No. 895,462. PATENTED AUG. 11, 1908.

G. HOSKINS.

SWINGING GATE.

APPLICATION FILED OCT. 17, 1907.

2 SHEETS—SHEET 1.

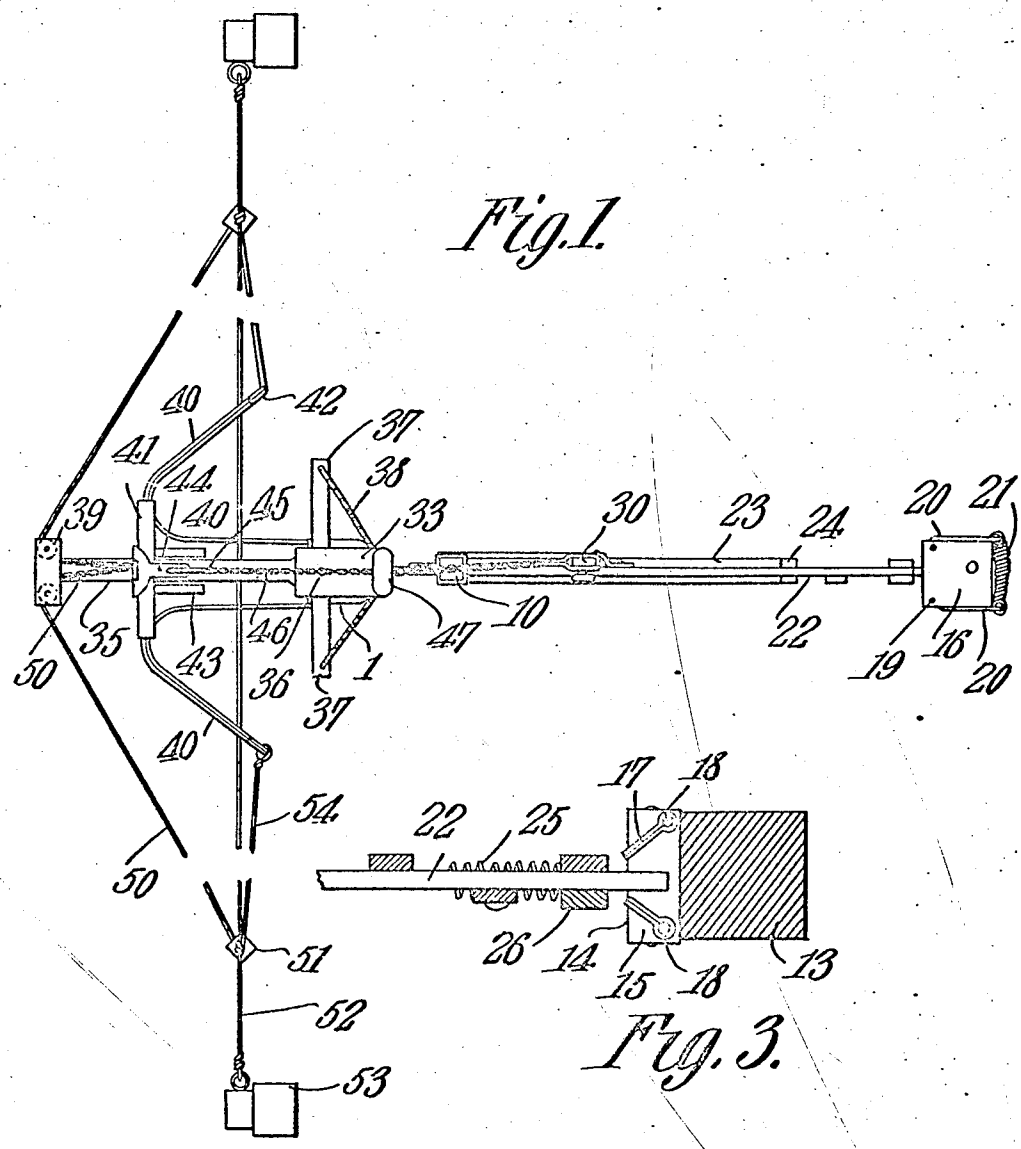


Fig. 1.

