

No. 775,772.

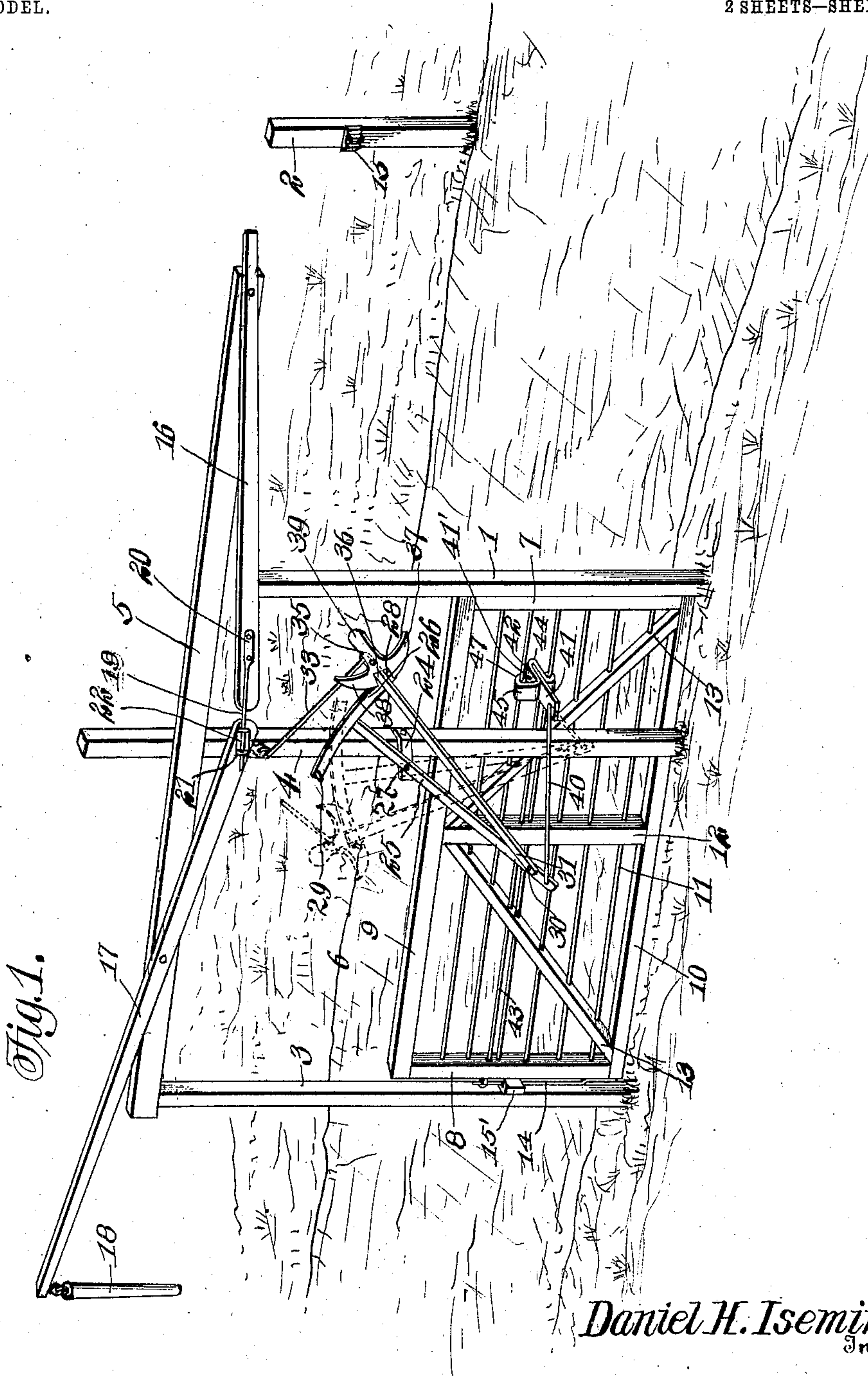
PATENTED NOV. 22, 1904.

