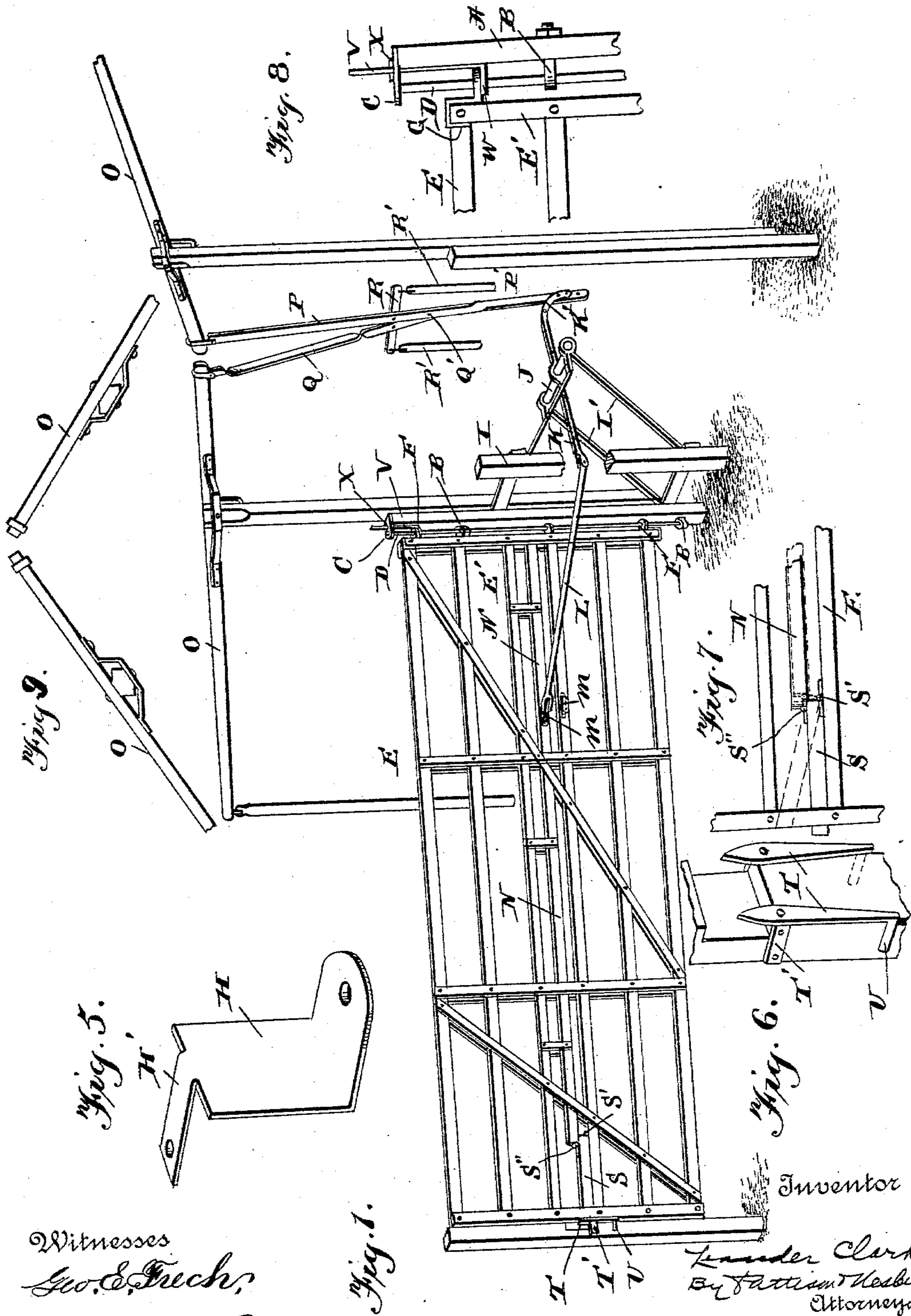


(No Model.)

L. CLARK.
GATE.

Patented Oct. 20, 1896.

No. 569,858.



