

R. LADEWIG & A. ROSENBERG.  
Improvement in Gates for Turning Bridges.  
No. 124,072. Patented Feb. 27, 1872.

Fig. 1.

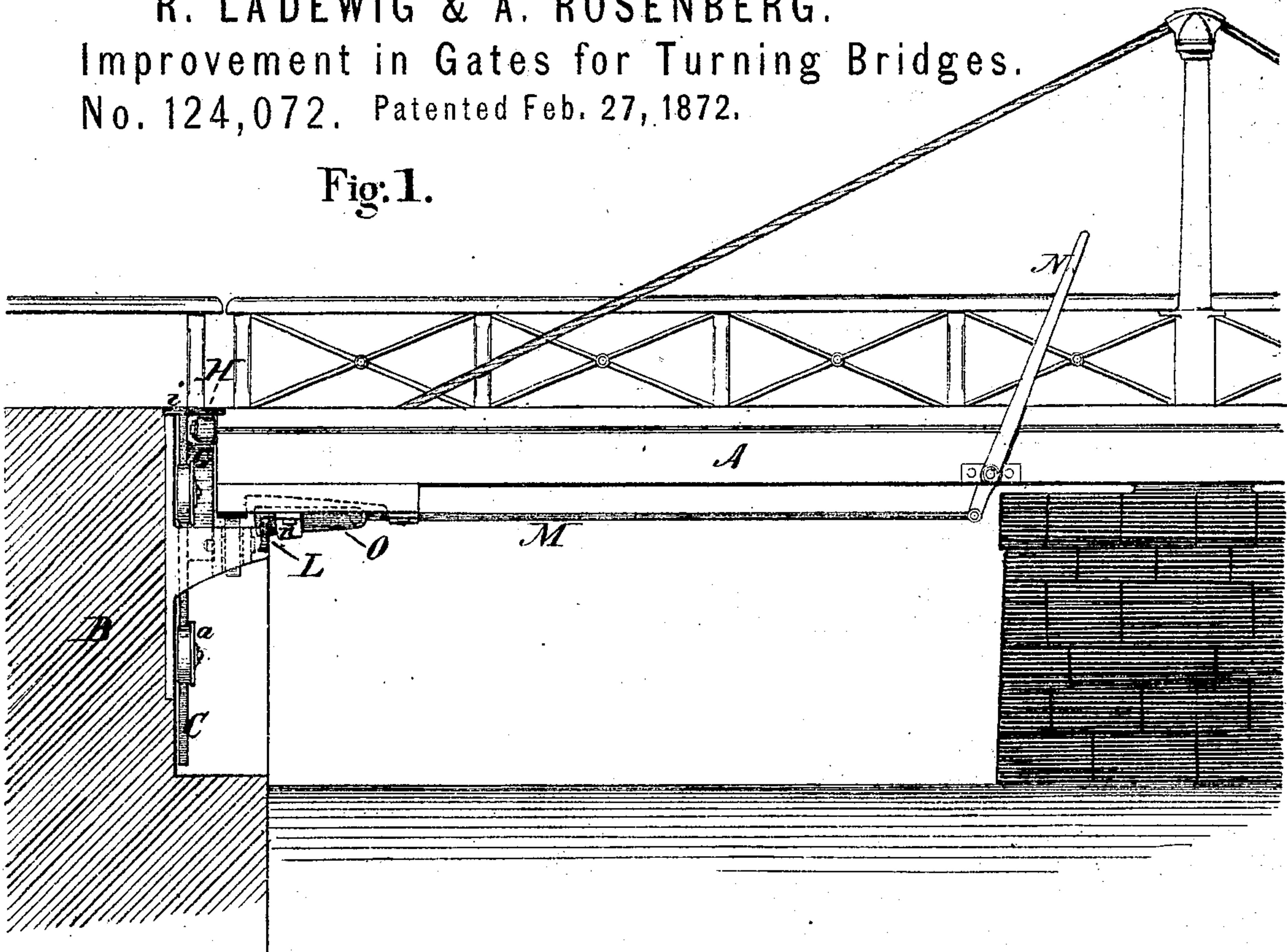
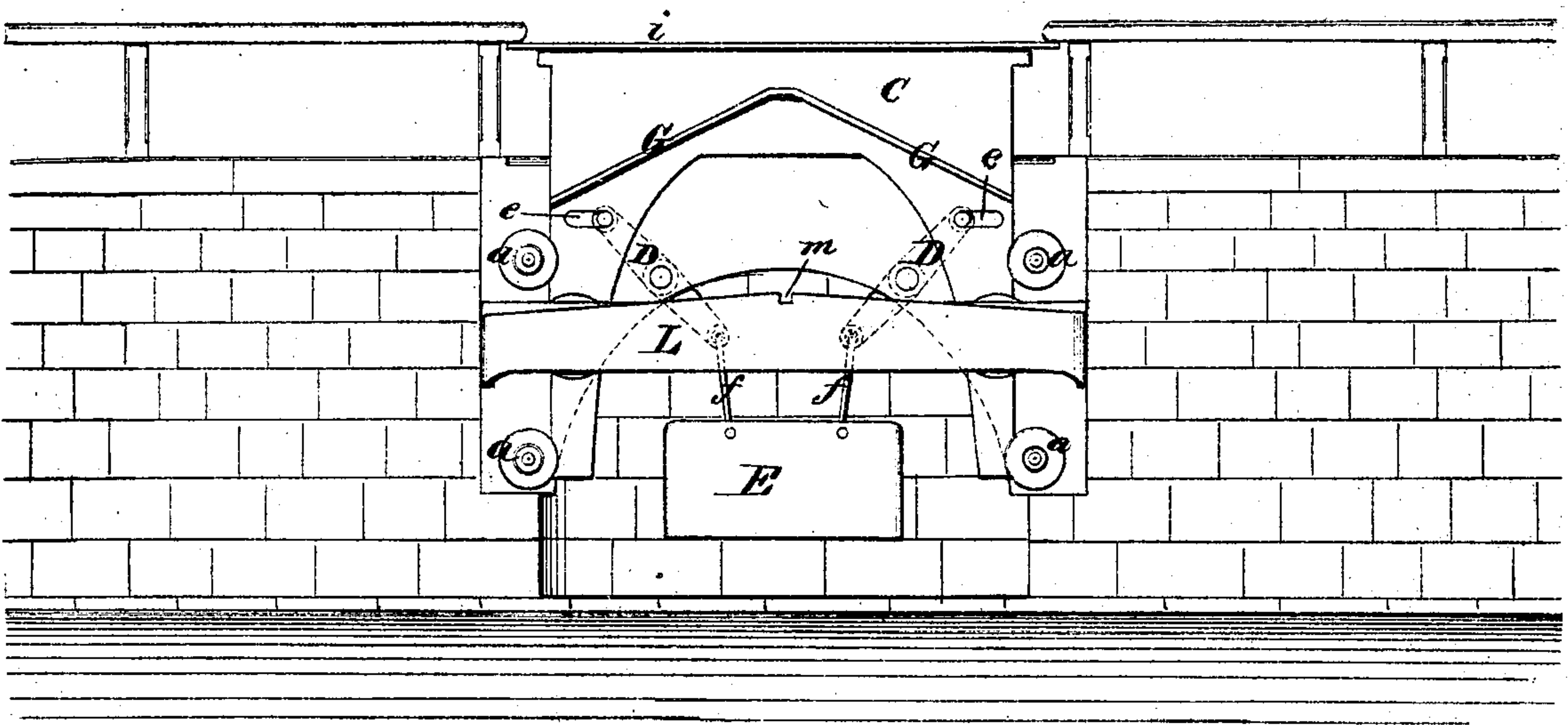


