

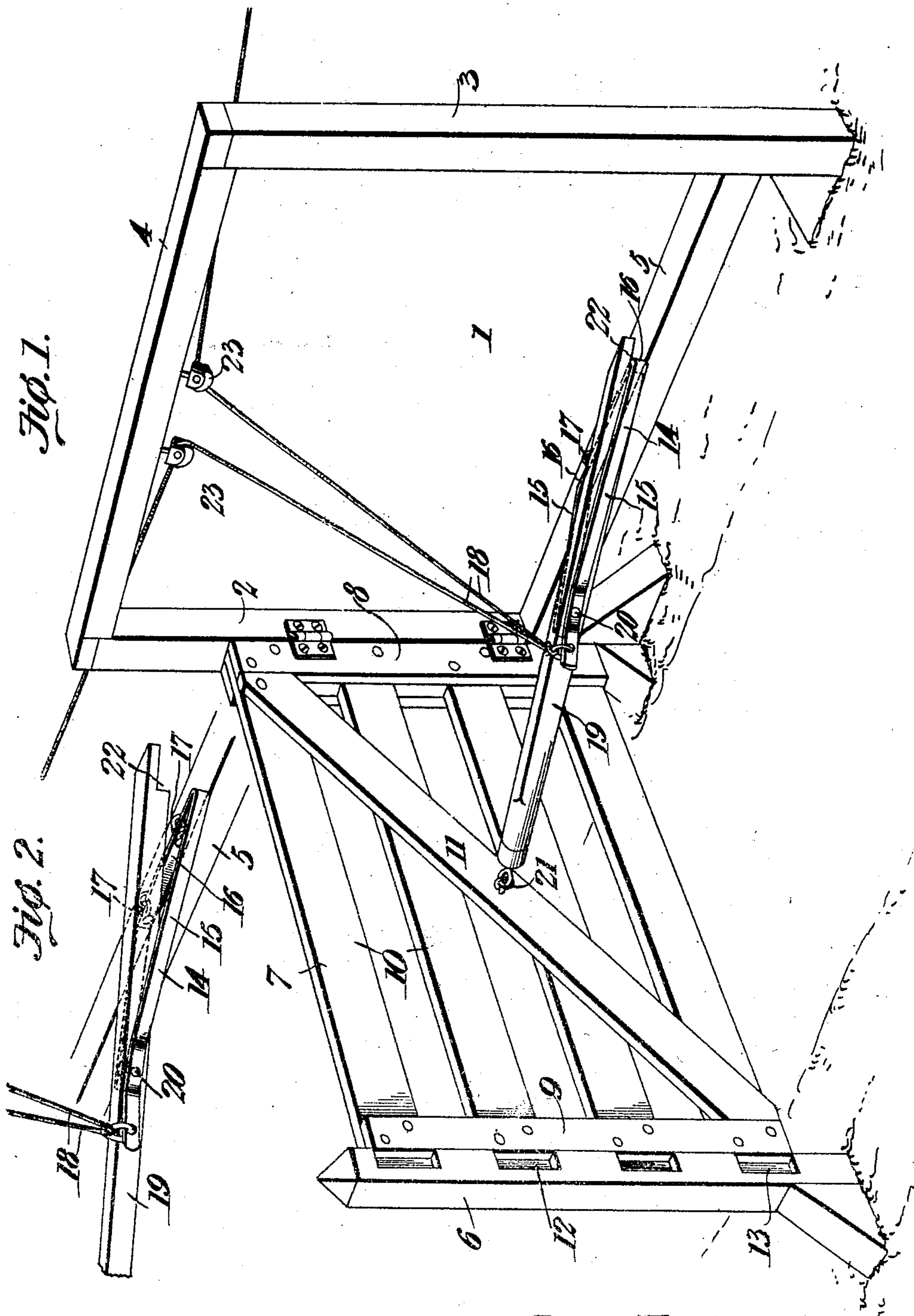
No. 774,963.

PATENTED NOV. 15, 1904.

A. E. AIRHART.
GATE.

APPLICATION FILED MAY 9, 1904.

NO MODEL.



Witnesses
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ALBERT ELMER AIRHART, OF CHENEY, WASHINGTON.

GATE.

SPECIFICATION forming part of Letters Patent No. 774,963, dated November 15, 1904.

Application filed May 9, 1904. Serial No. 207,138. (No model.)

To all whom it may concern:

Be it known that I, ALBERT ELMER AIRHART, a citizen of the United States, residing at Cheney, in the county of Spokane and State of Washington, have invented a new and useful Gate, of which the following is a specification.

My invention relates to gates, and especially to an improved mechanism for operating the same, and has for its objects to produce a comparatively simple inexpensive device of this character whereby the gate may be readily opened or closed at points on either side of and remote therefrom and one where- in the gate will be securely locked in closed position.

To these ends the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a perspective view of a gate embodying my invention and showing the same closed. Fig. 2 is a detail perspective view of the gate-operating member.

