No. 777,674. PATENTED DEC. 20, 1904.

A. M. HALL.

FARM GATE.

APPLICATION FILED MAY 31, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

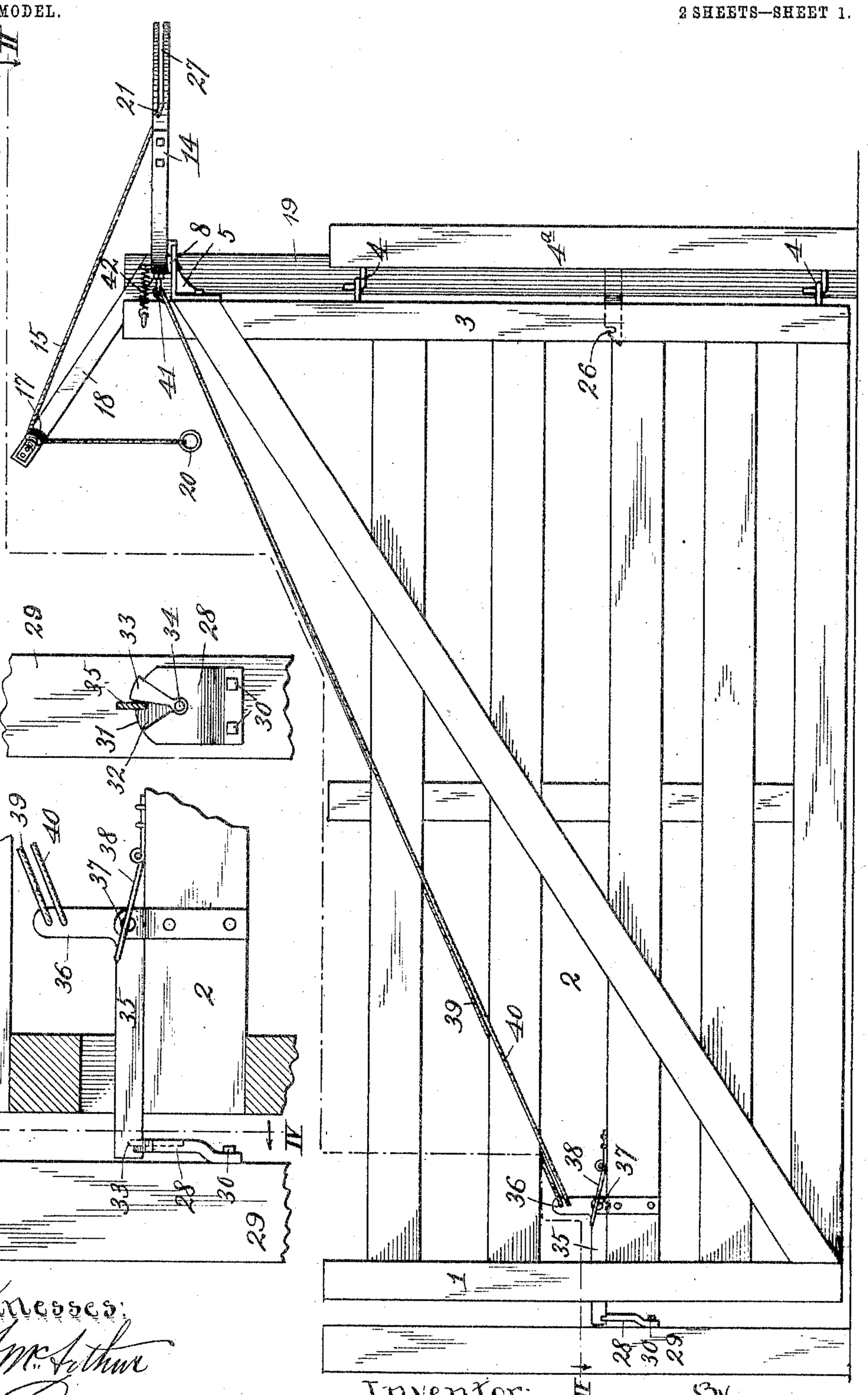

Fig. 4.

Fig. 3.

