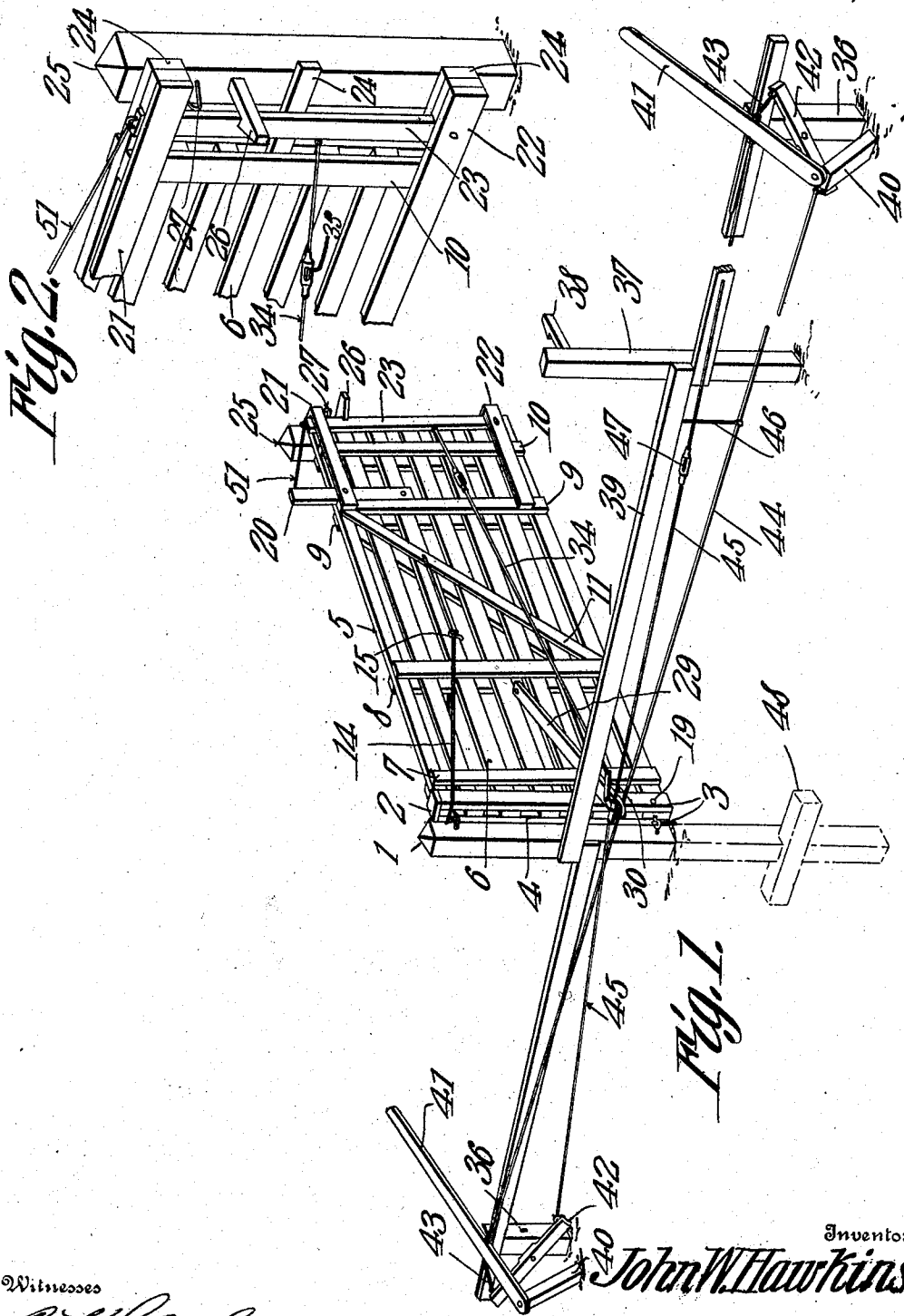


J. W. HAWKINS.
GATE.
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Patented Oct. 12, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN W. HAWKINS, OF MUNFORDVILLE, KENTUCKY.

