

No. 774,052.

PATENTED NOV. 1, 1904.

N. EARLY, JR.  
GATE.

APPLICATION FILED APR. 19, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

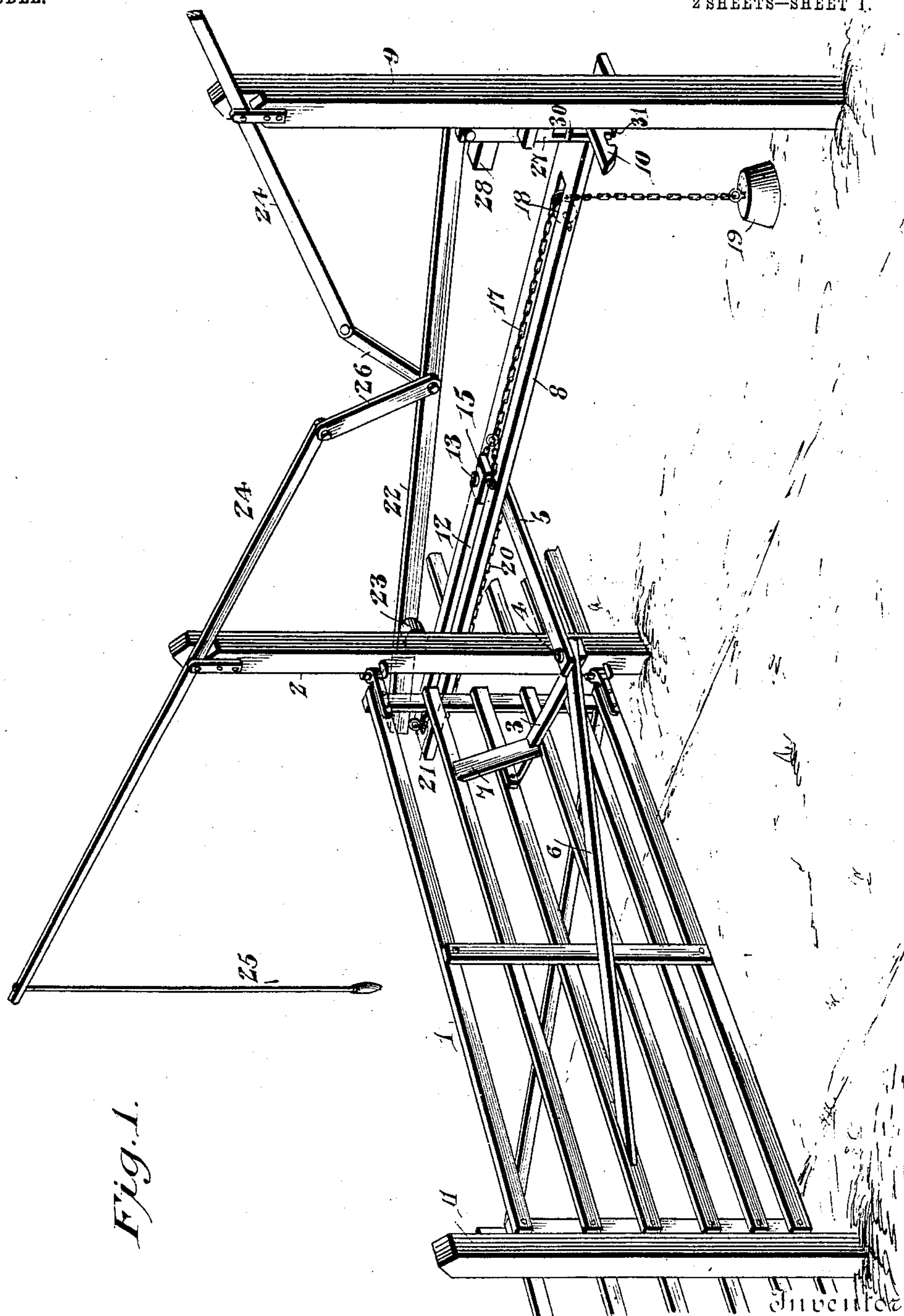


Fig. 1.