D. H. ISEMINGER.
SWINGING GATE.

APPLICATION FILED MAY 5, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



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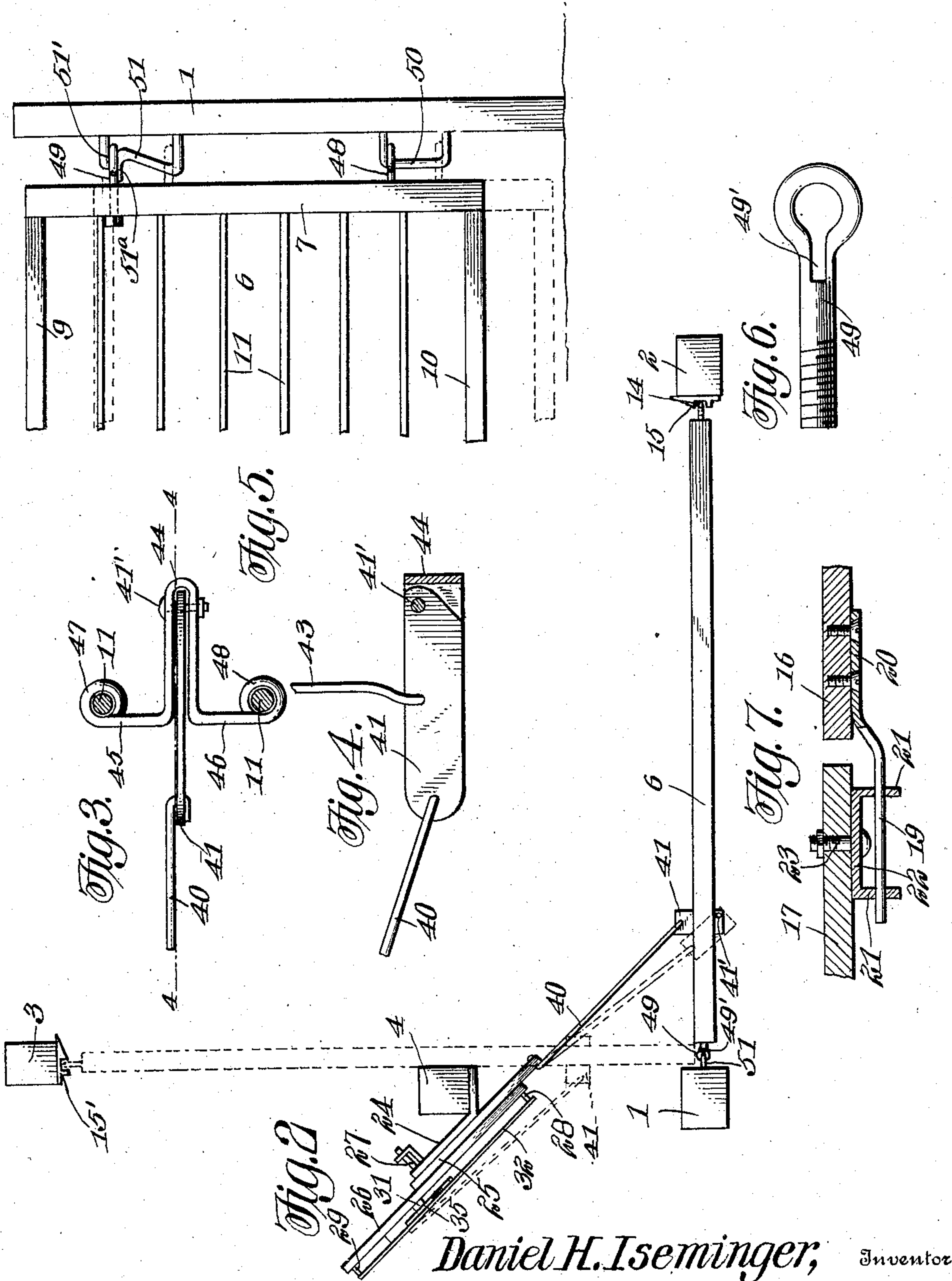
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UNITED STATES PATENT OFFICE.