Witnesses
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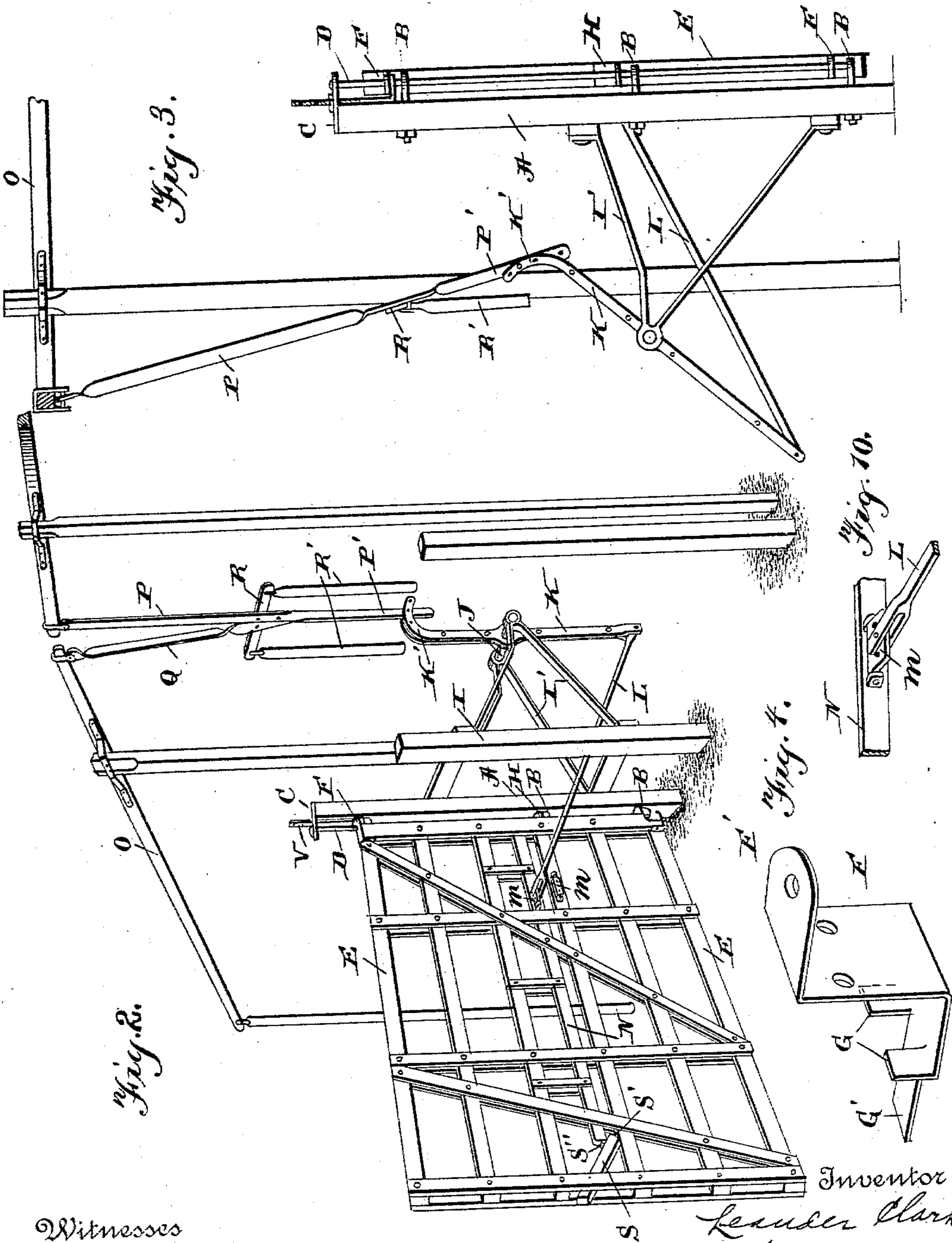
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2 Sheets—Sheet 2.

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Witnesses

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UNITED STATES PATENT OFFICE.

LEANDER CLARK, OF GREENVILLE, OHIO.

