

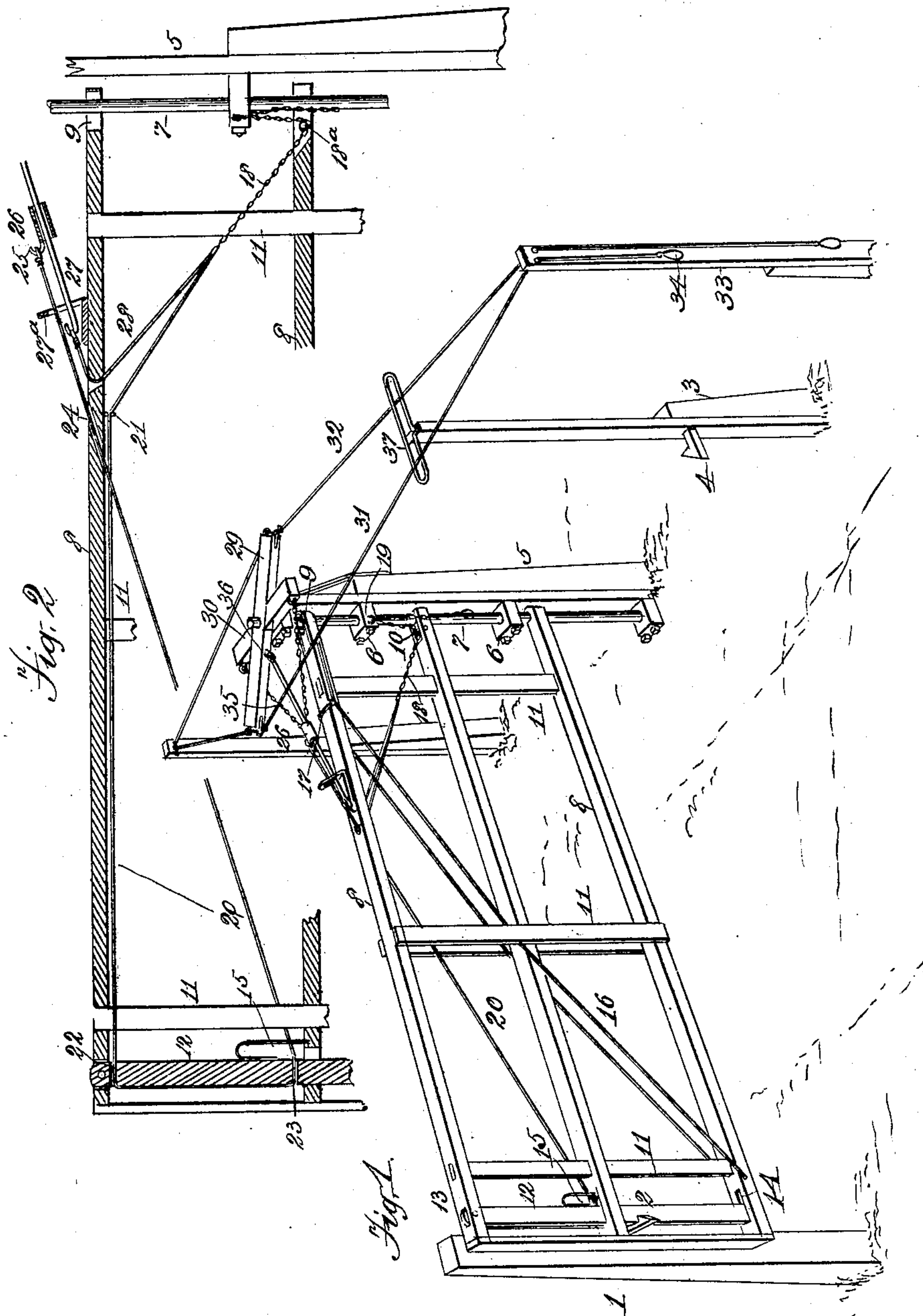
No. 887,971.

PATENTED MAY 19, 1908.

A. J. SHROPE.

GATE.

APPLICATION FILED MAY 27, 1907.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## GATE.

No. 887,971.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed May 27, 1907. Serial No. 376,043.

*To all whom it may concern:*

Be it known that I, ALBERT J. SHROPE, a citizen of the United States, residing at Mechanicsville, in the county of Cedar and State of Iowa, have invented certain new and useful Improvements in Gates, of which the following is a specification.

This invention relates to gates adapted to be opened and closed without getting out of the vehicle passing through the gate-way; and has for its object to produce a simple and inexpensive gate capable of easy operation and adjustment to different heights.

The nature of the invention will clearly appear from the description and claims following, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a gate embodying my invention. Fig. 2 is a fragmentary sectional view illustrating the mechanism for tripping the latch, and other connected parts.