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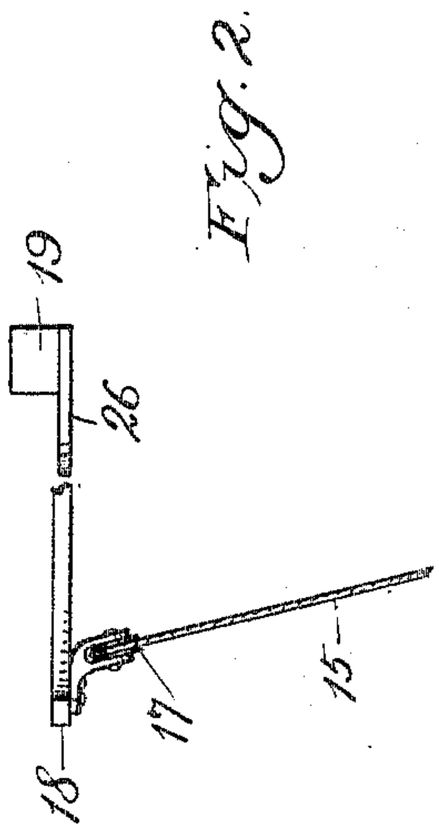
NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.



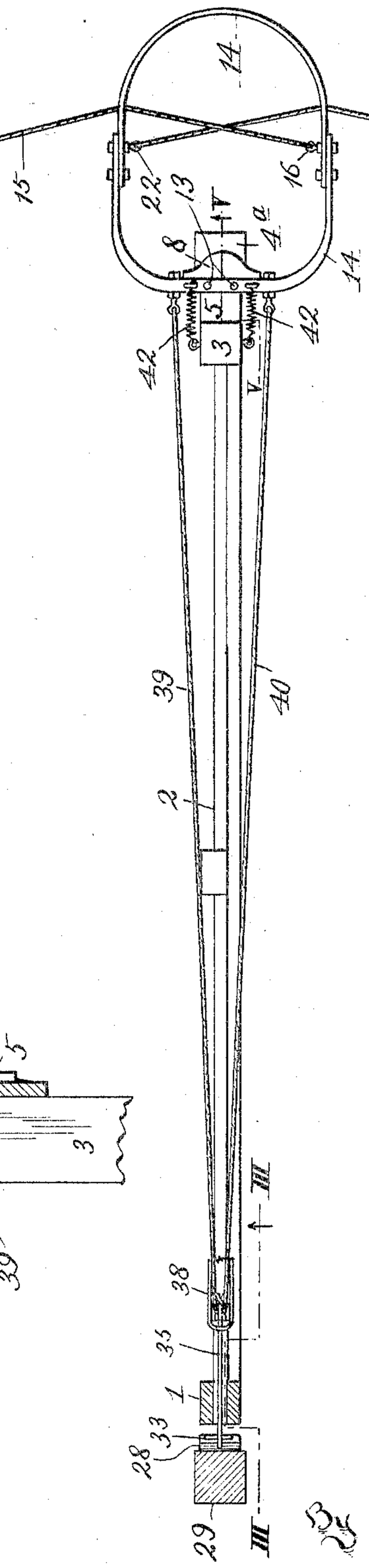


Fig. 5.