Fig. 2.



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# UNITED STATES PATENT OFFICE.

RUDOLPH LADEWIG AND AUGUST ROSENBERG, OF BERLIN, PRUSSIA.

## IMPROVEMENT IN GATES FOR TURNING BRIDGES.

Specification forming part of Letters Patent No. 124,072, dated February 27, 1872.

### SPECIFICATION.

*To all whom it may concern:*

Be it known that we, RUDOLPH LADEWIG and AUGUST ROSENBERG, of Berlin, Kingdom of Prussia, have invented certain Improvements in Gates for Turning Bridges, of which the following is a specification, reference being had to the accompanying drawing.

Our invention relates to automatic gates for closing the approach or passage to swinging bridges, when the same are open; and consists in a novel arrangement of vertically-sliding gates, elevated across the approach or passage by weights, and depressed below the same by a roller on the movable end of the bridge; and it also consists in devices for locking the bridge shut.

Figure 1 is a side elevation of a bridge and one of its abutments provided with our improved gate, and Fig. 2 is an inside-face view of the gate.

A represents the turning bridge or draw; and B, the abutment, against which the end of the same closes. C is the gate, which is mounted between rollers *a*, secured to the inner face of the abutment, so that it can slide vertically. D D are two levers pivoted to the abutment, their outer ends being provided with studs or arms, playing in slots *e* in the gate, and their inner ends being connected by rods *f* with a large weight, E, as shown. The weighted levers, thus arranged, serve to raise the gate and keep it elevated across the approach or passage to the bridge when the latter is open. The inner face of the gate is provided with a rib or flange, G, inclining downward from the middle of the gate toward each side of the same, as shown in Figs. 1 and 2; and the end of the bridge is provided, at its middle, with a roller, H, as shown in Fig. 1.

When the bridge is open the weighted levers, as before stated, elevate and support the gate across the roadway or approach, so as to prevent persons or animals from accidentally falling into the water; but, as the bridge is swung inward, the roller on its end rides upon the flange G and depresses the gate until level with the roadway, so as to leave the passage or roadway unobstructed. When the bridge

is again opened the roller rides off from the flange, and the weighted levers again elevate the gate. The flange being inclined from the center toward each side of the gate, the operation is the same whether the bridge be turned to the right or left.

It will be thus seen that, when the bridge is opened, the gate is automatically raised across the passage or roadway, and that, when the bridge is closed, the gate is automatically depressed out of the way. The upper edge of the gate is provided with a plate, *i*, which, when the gate is depressed, shuts down over the edges of the bridge and the abutment, as shown in Fig. 1, so as to prevent dirt, stones, or other obstructions from falling down between the working parts of the gate.

To provide for locking the bridge shut there is secured to the abutment a bar or plate, L, provided at its middle with a notch, *m*, and inclined downward therefrom toward each end; and to the bridge there is secured a sliding rod, M, operated by a hand-lever, N, and provided with a hinged latch, O, the end of which is supported in a plate or staple, *n*, so that it can rise and fall. When the bridge is open the hand-lever N is moved so as to slide the latch outward toward the end of the bridge, and then, when the bridge is closed the end of the latch rides upon the inclined face of bar L and drops into the notch in the middle of the same, and thereby locks the bridge in position. When the bridge is to be again opened, the hand-lever is moved so as to draw back the latch, whereby its end is drawn back out of the notch and the bridge released. The latch, being thus drawn back inside of the bar L, must, of course, be shoved out again, after the bridge is open, in order to have it ride upon the bar when the bridge is again closed. In this manner we provide a strong and simple lock for holding the end of the bridge in position, which must be done in order to keep the gate down level with the roadway.

We are aware that a sliding gate, suspended by a weight acting over a pulley, and operated by an incline on the bridge, has been heretofore described, and, therefore, we do not claim such devices, broadly; but

What we do claim is—

1. The combination of the vertically-sliding gate C, provided with the flange G, the levers D, and weight E, and the swinging bridge, provided with the roller H or its equivalent, when arranged to operate as described.

2. The combination of the fixed bar L, provided with the inclined faces and the notch *m*,

with the sliding pivoted latch O secured to the bridge, and arranged to be operated as set forth.

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