Fig. 3.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

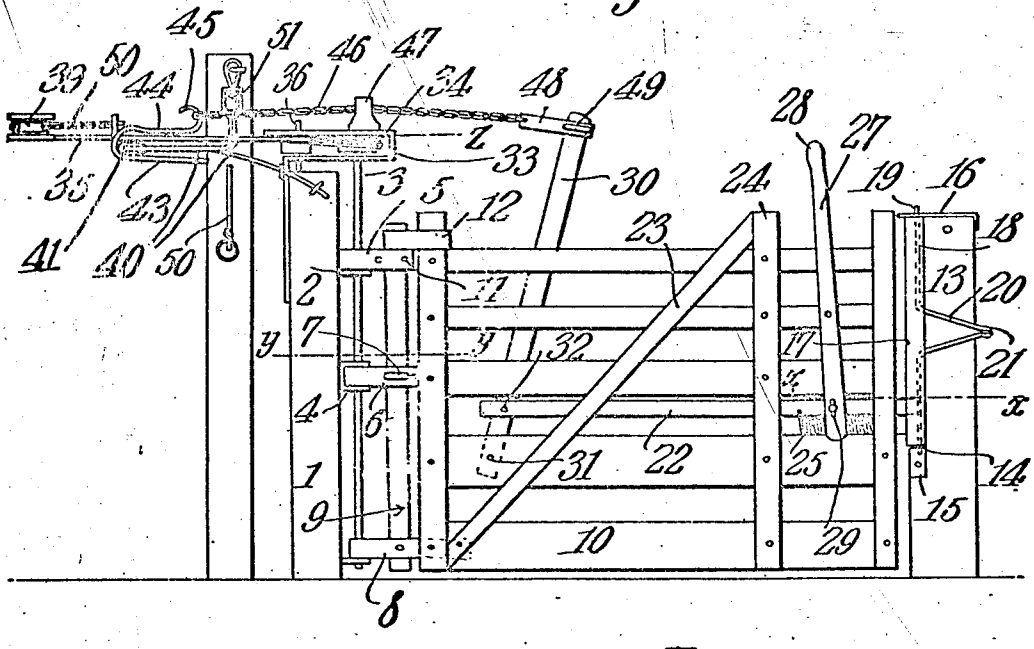


Fig. 5.

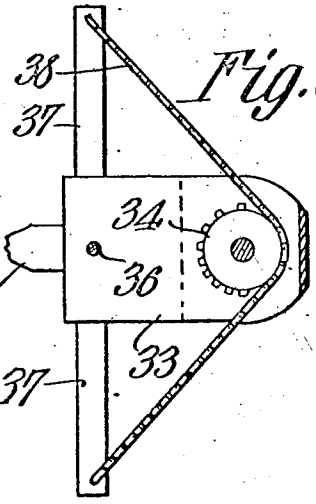
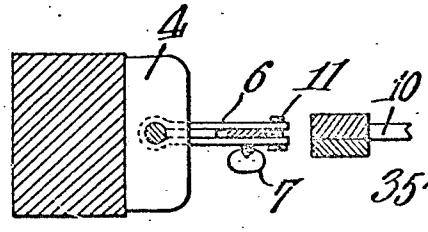


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE HOSKINS, OF TAYLOR, MISSOURI.

SWINGING GATE.

No. 895,462. Specification of Letters Patent. Patented Aug. 11, 1908.

Application filed October 17, 1907. Serial No. 397,858.

To all whom it may concern:

Be it known that I, GEORGE HOSKINS, a citizen of the United States, residing at Taylor, in the county of Marion and State of Missouri, have invented a new and useful Swinging Gate, of which the following is a specification.

This invention relates to improvements in gates and more particularly to means whereby the gate can be readily swung into open or closed position by a person approaching the gate from either direction and while at some distance from the gate.

One of the objects of the invention is to provide gate actuating mechanism of simple, durable and efficient construction, which can be conveniently operated, and which embodies means whereby the gate can be held automatically in any position to which it may be swung.

Another object is to provide a gate which can be readily adjusted vertically without interfering with the operating mechanism.

