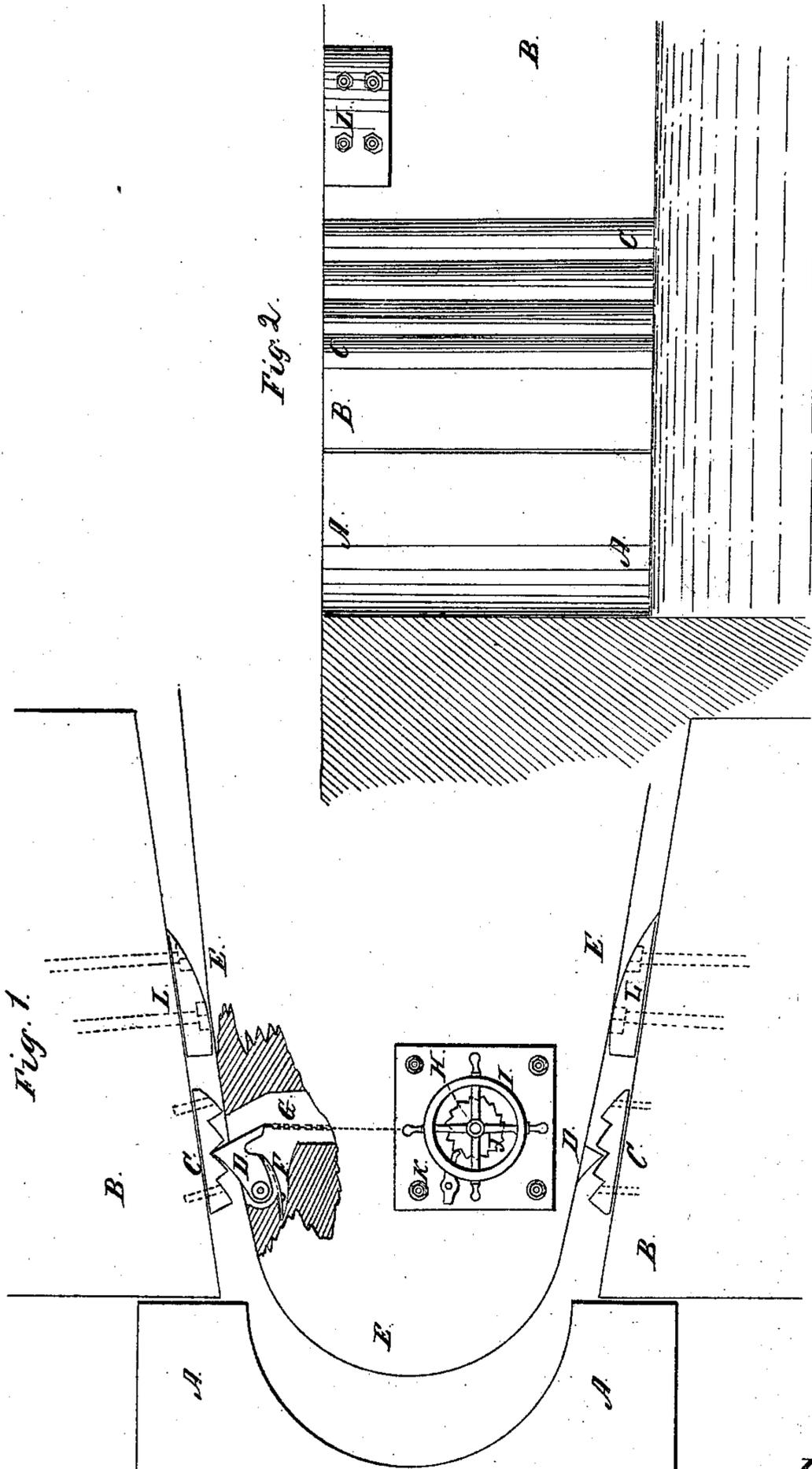


*J. L. Canham,  
Gangway & Bridge.*

*N<sup>o</sup> 63,855.*

*Patented Apr. 16, 1867.*



*Witnesses:  
Chas. Fische  
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# United States Patent Office.

JAMES L. CANHAM; OF NEWARK, NEW JERSEY.

*Letters Patent No. 63,855, dated April 16, 1867.*

## IMPROVEMENT IN LOCKING APPARATUS FOR FERRY-BOATS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES L. CANHAM, of Newark, in the county of Essex, and State of New Jersey, have invented a new and improved Self-Locking Apparatus for Ferry-Boats; 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 make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents my improved apparatus as applied to a ferry-boat.

Figure 2 is a detail side view of one of the racks and guide-blocks.

Similar letters of reference indicate like parts.

My invention has for its object to furnish an improved self-acting lock by means of which the boat may lock itself in the slip; and it consists in the pivoted blocks attached to the frame of the boat, in the combination of the springs, chains, shaft, ratchet-wheel, pawl, and pivoted blocks with each other, and in attaching racks to the sides of the fenders or timbers attached to the piles, the whole being constructed and arranged as hereinafter more fully described.

A is the ferry-bridge, and B are the fenders or timbers attached to the piles to receive the shock of the boat and guide it to its place in the bridge. C are racks attached to the fenders B, and extending so far vertically that the pivoted blocks D will always take hold of them as the boat enters the slip. The blocks D are firmly pivoted to the frame of the boat E in such a way that they may project beyond the boat, so as to take hold of the racks C to lock the boat, and so that they may readily be drawn in again to unlock the boat and allow it to pass out of the slip. F are springs, one end of which is attached to the frame of the boat, and their other ends press against the inner sides of the blocks D, so as to hold the said blocks out in proper position for taking hold of the racks C. G are chains, one end of which is attached to the inner side or corner of the blocks D, and the other ends of which are attached to the shaft or bar H. The lower end of the bar H rests and works in a socket formed in or attached to the frame of the boat, and the other end extends up through the deck of the boat, and has a hand-wheel, I, attached to it, by means of which it may be operated. J is a ratchet-wheel attached to the shaft H just above the deck, into the teeth of which the pawl K enters to hold the shaft H in the position to which it has been revolved to draw in the blocks D. If desired, a series of rods and levers may connect the blocks D with the engine room, so that the said blocks may be controlled and operated by the engineer when necessary. L are guide or guard-blocks attached to the fenders B to guard the racks C from receiving the force of the blow when the boats enter the slip, and which also guide the boats into proper position with reference to the bridge A.

What I claim as new, and desire to secure by Letters Patent, is—

1. Pivoting the blocks D to the frame of the boat in such a position as to take hold of the teeth of the racks C and hold the boat locked, substantially as herein shown and described.
2. The combination of the springs F, pivoted blocks D, chains G, shaft H, ratchet-wheel J, and pawl K, with each other, substantially as herein shown and described and for the purpose set forth.
3. Attaching racks C to the fenders B, substantially as herein shown and described and for the purpose set forth.

The above specification of my invention signed by me this 7th day of February, 1867.

JAMES L. CANHAM.

Witnesses:

WM. F. McNAMARA,  
JAMES T. GRAHAM.