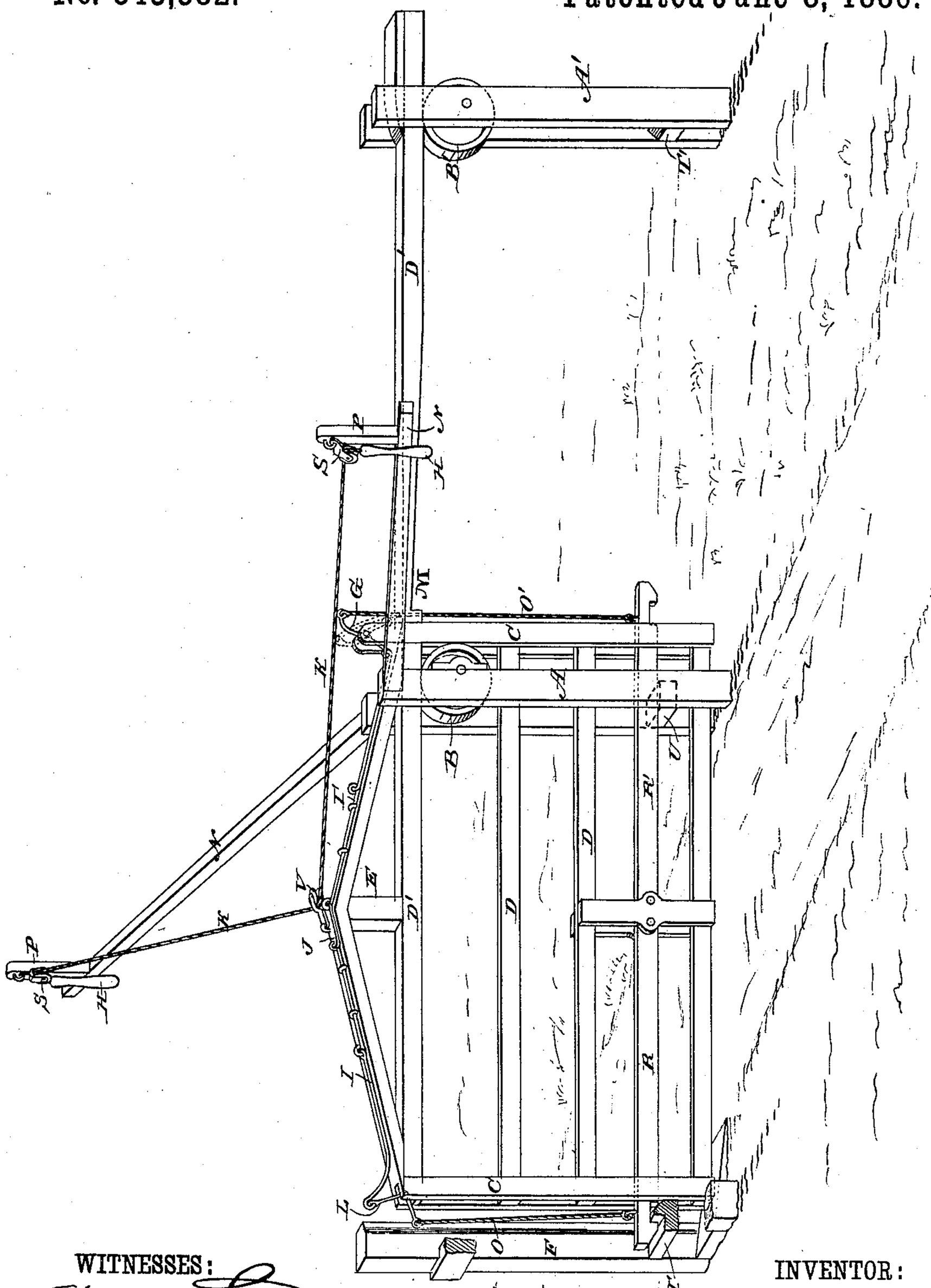
(No Model.)

W. MASON.

GATE.

No. 343,382. Patented June 8, 1886.



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GATE.

SPECIFICATION forming part of Letters Patent No. 343,382, dated June 8, 1886.

Application filed October 17, 1885. Serial No. 180,169. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MASON, of Puyallup, in the county of Pierce and Territory of Washington, have invented certain new and useful Improvements in Gates, of which the following is a full, clear, and exact description.

This invention consists in the construction and arrangements of parts, as will be hereinafter fully described and claimed.

Reference is to be had to the accompanying drawing, forming part of this specification, in which the figure represents a view in perspective of my improved gate closed, showing the position of the two locking-bars and the mechanism by which they are to be operated to lock and unlock the gate, and by which the gate is to be opened and closed. The front upright of one of the posts is removed to show the locking-bar and catch to lock the gate when closed.

A A′ in the accompanying drawing represent two posts, each consisting of two uprights set in the ground at the proper distance apart with spaces between them, in which friction-rollers B B′ are placed to support, balance, and guide the gate in opening and closing it.

The gate consists of the usual uprights, C, and cross-bars D D′, the upper bar, D′, having a truss, E, thereon. A third post, F, consisting also of two uprights, is provided with a space between them to receive the end of the locking-bar R to lock the gate closed, one side of this post being removed to show the notched end of the bar and the catch.

