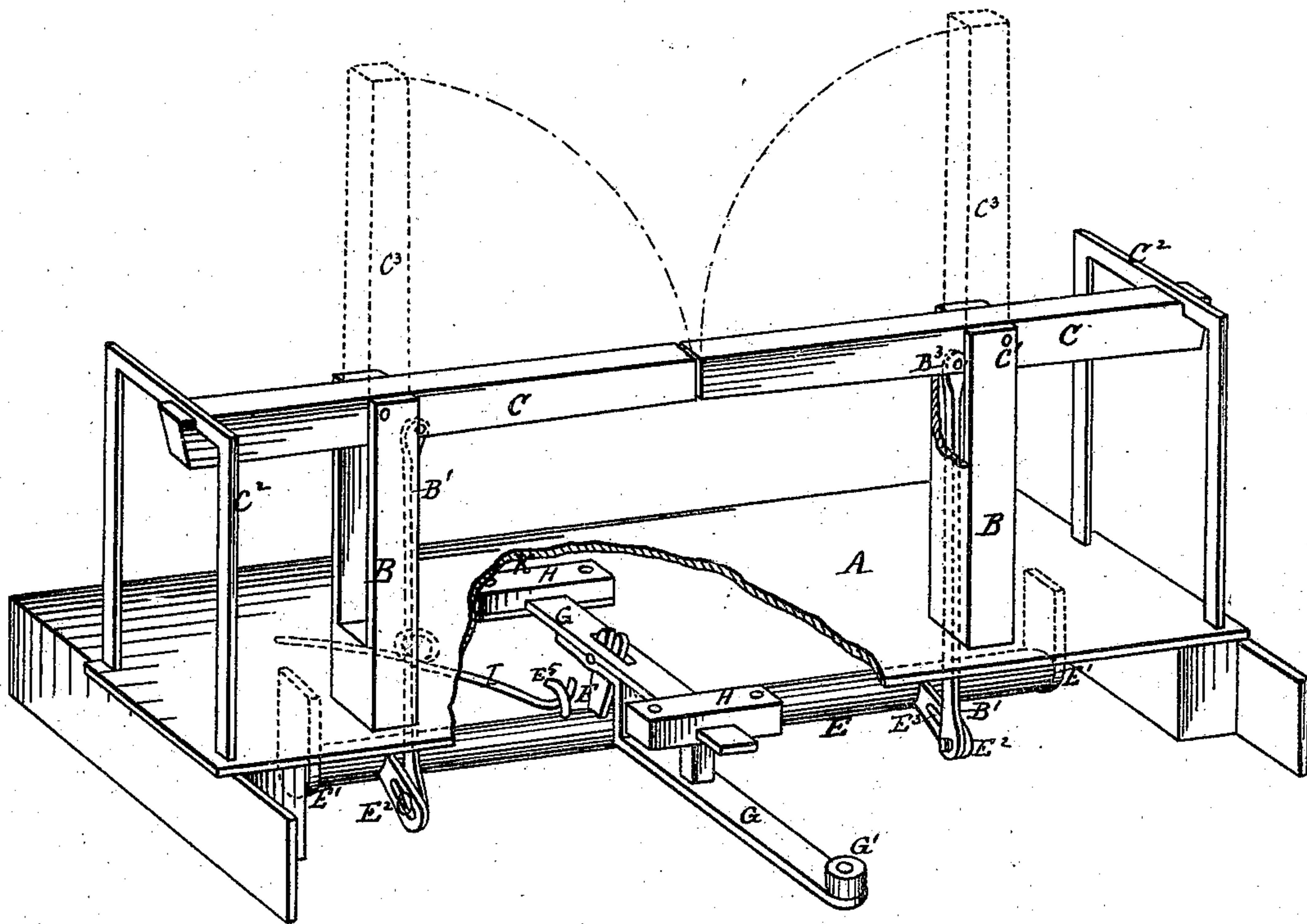


L. SIMON.  
FERRY-GUARD.

No. 173,507.

Patented Feb. 15, 1876.



Witnesses:  
A. Hark  
J. M. Cooksey.

Inventor:  
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Atty.

# UNITED STATES PATENT OFFICE.

LOUIS SIMON, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN FERRY-GUARDS.

Specification forming part of Letters Patent No. **173,507**, dated February 15, 1876; application filed December 11, 1875.

*To all whom it may concern:*

Be it known that I, LOUIS SIMON, of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Gates for Draw and Swing Bridges, Ferry-Boats, Landings, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to furnish swing and draw bridges, ferry-boats, and their landings, &c., with a sure, safe, and speedy means for opening and closing the approaches to, and exits from, the same by gates or bars to be operated by the bridge, draw, or boat, in such a manner that the gates will close immediately upon the opening of the draw or the departure of the boat from the landing.