Referring to the drawings, 1 designates a frame disposed upon one side of and extending parallel with the roadway and comprising a pair of upright posts or standards 2 3, connected at their upper ends by a horizontal overhead rail or timber 4 and between their lower ends by a similar rail or timber 5, attention being directed to the fact that the frame-post 2 constitutes in practice the hinge-post for the gate.

Disposed on the far side of the roadway from the frame 1 and opposite the post 2 is a vertical latch-post or standard 6, between which and the post 2 the gate 7 normally closes. This gate, which is hinged as herein shown or in other suitable manner to the post 2, comprises an inner vertical transverse end bar 8, an outer transverse bar 9, a plurality of horizontal slats or rails 10, and a diagonal brace 11, the rails 10, which are spaced vertically one above another and extended between the bars 8 and 9, being projected at their outer or forward ends beyond the latter, as at 12, and adapted to normally rest in suitable sockets or seats 13, provided in the post 6 to receive them when the gate is

closed. It is to be noted that under this construction the gate will be positively prevented from sagging at its outer end and that the hinges will be relieved of practically the entire weight of the gate.

For operating the gate I provide a primary operating member or lever 14, preferably formed from strap metal bent to substantially triangular form, as shown, to comprise a pair of outwardly-convergent side members or portions 15, connected at their inner ends by an end member or portion 16, carrying a pair of spaced eyes or members 17, which engage similar members for pivotally connecting the lever 14 to the timber 5. The lever 14, which is adapted to swing on its pivot in a vertical plane and has connected with its outer or forward end a pair of flexible operating ropes or elements 18, has the forward ends of its side portions 15 spaced to receive a secondary operating bar or member 19, which is pivoted adjacent to its longitudinal center between them by means of a bolt or pintle 20, said member being in turn pivotally connected with the gate, as at 21, and having its rear end notched or otherwise formed, as at 22, for engagement with the end portion 16 of the primary lever. It is to be noted that the secondary member 19 is pivoted slightly forward of its longitudinal center, whereby the greater portion of its weight will fall in rear of its pivotal point, thus causing it when the gate is closed to automatically assume a position parallel with the lever 14 and with its rear notched end 22 in engagement with the end bar 16 of the latter, while the operating-ropes 18, which are connected with the forward end of the lever 14 at a point normally in advance of the pivot 20, are extended through suitable pulleys 23, sustained by the frame 1, and to points sufficiently remote from the gate for the latter to be opened or closed by a person seated in a vehicle or on horse-back without dismounting.

In practice, supposing the gate to be closed, a pull exerted upon either of the operating-ropes swings the primary lever 14 on its pivot and causes it to break joint with the member or lever 19 and inaugurate, through the medium of the latter, the opening movement of

the gate. The member 14 having reached its vertical position, the momentum acquired by the member 19 causes the latter to swing the lever 14 past center, when the weight of the parts will automatically complete the opening movement. A similar action follows during the closing of the gate, and the latter when completely closed is locked in such position, owing to the rear end of lever 19 engaging with the lever 14 in the manner heretofore explained.

It is to be particularly observed that the pin or operating-lever 14 extends diagonally rearward and outward from the gate and has its pivotal axis arranged in a horizontal plane and at right angles or perpendicular to the longitudinal axis of the gate when closed, while the secondary or traction lever 19 is pivoted adjacent to the free end of the lever 14. It is obvious from this arrangement that during the opening movement of the gate the fulcrum 20 of the lever 19 will be constantly shifted in an arc of a circle described by the outer end of the lever 14, this arc being in a direction away from the advancing movement of the gate, whereby the lever 19 will be caused to exert throughout such movement a direct and continuous traction on the gate, whereas during closing of the latter the movement of the parts will be reversed and the lever 19 caused to exert a direct and continuous force for closing the gate.

From the foregoing it is apparent that I produce a simple inexpensive device admirably adapted for the attainment of the ends

in view, it being understood that minor changes may be resorted to without departing from the spirit of the invention.

Having thus described the invention, what is claimed is—

1. A gate, a support, a primary operating-lever of substantially triangular shape pivotally connected at its base with the support and having its converging arms spaced apart and extended diagonally toward the gate, a secondary lever pivoted between the converging arms of the primary lever, the pivotal axis of the latter being arranged in a horizontal plane and perpendicular to the longitudinal axis of the gate when closed, and a pivotal connection between the secondary lever and the gate.

2. A gate, a support, a primary operating-lever of substantially triangular shape pivotally connected at its base with the support and having its converging arms spaced apart and extended diagonally toward the gate, a secondary lever pivoted between the converging arms of the primary lever, and a pivotal connection between the secondary lever and the gate, said secondary lever being provided with a terminal recess adapted to engage the support for locking the gate in closed position.

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

ALBERT ELMER AIRHART.

Witnesses:

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J. E. BURBANK.