

**No. 621,513**

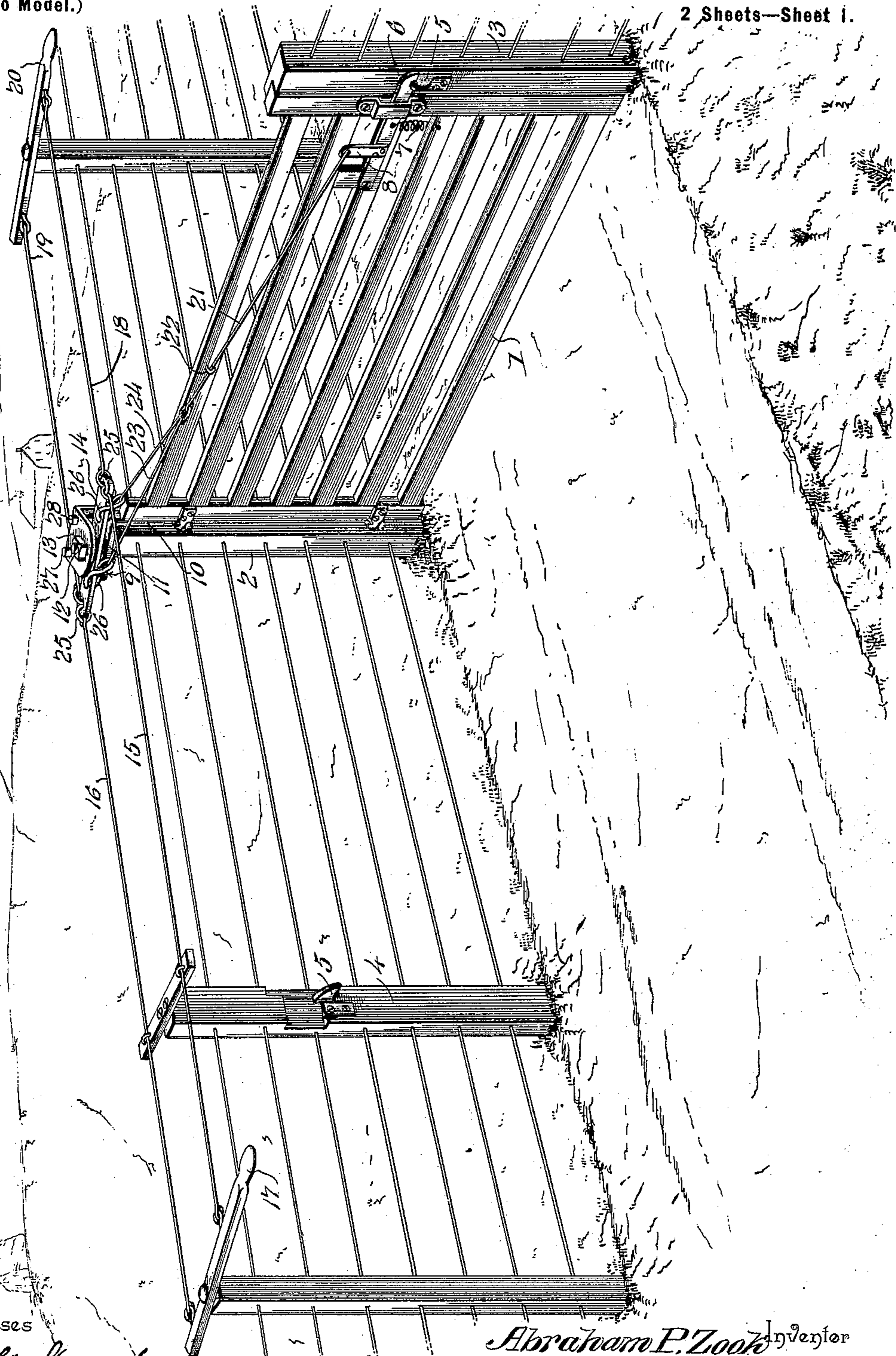
**Patented Mar. 21, 1899.**

**A. P. ZOOK.**  
**GATE.**

(Application filed Oct. 20, 1898.)

(No Model.)

