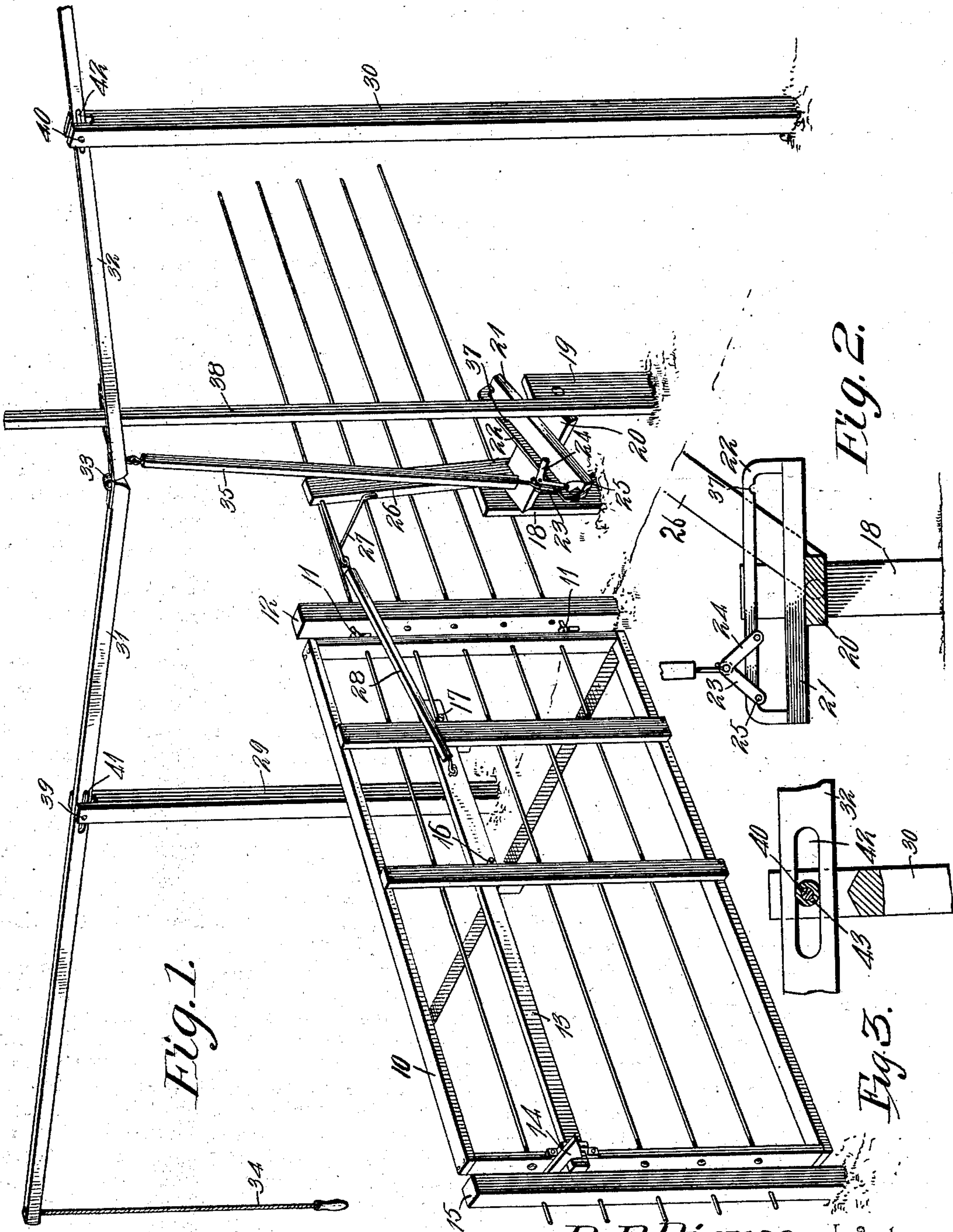


No. 748,214.

PATENTED DEC. 29, 1903.

R. P. PIERCE.
GATE OPERATING DEVICE.
APPLICATION FILED FEB. 9, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

RICHARD P. PIERCE, OF MOUNTCALM, TEXAS.

GATE-OPERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 748,214, dated December 29, 1903.

Application filed February 9, 1903. Serial No. 142,622. (No model.)

To all whom it may concern:

Be it known that I, RICHARD P. PIERCE, a citizen of the United States, residing at Mountcalm, in the county of Hill and State of Texas, have invented a new and useful Gate-Operating Device, of which the following is a specification.

This invention relates to gate-operating devices and may be applied to any form of swinging gate, but is more particularly applicable to large farm-gates, and has for its object to simplify and improve the construction and to produce a gate which may be readily operated from a distance therefrom without dismounting from the vehicle; and the invention consists in certain novel features of the construction, as hereinafter shown and described, and specified in the claims following.

In the drawings illustrative of the invention, in which like designating characters are employed for corresponding parts in all the figures, Figure 1 is a perspective view of a gate with the improvements applied. Fig. 2 is an enlarged detached detail of the trip-lever mechanism. Fig. 3 is an enlarged sectional detail of the antifriction movable joint of the operating-levers.