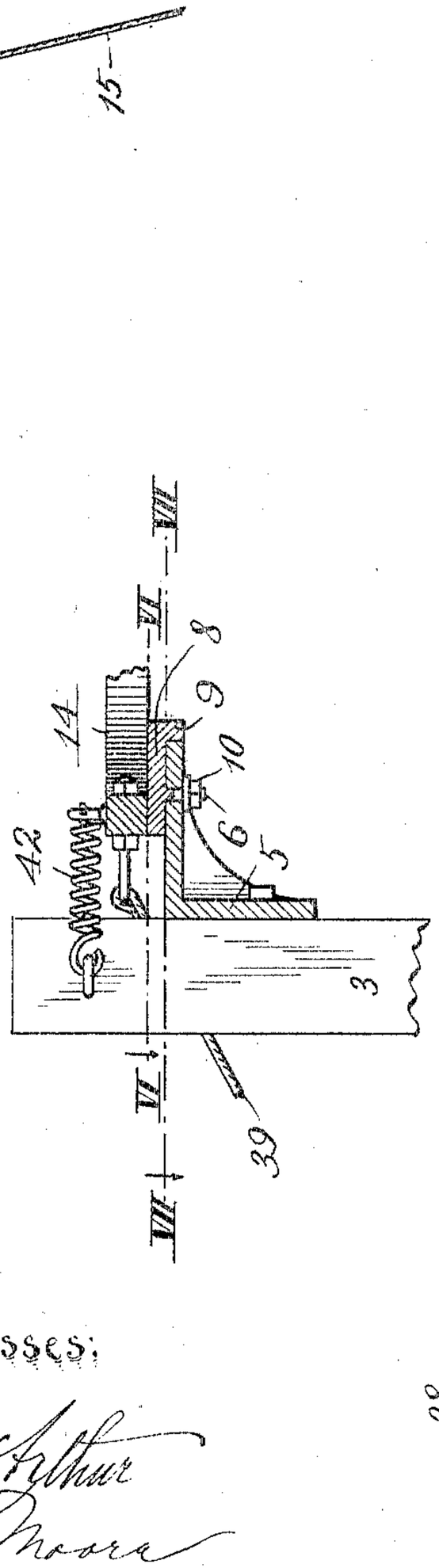


Fig. 7.

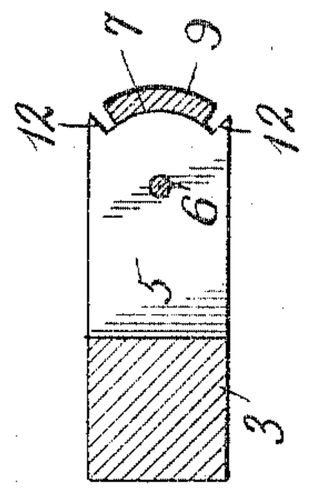
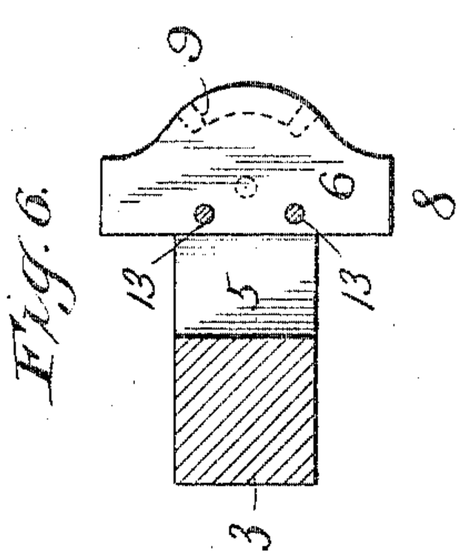
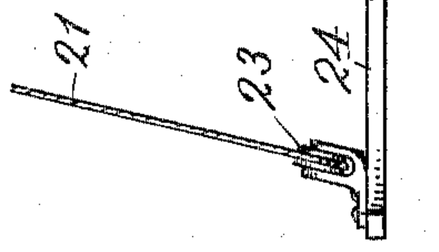


Fig. 6.





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A. W. Arthur

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No. 777,674. Patented December 20, 1904.

UNITED STATES PATENT OFFICE.

ADELBERT M. HALL, OF BALDWIN, KANSAS.

FARM-GATE.

SPECIFICATION forming part of Letters Patent No. 777,674, dated December 20, 1904.

Application filed May 31, 1904. Serial No. 210,392.

To all whom it may concern:

Be it known that I, ADELBERT M. HALL, a citizen of the United States, residing at Baldwin, in the county of Douglas and State of Kansas, have invented certain new and useful Improvements in Farm-Gates, of which the following is a specification.

My invention relates to farm-gates; and the object of my invention is to produce a gate of this type which may be opened by a person seated in a vehicle passing in either direction and closed in the same manner after the vehicle has passed.

My invention contains novel features and details of construction, as hereinafter described, and pointed out in the appended claims.