GATE.

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To all whom it may concern:

Be it known that I, JOHN W. HAWKINS, a citizen of the United States, residing at Munfordville, in the county of Hart and State of Kentucky, have invented a new and useful Gate, of which the following is a specification.

The objects of the invention are, generally, the provision in a merchantable form, of a device of the class above mentioned, which shall be inexpensive to manufacture, facile in operation, and devoid of complicated parts; specifically, the provision of novel means for operating a gate; and of novel means for mounting the operating means and for assembling the same with the gate; other and further objects being made manifest hereinafter, as the description of the invention progresses.

The invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the accompanying drawings, and particularly pointed out in that portion of this instrument wherein patentable novelty is claimed for certain distinctive and peculiar features of the device, it being understood, that, within the scope of what hereinafter thus is claimed, divers changes in the form, proportion, size, and minor details of the structure may be made, without departing from the spirit or sacrificing any of the advantages of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings.

In the accompanying drawings, Figure 1 is a perspective of the completed device, the gate being in closed position; and Fig. 2 is a detail perspective showing one end of the gate and its attendant mechanism.

In carrying out my invention, I provide primarily a suspension post 1 upon which the gate is adapted to swing. This suspension post 1 may be of any form, but, in order to provide a rigid supporting construction for the gate, I have mortised the suspension post 1 relatively near to its lower end, and provided a cross arm 48 which is adapted to fit in this mortise. This cross-arm 48, I do not assemble rigidly with the suspension post 1, preferring rather, to mount the post in the ground, and pack the

earth about it to the level of the mortise into which the cross-arm is adapted to fit, it being understood, that this mortise is located beneath the surface of the earth, say, at a distance of two feet. The cross-arm is then introduced into the opening about the post and made to engage the mortise. The earth is then tamped about the cross-arm and about the post to the surface of the ground.

The gate proper comprises the supporting bar 2, which is assembled, pivotally, with the suspension post 1, by means of hooks and gudgeons, or other common and well known means adapted to a like end. This supporting bar 2 comprises upright, spaced side strips 3, which are connected with each other by means of blocks 4 which are introduced between the strips, and spaced vertically apart.

The frame of the gate, denoted by the numeral 5, comprises longitudinally disposed members 6, the inner ends of which are disposed between the blocks 4, and adapted to slide in the direction of their length, therebetween. Through the inner ends of the lowest of the longitudinal members 6, and through the lower extremities of the side strips 3 is passed a pivot bolt 19, so that the frame is pivotally assembled at its lower corner, with the supporting bar 2. The longitudinal members 6 are united by means of uprights 7 and 10, located relatively near to the ends of the frame 5, and by other uprights 8 and 9, which are located between the uprights first above named. The upper ends of the uprights 9 are connected with the lower ends of the uprights 8, by means of diagonally disposed braces 11.

Passing now to the means whereby the position of the gate in a vertical plane is adjusted, it will be seen that the supporting bar 2, adjacent its upper end, is adapted to receive the intermediate portion of a tension member 14, the ends of which are disposed upon either side of the frame 5, and terminally mounted in the diagonal brace 11. A rider 15 is provided, which is adapted to slide upon one of the longitudinal members 6 and to engage the tension member 14. It is obvious, that by sliding the rider 15 upon the longitudinal member 6 upon which it is mounted, the outer end of the gate may be raised or lowered, in order to place the

same at a proper distance to clear the surface of the ground, and also, to cause the outer end of the gate to engage with whatever means may be provided for holding it in a closed position.