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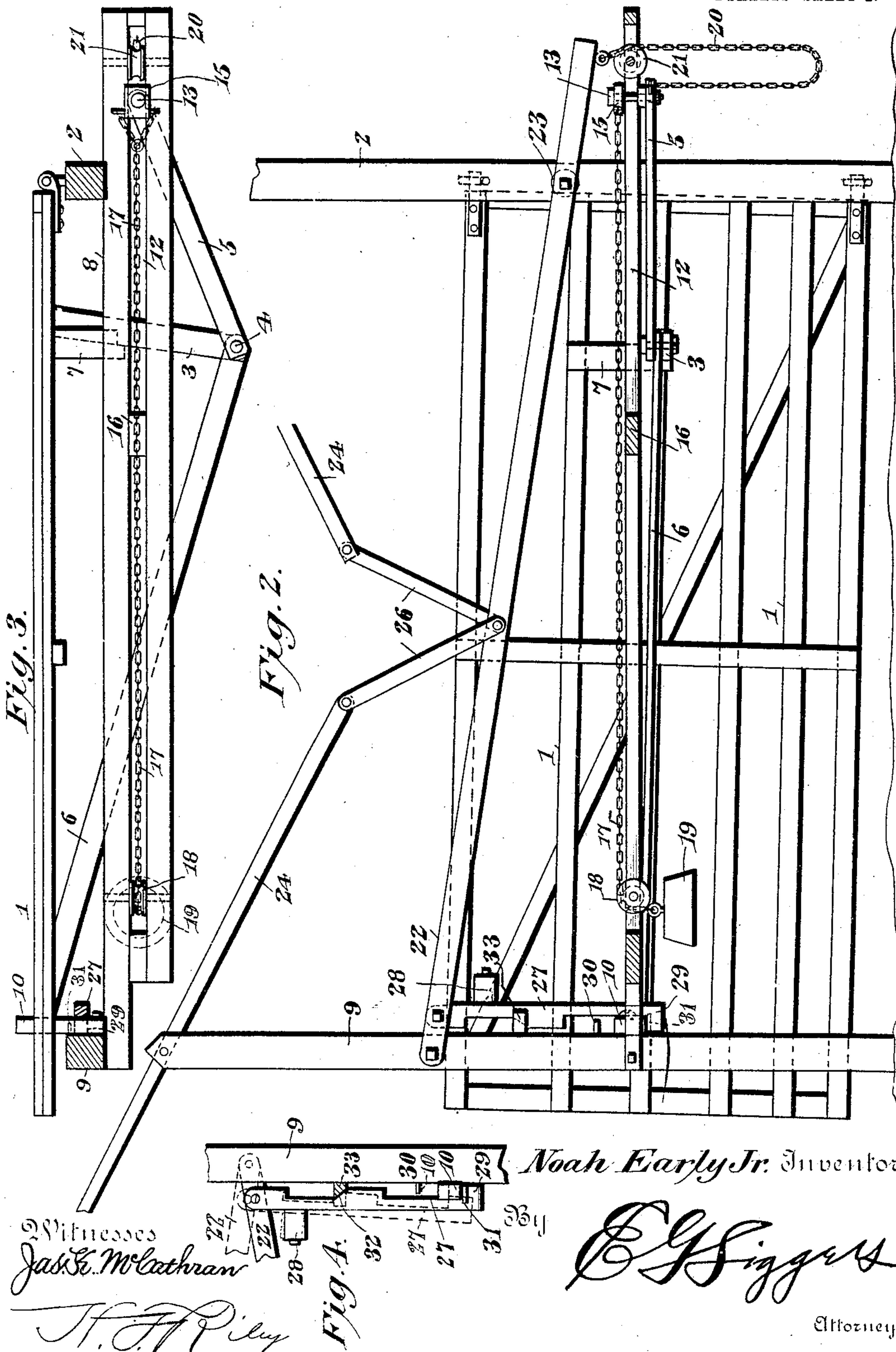
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2 SHEETS—SHEET 2.





# UNITED STATES PATENT OFFICE.

NOAH EARLY, JR., OF CHICAGO, ILLINOIS.