**2 Sheets—Sheet 1.**



Witnesses

E. F. Stewart.

*Handwritten signature*

By *Wicks* Attorneys,

Abraham P. Zook Inventor

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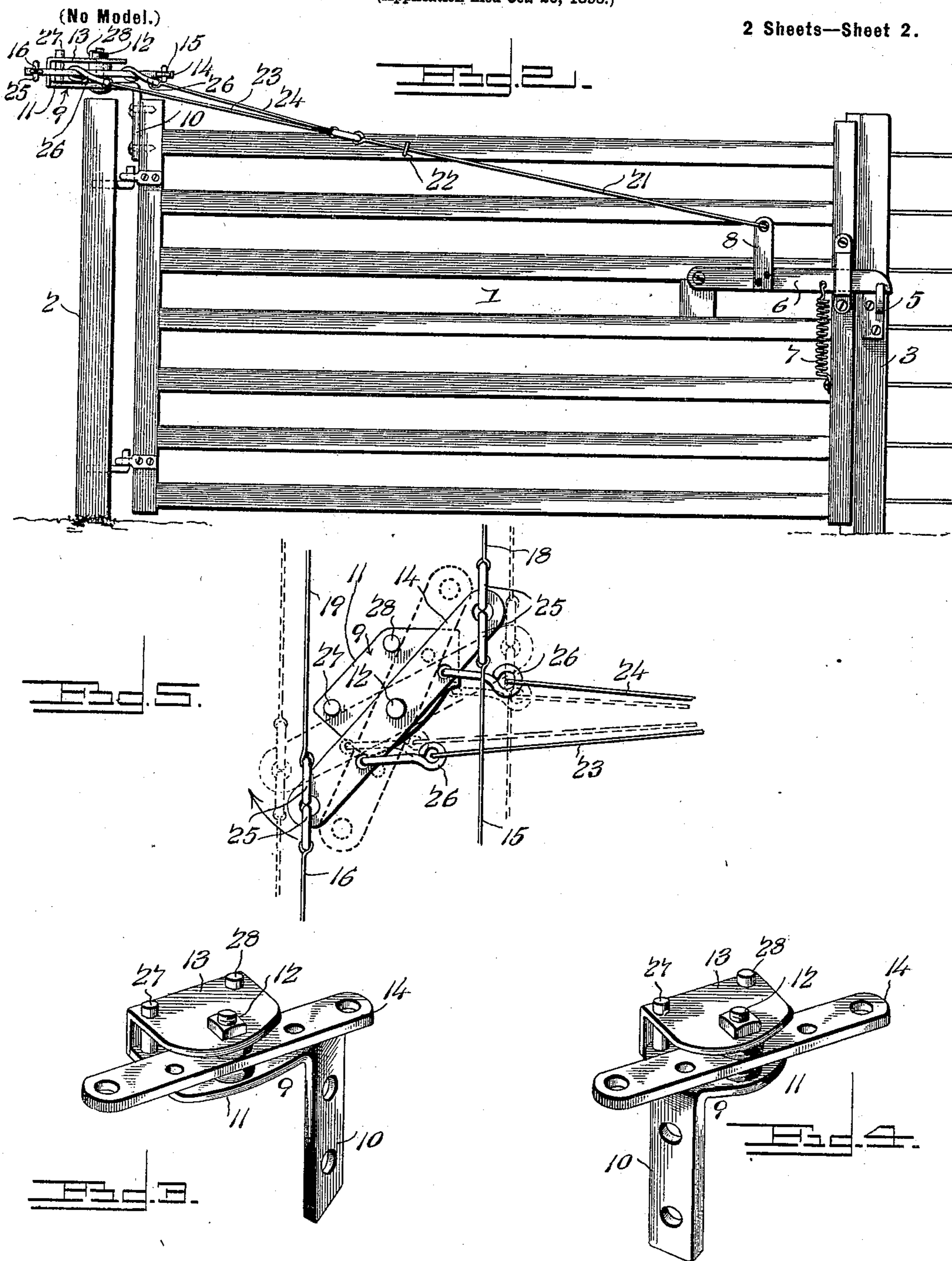
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2 Sheets—Sheet 2.



Witnesses

*E. F. Stewart*  
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By *W. S. [Signature]* Attorneys,

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# UNITED STATES PATENT OFFICE.

ABRAHAM P. ZOOK, OF BELLEVILLE, PENNSYLVANIA.

## GATE.

SPECIFICATION forming part of Letters Patent No. 621,513, dated March 21, 1899.

Application filed October 20, 1898. Serial No. 694,115. (No model.)

*To all whom it may concern:*

Be it known that I, ABRAHAM P. ZOOK, a citizen of the United States, residing at Belleville, in the county of Mifflin and State of Pennsylvania, have invented a new and useful Gate, of which the following is a specification.

My invention relates to gates, and has for its object to provide a simple and improved construction of gate-operating mechanism whereby the gate may be opened or closed from either side thereof, the same being adapted, preferably, to swing toward its open position in only one direction, and particularly to provide a gate-opening attachment adapted for application to any ordinary form of farm-gate which is mounted to swing in a truly horizontal plane, in contradistinction to those gates which are bodily movable vertically to disengage the latch from the catches on the latch and stop posts.

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 claim.

In the drawings, Figure 1 is a perspective view of a gate constructed in accordance with my invention. Fig. 2 is an elevation of the gate. Figs. 3 and 4 are detail views of right and left hand attachments for application to the hinge end of a gate to impart swinging motion thereto in one direction or the other. Fig. 5 is a plan view of the gate-operating mechanism, showing in full lines the normal and in dotted lines the terminal positions of the latch-operating lever.