Another object is to provide latch mechanism whereby the latch can be retracted immediately prior to the actuation of the gate, said latch mechanism being unaffected by the adjustment of the gate.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a plan view of a gate embodying the present improvements. Fig. 2 is an elevation thereof, a portion of the actuating cable being broken away. Fig. 3 is an enlarged section on line *x*—*x*, Fig. 2. Fig. 4 is an enlarged section on line *y*—*y*, Fig. 2. Fig. 5 is an enlarged section on line *z*—*z*, Fig. 2.

Referring to the figures by characters of reference, 1 designates a gate post having outstanding brackets 2 in which is journaled a rod 3, said rod also extending through a U-shaped bracket 4 secured to the post 1 between the brackets 2. Secured to the rod directly above the upper bracket 2 is an arm 5 and another arm 6 is secured to said rod within the bracket 4. Both of these arms are forked as indicated in Fig. 4 and arm 6 is provided with a set screw 7. Another arm 8 is loosely mounted on the lower portion of the rod 3 and is fastened to the lower end of a bar 9 and also to the bottom of a gate 10. Bar 9 is preferably flat and is slidably mounted within arms 5 and 6, it being retained in position therein in any preferred manner as by means of set screws 11 extending transversely through the arms. The set screw 7 is designed to bind upon the bar and by loosening it the bar can be raised or lowered to any desired elevation. The upper portion of the bar is connected to the upper portion of the gate by means of an arm 12.

The latch post 13 has a transverse shoulder 14 formed upon that face thereof adjoining the gate and secured upon this shoulder is a wear plate 15. A cap plate 16 is secured upon the upper end of the latch post and overhangs the shoulder 14 and interposed between said shoulder and the cap plate are keepers each consisting of a metallic strip 17 folded upon itself and engaging oppositely extending rods 18 which project beyond the strip to constitute trunnions 19. These trunnions bear within the strip 15 and the cap plate 16. V-shaped arms 20 are interposed between and formed integral with the adjoining ends of the rods 18 and lap the faces of post 13, the arms 20 being connected by means of a spring 21 and held thereby normally in contact with opposite faces of the post. When the arms are positioned in this manner the keepers 17 project beyond that face of the post to which they are connected and converge toward the gate as clearly indicated in Fig. 3.

The latch used in connection with the gate preferably consists of a longitudinally movable bar 22 slidably mounted between the diagonal braces 23 and the upright braces 24 of the gate and a spring 25 is secured at one end to the bar while the other end is connected to the end bar 26 of the gate, this spring being so disposed as to hold one end of the bar 22 normally projected beyond the gate and in position to contact with one of the keepers when the gate is closed. A lever 27 is fulcrumed upon the gate and extends upward therefrom, terminating in a handle 28. The lower end of this lever is pivotally connected to the bar as indicated at 29 and it is therefore apparent that by grasping the handle 28 the lever can be actuated manually so as to withdraw the latch from engagement with the keepers. Another lever 30 is fulcrumed upon the gate as indicated at 31 and said lever is also pivotally connected as at 32 to the bar 22.

Secured to the gate post 1 and extending forward therefrom is a bracket 33 in which the upper portion of rod 3 is journaled and secured to this rod and within the bracket is a sprocket 34. A sweep 35 is journaled at one end within the bracket as indicated at 36. Oppositely extending arms 37 are connected to or formed with the pivoted end of sweep 35 and extend at right angles thereto. A chain 38 connects the outer ends of these arms and also extends partly around the sprocket 34 and is designed to actuate the same in the manner hereinafter stated. Guide pulleys 39 are connected to the free end of sweep 35.

A guide frame is connected to the post 1 and extends outwardly beneath the sweep 35. This frame consists of oppositely bowed rods 40 located in the same horizontal plane and having their crown or intermediate portions connected by a bar 41 on which the sweep 35 normally rests. The terminals of arms 40 extend upward as at 42 and those portions of the arms between bar 41 and the terminals 42 constitute retaining means as will be hereinafter set forth.

