

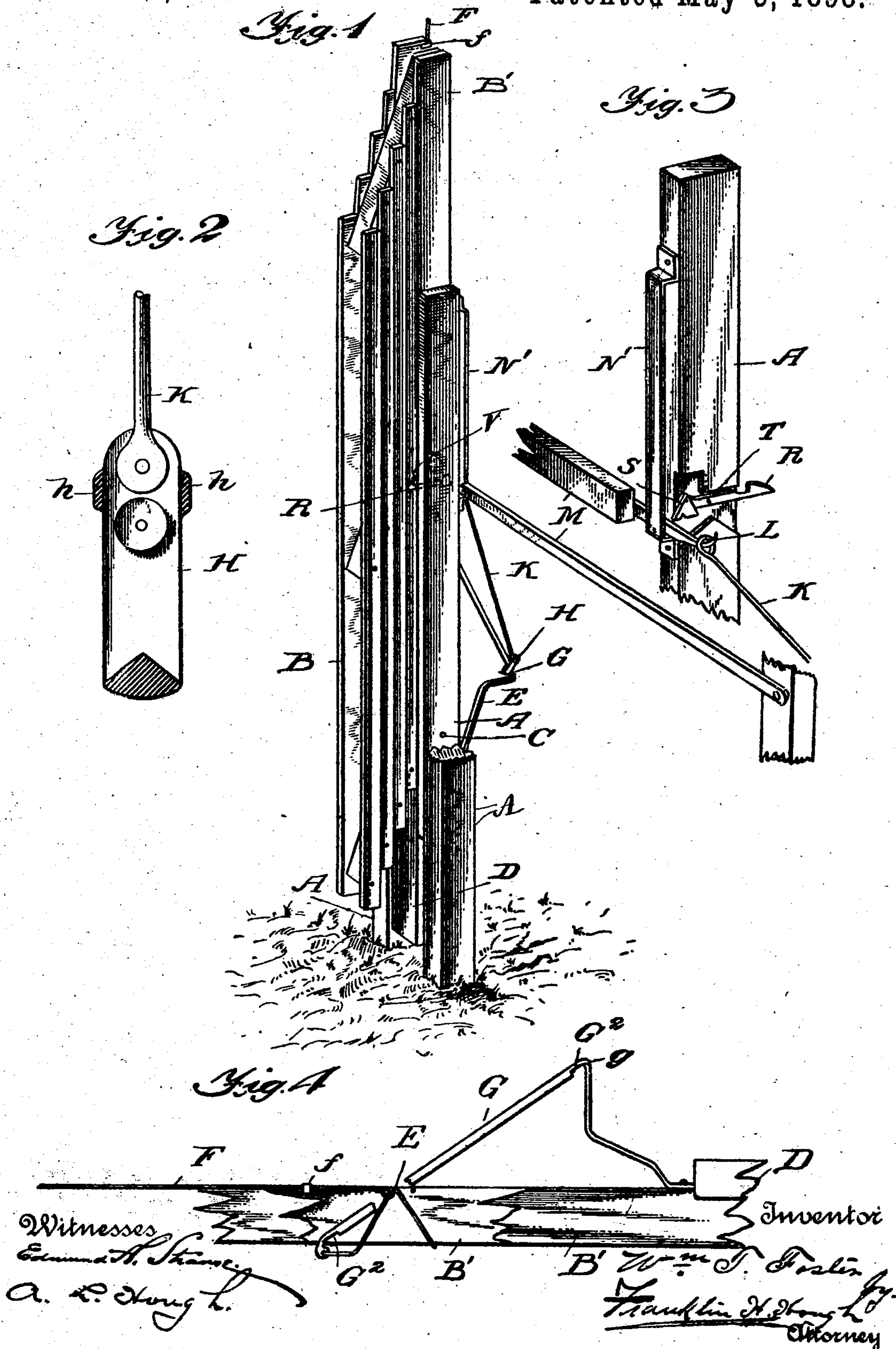
(No Model.)

2 Sheets—Sheet 1.

W. T. FOSTER.
TILTING GATE.

No. 603,444.

Patented May 3, 1898.



