(No Model.)

J. MASON.

GATE.

No. 430,605. Patented June 17, 1890.

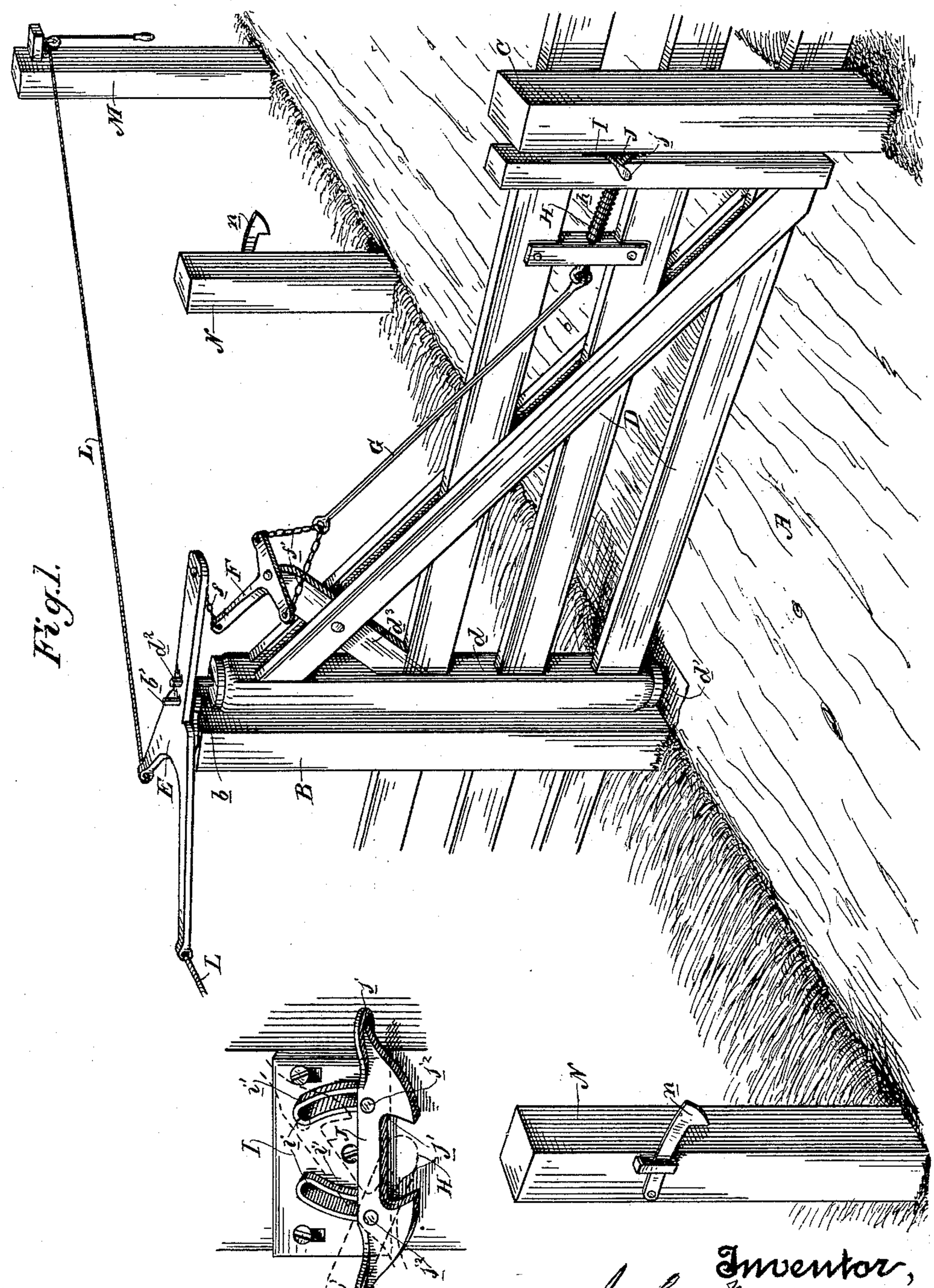

Fig. 1.

Fig. 2.

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GATE.

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To all whom it may concern:

Be it known that I, JOHN MASON, a citizen of the United States, residing at Petaluma, Sonoma county, State of California, have invented an Improvement in Gates; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of gates which are adapted to be opened and closed by means of ropes or cords extending along the roadway, thereby avoiding the necessity of the traveler's alighting from his vehicle or conveyance.

My invention consists in the peculiar construction and arrangement of parts hereinafter fully described, and specifically pointed out in the claims.

The object of my invention is to provide a simple and effective gate of the class which is generally known as "self-operating gates."

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my gate. Fig. 2 is a perspective of the catch on the gate-post.

A is the roadway.

B is a fixed gate-post at one side of the roadway, and C is a fixed gate-post at the other side of the roadway.

D is the gate.

On top of the fixed gate-post B is a plate *b*, which projects over the edge of said post toward the gate, and has in its end a pivot-pin *b'*, on which is pivoted the operating-lever E, the outer end of which is preferably forked. The end standard *d* of the gate has its lower end provided with a downwardly-extending pivot-pin *d'*, which is fitted in a suitable socket in a beam or other plate in the roadway, and the upper end of said standard has a similar pivot-pin d^2, which is pivoted in the operating-lever E at a point forward of the point at which the lever itself is pivoted. An inclined brace d^3 extends upwardly from the gate end, and on top of this brace is pivoted the T-shaped lever F. The leg of this lever is connected by a short chain or link *f* with the inner end of the operating-lever E, and the arms of the lever F are connected at each end by chains or links *f'* with the end of a connecting-rod G, which extends downwardly to and is connected with the latch H, mounted in the other end of the gate. This latch is so mounted as to slide longitudinally in its bearings, and a spring *h*, encircling it, causes it to be projected normally into a position to engage the catch on the gate-post.