Referring now to the accompanying drawings, in which like reference characters indicate the same parts throughout, Figure 1 is a side elevation of a gate provided with my invention, the gate being in closed position and one of the posts being omitted. Fig. 2 is a sectional plan view taken on line II II of Fig. 1, showing the two posts moved in toward the gate, the operating-cables being partly broken away. Fig. 3 is a detail view, enlarged, of the latch, taken on line III III of Fig. 2. Fig. 4 is a sectional view taken on line IV IV of Fig. 3. Fig. 5 is an irregular sectional detail taken on line V V of Fig. 2, the loop and the post being broken away. Fig. 6 is a section taken on line VI VI of Fig. 5. Fig. 7 is a section taken on line VII VII of Fig. 5.

1 2 3 is the gate, which may be of any preferred construction and is connected by hinges 4 to a post 4^a, whereby it may turn in either direction to open position.

Secured to the post 3 of the inner end of the gate is a bracket 5, through which passes a depending stud 6, Figs. 5 to 7, and the outer end of the bracket is curved in the arc of a circle of which said stud is the center, as shown at 7. The stud 6 is preferably integral with a segmental shoe 8, (shown in plan in Fig. 6,) this shoe being provided with a depending segmental flange 9, which loosely fits the convex or curved surface 7. The stud 6 is held in position by a nut or a cotter, a nut 10 being shown.

At the ends of the convexity 7 two shoulders 12 are formed, their function being to transmit the movement of the shoe 8 to the gate-post 3, as will be readily understood from the following description.

Secured to the upper face of the shoe 8, as by bolts 13, is a looped frame 14, which extends rearwardly beyond the end of the gate. This frame provides points of attachment for the cables which are pulled by the operator and also for two cables which lead to the gate-latch.

One of the main cables, 15, is connected to the frame 14 at 16 and extends across the frame and in a substantially horizontal direction to a pulley 17, supported by an arm 18, attached to a post 19, Figs. 1 and 2. Depending from the pulley, the cable terminates in a ring 20 or other suitable handle. Similarly the opposing cable, 21, is connected to the frame 14 at 22 and passes over a pulley 23, supported by an arm 24, attached to a post 25. Posts 19 and 25 are equal distance from the hinge-post 4 and are set at such points that the keepers 26 attached thereto will engage the latch of the gate when the same is pulled open.

Preferably I form the outer portion of the frame 14 with a slot 27, through which the cables 15 and 21 pass instead of above or below the frame.

My improved latch for holding the gate in closed position—*i. e.*, across the roadway—is shown in detail in Figs. 3 and 4. The fixed portion or keeper 28 is secured to a post 29 with screws 30. Its upper edge 31 is preferably crowned, as shown, and a segment-shaped recess 32 is formed for a stop 33, which is pivoted on a rivet or pin 34. A notch is cut centrally in the top of the plate 28 to receive the latch proper, and the pivoted stop 33 is only sufficiently wide to clear the side of the latch when the former is at either end of its throw, as shown in Fig. 4. Before describing the operation of this stop the latch itself will be described. This part is in the form of an angle-lever, having a horizontal arm 35 and an upwardly-extending arm 36. Arm 35 extends between the end posts of the gate and normally rests upon one of the bars

2 thereof. The latch is fulcrumed at 37, either as shown or in any preferred manner. Its arm 35 is pressed downward by some suitable means, as shown. A spring 38 performs this function. In lieu thereof the arm might be provided with additional weight.

Two cables 39 and 40 (which may be ropes, wires, or chains) are connected to arm 36 of the latch, and their opposite ends are connected, respectively, to the frame 14 at points equidistant from the pivot 6, preferably by means of eyebolts 41.

The frame 14 is normally held in alinement with the gate, as shown, by two tension-springs 42, which are of equal strength. Preferably these springs are connected to the top of the frame 14 and to post 3 of the gate, as shown in Figs. 1 and 2, and their action is further to maintain equal tensions upon the latch-cables 39 and 40.

Supposing the gate to be in closed position, as shown, the operation of opening it would be as follows: The passenger, approaching the gate in the direction of the arrow in Fig. 2, pulls down on cable 21, and as the stud 6 turns freely in the bracket 5 the movement of frame 14 turns the shoe 8 a certain distance before the end of the flange 9 strikes the shoulder 12 of the bracket. This initial movement of the frame 14 draws back the latch-lifter cable 39, which causes the latch 35 to be lifted and released from the keeper 28 and its auxiliary stop 33. The continued pulling of the main cable 21 causes the flange 9 to engage one of the shoulders 12, and thereby the gate is swung open until the latch strikes the keeper 26 on post 19, where it is retained by the notch in the keeper until the passenger passes said post 19. At this point he pulls down the other cable 15, which causes the latch to be lifted in the manner aforesaid, and the further pulling of the cable acting on frame 14 closes the gate.

