

H. Z. MAST.

Gates.

No. 133,788.

Patented Dec. 10, 1872.

Fig 1.

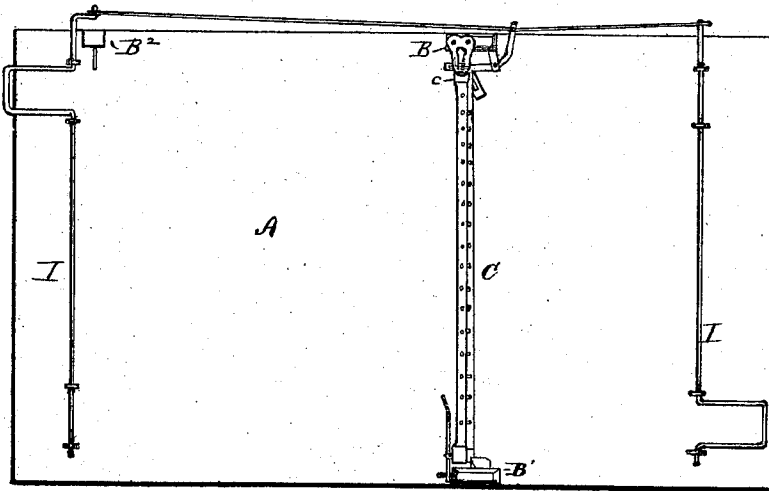


Fig 2.

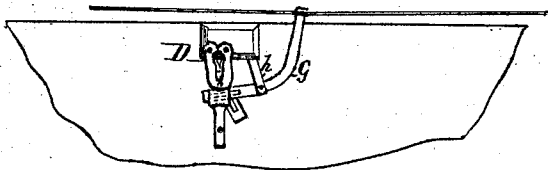


Fig 3.

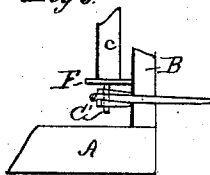
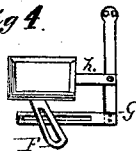


Fig 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY Z. MAST, OF FORK MEETING-HOUSE, ASSIGNOR TO HIMSELF AND
ROBERT R. CARMAN, OF FALLSTON, MARYLAND.

IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. 133,788, dated December 10, 1872.

To all whom it may concern:

Be it known that I, HENRY Z. MAST, of Fork Meeting-House, in the county of Baltimore and State of Maryland, have invented a new and useful Improvement in Gates; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

This invention relates to that class of gates which are opened and closed automatically by a passing vehicle, the gate, in this instance, being thrown out of balance to cause it to swing in either direction by proper mechanism operated by the vehicle, which mechanism moves in a suitable manner the lower end of the gate-bar; and consists in the employment of a few simple parts, of peculiar construction, for operating the gate-bar, as will be fully described hereinafter.

In the drawing, Figure 1 represents a plan view of my improved gate; Fig. 2, a plan view of the special mechanism which operates the gate-bar; Fig. 3 is a side elevation of the parts represented in Fig. 2; and Fig. 4, a modified form of the mechanism.

To enable others skilled in the art to make and use my invention, I will now proceed to describe fully its construction and manner of operation.

A represents the road-bed upon which the gate is located. B represents the post to which the gate is attached; B¹, the post against which it swings when closed; and B², that against which it swings when opened. The posts B¹ B² are provided with suitable catches, which engage with a corresponding latch upon the gate, when it is either opened or closed, and prevent it from swinging accidentally out of place. C represents the gate, which is provided with the usual bar *c* at its rear end, which bar is attached at each end to the post B. D represents a plate, by means of which the upper end of the gate-bar is held. This plate is rigidly secured to the post B in any proper manner, but is attached to the upper end of the gate-bar by a single pin, so that the latter is free to swing in either direction. If desired, the end of the gate-bar may be hinged in any other suitable manner. E, Fig. 3, represents a pin extending downward from the lower end of the gate-bar, which pin rests in the slot of a bar, F, Fig. 3, which is rigidly attached to the gate-post. G represents the

operating-lever, the short arm of which is provided with a slot which incloses the pin *c'* of the gate-bar. This lever is pivoted between the ends of the forked bar *h* rigidly attached to the gate-post, and the end of its long arm is connected, by means of suitable rods, to the crank-shafts I, of the usual well-known construction.

It will be observed that the bar F is not located at right angles to the face of the post B, but is inclined to one side at about an angle of forty-five degrees, the object of this construction being to cause the lower end of the gate-bar, when moved, to travel in a diagonal direction, by which means the double effect of raising the front end of the gate and disturbing its side balance is obtained.

The operation will be readily understood. The gate being closed, an approaching vehicle is so directed that one of its wheels is caused to strike the raised crank of the shaft I and depress it. By means of this movement the lever G is operated to move the lower end of the gate-bar, by means of the pin *c* and slotted bar F, out from the post, and also to one side in the direction opposite to that in which the gate opens. This movement of the lower end of the gate-bar throws up the front end, so that the latch is disengaged from the catch of gate B¹, and also disturbs its balance so that it swings open with great rapidity. After the vehicle has passed through, the wheel again comes in contact with a crank and the gate is again closed by the reverse of the operation just described.

If desired, the lever G may be jointed, as represented in Fig. 4, as substantially the same result is produced by the construction.

The parts employed to operate the gate-bar are few in number and exceedingly simple in their construction.

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

The combination of the slotted and pivoted lever G, the slotted bar F, and the gate C having the bar *c* provided with the pin *c'*, substantially as described.

This specification signed and witnessed this 17th day of May, 1872.

HENRY Z. MAST.

Witnesses:

JOSEPH W. SHROFF,
JOHN T. SABEL.