The catch on the gate-post C is of a peculiar construction, and to it I direct special attention. A plate I is firmly secured, by bolts or otherwise, to the face of the gate-post C. In this plate, and near each end thereof, are made the curved slots *i*, having their concave sides facing each other—that is to say, toward the center of the plate. J is the catch-plate, having a length sufficient to permit the ready handling of its two ends when it is necessary to operate it by hand, and these ends may have thumb-bearings *j* to permit the ready manipulation of the plate. The lower center of the plate is provided with a bevel-sided notch *j'* to receive the catch, while its lower edge from this notch out to each end is formed on a curve or beveling, so that the catch can pass under it and engage the notch. The plate is provided with a couple of pins or studs j^2, which extend into and play in the curved slots *i* of the plate I. The catch-plate J, by its own weight, is suspended by its pins or studs in the bottoms of the curved slots *i*, and, having a bearing at each side, it remains perfectly steady and level. At the same time it can be tilted to an angle by pressing down or lifting either end of the plate. In forming the plate I the slots *i* are preferably made in raised portions *i'*, which serve not only as reduced frictional surfaces for the play of the catch-plate, but also serve to hold the catch-plate well out, so as to leave plenty of room for the engagement of the gate-latch. By pressing down on one end the catch-plate is turned about its nearer pin or stud as a center, while its other pin or stud moves up in the other slot of the plate I. By lifting the same end the plate is moved about its other pin or stud as a center, its nearer pin or stud moving up in the slot. The advantages of this form of catch are that it remains perfectly steady and level in its normal position; it will return to it with accuracy (in this respect differing materially from any plate which

is pivoted in the center;) it is limited in its movement when inclined, so that it cannot be moved so far but that it will immediately drop back to its normal position; it can be operated as easily as any thumb-latch, and, finally, it can be operated from either side to allow the gate to swing from or to the operator, as may be desired.

Cords or ropes L extend from the forked rear end of the operating-lever E in opposite directions along the side of the road, and are suspended from suitable pulleys in the posts M. Posts N are also placed alongside of the road, and are provided with gravity-catches *n*, adapted to engage the latch of the gate when said gate is turned to an open position on either side.

The operation of the gate is as follows: The traveler approaching in a vehicle grasps and pulls one of the ropes L, whereby he turns the operating-lever E about its own pivotal center *b'* in such a way as to carry the inner end of the lever away from him. The first effect of this movement of the lever is to so turn the T-shaped lever F as to pull on the connecting-rod G, thereby retracting the sliding latch H of the gate from its engagement with the notch of the catch-plate J. As soon as the gate is free of the catch it swings open of its own gravity, by reason of the fact that it is thrown out of the perpendicular by the turning of the lever E, in which the upper end of the gate is pivoted; but even without this the further movement of the lever E insures its opening. When the traveler has passed through the gate, he grasps the other rope L and closes the gate again by a reverse movement. A traveler on foot approaching the gate and having to open it by hand, simply presses down the near end of the catch-plate J, so that it readily turns to an inclination and frees the latch of the gate in such a manner and in such a direction that the gate opens away from him; but if he should desire to have the gate open toward him for any reason he would lift up the end of the catch-plate.

I am aware of a gate operated by a lever pivoted on the gate-post, and so connected with it and with the latch as to first withdraw the latch and then open the gate, and I do not therefore claim this, broadly.

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

1. The combination of the gate-posts B C, the intervening swinging gate D, the sliding latch H, carried by the gate, and a suitable catch on the gate-post C, with which the latch engages, the operating-lever E, pivoted on the gate-post B, cords or ropes L, extending from said lever, whereby it is operated, the pivoted T-shaped lever F on the gate connected by its leg with the operating-lever and the rod G, connected with the sliding latch and with the arms of the T-shaped lever, substantially as herein described.

2. The gate-posts B and C on the side of the roadway, and the intervening gate D, having an end standard, with a pivot-pin at its lower end mounted in a suitable fixed socket below and a pivot-pin at its upper end, and the sliding spring-controlled latch H of the gate, adapted to engage a suitable catch on the post C, in combination with the means for releasing the latch and opening the gate, consisting of the operating-lever E, pivoted on top of the post B and receiving the upper pivot-pin of the gate-standard, the ropes or cords L for operating the lever, the pivoted T-shaped lever on the gate, the leg of which is connected with the operating-lever, and the connecting-rod G, attached at one end to the sliding latch and at the other end to the arms of the T-shaped lever, substantially as herein described.

3. The combination of the gate-posts B and C, the swinging gate D, the spring-controlled sliding latch H of said gate, the catch with which it engages, consisting of the plate I on the gate-post C, having the oppositely-curved slots *i*, and a notched plate J, having pins or studs fitted and playing in said slots, and means for disengaging the latch and opening the gate, consisting of the operating-lever E, pivoted on the gate-post B and having the upper end of the gate-standard pivoted in it, ropes or cords L for operating the lever, the pivoted T-shaped lever F, carried by the gate and connected by its leg with the operating-lever, and the connecting-rod G, attached at one end to the latch and at the other end to the arms of the T-shaped lever, all arranged and adapted to operate substantially as herein described.

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