In the drawing is shown a plan view of my invention, the flooring being broken away to exhibit the mechanism by means of which the gates or bars are operated, and which may be explained as follows:

A represents one of the approaches to the draw of a bridge, end of a ferry-boat, or its landing. B B are two standards, either of metal or wood, firmly secured to the flooring on opposite sides of the roadway, and facing each other. These standards may be of any required height, and are made hollow to permit the rods B<sup>1</sup> B<sup>1</sup> to pass down through them, as shown by the dotted lines B<sup>1</sup> B<sup>1</sup>. C C are two horizontal bars, pivoted between their centers and outer ends to the standards B B, as shown at C<sup>1</sup> C<sup>1</sup>, and to which the upper ends of the rods B<sup>1</sup> B<sup>1</sup> are attached at B<sup>3</sup> B<sup>3</sup>. C<sup>2</sup> C<sup>2</sup> are stops to prevent the bars C C from falling below a horizontal position as they close. E is a rock-shaft of iron, or it may be of wood, placed underneath the roadway, and at right angles to the same, its outer ends fixed in suitable sockets or bearings, so that it may turn upon the pivots E<sup>1</sup> E<sup>1</sup>. E<sup>2</sup> E<sup>2</sup> are arms projecting from either end of the shaft E, so arranged as to fall directly underneath the standards B B to the rods B<sup>1</sup> B<sup>1</sup>,

passing down through which they are connected by means of a bolt, screw, or pin passing through the lower ends of the rods B<sup>1</sup> B<sup>1</sup> and the slots E<sup>3</sup> E<sup>3</sup> in the arms E<sup>2</sup> E<sup>2</sup>, as shown at E<sup>3</sup> E<sup>3</sup>. F is an arm projecting from the center of the shaft E at right angles to the arms E<sup>2</sup> E<sup>2</sup>, and so arranged upon the top of the shaft as to stand perpendicularly when the arms E<sup>2</sup> E<sup>2</sup> are occupying a horizontal position. G is a crooked lever, constructed of one or more pieces, working in the slides or guides H H. The inner end of this lever is attached to the arm F at F<sup>1</sup> by any suitable device, and its outer end supplied with a roller, G', to render the working more easy by reducing the friction. I is a spring of metal, or other proper substance, so constructed and arranged as to bear against the stud or short arm E<sup>5</sup> on the shaft E, to aid in closing the gates or bars.

A more desirable form of spring, in the shape of those in ordinary use for railway-cars, may be used by placing it against the frame-work at K, in such a manner that the head of the lever G will press against it when the gates are opened.

The spring I, and all modifications of it, may, however, be dispensed with, as the construction of the machinery is such as to insure the closing of the gates immediately upon withdrawal of the pressure from the lever G.

The working of my invention is obvious. Supposing it to be placed upon the landing at the foot of a pier or wharf, when the ferry-boat runs in, a bumper on the bows comes in contact with the end of the lever G, pushing it back, thus causing the shaft E to revolve upon its pivoted ends E<sup>1</sup> E<sup>1</sup>. The rods B<sup>1</sup> B<sup>1</sup> are forced upward by means of the arms E<sup>2</sup> E<sup>2</sup>, to which they are united, lifting the bars C C from their horizontal to a perpendicular position, as shown by the dotted lines C<sup>3</sup> C<sup>3</sup>, thus opening the way for the passage of carriages, &c. It is also obvious that the rods B<sup>1</sup> B<sup>1</sup>, being joined to the bars C C inside their respective centers, and of the points at which they are pivoted to the standards B B, lift in their upward course the longer ends of the bars, the weight of which easily brings them down again when pressure is withdrawn from the lever G.



I am aware that lifting gates or bars, as distinguished from such as swing or revolve, have been before used, and therefore do not claim this feature as new; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. I claim the combination of the push-lever G, rock-shaft E, rods B<sup>1</sup> B<sup>1</sup>, and gate arms or guards C C, substantially as and for the purposes set forth.

2. I claim, in a self-closing-gate, the standards B B, the bars C C, the rods B<sup>1</sup> B<sup>1</sup>, and

the rock-shaft E, supplied with the arms E<sup>2</sup> E<sup>2</sup> and F, in combination with the lever G, when the same are constructed and arranged to operate substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

LOUIS SIMON.

Witnesses:

GEORGE COOMBS,  
B. SCHUENEMANN.