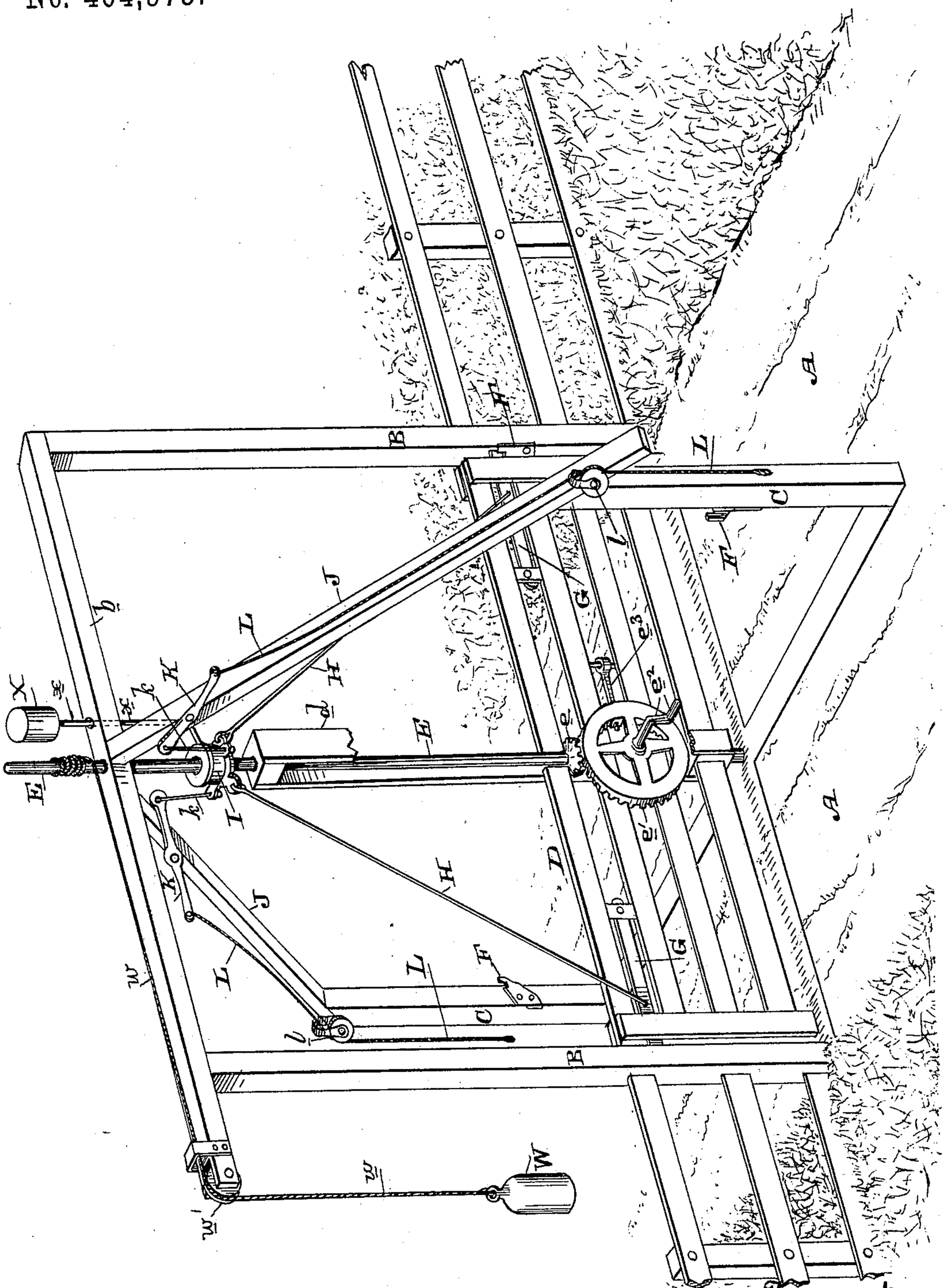
(No Model.)

F. W. HYDE & A. Z. DOTTERRER.

GATE.

No. 404,973. Patented June 11, 1889.



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UNITED STATES PATENT OFFICE.

FRED W. HYDE AND ALVIN Z. DOTTERRER, OF DAVISVILLE, CALIFORNIA.

GATE.

SPECIFICATION forming part of Letters Patent No. 404,973, dated June 11, 1889.

Application filed March 13, 1889. Serial No. 303,168. (No model.)

To all whom it may concern:

Be it known that we, FRED W. HYDE and ALVIN Z. DOTTERRER, of Davisville, Yolo county, State of California, have invented an Improvement in Gates; and we hereby declare the following to be a full, clear, and exact description of the same.

