

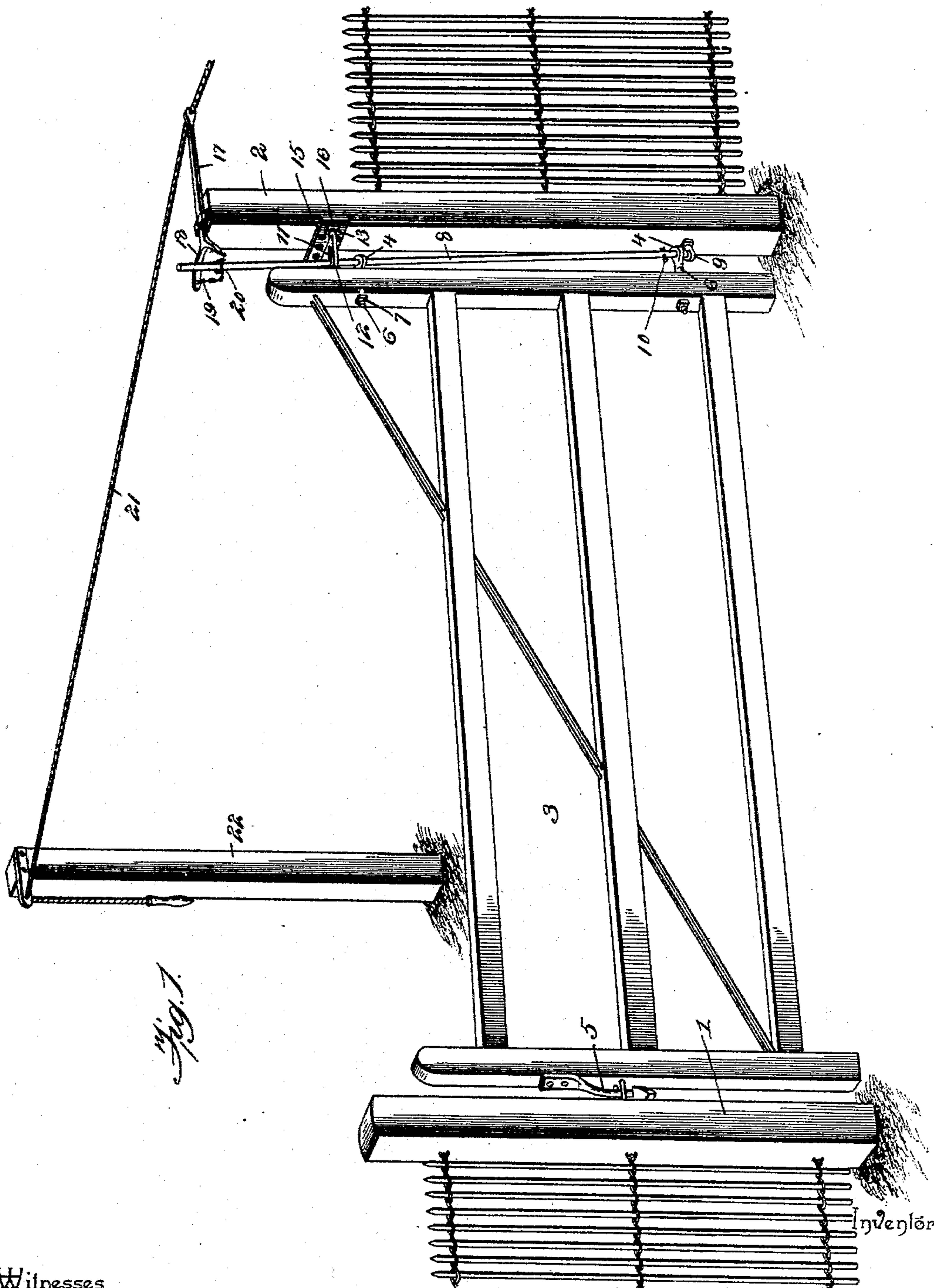
(No Model.)

2 Sheets—Sheet 1.

O. C. MILLER.
GATE.

No. 514,375.

Patented Feb. 6, 1894.



Witnesses

John C. Shaw
[Signature]

By *W. S. Attorneys.* *Oran C. Miller.*

Chas. Snow & Co.