## GATE.

SPECIFICATION forming part of Letters Patent No. 774,052, dated November 1, 1904.

Application filed April 19, 1904. Serial No. 203,895. (No model.)

*To all whom it may concern:*

Be it known that I, NOAH EARLY, Jr., a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Gate, of which the following is a specification.

The invention relates to improvements in gates.

The object of the present invention is to improve the construction of gates, more especially the mechanism for opening and closing the same, and to provide a simple, inexpensive, and efficient construction of great strength and durability adapted to be readily applied to a swinging gate and capable of enabling the same to be opened and closed at a distance from either side of it by a person on horseback or in a vehicle.

A further object of the invention is to provide gate-operating mechanism of this character adapted to insure a positive closing of the gate and capable of effectually preventing the gate being left partly open.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a gate provided with operating mechanism constructed in accordance with this invention. Fig. 2 is an elevation, partly in section, the gate being open. Fig. 3 is a horizontal sectional view of the same. Fig. 4 is a detail view illustrating the construction of the latch-operating bar.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a swinging gate hinged to a post or upright 2 and provided with a laterally-extending arm 3, which is pivoted by a

bolt 4 or other suitable fastening device to the front end of a gate-actuating bar 5. The gate may be constructed in any desired manner, and the laterally-extending arm is braced by a horizontal bar 6 and an inclined bar or piece 7. The horizontal bracing-bar 6 extends rearward from the front portion of the gate at an angle to the same and is secured to the outer end of the arm 3 by the fastening device 4. The inclined bracing bar or piece 7 extends upward from the inner portion of the arm 3 to the gate. The rear end of the gate-actuating bar is slidably connected with a guide 8, disposed horizontally and arranged at right angles to the gate when the latter is closed. The guide is supported by the post or upright 2, and a similar post or upright 9, which serves as a supplemental latch-post, being provided with a pivoted latch 10 for holding the gate in its open position. When the gate is closed, the bar 5 is arranged approximately parallel with the gate and at right angles to the laterally-extending arm 3 and forms a lock for holding the gate in its closed position. The gate when closed abuts against a post 11.

The guide 8 is provided with a longitudinal slot 12, through which passes a pivot 13, which connects the bar 5 with a block 15, arranged upon the upper face of the guide 8 and movable longitudinally thereof. The guide is provided with a stop 16, arranged to limit the outward movement of the slide formed by the block and the pivot 13. The block is connected with a chain 17, passing over a pulley 18 and provided at its lower end with a weight 19. The pulley 18 is mounted on the guide adjacent to the post or upright 9, the pulley being arranged in the slot or opening, which extends substantially the entire length of the guide. The slot or opening of the guide is preferably formed by two bars or pieces spaced apart by intermediate and end blocks, the intermediate block constituting the stop 16. Instead of employing a chain any other flexible connection may be provided. The chain is provided at its upper or inner end with two branches, which are secured to the block 15 at opposite sides thereof by a



transverse fastening device. The weight operates to move the slide outward away from the hinge-post to close the gate. The slide is moved forward to open the gate by means of a chain 20 or other suitable flexible connection extending beneath the guide to a pulley 21, which is mounted in the slot or opening 12 beyond the post 2, and the chain extends around the same, being connected at its outer or upper end to a weighted lever 22. The weighted lever 22, which extends longitudinally of the guide at a point above the same, is fulcrumed at one end on the post or upright 9 and its other end is connected with the said chain 20. The lever 22 is provided near its outer or free end with a weight 23, adapted to return a pair of operating-levers 24 to their initial position. The operating-levers, which are normally arranged in an inclined position, are fulcrumed between their ends on the posts or uprights 2 and 9, and they are provided at their outer ends with suitable flexible connections 25, having handles or grips and adapted to be readily grasped by a person on the ground, in a vehicle, or on horseback. The inner or lower ends of the operating-levers are connected by links 26 with the weighted lever, and when the outer portions of the operating-levers are swung downward the weighted lever will be raised to move the slide inward, and thereby open the gate.