Passing now to the immediate means whereby the gate is latched, it will be seen that there upstands above the upper edge of the frame 5, in lateral abutment with the upright 9, an arm 20. It will further be seen, that the upper and lower of the longitudinal members 6, and one of the members 6 which are positioned between the upper and lower members, are terminally extended beyond the outer end of the gate proper, as denoted by the numeral 24. Guides 21 and 22 are disposed in parallel relation with respect to the upper and lower members 6, these guides being terminally assembled with the upright 9. The upper guide 21 is rigidly connected with the arm 20, and both of the guides 22 and 21, as shown most clearly in Fig. 2, are connected at their ends with the extensions 24 of the members 6. A latch-bar 23, disposed in an upright position, is shown, and this latch-bar, at its lower end, is disposed between the guide 22 and the adjacent of the longitudinal members 6, being pivotally connected therewith by means of a transversely disposed bolt. The upper extremity of the latch-bar 23 is disposed between the guide 21 and the adjacent of the longitudinal members 6, the said upper end of the latch-bar being adapted to slide in the plane of the gate frame 5, between the members which inclose it. For the operation of the latch-bar 23, to cause it to engage the detent 26, hereinafter described, any suitable resilient means may be employed.

An outer post 25 is provided, which is adapted to receive the extended portions 24 of the longitudinal members 6 of the gate, when the gate is brought into closed position. This outer post 25 carries a laterally projecting detent 26, which is arranged to be engaged by the latch-bar 23, when the gate is swung into a closed position. Mounted upon the outer post 25, relatively near to its upper extremity, is a bracket 27. This bracket 27, engaging one of the extensions 24, raises the gate into the proper position when the same is closed, and further, increases slightly the force necessary to open the gate, so that the same may not be moved to an open position, through slight accidental shock to certain gate-operating mechanisms which will be described hereinafter.

It will be seen that there projects from the frame 5, at an acute angle to the plane thereof, an arm 29, extending a short distance beyond the inner, or pivoted end of the gate. This arm 29 carries upon its upper face, adjacent its extremity, a bent latch-lever 30. The latch-lever, at its point of

bending, is united by a suitable pivot element, with the arm 29. The latch-bar 23 is connected with the extremity of the portion 33 of the latch-lever by means of a flexible connection 34, a suitable takeup, in the form of a turn-buckle 35, or like device, being introduced into the connection 34. The latch-lever 30 and the connection 34 are operative, through the instrumentality of certain mechanisms which will be described hereinafter, to withdraw the latch-bar 23 from its hold upon the detent 26, and to swing the gate into an open or into a closed position, and, for the restraint of the movement of the latch-bar 23 under the impulse of the herebefore mentioned resilient means for actuating the latch-bar, a flexible connection 51 unites the upper extremity of the latch-bar 23 with the upper extremity of the arm 20.

I will now describe the mechanism whereby the latch-lever 30 is operated to unlock the gate and to open or to close the same.

By referring to Fig. 1, it will be seen that end posts 36 are located upon either side of the suspension post 1 at a suitable distance therefrom. Disposed between one of the end posts 36 and the suspension post 1, is an intermediate post 37, somewhat higher than the end post, and provided with an outstanding detent 38, resembling in form the detent 26 which is carried by the outer post 25, the detent 38 being adapted to engage the latch-bar 23 to hold the gate in open position. A rail 39, unites the end posts 36 with the suspension post 1, and with the intermediate post 37.

Disposed laterally beyond the end posts 36, are short fulcrum posts 40, upon the upper extremities of which are pivotally mounted the extremities of operating levers 41, which, resting intermediate their ends upon the rail 39, extend in an inclined position, into the road-way. By thus positioning the operating lever 41 to rest upon the upper edge of the rail 39, the strength of the mechanism is promoted, and by inclining the levers upward, their free ends are well within the reach of a person in a vehicle, and the fulcrum posts 40, are, at the same time, made relatively short, so that the members 41 have but a short leverage upon the posts 40, to shake them loose in their seats in the ground.