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

The gate 1, to which the device embodying my invention is applied, may be of the ordinary or any preferred construction, preferably having hinges to mount it upon a hinge-post 2, which insure the swinging movement of the gate in a fixed path. The free end of the gate is adapted for contact with a latch-post 3 when in its normal or closed position and a stop-post 4 when in its open position, each of said posts being provided with a notched catch 5 or the equivalent thereof for engagement by a pivotal latch 6 or other fastening device mounted upon the gate. In

the construction illustrated the latch is provided with an actuating-spring 7 and an upwardly-extending arm 8, with which is connected a latch-operating device, hereinafter described, to disengage the latch from the catch preparatory to swinging the gate to or from its closed or normal position.

Secured to the standard at the hinged end of the gate is a bracket 9, consisting of a securing-plate 10 and a horizontally-projecting arm 11, preferably disposed obliquely to the plane of the gate, as at an angle of approximately forty-five degrees. Carried by this horizontal arm of the bracket is a bolt 12, which also extends through a cap or covering-plate 13, and fulcrumed upon the bolt between the planes of the bracket-arm and said cap or covering-plate is a latch-operating lever 14, to the arms of which are connected operating cables, wires, or rods 15 and 16, extending to an operating-lever 17, and duplicate operating cables, wires, or rods 18 and 19, extending to an operating-lever 20 at the opposite side of the plane of the gate. The operating connections 15 and 16 are respectively connected to opposite ends of the latch-operating or trip lever 14 to communicate motion thereto, respectively, in the directions necessary to open and close the gate, while the connections 18 and 19 correspondingly are designed to communicate opening and closing motion to the gate; but in order that the motion of the latch-operating or trip lever in either direction may serve to raise the latch in order to release the gate I employ a flexible connection 21, attached at one extremity to the arm of the latch, extending through a suitable guide 22 on the gate and provided with branches 23 and 24, which are connected with said latch-operating or trip lever at opposite sides of the fulcrum thereof, or, in other words, respectively to the arms of said lever. Thus when the latch-operating or trip lever receives gate-opening motion in the direction indicated by the arrow in Fig. 5 the branch 23 is strained to raise the latch, whereas when the latch-operating or trip lever receives gate-closing motion in the direction opposite to that indicated by said arrow in Fig. 5 the other branch 24 is strained to disengage the latch. Rings 25 or other equivalent devices are employed for loosely attaching the gate opening

and closing connections with the extremities of the lever and links 26 to perform a similar function with relation to the branches of the latch-operating connection; but preferably the said links, which are adapted to swing loosely with relation to the lever, are connected with the latter at points adjacent to the fulcrum of the same or between said fulcrum and the points of attachment of the gate opening and closing connections.

Arranged upon the bracket in the path of the swinging movement of the latch-operating or trip lever are stops 27 and 28, consisting of pins which serve to limit the movement of said latch-operating or trip lever in its gate opening and closing movements independently of the bracket, and hence when said lever is swung in one direction the first result of its operation is to raise the latch, and thus release the free end of the gate, and when the lever comes in contact with one of the stops the motion of the lever is imparted to the bracket to cause the swinging movement of the gate from or toward its closed position.

In Figs. 1, 2, 3, and 5 I have shown gate-operating devices including the bracket for attachment to the hinged end of the gate and the latch-operating or trip lever and connections adapted for use in connection with a gate designed to swing in one direction, while in Fig. 4 I have shown an attachment corresponding in features and functions with that shown in the other figures, but adapted for use in connection with a gate designed to swing in the opposite direction, the only difference in construction between the two devices residing in the angle at which the securing-plate of the bracket is arranged with relation to the supporting-arm upon which the latch-operating or trip lever is mounted. Furthermore, it will be seen from the foregoing description that the use of the device embodying my invention does not depend upon

any special construction of gate, but, on the other hand, that said attachment may be applied to any ordinary form of gate provided with the usual or any preferred construction of hinges. Preferably the device is employed in connection with a gate-fastening latch, as hereinbefore described, it being for this reason that the lever which is mounted upon the bracket is capable of a limited movement independently of the bracket; but it will be understood that the specific construction of the latch does not form an essential feature of my invention, but that the same may be modified to suit the construction of the gate in connection with which it is used, and also that various other changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having described my invention, what I claim is—

The herein-described operating attachment for gates, the same consisting of a bracket having a securing-plate and a horizontal supporting-arm doubled upon itself to form a superjacent parallel covering-plate, a latch-operating lever fulcrumed for horizontal swinging movement between said supporting-arm and the covering-plate, stops for limiting the swinging movement of the lever with relation to the bracket, latch-operating devices connected with the lever, operating-levers, and gate opening and closing connections between each operating-lever and the latch-operating lever, 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.

ABRAHAM P. ZOOK.

Witnesses:

MOSES P. ZOOK,  
RICHARD BRINDLE.