(No Model.)

A. SHEPHERD.

FENCE GATE.

No. 384,793. Patented June 19, 1888.

Fig I.

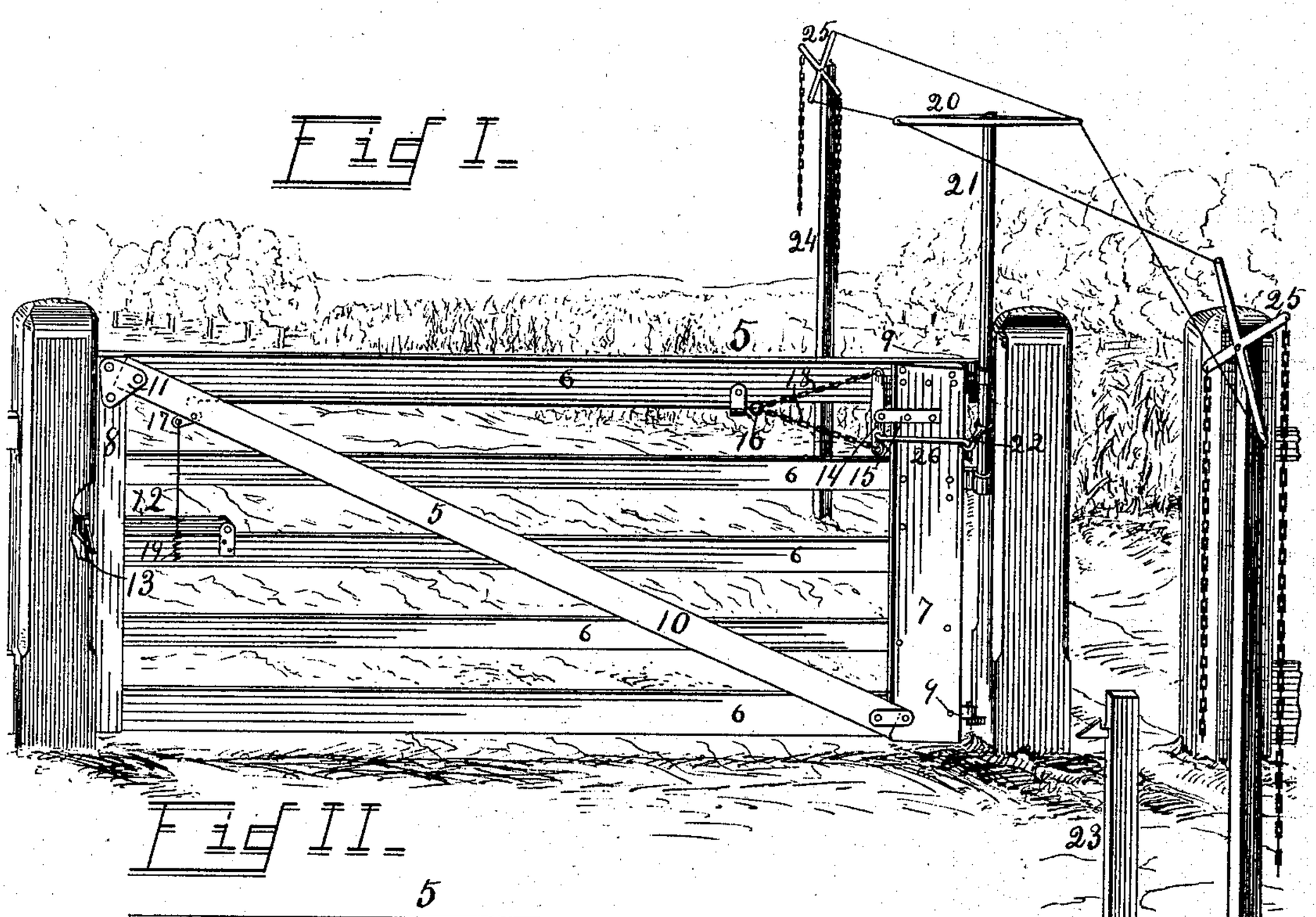


Fig II.