Pivoted between their ends upon the end posts 36, are upright auxiliary levers 42, the upper extremities of which are united with the operating levers 41, by means of connections 43. A flexible connection 44 unites the lower end of one of the auxiliary levers 42 with the remote operating lever 41, and a broken connection 45 is assembled, at one of its remote ends with the lower end of the other of the auxiliary levers, and at the other of its remote ends with the other operating lever, the adjacent ends of the broken

connection, being connected with the latch lever. Hanging from the rail 39, is a tie 46, the lower extremity of which is arranged to support the connection 44.

5 The invention includes a take-up which may be in the form of a turn-buckle 47 carried by the connection 45, and this element 47, together with the element 35, is sufficient to remove any slack which may exist
10 in any of the connections, after prolonged use.

Since, the operations of the various component mechanisms of the device have been described in connection with the description,
15 a detailed setting out of the operation of the structure as an entity is considered unnecessary, but it may be said briefly, in conclusion, that the operating levers 41 are so positioned, that a person sitting in a vehicle,
20 may readily move either of them, to unlock the gate, and to swing the same into an open or into a closed position, as may be.

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

1. A device of the class described comprising a suspension post; a swinging gate carried by the suspension post; end posts located upon either side of the suspension post; fulcrum posts disposed laterally beyond the end posts; operating levers terminally pivoted to the fulcrum posts and arranged to extend over the end posts; upright auxiliary levers pivoted intermediate their ends to the end posts; connections uniting the upper ends of the auxiliary levers with the operating levers; crossed connections uniting the operating levers with the lower ends of the remote auxiliary levers; and means interposed between the ends of one of the crossed connections for unlatching the gate and for swinging the same.

2. A device of the class described comprising a suspension post; a swinging gate carried by the suspension post; end posts located upon either side of the suspension post; a rail uniting the end posts with the suspension post; fulcrum posts disposed laterally beyond the end posts; operating levers terminally pivoted to the fulcrum posts and arranged to bear upon the rail and to extend terminally beyond the same; upright auxiliary levers pivoted intermediate their ends to the end posts; connections uniting the upper ends of the auxiliary levers with the operating levers; a connection uniting each of the auxiliary levers with the remote operating lever; and means operatively assembled with one of the last named connections
60 for unlatching the gate and for swinging the same.

3. A device of the class described comprising a suspension post; a swinging gate carried by the suspension post; end posts located upon either side of the suspension post; a rail uniting the end posts with the suspension post; fulcrum posts disposed laterally beyond the end posts; operating levers terminally pivoted to the fulcrum posts and arranged to extend terminally beyond the rail; upright auxiliary levers pivoted intermediate their ends to the end posts; connections uniting the upper ends of the auxiliary levers with the operating levers; a connection uniting one of the operating levers with the remote auxiliary lever; a tie terminally assembled with the rail and arranged to support the last named connection intermediate its ends; a latch-lever carried by the gate; a broken connection assembled at one of its remote ends with the lower end of the other of the auxiliary levers and at the other of its remote ends with the other operating lever, the adjacent ends of the broken connection being connected with one end of the latch lever; and means operatively connected with the other end of the latch-lever for unlatching and for swinging the gate.

4. A device of the class described comprising a suspension post; a swinging gate carried by the suspension post; end posts located upon either side of the suspension post; a rail uniting the end posts with the suspension post; inclined, terminally fulcrumed operating levers extending across the rail; upright auxiliary levers pivoted intermediate their ends to the end posts; connections uniting the auxiliary levers with the operating levers; a connection uniting the lower end of one of the auxiliary levers with the remote operating lever; a tie terminally assembled with the rail and with the last named connection; a latch-lever carried by the gate; a connection uniting the lower end of the other auxiliary lever with the other operating lever, the last named connection being operatively connected with one end of the latch lever and provided, intermediate its ends, with a takeup; latch-mechanism carried by the gate; a connection uniting the latch-mechanism with other end of the latch lever and operative to unlock and to swing the gate; and a takeup interposed in the last named connection.

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

JOHN W. HAWKINS.

Witnesses:

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