GATE.

SPECIFICATION forming part of Letters Patent No. 569,858, dated October 20, 1896.

Application filed June 13, 1896. Serial No. 595,459. (No model.)

To all whom it may concern:

Be it known that I, LEANDER CLARK, of Greenville, in the county of Darke and State of Ohio, have invented certain new and useful Improvements in Gates; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

This invention pertains to gates; and the object thereof is to provide an improved mechanism for swinging the gate by means of levers arranged within easy reach of a driver when approaching the gate and also after having passed therethrough.

A further object is to provide an improved latch mechanism; and still another object is to provide an improved means for vertically adjusting the gate.

With these objects in view the invention consists in the novel features of construction hereinafter fully described and claimed, and illustrated by the accompanying drawings, in which—

Figure 1 is a perspective view of the gate closed. Fig. 2 is a similar view with the same partially open. Fig. 3 is an end elevation of the gate and operating mechanism when the gate is entirely open. Figs. 4 and 5 are detail views of the brackets carried by the gate and through which the rod extends upon which the gate turns. Figs. 6 and 7 are enlarged detail views of the latch mechanism. Fig. 8 is an enlarged detail view showing the device for adjusting the gate vertically. Fig. 9 is a plan view showing the position of the operating-levers. Fig. 10 is an enlarged detail view showing the connection between the gate and the mechanism for swinging it.

The gate-supporting post A is provided with eyebolts B, of ordinary construction, and these bolts, in connection with the top plate C upon said post, support the vertical rod D in proper position for gate E to turn thereon. Brackets F, clearly illustrated in Fig. 4, are arranged at the top and bottom edges of the gate at its rear end and have the outwardly-projecting perforated members F', through which rod D extends and which hold

the gate in position thereon. These angle-brackets at their inner ends are formed with the parallel slits to constitute the side tongues G and the central tongue G'. The side tongues G are turned backward at an angle, as shown, and fit around the vertical stays E' of the gate, while tongue G' extends outward along the horizontal surfaces of the top and bottom rails. Bracket H projects from the rear end of the gate between the top and bottom edges thereof and has the single tongue H', which projects outward over one of the intermediate rails of the gate and thus secures a firm hold. This bracket H forms an additional hold for the gate upon the rod D.

Arranged to one side of the rear of the gate is post I, and supported thereby and by post A are brackets I', which support in horizontal position shaft J. Lever K is fulcrumed between its ends upon this shaft, said lever being curved downward at its outer end, as indicated at K'. This lever is preferably formed of two pieces of iron secured together with their extremities separated to form bifurcations. Pivotaly secured at one end in the bifurcation of the inner end of the lever is arm L, the opposite bifurcated end of said arm being pivotaly secured to the horizontally-pivoted bracket M, carried by the bar N, adapted to swing longitudinally in the gate for operating the latch, presently to be explained.

Depending from one of the hand-operating levers O is the piece of strap metal P, said strap being formed with a half-turn adjacent its lower end, as indicated at P', so as to properly connect with the curved bifurcated end K' of the lever K. Depending from the other lever O is a strap Q, which is provided with a half-turn immediately beneath the lever, the angle of said strap Q being reversed just above its point of connection at Q' with strap P. Secured to straps P and Q is the horizontal arm or bar R, from the ends of which depend weights R' for the purpose of accelerating the movement of the gate, causing the same to be operated with greater ease than otherwise. The metal of which straps P and Q are formed is capable of considerable lateral spring, which affords all the movement necessary to said straps in following the movement in circle arcs of the inner ends

of the operating-levers O. Owing to the curved end K' of lever K, at which point the operating mechanism for the gate is connected, it is quite impossible to throw the gate upon a dead-center. The adjustment is rendered even more delicate by the weights before referred to.

