2 Sheets—Sheet 1.

J. M. McCAFFREY & J. LARKIN.

Railway-Gate.

No. 204,160. Patented May 28, 1878.

Fig. 1.

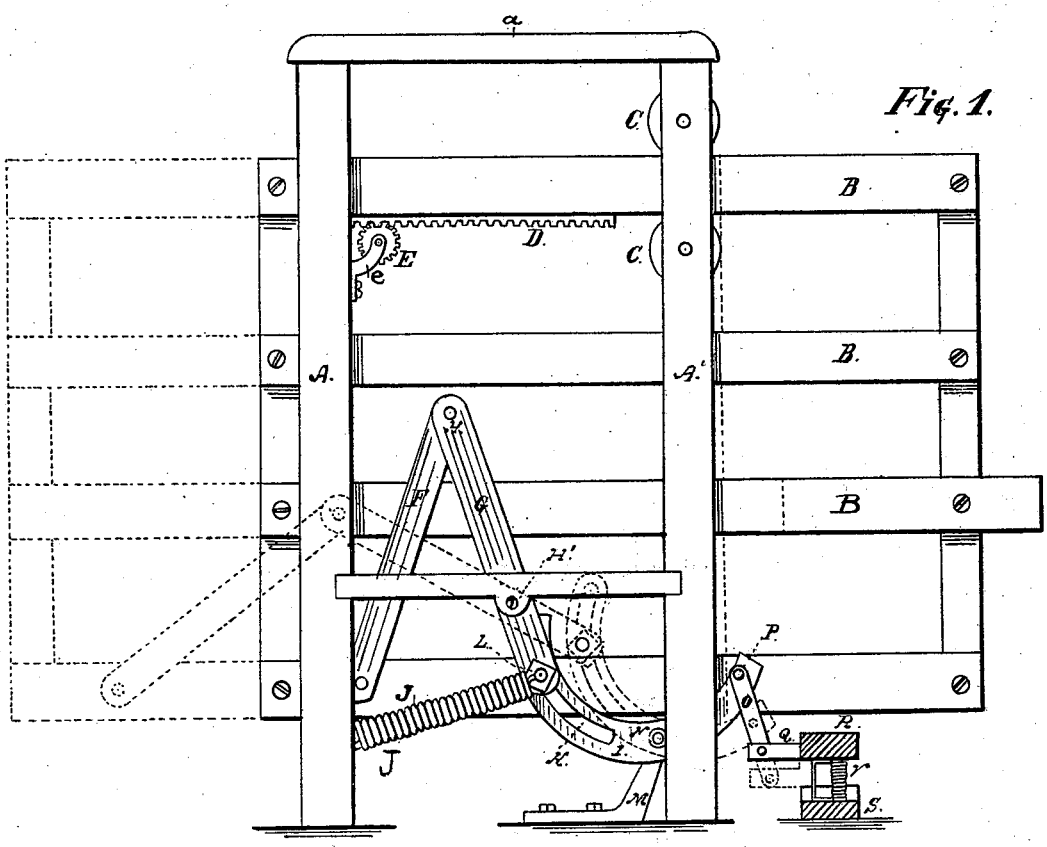
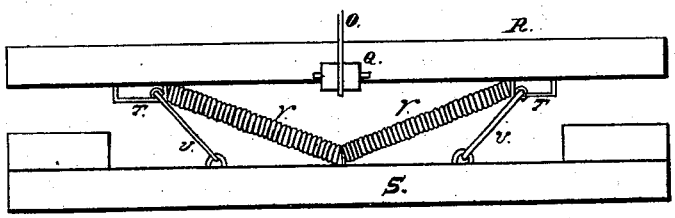


Fig. 2.