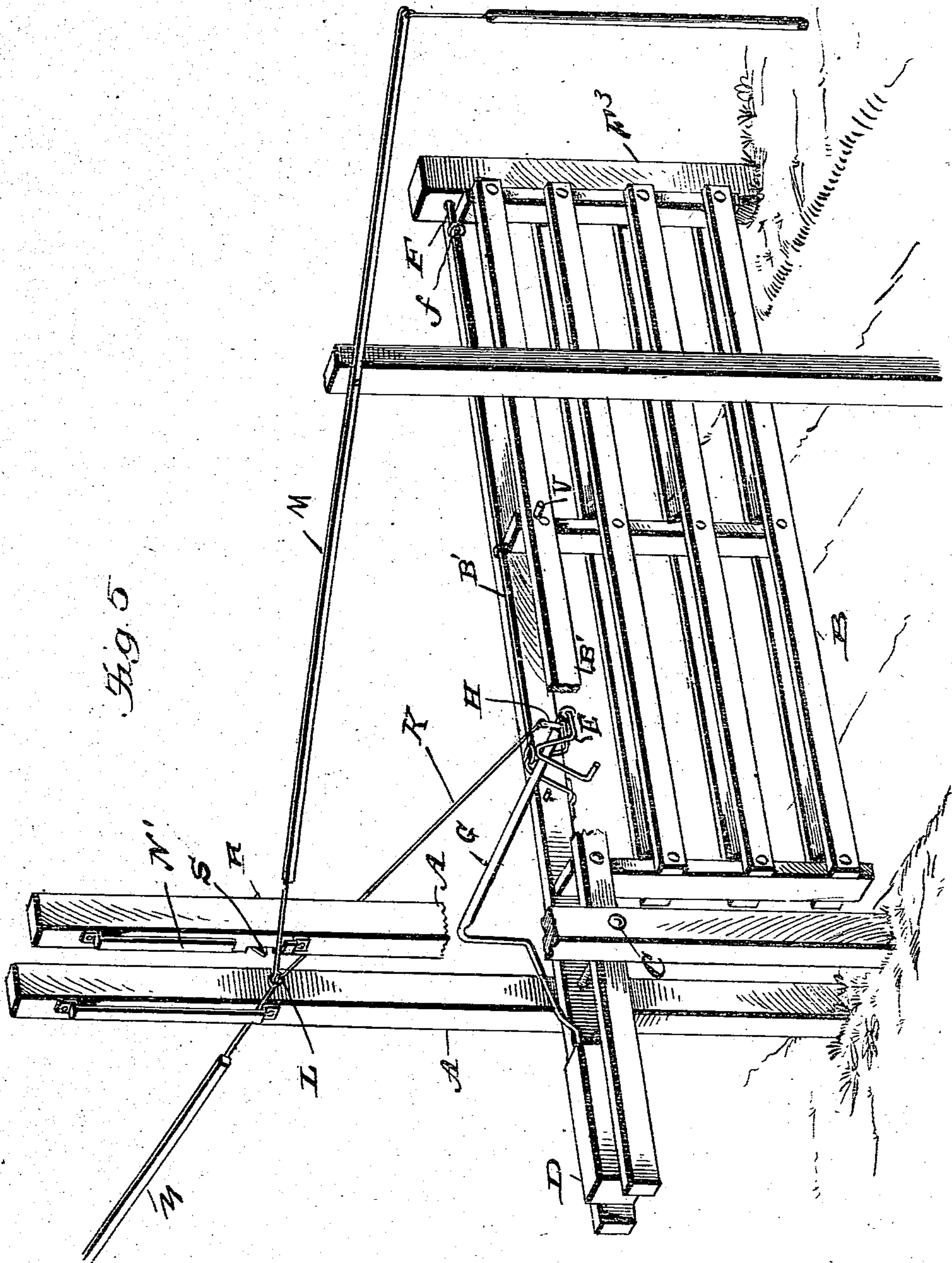
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Witnesses
L. C. Willy
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UNITED STATES PATENT OFFICE.

WILLIAM T. FOSTER, OF BOZEMAN, MONTANA.

TILTING GATE.

SPECIFICATION forming part of Letters Patent No. 603,444, dated May 3, 1898.

Application filed January 8, 1897. Serial No. 618,468. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. FOSTER, a citizen of the United States, residing at Bozeman, in the county of Gallatin and State of Montana, have invented certain new and useful Improvements in Tilting Gates; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in gates, and especially to an improved form of folding panel gate which may be automatically locked in a folded position as the gate is tilted vertically, the said gate being held in such raised position until an operating-lever is so manipulated as to release a catch on the vertical posts between which the gate is pivoted and allow the gate to shut by gravity.

The invention consists, further, in a general improvement on the construction of a tilting gate upon which I was granted Letters Patent No. 566,899, of September 1, 1896, and the particular improvement forming the subject-matter of the present application resides in the provision of a lifting-link, which has journaled therein a pulley to lessen the amount of friction upon an angle-lever, which is utilized in opening and closing the gate.

Another part of the invention resides in the peculiar construction of a locking mechanism, which is so arranged as automatically to engage a lug on the gate when the gate is raised to a vertical position and to release the said gate by the end of an operating-lever engaging with an angular plate pivoted to the rear end of the said catch whereby as the lever is raised the catch is released and the gate, which is suitably balanced upon its pivotal portions, closes down to a horizontal position and is automatically locked to the gate-post.

To these ends and to any others to which the invention may pertain the same consists, further, in the novel construction, combination, and adaptation of parts, as will be here-

inafter more clearly described, and then specifically defined in the appended claims.