Latch S projects outward from the front edge of the gate and at its rear end upon its lower side is hinged to one of the intermediate gate-rails, as indicated at S'. Longitudinally-movable latch-bar N is hinged to the rear end of the latch S upon its upper side, as indicated at S''. Hence when the gate is drawn upon for opening through the medium of arm L said bar N is drawn rearward and latch S raised to the position indicated in dotted lines in Fig. 7, wherein it clears the catch upon the gate. This catch consists of arm T, pivoted between its ends to strap P', which is secured to the post. The lower end of arm T carries the backward projection U, which bears against the surface of the post, so that while arm T moves inward at its upper end when engaged by the latch of the closing gate, so as to permit the gate to move in line with the post, said arm will not turn outward at its upper end, and hence the latch is held securely in place. The raising of the latch, as above explained, carries it out of the way of arm P, and the gate may be swung open without difficulty. While the gate herein shown and described is adapted to swing in one direction only, I have shown a double arrangement of catch, the same being adapted for gates swinging in both directions or in one direction only, as in the present case.

Brackets G and H bear upon the eyebolts B when the gate is in its normal position. The gate, however, may be moved vertically, as said brackets are free to slide upward upon rod D, and for accomplishing this movement in order to have the gate clear snow-drifts, &c., I provide the stirrup V, which extends downward through the top plate C of the gate-post and has the lower angular end W, which embraces the rod D and which is immediately beneath top bracket G, whereby when stirrup V is raised the gate will move vertically therewith, the weight of the latter being sustained by the strap, which is held in the raised position by pin X.

As I do not desire to limit my invention to the specific manner here shown for connecting the operating mechanism with the gate through the medium of the longitudinally-movable latch-bar, the arm L may be connected to the auxiliary bracket M', carried by one of the intermediate gate-bars, in which event the latch here shown may be operated by hand, or any other form of latch may be substituted that may be desired.

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

1. The combination of a swinging gate, a

fulcrum arranged to the rear and to one side of the gate, a lever arranged intermediate its ends on said fulcrum and having its outer end curved in a vertical plane, a lever-turning mechanism connected to the curved end of the said lever, and a connection between the straight end of the lever and the gate, substantially as shown and described.

2. The combination with a swinging gate, a lever fulcrumed between its ends and a connection between one end of the lever and the gate, of hand-levers, a strap connecting one of said levers with the first-named lever, a second strap connecting the other hand-lever with the first-named strap, and a weight carried by the strap, substantially as shown and described.

3. The combination of a swinging gate, a lever fulcrumed between its ends, a connection between one end of the lever and the gate, and operating-levers, a strap connecting one of the hand-levers with the free end of the first-named lever, said strap having a half-turn at a point adjacent the connection with the said lever, a second strap leading from the other hand-lever to the first strap, said second strap having a half-turn between its ends, the connection between the straps being rigid, the strap being formed of spring metal and provided with said half-turn for the purpose, substantially as herein shown and described.

4. The combination of a swinging gate, a lever fulcrumed between its ends, a connection between one end of the lever and the gate, the operating-levers, the straps depending from the operating-levers and connected, one of said straps being continued beneath the point of connection and secured to the free end of the first-named lever, the transverse arm carried by the straps, and the weights depending from said arm, substantially as shown and described.

5. The combination of a swinging gate, a longitudinally-movable bar therein, gate opening and closing mechanism connected with said movable bar, the latch projected from the front end of the gate and normally in a lowered position and hinged at its rear end to the gate, and a hinge connection between the upper edge of the latch and the said longitudinally-movable bar, whereby when the gate is operated upon for opening, said latch will be raised and disengaged from the gate-post, substantially as shown and described.

6. The combination of the gate-post, the rod disposed vertically and secured thereto, the gate, the brackets projected therefrom which embrace the rod and which are adapted to move vertically thereon, the stirrup extending downward through the top support for the rod which is secured to the post, said stirrup having the angular lower end which embraces and moves upon the rod, said angular portion of the stirrup being positioned

beneath one of the brackets of the gate, the stirrup being perforated, and a pin adapted to extend through one of the perforations after the gate is adjusted vertically, whereby
5 the stirrup is held in the desired position and supports the gate at the desired elevation substantially as shown and described.

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

LEANDER CLARK.

Witnesses:

W. Y. STUBBS,
T. C. MAHER.