DANIEL H. ISEMINER, OF BLOOMINGTON, ILLINOIS.

SWINGING GATE.

SPECIFICATION forming part of Letters Patent No. 775,772, dated November 22, 1904.

Application filed May 5, 1904. Serial No. 206,546. (No model.)

To all whom it may concern:

Be it known that I, DANIEL H. ISEMINER, a citizen of the United States, residing at Bloomington, in the county of McLean and State of Illinois, have invented certain new and useful Improvements in Swinging Gates; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
 10 pertains to make and use the same.

This invention relates to gates of that kind which are mounted to swing upon a hinging-post to and between main and auxiliary latch-posts disposed upon opposite sides of the road-
 15 way and in which operating-levers so located as to be manipulated by a rider, driver, or pedestrian from either side of the gateway are employed to govern the gate-latch mechanism and effect the swinging of the gate.

One object of my invention is to provide gate-operating mechanism which is easy to understand and operate and in which a full
 20 downpull upon the opposite levers in succession will effect the free swing of the gate to its full-open and full-closed positions, thereby obviating the objection to complex structures embodying parts which are liable to hang on
 25 "dead-center."

Another object of the invention is to provide latch-operating and swinging mechanism which is simple of construction, comparatively inexpensive of production, and efficient and reliable in operation and which is auto-
 30 matic in action to lock the latch and latch-operating and gate-swinging connections to prevent any possibility of accidental opening of the gate under wind or other pressure.

A still further object of the invention is to provide means whereby the gate may be raised
 40 and lowered on its hinges to swing over snow or other obstructions or to suit inequalities of road-surface.

With these and other objects in view the invention consists of certain novel features of
 45 construction, combination, and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is
 50 a perspective view showing the gate swung

open. Fig. 2 is a top plan view showing the closed and open positions of the gate in full and broken lines. Fig. 3 is a sectional view through a portion of the gate, showing the latch-actuating device in end elevation. Fig. 55
 4 is a horizontal section on line 4 4 of Fig. 3. Fig. 5 is a view showing the construction of the gate-hinges. Fig. 6 is a top plan view of the upper hinge member or eye on the gate, and Fig. 7 is a detail section through the ends
 60 of the operating-levers.

Referring now more particularly to the drawings, 1 and 2 represent the hinging-post and main latch-post, disposed upon opposite
 sides of the driveway; 3, an auxiliary latch-
 65 post disposed upon the same side of the gateway as the post 1 and in line therewith; 4, a supporting post or standard disposed between the post 1 and the post 3; 5, a horizontal bar or rail secured to and connecting the upper
 70 ends of the posts 3 and 4, and 6 the gate, which is hingedly mounted upon the post 1 to swing between the posts 2 and 3.

The gate 6 may be of any preferred construction, but is here shown as consisting of
 75 the hinging and latch stiles 7 and 8, the top and bottom bars 9 and 10 connecting the upper and lower ends of the said stiles together, longitudinal rods or runners 11, a central panel or picket 12, secured to the upper and lower
 80 bars and to the rods 11 also, if desired, and diverging braces 13, connected to the top bar 9, adjacent to the upper end of the picket or panel 12 and extending downwardly and out-
 85 wardly therefrom to the ends of the gate, where they are secured at the point of junction of the stiles 7 and 8 with the lower bar or rail 10. On the stile 8 is a spring latch-bar
 90 14, adapted to engage keepers 15 and 15', arranged, respectively, on the main and auxiliary latch-posts 2 and 3. These keepers may be of any preferred construction and are here shown as consisting of an ordinary form hav-
 95 ing a central notch or recess to receive the bar 14 and end shoulders on which said bars ride in moving into and out of said notch or recess.