I clearly illustrate my invention in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which drawings—

Figure 1 is a perspective view of a folding gate embodying my improvements. Fig. 2 is an enlarged view of the link, which has a sliding contact with the angle-lever whereby the gate is raised or lowered. Fig. 3 is an enlarged view of the catch, which is secured to a vertical gate-post, against which catch a lug carried on the gate is adapted to engage to hold the gate in a vertical or open relation. Fig. 4 is a detail view of the crank-lever and connection, parts of the gate being broken away. Fig. 5 is a perspective view of the gate closed.

Reference being had to the details of the drawings by letter, A designates two upright posts, between which is hung the folding gate B on a rod C. The said gate has its upper strips extended behind its pivotal portion and is weighted, as seen at D, thus causing the gate nearly to balance on its pivot.

Pivoted between the upper strips B' of the gate is the crank-lever E, to which is secured one end of the rod F, which is mounted parallel to the top strips of the gate and works through guide-eyes f, the said rod extending a slight distance in advance of the free end of the gate, thus forming a latch to hold the gate closed and prevent it from being raised until the said rod is drawn back flush with the end of the gate and out of engagement with the gate-post. To the forward portion of said lever E is secured one end of the angle-lever G, which is notched on its under side near its point of connection with the said crank, the said angle-lever being upwardly and backwardly inclined, as seen in the drawings, and downwardly bent at a point between the gate-posts, to which the gate is pivoted. At the angle g in the said angle-lever is another recess, these recesses or notches G² being for the purpose which will hereinafter presently appear. Mounted so as to travel longitudinally on the inclined portion of the said angle-lever is the link H, which has journaled between its walls a pulley, and to the

upper end of the said link is pivoted the bar K, which has connection at its upper end through an eye therein with the hook L, secured to the end of the pivoted operating-lever M. As the gate is operated by two levers, one on each side of the gate, the end of each lever M is formed into an eye, which engages with an eye or hook at the end of bar K. A suitable guide-strip N' is secured to the back side of the vertical gate-post, between which strip and the post the said hook is guided and held to the post.

Secured to the inner side of one of the vertical gate-posts on which the gate is mounted is a catch R, pivoted to the post, having a notched end extending out a short distance in front of the forward faces of the said post, and the said catch has pivoted to its rear end an angle-plate S, which, acting as a weight, serves to hold the said catch normally in a horizontal position, as the said catch is prevented from rising to a position above the horizontal one by reason of the pin T being provided as a stop. The rear angle of the said plate extends slightly backward from the rear faces of the said gate-supporting posts and in the path of the hooked end of the operating-lever as it works vertically at the back side of the posts.

From the foregoing it will be seen that as the operator pulls down the end of one of the levers M the link which engages the notch at the forward end of the angle-bar causes the gate to rise to a vertical position and fold between the gate-posts, and as the gate reaches a vertical position the link secured to the end of the bar K will fall by gravity and engage in the notch at the other angle of the said bar. Secured to one of the strips of the folding gate is a lug V, which is so disposed and located with reference to the tilting catch that as its lower edge comes in contact with the inclined end of the catch the latter will tilt slightly, and after the lug has passed over the hooked end of the catch the catch will return to its horizontal position and hold the gate in a vertical position, as illustrated in the drawings. When it is desired to close the

gate, the operator tilts the operating-lever, the hook at the end of the said lever resting underneath the rear angle of the plate pivoted to the catch-lever, and as the inner end of the said lever is raised the catch is caused to be tilted, and the link II, engaging in the notch, gives the gate as the lever is operated a slight momentum, and the same closes by gravity.

Having thus described my invention, what I claim to be new, and desire to secure by Letters Patent, is—

1. In combination with the tilting gate as described, the crank-lever, mounted between the upper rails thereof, a latch-rod connected to one of the crank portions, an angle-lever having one end secured to the second crank portion, its other end secured to the upper strips of the gate, the pivoted operating-lever, the rod K secured to one end thereof, and the link carrying a pulley journaled therein, adapted to travel on the said angle-lever, and having connection with the rod K, whereby the gate may be raised or closed, substantially as described.

2. In combination with the gate, the angle-lever having recesses, one at its angle, and one at its forward end, the shouldered link, and friction-pulley mounted therein, and the operating-lever for raising the link, substantially as shown and described.

3. In combination with the tilting gate, mounted as described, the pivoted catch carried on the gate-post, the angle-plate pivoted to said catch, one of the angles of the said plate extending behind the rear edge of the gate-post, and the operating-lever having a hooked end and connected to the gate-lifting mechanism, the said hook adapted to raise the angle-plate to tilt the catch, as the outer end of the operating-lever is pulled down, substantially as shown and described.

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

WILLIAM T. FOSTER.

Witnesses:

HERMAN BUIDEWAHL,
ARTHUR R. CUTTING.