Loosely embracing the sweep 35 is a fork 43 which is hooked over the bar 41 and has an arm 44 provided with a hooked end 45. A chain 46 is secured to this hook 45 and extends through a pivoted guide block 47 mounted on the bracket 33. The end of this chain is fastened to a loop 48 which slidably engages the lever 30 and is designed to be fastened to it by means of a set screw 49. Two chains or other flexible devices 50 are connected to the fork 43 and extend partly around the respective pulleys 39 and through pulley blocks 51. The two pulley blocks are suspended from a cable 52 which extends transversely of the gate actuating apparatus and is designed to be supported by posts 53 located at desired distances from the gate. Each of the pulley blocks is also preferably connected to one of the terminals 42 by means of a cable 54. The parts are thus firmly braced.

As heretofore indicated the gate can be readily adjusted vertically by loosening the set screw 7. Bar 9 can then be slid within the arms 5 and 6 and can be locked in adjusted position by means of the set screw. Moreover, loop 48 can be adjusted along the lever 30 and locked by means of set screw 49 so that the various parts can be held in proper relation subsequent to the adjustment of the gate. When the gate is closed and it is desired to open it from either direction the operator grasps the depending end of the adjoining cable or chain 50 and by pulling on it draws the hooked fork 43 away from the bar 41 and therefore pulls on chain 46 and transmits motion therethrough to lever 30 which in turn pulls back the latch bar 22. The gate is thus released from the latch post and a continuous pull upon the chain or cable will result in the sweep 35 being swung upon its pivot 36. Chain 38 will therefore be drawn along the sprocket 34 and cause bar 3 to partly rotate and the gate to swing open. The movement of the sweep 35 will result in the hooked fork 43 sliding onto one of the arms 40 and it will be pressed against the arm by the spring 25 of the latch with sufficient force to frictionally engage the arm and hold the gate in any position to which it may be moved. When it is desired to close the gate the operator can either push against it or can pull upon the other cable or chain 50. This will result in the sweep returning to its normal position, thereby swinging the gate toward the latch and causing the bar 22 to move against one of the keepers 17. Said keeper will therefore be swung out of the path of the latch bar and as soon as the bar passes it the keeper will be returned to its normal position by spring 21.

What is claimed is:

1. The combination with a swinging gate and a spring actuated latch carried by the gate; of means for actuating the gate, a fixed structure adjacent the gate, and mechanism carried by said means and controlled by the spring of the latch for frictionally engaging the fixed structure to hold the gate in a closed or an open or partly open position.

2. The combination with a swinging gate and a spring actuated latch carried thereby; of means for actuating the gate, a fixed structure adjacent the gate, mechanism carried by said means and normally held in frictional engagement with said structure by the spring of the latch to hold the gate in open or partly open position, and means for actuating the latch against the stress of the spring to unlock the gate and release said frictional holding means.

3. The combination with a swinging gate and a toothed wheel movable therewith; of a sweep, flexible means carried by the sweep and engaging the wheel for transmitting motion to the gate from the sweep, a supporting guide for the sweep, means for actuating the sweep, and means carried by the sweep and coöperating with the guide for holding the gate in any position to which it may be moved.

4. The combination with a rod, a sweep, and means actuated by the sweep for partly rotating the rod; of arms outstanding from the rod, a gate, a bar secured thereto and adjustably mounted within the arms, and means for securing the bar in adjusted position within the arms.

5. The combination with a swinging gate; of means for actuating the gate, and spring operated mechanism carried by said means for holding the gate in any position to which it may be moved.

6. The combination with a swinging gate;

of means for actuating the gate, a fixed structure adjacent the gate, and spring actuated mechanism carried by said means for frictionally engaging the fixed structure to hold the gate in any position to which it may be moved.

7. The combination with a swinging gate and a fixed structure adjacent the gate; of a sweep, means for actuating the sweep, arms outstanding from the sweep, a flexible element secured at its ends to the arms, a revoluble device secured to the piovtal portion of the gate and engaging and disposed to be rotated by said element, and bearings for holding said revoluble device against transverse movement.

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

GEORGE HOSKINS.

Witnesses:
OLLIE M. HOSKINS,
H. M. WOOD.