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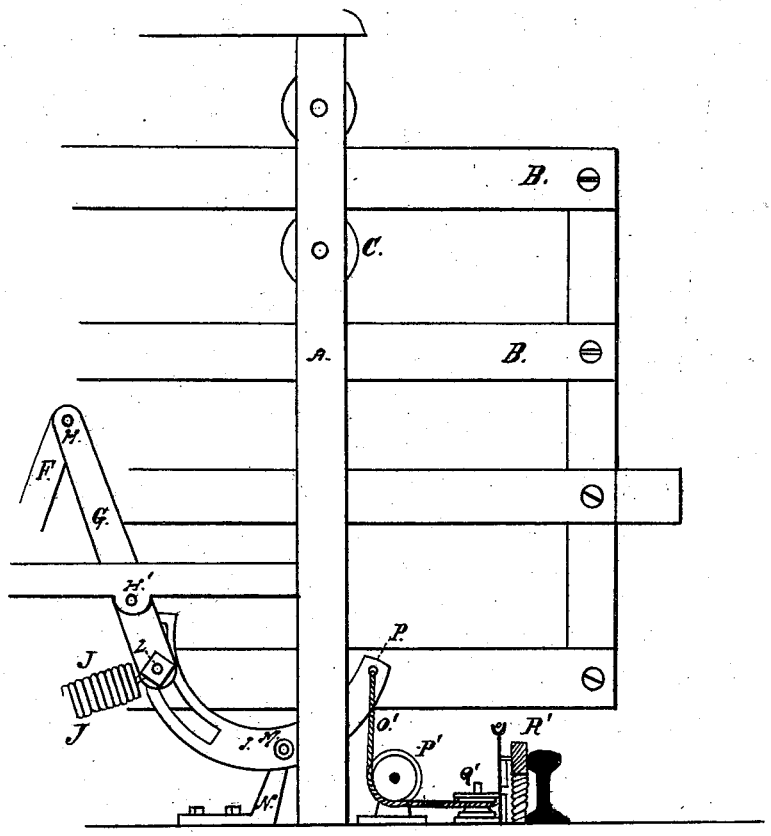
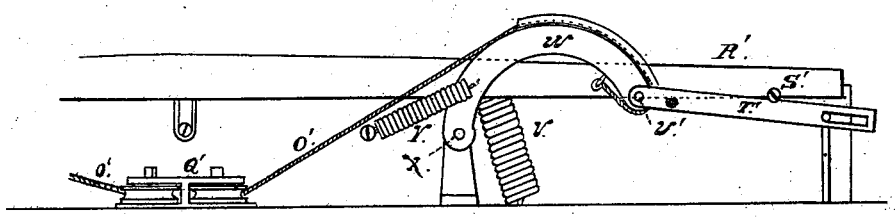


Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE

JAMES M. McCAFFREY, OF SHERMAN, TEXAS, AND JAMES LARKIN, OF MILWAUKEE, WISCONSIN.

IMPROVEMENT IN RAILWAY-GATES.

Specification forming part of Letters Patent No. **204,160**, dated May 28, 1878; application filed January 2, 1877.

To all whom it may concern:

Be it known that we, JAMES M. McCAFFREY, of Sherman, in the county of Grayson, in the State of Texas, and JAMES LARKIN, of Milwaukee, in the county of Milwaukee, in the State of Wisconsin, have invented certain new and useful Improvements in Railroad and Farm Gates; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the drawings, and to the letters of reference marked thereon, which form a part of this specification.

Our invention relates to automatically-operating slide-gates which are operated by pressure on treadles, and are suitable for use either as farm-gates or railroad-gates; and the invention consists in certain new devices and combinations of devices, all as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a side elevation of our improved gate arranged for operation as a farm-gate, and Fig. 2 is a view of the treadle for operating the same. Fig. 3 is an elevation of a portion of the gate arranged for operation as a railroad-gate, and Fig. 4 is a view of the treadle for operating the same.

Referring to the parts by letters, A A′ represent the uprights or posts, united together at the top by cap-piece *a*. B represents the gate; C C, the pulleys, secured to the uprights A′, one on each side of the upper slat or bar of the gate. D is a ratchet-bar, secured to the under side of said upper slat. E is a pinion, journaled in a bracket, *e*, which is secured to the post A. The teeth of the pinion E gear with the teeth of the ratchet D.