Whether the latch will move the auxiliary stop 33 depends on the direction in which the gate had last been opened. If the gate had previously been opened in the same direction as that described, the latch will not move the stop 33, but will strike the same, and thus the gate is prevented from swinging too far, and also the latch is sure to drop into its notch in the keeper. If the gate had previously been opened in the opposite direction, the latch will throw the stop 33 to the opposite end of its throw and will be arrested thereby in the same way as in the other case.

While the drawings show the preferred construction of my invention, I do not wish to limit myself thereto in regard to modifications of details.

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

1. The combination, with a post forming the hinged end of a gate, of a bracket secured to said post, said bracket being provided with two stops 12, a shoe pivotally mounted on said bracket, said shoe having a lost-motion connection with the bracket, a looped frame rigidly secured to said shoe, a latch on the gate, and cables connecting the latch to said frame.

2. The combination with a post forming the hinged end of a gate, of a bracket secured to said post, said bracket being provided with two stops 12, a shoe pivotally mounted on the bracket, said shoe having a portion which plays loosely between said stops during the initial movement of the shoe, a looped frame secured to said shoe, said frame extending rearwardly from the gate, a latch on the gate, cables connecting the latch to said frame, and means for swinging said frame.

3. The combination of a gate having a latch, a bracket secured to the hinged end of the gate, said bracket having two stops thereon, a shoe pivotally mounted on the bracket, said shoe having a depending flange adapted to play between said stops during the initial movement of the shoe, a looped frame secured to said shoe, two tension-springs connecting said frame to the adjacent end of the gate, cables for swinging the looped frame, and cables attached at their opposite ends to the latch and the looped frame.

4. The combination with a gate hinged at one end and provided with a latch at its opposite end, a post, and a keeper on the post which is engaged by the latch when the gate is closed, of a bracket rigidly secured to the hinged end of the gate, a looped frame pivoted upon the bracket the initial movement of which is independent of said bracket, means carried by the looped frame for positively engaging the bracket so that the latter will swing with the looped frame after said frame has reached the end of its initial movement, cables attached at their opposite ends to the looped frame and the latch so that the latter will be released from the keeper on the initial movement of the looped frame, and means actuated from a distance for swinging the looped frame to either side.

5. The combination with a gate hinged at one end and provided with a latch at its opposite end, a post, and a keeper on the post which is engaged by the latch when the gate is closed, of a bracket rigidly secured to the hinged end of the gate, a looped frame slotted at its outer portion and pivoted upon the bracket the initial movement of which is independent of said bracket, means carried by the looped frame for positively engaging the bracket so that the latter will swing with the looped frame after said frame has reached the end of its initial movement, a pair of cables extending in opposite directions through the slot in the looped frame and which cross near their inner ends and are attached to the inner sides of said frame, and cables attached at their opposite ends to the looped frame and the latch.

6. The combination with a gate hinged at one end and provided with a latch at its opposite end, a post and a keeper on the post which is engaged by the latch when the gate is closed, of a bracket rigidly secured to the hinged end of the gate, a looped frame pivoted upon the bracket the initial movement of which is independent of said bracket, means carried by the looped frame for positively engaging the bracket so that the latter will swing with the looped frame after said frame has reached the end of its initial movement, cables attached at their opposite ends to the looped frame and the latch so that the latter will be released from the keeper on the initial movement of the looped frame, a pair of posts arranged an equal distance from each side of the hinged end of the gate, keepers on said posts adapted to be engaged by the latch when the gate is swung to an open position, arms on said posts, pulleys mounted upon the arms, and a pair of cables attached at their crossed inner ends to the opposite sides of the looped frame and having their outer ends depending from the pulleys.

In testimony whereof I affix my signature in the presence of witnesses.

ADELBERT M. HALL.

Witnesses:

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C. O. EWAN,
PHOEBE J. BARE.