To the upper side of the truss E are secured sliding rods I I′, connected to and to be operated by a central link, J, to lock and unlock and to open and close the gate.

To the upper front corner of the gate is pivoted a bell-crank, L, to one arm of which is connected the sliding rod I, and to its opposite arm is attached a rope, wire, or rod, O, connecting it to the locking-bar R, by which said bar is to be raised to unlock the gate and allowed to lock itself by its own gravity, when the gate is closed. A catch, T, is secured between the uprights composing the post F with an inclined edge, so that as the locking-bar R approaches its notched end will pass over the inclined edge and become locked with the catch, as shown.

At the opposite end of the gate on its corresponding upper corner is pivoted a vibrating lever, G, the lower end of which is pivoted to the sliding bar I′, and to its opposite upper end is attached a rope, O′, by which the locking-bar R′ is connected and operated to unlock the gate when open. By this construction and operation of the vibrating lever G it will be understood that the locking-bar R′ is entirely independent in its operation of the locking-bar R, and is always in position to lock itself with the catch T′ on the post A′ by its own gravity when the gate is open. It will be observed that the end of the lever G, to which the rope O′ is attached, passes back and forth over a perpendicular center, so as to lift the end of the locking-bar R′ out of the catch T′ to unlock the gate and permit it to be closed, as represented in the drawing; and when the gate is opened the lever G will be returned to the position shown in the dotted lines to permit the locking-bar R′ to rest upon its support U, independently of the bar R, to engage with the catch T′ to lock the gate open. When the rope K is drawn by the handles H to open the gate, the lever G, pivoted to the rod I′, will be moved to the position shown in dotted lines, the connecting-rope O′ being carried an equal distance to the opposite side of the axis of the lever G. The locking-bar R′ will thus be lowered in position to lock the gate open by passing over and taking into the catch T by its own gravity.

To operate the sliding rods I I′ to open and close the gate, and to operate the locking-bars R R′ to lock the gate either open or closed, two arms, N N, are secured to the post A, one on either side of the gate, with uprights P, to which are hung pulleys S S.

Centrally to the link J is secured a pulley, V, through which a rope, K, passes, extending over the two pulleys S S, and attached to the handles H H on either side of the gate, and by which the gate is to be opened and closed.

In order to balance the gate and guide it back and forth over the friction-rollers B B′, the upper bar, D′, extends to the post A′, and may be weighted, if necessary, to counterbalance the weight of the gate, so that a quick pull on either of the handles H H will unlatch and open or close the gate, as the case may be.

By uniting the sliding rods I I′ by a central link, J, it will be understood that the two rods are operated simultaneously. For example, when the gate is closed, the bell-crank L will lower the locking bar R, allowing it to lock the gate by its own gravity. The lever G, at the opposite end of the gate, will then be in the position represented in the drawing, and when the gate is opened the bell-crank will be raised and the locking-bar R suspended out of the latch T, and the lever G will assume the position shown in dotted lines, having passed over its perpendicular center and dropped the locking-bar R′ in position to lock the gate open by its own gravity.

In opening the gate by means of the rope K, the link J draws the rod I to operate the bell-crank L, and pushes the rod I′ to vibrate the perpendicular lever G; and in closing the gate the link J will draw the rod I′ and push the rod I to lower the locking-bar R, and so on, the rods I I′ will be alternately pulled and pushed to unlock the bars R R′ and to open and close the gate.

In order to prevent any rebound when the gate is opened quickly by striking against the post A′, the under side, M, of the upper bar, D′, is inclined, as represented, which incline will also serve to hold the gate open in case of any derangement of the latch bar R′.

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

1. The combination, with a sliding gate having locking-latches at its opposite ends, of two sliding bars or rods on the top of the gate, the said sliding bars being connected at their adjacent inner ends and in connection at their outer ends with the said locking-latches, and an operating-cord extending at opposite sides of the gate and connected between its ends to the said sliding bars or rods at their point of connection, suitable posts and supports being provided for the gate and its operating-cord, substantially as set forth.

2. The combination, with the posts A A′, the post F, and catches T T′, of the gate D, having the separate locking-latches R R′, for engaging the catches T T′, the sliding bars or rods I I′ on top of the gate, link J, connecting the adjacent ends of said bars, bell-crank lever L at the upper forward corner of the gate having one arm connected to the rod I, the cord O, connecting the other arm with the latch R, the perpendicular lever G, connecting the opposite end to the latch R′, a pulley, V, secured to the link J, and the operating-cord K, passed through the pulley and extended to opposite sides of the gate, substantially as set forth.

3. A gate comprising the posts A A′, having the guide-rollers B B′, the post F, and the catches T T′ on the posts F A′, the sliding gate D, having the extension D′, resting on the said rollers, the lower edge of said extension being inclined from the rear end of the gate outward, the locking-latches R R′, projecting from opposite ends of the gate, the levers L G, pivoted to the upper corners of the gate, the cords O O′, connecting the levers and latches R R′, the sliding rods I I′, connected at their outer ends with the levers, the link J, connecting the inner ends of the rods, the pulley V on said link, the bars N, having uprights P, provided with pulleys S S, and the cord K, extended through the pulleys S V S and provided with handles H H, all constructed and combined substantially as set forth.

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Witnesses:
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