Upon the bar 5 are fulcrumed operating-levers 16 and 17, which are provided at their outer ends with suitable handles 18 and are movably connected at their inner ends, the
 100

movable connection between them comprising a rod or stem 19, secured at one end, as shown at 20, to the inner end of the lever 16 and having its opposite or free end slidably engaging eyes 21 in a bracket 22, swiveled on a bolt 23, passing through the inner end of the lever 17, whereby the inner ends of the levers are free to have independent movement upon one another in a vertical plane and at the same time to impart corresponding movement one to the other, as will be readily understood.

These levers operate the gate-swinging and latch-releasing mechanism, which is constructed in the following manner: Fixed to the post 4 is a bracket-plate 24, which is disposed so as to lie obliquely to the plane of the gate 6 when the latter is in its closed position. On this bracket 24 is fulcrumed a lever 25, which is of T-form, being provided at its upper end with a cross-head or cross-bar 26. The pivotal connection 27 of said lever is below said cross-bar, and at the opposite ends of the latter are locking pins or devices 28 and 29. To the lower end of this lever is pivoted at 30 the lower end of a shifting bar or rod 31, which moves at its upper end in a guide 32, carried by the cross-bar 26 of the lever 25. The bar 31 extends a suitable distance above the cross-bar 26 and its upper end is connected by a link 33 with an eye or like loose-joint connection on the inner end of the lever 17, whereby when either lever 16 or 17 is moved the link 33 will be actuated to swing the bar 31 in one direction or the other along the T-head 26. A double-hooked catch 35 is pivotally mounted upon the upper end of the bar 31, just below the pivotal connection of the link 33, and this catch is provided with a central notch 36, to engage said pins 28 and 29. The lower side of the catch which has the notch is curved, as shown, and the catch also has an upwardly-extending counterweight-arm 39. By reference to Fig. 1 it will be observed that when the gate 6 is in open position the bar 31 lies contiguous to the pin 28, the latter being caught in the notch of the catch, which is held in engaging position by the inclined position of the counterweight-arm 29, thus locking said bar against movement. When, however, the inner end of either of the levers 16 and 17 is elevated by pulling down upon the handle 18 at the outer end of said lever, the link 33 will draw upon the rod 31 and, as the catch 35 is in engagement with the pin 28, will swing the T-shaped lever 25, as well as said rod, to the reverse direction, (shown in dotted lines in Fig. 1,) which is the position the parts assume when the gate is closed, as shown in full lines in Fig. 2. In this operation of the aforesaid parts the hook 35 maintains engagement with the pin 28 until the bar 31 reaches a perpendicular position, when the gravity-arm 39 will cause it to swing in the reverse direction, thus releasing it from engagement with the pin 28 and allowing the bar 31 to

swing under the acquired momentum until the notch 36 comes opposite the pin 29, when the catch will tilt to the dotted-line position shown in Fig. 1, so as to bring the notch 36 into engagement with the pin 29, thus locking the parts against movement in the positions they assume when the gate is closed. The lower end of the T-lever 25 is connected by a link 40 to a latch-actuating tongue or plate 41, pivotally mounted in the bracket 42, attached to the gate, the said tongue or plate being connected by a rod 43 to the upper end of the spring latch-bar 14. As shown in detail in Figs. 3 and 4, the bracket 42 comprises a strip of metal bent to form a U-shaped portion or housing 44, which receives the tongue 41 and arms 45 and 36, projecting above and below the same and bent or coiled at their free ends to form clips 47, which embrace two of the rods 11 and fasten the bracket thereto. The tongue or plate 41 is eccentrically pivoted to the bracket, as indicated at 41', said pivot being located near the inner end and outer side of the said tongue, so that the latter may swing thereon in a direction longitudinally of the gate 6 and draw the rod 32 inward to retract the latch 14 or permit said rod to move outwardly under the outward movement of the spring-latch to permit the latter to engage the keeper 15 or 15'. When either lever 16 or 17 is operated and the T-lever 25 is actuated, as described, the link 40 will in a well-understood manner impart motion to the tongue 41 to first release the latch 14 from the keeper of one of the latch-posts and will then impart a thrust to the gate to swing it to its open or closed position. When the lever is released, the bar 31 is free to move by gravity past either side of the post 4 to bring the catch 35 into engagement with the coacting pin 28 or 29. It will be observed that in either direction of movement of the parts freedom of action is insured, as the parts have no center to hang upon, thus allowing the gate to be swung open or closed under a direct pull of either lever and with a comparatively slight expenditure of power.