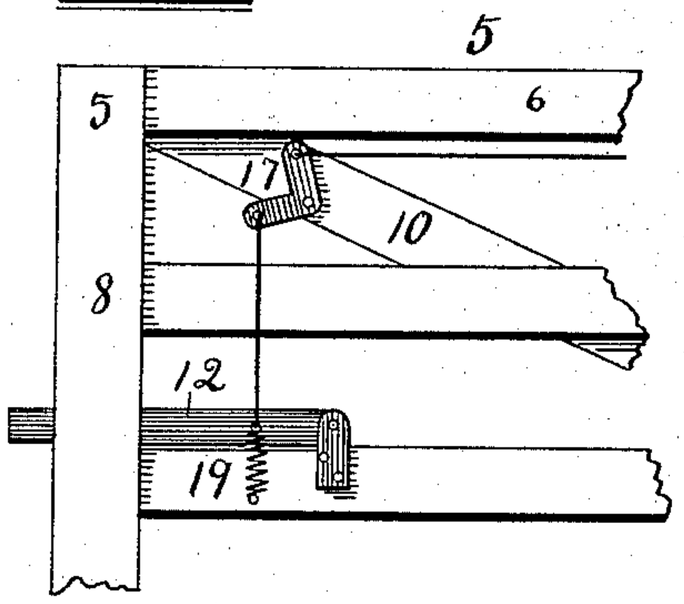
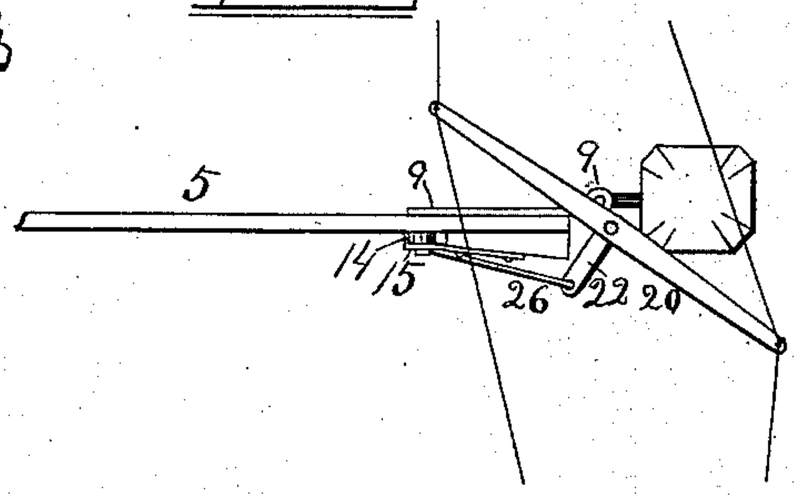


Fig III.



Witnesses.
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UNITED STATES PATENT OFFICE.

AUGUSTUS SHEPHERD, OF HENNEPIN, ILLINOIS.

FENCE-GATE.

SPECIFICATION forming part of Letters Patent No. 384,793, dated June 19, 1888.

Application filed January 9, 1888. Serial No. 260,152. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS SHEPHERD, a citizen of the United States, residing at Hennepin, in the county of Putnam and State of Illinois, have invented certain new and useful Improvements in Fence-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 appertains to make and use the same.

This invention relates to that class of fence-gates which are adapted to swing across highways or farm-roads, and its object is to provide means whereby any person approaching the gate from either side upon a horse or in a carriage may open the gate and pass through and close it again without dismounting.

To this end the invention consists in the construction and combination of parts forming a fence-gate, hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure I is a perspective view of a gate, showing my invention. Fig. II is a front elevation of a portion of the gate, showing the operation of the latch. Fig. III is a plan view of the parts at the hinge-post.

5 represents the gate, and as lightness and strength are very essential points in a mechanically-operated gate I will describe the best construction which I have thus far devised for it. Each of the horizontal bars 6 is firmly bolted across the face of a wide hinge-standard, 7, and a light latch-standard, 8. The hinge-standard is thicker at its back than its front edge to give strength and economize lumber. Bolts pass through each of the strap-hinges, 9, one of the bars 6, and the standard 7.

10 is a brace cut square off at its ends and fastened flat against all the cross-bars 6, its foot resting in a notch in the edge of the standard 7 and its head in a similar notch in the edge of the standard 8. A bolt passes through one of the hinge-straps and the foot of this brace, and a triangular strap, 11, unites the top of the brace and the standard 8, three bolts passing through this strap, one of which binds the brace to the top bar and the other two bind the top bar to the standard.

12 represents the gate-latch pivoted to one of the bars 6, and 13 the usual notched catch, having an inclined front, up which the latch may slide into the catch by the act of closing the gate.

14 is a lever pivoted midway in supports 15, which are rigidly secured to the standard 7, projecting therefrom enough to permit the lever to rock to and fro.