In the drawing 1 designates the latch post for the gate when closed, provided with a suitable latch hook 2. At right angles to this post is another post 3 provided with a similar latch 4 and adapted to hold the gate when opened. The hinge post 5 is provided with a series of blocks 6 taking a vertical rod 7 which passes through the ends of the longitudinal bars 8, forming a part of the gate. All but the lower bar are slotted at 9 and 10 respectively so as to allow for a slight tilt of the gate in its operation, as will be described presently. Connecting these longitudinal bars are suitable cross bars 11. The latch bar 12 is hinged in a mortise 13 and is adapted to swing a limited distance in slots 14 in the other bars. It is provided with a spring 15 tending to move it to latching position. The gate is provided with truss wires 16 looped through the lower bar near the free end and connected to the upper bar near the hinge end, as shown. These wires pass over the looped ends of a stirrup 17 and by moving this stirrup toward the free end of the gate it will be seen that this end of the gate may be elevated slightly at pleasure.

Provision is made for raising and lowering the gate so as to clear snow or other obstructions. For this purpose the hinge blocks 6 are separated some distance from each other so as to allow the whole gate to move up or down on the rod 7. Adjustment is made by means of a chain 18 the links of which are adapted to engage a hook 19 on one of the

hinge blocks. This chain connects at one end with the ends of a looped wire or cord 20 the course of which is more clearly shown in Fig. 2. As will be seen, this chain passes under a cross pin 18<sup>a</sup> in the slotted end of the gate bar. One member of this wire or cord 20 passes up under the upper bar of the gate through an eye 21 thence through a hole 22 near the upper end of the latch bar thence down along the edge of said bar through another hole 23 thence back and through a diagonal hole 24 in the upper bar to a connection with a hook 25 on a sleeve 26. This sleeve runs freely on a hooked rod 27 one end of which engages the opening and closing lever to be described presently. This rod passes through a slot in a bracket 27<sup>a</sup>. The other end engages a short section of wire or cord 28 (or a looped portion of the part of said wire or cord first described) and connects with the chain 18.

Provision is made for a compound pull on this latch cord or wire so as to both retract the latch bar and also slightly elevate the free end of the gate. This connection is best shown in Fig. 1 and will now be described.

At the upper end of the hinge rod 7 is pivoted a shift lever. This comprises one long arm 29, normally at an angle of about 45 degrees to the gate. Crossing this is a shorter bar 30 which normally stands at about right angles to the gate. These are preferably halved or otherwise suitably jointed together and together form a single compound lever. The ends of the longer arm connect with suitable pull cords or wires 31 and 32 respectively which pass through holes in the outstanding posts 33 and are provided with suitable pulls 34. The ends of the shorter arm connect by chains 35 with the sleeve 26 above described. The rearward end of the rod 27 hooks to a staple or eye 36 a little distance from the center of the long lever 29.

It will now be evident that by pulling on the higher of the two pulls shown in Fig. 1, the compound lever will be drawn toward the operator, with the effect of pulling the sleeve back on the rod and also pulling the rod back slightly as regards the gate. The effect of this is to draw the latch back to the limit of its movement, slightly elevating the free end of the gate and then to draw the gate open. A similar pull on the lower of the two pulls shown (which of course becomes the higher one in the changed position) reverses the operation and closes the



gate. The action is of course the same from either side.

The outstanding latch post is preferably extended as high as the outstanding post 33 and provided with a loop 37 through which the pull cords pass and which is adapted to prevent their sagging at the opening side of the gate. The post at the other side may stand nearer the hinge post so that no supporting loop is necessary. Instead of a rod the part 27 might be a flexible device, such as a chain or wire, but for the fact that if this were the case animals might by putting their heads over it, depress the latch mechanism at this point and so open the gate. I therefore prefer a stiff part, such as a rod as described.

Several of the posts are shown composed of two or more parts mainly for economy in construction, the upstanding portions being of comparatively light material with a stout post for base. This slight elevation of the free end of the gate in opening is of advantage in that it brings the aid of gravity in latching the gate. Otherwise a slight sticking of the latch bar or an insufficient spring would tend to obstruct its movement and interfere with its prompt action sometimes. As it is, the gravity of the gate tends to swing the gate positively to closing position and throw the latch, as will be evident.

Having thus described my invention I claim:

1. In a gate, the combination of the gate frame and its pivoted latch-bar, substantially as described, of a vertical hinge-rod on which the gate is free to be elevated or depressed, a shift lever mounted at the upper end of said hinge-rod, a looped wire or cord connecting with the latch-bar, a rod connecting said shift lever with one end of said wire or cord, a sleeve running on said rod connecting with the other end, diverging chains connecting the sleeve with diverging arms of the shift lever, and a single connection of the rod with said lever near the center, substantially as for the purpose set forth.

2. The combination with a gate frame, its hinge-rod and latch-lever substantially as described, of a looped wire or cord connecting with the latch-bar, a shift lever to unlatch the gate and open it, a double connection of said shift lever with said wire or cord and an adjustable connection with said wire or cord whereby the gate may be elevated or depressed to any desired position.

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

ALBERT J. SHROPE.

Witnesses:

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