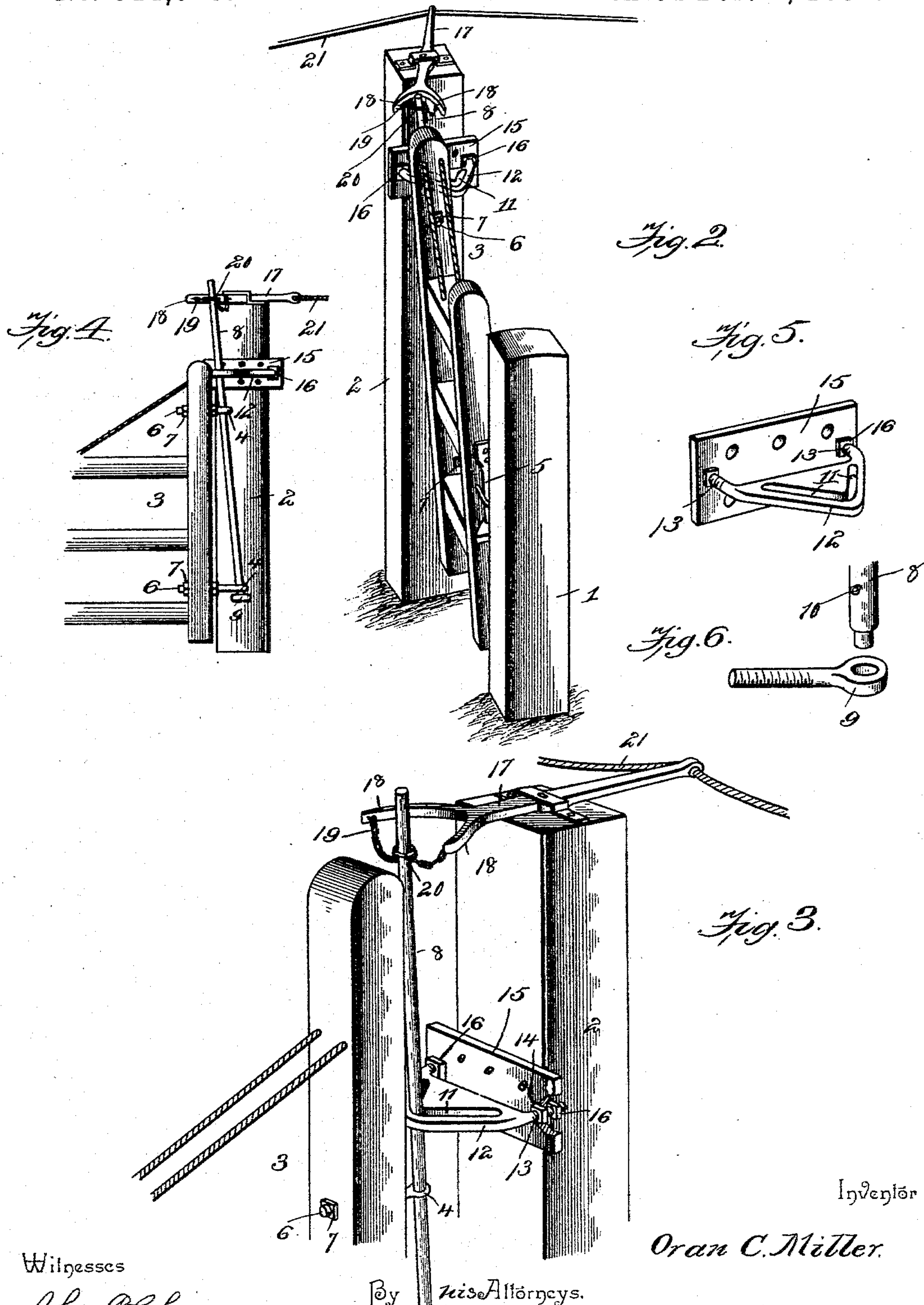
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John C. Shaw.
D. D. Case

By his Attorneys.

Inventor
Oran C. Miller.

C. Snow & Co.

UNITED STATES PATENT OFFICE.

ORAN C. MILLER, OF UNION, MICHIGAN, ASSIGNOR OF ONE-HALF TO OLIVER G. MEACHEM, OF SAME PLACE.

GATE.

SPECIFICATION forming part of Letters Patent No. 514,375, dated February 6, 1894.

Application filed November 2, 1893. Serial No. 489,839. (No model.)

To all whom it may concern:

Be it known that I, ORAN C. MILLER, a citizen of the United States, residing at Union, in the county of Cass and State of Michigan, have invented a new and useful Gate, of which the following is a specification.