H′ is a cross-bar, secured to and between the uprights A A′. F is a bar, one end of which is pivoted to the lower slat or bar of the gate, its other end being pivoted to a bar, G, as shown at H. This bar G is pivoted to the cross-bar H′, and its lower end is pierced with a bolt-hole.

I is an arc-shaped plate, formed with a slot, K. L is an eyebolt, passed through the bolt-hole in the bar G and through the slot in the plate I, its other end being provided with a disk or head of greater width than the slot, so as to retain the bolt in proper position. J is a coiled spring, one end of which is secured to the bolt L and the other to the post A. M is a post or bracket, secured to the road-bed. The arc-shaped plate I is pivoted to this post M, as shown at N.

O is a rod or connecting-link, one end of which is pivoted to the plate I, as shown at P, and the other to a rod or bar, Q, attached to the treadle-bar R. R is the treadle-bar, over which the wheels of the vehicle pass. S is a stop-bar, arranged beneath the treadle to limit its motion in a downward direction. T T are staples, secured to the under side of the treadle-bar; and V V are links, which connect the staples of the treadle with the stop-bars S. *r r* are coiled springs, which also connect the treadle with the stop-bar and support the treadle in an elevated position.

The operation is as follows: The wheels of the vehicle being driven over the treadle-bars, its weight will force the latter downward, thereby, through the connections Q and O, pulling down that end of the arc-shaped plate I, elevating or drawing forward its other end, and thereby causing the gate to slide open or into the position shown by dotted lines, Fig. 1, through the connection of the plate I with lever-bars G and F. When the vehicle has passed through the gate, or its wheels no longer press upon the treadle-bar, the coiled spring J, which has been extended in the operation of opening the gate, will retract, drawing the levers together and sliding the gate into the position shown by full lines in Fig. 1. At the same time the springs *r r* will raise the treadle-bar into the position shown by Fig. 2 of the drawing.

The treadle device for operating the gate when used on railroad-tracks is somewhat different from the foregoing. It is illustrated by Figs. 3 and 4 of the drawings, in which Z represents the rail, and R′ the treadle-bar, arranged alongside of the rail, so as to be pressed down or operated by the flanges of the locomotive-wheels and wheels of the cars as they pass along.

The treadle is supported in an elevated position by springs V.

W is an arc-shaped lever, one end of which

is pivoted to a post, X, secured to the road-bed, and the other to a rod, T′, the end of which is slotted, as clearly shown by Fig. 4 of the drawings, a pin secured to the rail or road-bed passing through the slot to hold the rod T′ in position and yet permit of its oscillation. O′ is a wire rope, one end of which is secured to the end of the arc-shaped plate I and passed around pulleys P′ and Q′ and around the arc-shaped lever W, on the upper side of which is a groove to hold the rope in position. The other end of the rope is secured to the lever W.

Y is a coiled spring, one end of which is secured to the lever W and the other to the road-bed or rail. S′ is a pin on the end of the treadle-bar, which rests against the upper side of the rod T′.

The operation of this treadle device is as follows: As the flanges of the wheels of the locomotive and cars press down the treadle-bar R′, the pin S′ presses down the rod T′, thereby lowering the end of the lever W and pulling on the rope O′ so as to pull down the end of the arc-shaped plate or lever I and operate the gate, as before described. When the train has passed, the spring Y raises the lever W and rod T′, thereby slacking the rope O′ and permitting of the spring closing the gate, as before described, the springs V raising the treadle R′.

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

1. The sliding gate B, operated by means of the bars F G, slotted arc-shaped lever I, spring J, and treadle R, substantially as and for the purpose specified.

2. In combination with the treadle-bar R, the stop-bar S, springs V, staples T, and links U, substantially as and for the purpose specified.

3. The combination of gate B, bars F G, spring J, and slotted lever I with a treadle and connecting devices, substantially as set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

JAMES M. McCAFFREY.
JAMES LARKIN.

Witnesses:
E. H. BOTTUM,
G. McWHIRTER.