16 is a ring connected by a chain or rod with one arm of an elbow-lever, 17, and by two flexible connections, 18—such as chains—with the rock-lever 14. The other arm of the elbow-lever 17 is connected with the latch 12. When the rock-lever 14 is vertical, the latch is down; but rocking this lever either way pulls upon one of the connections 18 and raises the latch, while the other connection is slackened and sags down. Therefore the necessity that these connections be flexible and not rigid or stiff. It is a bifurcated connection having flexible legs. The weight of the latch restores the rock-lever to its normal vertical position, and this may be aided by a spring, 19, pulling down upon the latch. The opener consists of a lever, 20, rigidly fixed at the top of a shaft, 21, which is journaled upon the gate near the axial line of the hinges and provided with a horizontal arm, 22, which is connected at its outer end by a stiff pitman, 26, with one arm of the rock-lever 14. The movement of the arms of the opener in a horizontal plane causes the rock-lever 14 to move in a vertical plane, and when the latch has been thereby raised and disengaged from the catch the rock-lever comes to a rest against the edge of the standard, practically locking the opener to the gate, so that further movement of the opener swings the gate on its hinges. Either end of the rock-lever will rest against the edge of the standard, as a shoulder to act on, so that the gate may be swung open by turning the opener one way, and it may be closed by turning the opener the other way.

23 is a post beside the road at the hinge-post side in the required position and provided with a catch to engage the gate-latch and hold the gate open. The before-described action of the opener in the reverse direction will now unlatch the gate and close it.

To enable a rider to reach the opener, I fix

posts 24 in the ground on the hinge-post side of the road far enough from the gate to permit the same to swing open or closed without interfering with the team when the rider is opposite the post 24, and upon these posts I mount on horizontal journals cross-levers 25. The two vertical arms of each cross-lever are connected, respectively, with the two upper arms of the opener 20, and from the horizontal arms of the cross-lever 25 chains or cords hang within reach of the rider. By pulling down on one of these chains the gate will be opened and the farther cross-lever will be tilted. Then when the rider passes through the gateway he may pull down upon the raised chain of the said tilted farther cross-lever, now near at hand, whereby the gate will be closed. In order that wires or chains running along the side of the road from the cross-levers to the opener 20 may act to advantage thereon through an arc of ninety degrees to open and close the gate, and about five degrees more to raise the latch, I prefer to fix the opener-arms 20 at an angle of about fifty degrees with the plane of the gate, as shown in plan view, Fig. III.

It might be possible to dispense with the shoulders which the standard 7 furnishes at the ends of the path of the rock-lever 14 by providing a strong shoulder or stop at the upper end of the path of the latch, on which the rock-lever might pull after raising the latch to swing the gate; but that would require heavier parts to meet the strain.

As now constructed, the gate operates with great ease and certainty. It might also be possible to hinge the gate upon the shaft 21; but then the weight of the gate would cause friction and impede the action of all the parts, requiring a heavier weight or a stronger spring 19 upon the latch to restore the parts to their normal position after each action.

Having thus fully described my invention, what I desire to secure by Letters Patent is the following:

1. The combination of a gate hung upon hinges, an opener-shaft vertically journaled to the gate near the hinges and provided with a two-armed lever fixed upon its upper portion and a single arm lower down, a rock-lever pivoted midway to the gate, shoulders or stops at the ends of the path of the said rock-lever, a stiff pitman connecting one arm of the rock-lever with the lower arm of the opener, a latch hung upon the gate, a spring for the latch, an elbow-lever pivoted above the latch, a connection between one arm of the elbow-lever and the latch, a bifurcated connection having flexible legs connecting the other arm of the elbow-lever with the two arms of the said rock-lever, two posts fixed beside the road at a distance from the hinge-post, a cross-lever journaled upon each of the two posts, and connections between the vertical arms of the said cross-levers and two arms of the opener-lever, and chains or cords depending from the horizontal arms of the cross-levers, substantially as shown and described.

2. The combination of a gate, a latch hung thereon, a spring for the latch, a rock-lever pivoted midway to the gate, a flexible bifurcated connection between the latch and the rock-lever, an opener having two upper arms, one lower arm, and a shaft vertically journaled to the gate near its hinges, a stiff connection between the lower arm of the opener and one arm of the rock-lever, and means for operating the opener, substantially as shown and described.

3. The combination of a gate, a rock-lever pivoted midway thereto, a latch hung on the gate, flexible connections between the two arms of the rock-lever and the latch, an opener, substantially as described, journaled to the gate, a stiff pitman connecting an arm of the opener with an arm of the rock-lever, and shoulders or stops fixed at the ends of the path of the latter, substantially as shown and described.

4. A gate hinged upon a post fixed at one side of a road, a latch hung at the outer end of the gate, two catches for the latch fixed in the path thereof, one at each side of the road, a rock-lever pivoted midway to the gate, and stops fixed at each end of its path, flexible connections between the two ends of the rock-lever and the latch, an opener journaled upon the gate, and a stiff connection between the opener and the rock-lever, substantially as shown and described, whereby the action of the opener is to first raise the latch from its catch and then to swing the gate, whether the movement be to open or to close the gate.

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

AUGUSTUS SHEPHERD.

Witnesses:
JEFF DURLEY,
A. B. PURVIANCE.