The gate proper, 10, may be of any desired size or structure; but for the purpose of illustration an ordinary gate is shown formed of a rectangular wooden frame and spaced wire bars and hinged, as at 11, to the post 12. The gate-frame will be provided with a latch-bar 13, movable longitudinally and adapted to connect automatically with a gravity-latch 14 on the opposite post 15, as shown. The latch-bar will thus connect with the latch member 14 when the gate closes, and the latch-bar is releasable from the latch when moved longitudinally of the gate, the latch-bar having stops 16 17 to limit its movements, as shown.

Located adjacent to the hinged end of the gate are spaced standards 18 19, and mounted for oscillation upon these standards is a bar 20, and supported centrally upon this bar and transversely thereof is a beam 21, the beam thus partaking of the movement of the bar.

The beam member will be provided with a guide-rod 22, spaced therefrom and attached thereto at the ends, whereby a longitudinal

aperture is formed between the beam and guide-rod. Upon the rod 22 a sliding member or traveler is mounted and movable longitudinally thereon, the sliding member consisting of spaced plates 23 24, connected by bolts 25 upon opposite sides of the rod, the bolts and plates embracing the rod upon all sides, as shown.

Extending from the bar 22 is an arm 26, and extending from the free end of this arm is a bracket 27. Pivotaly connected by its ends to the bracket 27 and the latch-bar 13 is a rod 28, whereby the oscillatory movement of the bar 20, beam 21, and arm 26 will be communicated to the latch-bar and gate, as hereinafter described.

Spaced apart upon each side of the gateway-opening are standards 29 30, the standards having relatively long lever-arms 31 32, which latter are movably connected, respectively, to the upper ends of the standard and hinged together at their adjacent ends, as indicated at 33. The lever-arms 31 32 will extend a sufficient distance upon each side of the gateway-opening to enable a person sitting in a vehicle to reach a pull-cord 34, depending from the ends of the levers, without leaving the seat or dismounting from the vehicle.

The traveler or sliding member 23 24 will be connected to the levers 31 32 near their united ends by rod 35, as shown.

The rod 22 will be provided with a notch 37 near each end, into which the traveler will enter to cause it to engage the tilting beam and move it upward when the strain is first applied to the rod 35. By this means the traveler will not move longitudinally of the rod 22 when the strain is applied, but will carry the tilting beam with it, as will be obvious.

The first upward movement of the tilting beam will move the upper or free end of the arm 26 and the rod 28 with it, and the first part of the motion will draw the latch-bar 13 longitudinally and release it from the latch 14, and the continued movement of the arm 26 and beam 22 will carry the gate with it and swing it open.

The parts 21, 26, 27, and 28 will be so proportioned that by the time the beam 21 22 is reversed in position the gate will be open.

The levers 31 32 must be heavier at their

inner ends, so that they will return by gravity to their operative positions, so that when the beam has been tilted to its reverse position the traveler 23 24 will run by gravity to the lower end of the rod 22, and then when the gate is to be closed a downward pull upon the lever 31 or 32, as the case will be, will cause the traveler to engage the notch 37 in the adjacent end of the rod and return the beam to its former position and close the gate. By this simple means the driver can open and close the gate as he passes through without dismounting and without a perceptible pause.

The whole apparatus is very simple in construction and of few parts and will not, therefore, be liable to get out of order or become broken or disarranged.

The parts can be made very strong and substantial and can be adapted to gates of any form or size or other closure to which it is applicable.

The parts will generally be of wood, but may be of metal, or partially of wood and partially of metal, if preferred. A guide-post 38 will be arranged, as shown, to form lateral support to the rods 31 32.

The parts may be modified in minor particulars without departing from the principle of the invention or sacrificing any of its advantages.

At the pivotal points 39 40 of the levers 31 32 the levers will be longitudinally slotted, as shown at 41 42, so that they will have the necessary longitudinal play to prevent the parts binding when operated.

The pivot-bolts 39 40 will preferably be provided with a section of tubing, such as gas-pipe, as indicated at 43 in Fig. 3, to reduce the friction.

Having thus described my invention, what I claim is—

1. The combination with a swinging gate, of spaced standards disposed adjacent thereto, a bar mounted for oscillation between said standards, a beam connected transversely of the bar and movable therewith and provided with a longitudinal aperture, a traveler movable in said aperture, an arm extending from said bar and operable thereby to swing in a vertical plane, operative connections between the arm and gate, a pair of operating-levers disposed end to end with their meeting ends pivotally connected, and a rod pivoted to one of the levers adjacent to their meeting ends and to the traveler.

2. The combination with a swinging gate, of spaced standards disposed adjacent thereto, a bar mounted for oscillation between said standards, a beam connected to and movable with the bar and provided with a longitudinal aperture, said beam being disposed substantially parallel with the gate when closed, a traveler movable in said aperture, an arm extending from said bar and operable thereby to swing in a vertical plane in a direction parallel with the beam, a bar pivotally connected with the arm and gate, a pair of operating-levers disposed end to end with their meeting ends pivotally connected, and a rod pivoted to one of the levers adjacent to their meeting ends and to the traveler.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

RICHARD P. PIERCE.

Witnesses:

J. H. MORGAN,
B. F. OWEN.