It is desirable to so mount the gate 6 that it may be raised or lowered to swing over snow or other obstructions or to suit inequalities of ground-surface, and for this purpose the hinges which connect the same to the post 1 are constructed in a novel manner to allow the gate to swing in two different horizontal planes, to either of which it is adjustable at will. By reference to Figs. 5 and 6 it will be seen that the hinging-stile 7 of the gate is provided with upper and lower hinge members in the form of eyes 48 and 49, the upper eye 49 having a keyhole-slot 49' formed therein for a purpose hereinafter described, while the post 1 carries staple-bars 50 and 51, with the vertical portions or pintles of which the eyes 48 and 49 are connected. These staple-bars are of

greater length than usual to provide for the vertical adjustment of the gate, and, as shown, the upper staple-bar 51 is outwardly deflected at its upper end to form a recess and supporting-shoulder 51' and has projecting therefrom a lug 51^a of a size and form to pass readily through the elongation of the opening 49' in the upper eye member 49 on the gate. Normally, or when the gate is in its lowered position, the eyes 48 and 49 are supported by the lower horizontal arm of the staple-bars 50 and 51; but when it is desired to have the gate to swing in a higher plane to clear an obstruction, the gate, when in closed position, is elevated until the lug 51^a passes through the keyhole-slot 49' in the eye 49 and the latter comes above said lug, when the upper end of the gate is given an outward movement to cause the eye 49 to seat in the recess and upon the shoulder 51', whereby the gate will be supported in its elevated position and may swing freely without dropping down, as the outer end of the keyhole-slot 49' will project beyond the end of the lug 51^a, and thus adapt the eye to ride upon the shoulder 51' and lug 51^a in the swinging movements of the gate. The tongue 41 has a loose connection with the link 40, which allows the gate to be adjusted without interfering with the latch-operating and gate-swinging mechanism.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. In a swinging gate, the combination with a hinging-post, main and auxiliary latch-posts, and a supporting-post located adjacent to said hinging-post, of a bracket upon the said supporting-post, a T-lever pivoted to said bracket and having its cross portion or bar at its upper end provided with locking members at its extremities, a shifting bar pivotally connected to said lever, a gravity tilting catch pivotally mounted upon said shifting bar and adapted to engage said locking members, operating-levers, a link connecting the shifting bar with said levers, a latch device upon the gate, a bracket carried by the gate, a pivoted latch-plate mounted on the bracket, a connection between the latch-plate and the latch, and a link connecting the lower end of the T-lever with the latch-plate, substantially as described.

2. In combination with a swinging gate and latch-posts against which it turns, a latch device carried by the gate, operating-levers, supports therefor, a lever mounted to swing in a vertical plane oblique to the gate, a shifting bar pivotally connected to said lever; means carried by said lever to guide said shifting bar, means to automatically lock the shifting bar to the lever at the limits of movement of the shifting bar on the lever, a connection between the latter and the operating-levers, a latch-trip device carried by the gate, and a connection between the latch-trip device and the shifting bar, whereby the former is operated by the latter, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

DANIEL H. ISEMINER.

Witnesses:

JAMES L. LOAR,
E. E. DONNELLY.