Our invention relates to that class of gates which are adapted to be operated by the approaching and receding traveler without subjecting him to the necessity of alighting from his vehicle or conveyance; and our invention consists in the constructions and combinations of devices which we shall hereinafter fully describe and claim.

Referring to the accompanying drawing for a more complete explanation of our invention, the figure is a perspective view of our gate.

A is the roadway.

B are gate posts on each side of the roadway.

C are gate-posts in the middle of the roadway.

D is the gate. This is pivoted in a suitable step in the center of the roadway, so that it may have a rotary movement about its own center. When it extends between the side gate-posts B, it completely closes the roadway, and when it extends between the gate-posts C it completely opens the roadway. This rotary movement is imparted to the gate by means of the weight W. A shaft E is journaled in a standard *d*, rising centrally from the gate, and said shaft passes through a cross-bar *b* between the tops of the gate-posts B, and has secured to its projecting top a cord or cable *w*, which extends over a guide-pulley *w'* and suspends the weight at one side. The attachment of the cord or cable is such that under the constant tendency of the weight to turn the gate the direction of its revolution will be away from the approaching traveler, who keeps to the left-hand side of the road.

Upon all the gate-posts B and C are placed catches F of any suitable character, here shown as having beveled edges and notched tops of the ordinary construction. In each end of the gate is a pivoted latch G, from each of which extends upwardly a connecting-rod H, the upper end of each of said rods being connected with a vertically-moving collar I, mounted upon the shaft E above the central standard of the gate.

Pivoted to diagonal braces J, which extend between the gate-posts C and the top cross-bar *b* of the gate-posts B, are the trip-levers K, the inner ends of which are connected by links *k* with the sliding or movable collar I. The outer ends of these levers have operating-cords L, which extend downwardly and are suspended over guides *l* on the lower end of the diagonal braces J.

The operation of the gate, as far as described, is as follows: The traveler approaching the gate and keeping to the left-hand side of the road, pulls upon the operating-cord L within reach, so as to cause the trip-lever K above to raise the movable collar I. This movement of the collar, through the connecting-rods H, raises both latches G of the gate from their engagement with the catches F, thereby releasing the gate and allowing the weight to turn it. He immediately lets go of the cord, so that the latches G drop of their own weight, and coming into contact with the catches F of the posts C catch the gate and hold it in proper position in the middle of the road parallel with its direction. This opens the roadway and the traveler passes through, and when clear of the gate he pulls upon the cord L on the other side, which once more relieves the latches of the gate and allows it to turn through a second quarter-revolution, when it is again caught by the catches on the posts B, and in this position closes the roadway. As above stated, the gate turns away from him, so that there is no danger of frightening his horses. In order to wind up the weight when it has run down, we place upon the bottom of the shaft E a pinion *e*, with which a spur-gear *e'* engages, said gear being provided with a crank e^2 for operating it. A pawl e^3 holds the spur-gear when not in use and serves as a connection between the gate and shaft E, so that when it is in engagement with the spur-gear the shaft can turn the gate; but when the pawl is thrown out of engagement, so that the spur-gear can be rotated, the shaft may be rotated independently of the gate, so as to wind up the weight.

In practice we would make the crank removable, so as not to be in the way. If it should be found that the latches would not

return of their own weight, we may attach a depressing weight X by means of the shank *x* to the sliding collar I, which will positively force it downward, and thus, through the connecting-rods H, force the latches down to position again to allow them to drop.

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

1. The centrally-pivoted gate having the vertical shaft E and the quartering gate-posts B and C in the roadway, in combination with the weight, the suspending cord or cable winding upon the central shaft of the gate, whereby the gate is turned, catches upon the gate-posts, pivoted latches on the gate, a sliding collar on the shaft E of the gate, connecting-rods between said collar and latches, and pivoted trip-levers having operating-cords, said levers being connected with the sliding collar, whereby the latches are relieved, substantially as described.

2. The centrally-pivoted gate and the revoluble shaft E, connected with said gate, in combination with the operating-weight and suspending-cord connecting it with the shaft, whereby the gate is turned, the quartering gate-posts and catches thereon, the pivoted latches carried by the gate, the trip-levers with their operating-cords, the sliding collar and connections, whereby the latches are relieved from the catches, and the means for winding up the weight, consisting of the pinion on the bottom of the shaft E and a spur-gear engaging said pinion, substantially as described.

In witness whereof we have hereunto set our hands.

FRED W. HYDE.
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Witnesses:
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