The lever 22 operates the latch by means of a pivoted latch-engaging bar 27, having a weight 28 at its upper portion and provided at its lower portion with a lug or projection 29 for engaging the latch 10. The latch 10 has its upward and downward movement limited by projections 30 and 31, and when the operating-levers are in their normal positions the lug or projection 29 lies beneath the latch, as illustrated in full lines in Fig. 4 of the drawings. When the latch-operating lever 22 is swung upward, the latch will be raised and the gate as soon as released will be positively and completely closed by the weight, so that there is no liability of the gate being left partly open. The latch-engaging bar or lever is provided at an intermediate point with an inclined surface 32, arranged to engage a projecting block or piece 33, recessed to receive and guide the bar or lever and provided with a fixed inclined surface. The fixed inclined surface of the projecting block or piece is arranged in the path of the inclined surface of the bar or lever, whereby when the latter is raised it will finally be swung outward to trip or release the latch. When the gate is closed and either of the operating-levers is pulled downward, the weighted lever will be swung upward and the slide caused to move inward, thereby opening the gate. When the opening movement of the gate is completed, the operating-lever is released and is returned to its initial position by the weighted lever. The

gate is closed by pulling downward on either of the operating-levers, which movement lifts the latch and releases the gate.

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

1. The combination with a gate, of a guide, means connected with the gate and slidable on the guide for actuating the gate, a weighted lever connected with the said means, and operating mechanism connected with the weighted lever, substantially as described. 75

2. The combination with a gate, of a guide, means connected with the gate and slidable on the guide for actuating the gate, a weighted lever connected with the said means, operating mechanism connected with the lever for moving the said means on the guide in one direction, and automatically-operable means for moving the said means in the opposite direction on the guide, substantially as described. 85

3. The combination of a gate, having a laterally-extending arm, a guide arranged approximately at right angles to the gate when the latter is closed, a bar slidable on the guide and pivotally connected with the arm of the gate and forming a lock for holding the latter in its closed position, and means for sliding the bar on the guide, substantially as described. 90

4. The combination of a gate having a laterally-extending arm, a guide arranged approximately at right angles to the gate when the latter is closed, a bar slidable on the guide and pivotally connected with the arm of the gate and forming a lock for holding the latter in its closed position, operating mechanism connected with the bar for moving the same in one direction, and a weight for moving the bar in the opposite direction, substantially as described. 95

5. The combination of a gate, a guide having an intermediate stop, a bar connected with the gate and slidable on the guide, flexible connections extending in opposite directions from the bar, a weight for actuating one of the flexible connections, and operating mechanism for operating the other flexible connection, substantially as described. 100

6. The combination of a gate, a guide, gate-actuating means slidable on the guide, a lever extending longitudinally of the guide and located above the same, and connected with the gate-actuating means for moving the same on the guide in one direction, means for moving the said means in the opposite direction on the guide, and operating mechanism for actuating the said lever, substantially as described. 110

7. The combination with a gate, of a weighted lever, a pair of operating-levers connected with the weighted lever and adapted to be returned by the same to their initial position, a guide, and means slidable on the guide and connected with the weighted lever and with the gate, substantially as described. 115

8. The combination with a gate, of a slide 120



connected with the gate, a weighted lever, a flexible connection extending from the slide to the weighted lever, and a pair of operating-levers connected with the weighted lever and  
5 adapted to be returned by the same to their initial position, after they have been operated, substantially as described.

9. The combination of a gate, a guide having a slot, a block or slide connected with the  
10 gate and slidable in the slot, pulleys arranged at opposite sides of the slot, flexible connections connected with the block or slide and arranged on the pulleys, operating mechanism connected with one of the flexible connections  
15 for actuating the slide in one direction, and a weight for actuating the other flexible connection to move the slide in the opposite direction, substantially as described.

10. The combination with a gate, and a latch, of a guide, means connected with the gate and  
20 slidable on the guide for actuating the said gate, a weighted lever extending longitudinally of the guide and connected with the said means for moving the same in one direction, operating mechanism connected with the  
25 weighted lever, a latch-engaging lever connected with the weighted lever, and means for tripping the latch-engaging lever to release the latch, substantially as described.

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

NOAH EARLY, JR.

Witnesses:

GEO. P. THIEL,  
E. P. FALTER.