My invention relates to swinging gates, and has special reference to means for operating the same, the objects in view being to provide a simple, inexpensive and efficient construction whereby the gate may be opened in either direction by the movement of an operating lever, and furthermore, to provide means for adjustment, whereby the gate is held in a horizontal position when in either its open or closed arrangement.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings: Figure 1 is a perspective view of a gate and operating devices embodying my invention. Fig. 2 is a similar view, showing the disposition of the parts after the hinge-rod has been shifted to open the gate. Fig. 3 is a detail view, partly in section, of the operating mechanism. Fig. 4 is a view of the parts after the gate has swung open. Fig. 5 is a detail view of the slotted bracket. Fig. 6 is a similar view of the socket and lower end of hinge-rod.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates the latch-post, 2 the hinge-post, and 3 the gate which is provided at its hinged end with upper and lower hinge-eyes 4, and at its free end with a latch 5. The hinge-eyes 4 are provided with threaded stems 6 which extend through perforations in the vertical end-bar of the gate and are fitted at opposite sides of the latter with nuts 7, whereby the projection of the hinge-eyes from the line of the end-bar may be adjusted.

8 represents a hinge-rod, which extends through the hinge-eyes and is stepped at its lower end in a socket 9, which is secured to the hinge-post. A key 10, is fitted in a transverse perforation in the hinge-rod above the lower hinge-eye to prevent displacement of

the parts. The upper end of the hinge-rod is slidably fitted in the V-shaped slot 11, of the guide 12, said guide being secured to the hinge-post above the upper hinge-eye of the gate. This guide is capable of adjustment by means of threaded stems 13, which engage perforations 14, near the extremities of a plate 15, which is fixed securely to the inner side of the hinge-post, and nuts 16, which are threaded upon said stems upon opposite sides of said plate, said adjustment being designed to vary the inclination of the hinge-rod.

Pivotally arranged upon the upper end of the hinge-post is an operating lever 17, which is provided at its inner end with a yoke, the arms 18 of which are connected by means of short chains or other flexible connections 19, with a ring 20, which is loosely fitted upon the hinge-rod. Connected to the free end of the operating lever are the oppositely-extending operating cords 21, which pass through suitable guide-eyes in the uprights 22.

From the above description it will be seen that the parts are so connected that when an operating cord is drawn, and the operating lever is thrown to one side or the other, as indicated in Fig. 2, the hinge-rod, by moving in one arm of the V-shaped slot of the guide, will be inclined laterally, and at the same time will be drawn backward, thus elevating the free end of the gate. The elevation of the free end of the gate disengages the latch, and the inclination of the hinge-rod causes the gate to swing in the direction of that inclination, or in the opposite direction to that of the approach of the gate. The flexible connection with the sliding ring between the hinge-rod and the lever enables the rod to be adjusted by a quick movement of the lever without the risk of straining or disarranging the parts, and the adjustability of the guide enables the hinge-rod to be arranged at such an inclination as to maintain the gate in both its closed and open positions with its longitudinal axis parallel with the surface of the ground.

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 described my invention, what I claim is—

1. The combination of a hinge-rod stepped at its lower end in a stationary socket, hinge-eyes carried by the gate and fitted upon said rod, a guide having a V-shaped slot through which said hinge-rod extends, a pivotal operating lever provided with a yoke, the arms of which extend upon opposite sides of the hinge-rod, and a ring loosely fitted upon the hinge-rod and flexibly connected to the extremities of the arms of the yoke, substantially as specified.

2. The combination of an inclined hinge-rod stepped at its lower end in a stationary socket, hinge-eyes carried by the gate and fitted upon said hinge-rod, a guide having a V-shaped slot through which the hinge-rod extends, means for adjusting said guide to alter the inclination of the hinge-rod, an operating lever, and connections between said lever and the hinge-rod, substantially as specified.

3. The combination with a hinge-post and gate, of a socket fixed to the hinge-post, a hinge-rod stepped at its lower end in said socket, hinge-eyes carried by the gate and fitted upon said rod, a guide having a V-shaped slot through which the hinge-rod extends, said guide being provided with threaded stems fitting in perforations in a plate secured to the hinge-post and engaged by adjusting-nuts arranged upon opposite sides of said plate, an operating lever provided with a yoke, a ring loosely fitted upon the hinge-rod, and flexible connections between the ring and the arms of said yoke, substantially as specified.

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

ORAN C. MILLER.

Witnesses:

WM. R. RHINEHART,
JOSEPH HARTMAN.