

J. D. MORRISON.

Improvement in Gates.

No. 121,188.

Patented Nov. 21, 1871.

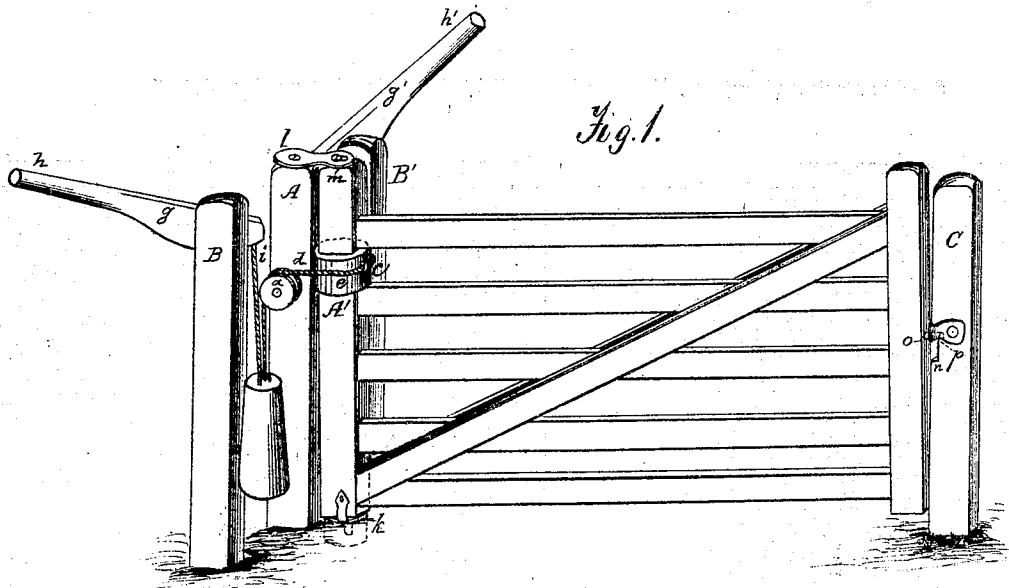


Fig. 1.

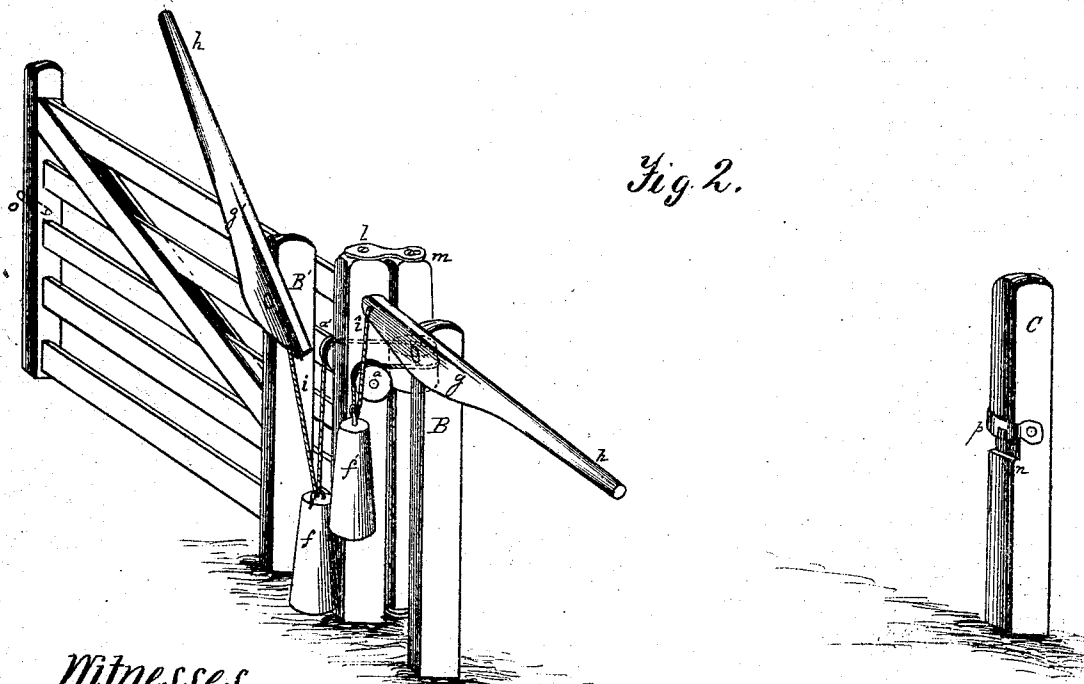


Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES D. MORRISON, OF RICHFIELD, ILLINOIS.

IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. 121,188, dated November 21, 1871.

To all whom it may concern:

Be it known that I, JAMES D. MORRISON, of Richfield, Illinois, have invented a new and useful Improvement in Gates, of which the following is a specification:

The invention relates to that class of gates that is opened and closed by means of cords and weights which are connected with levers, the handles of which reach to a point beyond the arc described by the gate when being opened, the weights being so arranged as to balance when undisturbed, and to open or close the gate when one or the other, there being two weights, is raised. The object of the invention is to provide a gate that may be opened and shut by a person in a vehicle or on horseback without alighting.

Figure 1 is a view of the gate when closed. Fig. 2 is a view of the same when open.

A is a post of any ordinary construction that is securely planted. Upon its sides that are parallel to the sides of the gate, directly in rear of and adjacent to the shoulder *c*, hereinafter mentioned, are two grooved pulley-wheels, *a a'*, one on either side of said post, and both arranged so as to revolve freely. That part of the gate which is adjacent to the post A is constructed of a substantial piece of timber, A', of sufficient power to support the entire frame of the gate. It is provided at its upper part with a circular grooved shoulder, *c*, the groove being cut in any suitable form. A cord, *d*, adapted to the size of the groove *c* as well as the pulley-wheels *a a'*, is securely fastened in said groove at a point which lies in a plane that passes through the vertical lateral center of the gate, the ends passing along in the groove *c* on either side, over the pulley-wheels *a a'*, being fastened to the weights *f f'*. The weights *f f'* are of equal weight, constructed in any convenient shape, and when undisturbed hold the gate securely closed, as hereinafter more fully appears. At either side of the post A are the posts B B', which are of rectangular form, securely planted, and so placed as to stop the gate when opened in either direction to a position at right angles to that which it occupies when closed. The posts B B' are each provided with a lever, *g g'*, which are attached to the sides of the same which are furthest from the gate, near the top thereof, the handles of which *h h'* extend outward to points beyond the reach of the gate, where they may be actuated by a person in a ve-

hicle or mounted on a horse without interfering with the opening or closing of the gate. To the ends of these levers, which are adjacent to the posts B B', are attached cords *i i'*, the ends of which are securely fastened to the weights *f f'*; or the cord *d* may be made of sufficient length to admit of its ends being carried beyond the weights and attached to the levers in addition to the weights. The lower end or base of the piece A' is provided with a pin or its mechanical equivalent, constructed to turn in a socket, *k*, which is secured in any convenient manner in its position immediately in front of the post A, as shown. The upper end of said piece A' is held in place by a brace, *l*, rigidly attached to the top of the post A, and which is cut to receive a pin, *m*, securely driven in or attached to the top of said piece A', a bolt or head preventing the brace *l* from slipping out of position. The pin *m* and brace *l* are so constructed as to permit the raising and lowering of the gate, at pleasure. The said piece and the gate thereto attached are arranged to turn feely upon said pins, socket, and brace, each acting to hold the gate in position and to facilitate its operation. At a proper distance to receive the side of the gate furthest from the piece A' is placed the post C, which is constructed with a flat surface toward the gate, and firmly planted. A recess, *n*, is cut in the side last aforesaid directly opposite a pin or latch, *o*, that is rigidly attached to the gate in any suitable manner, the said recess being made so as to permit the free passage of the pin *o*, except as hereinafter set forth and explained. Directly above the recess *n* is placed a metallic strip or bar, although a strip or bar of other material may be used, a notch, *p*, being cut therein to receive the pin or latch *o*. The gate is so constructed that the end adjacent to the post C is heavier than either one of the weights *f f'*, but lighter than the two combined. As a consequence, when the gate is closed the pin or latch *o* coming opposite to the notch *p* the weights *f f'* operate as one weight, and lift the pin or latch *o* into the notch *p* and the gate is held securely closed. When it is desired to open the gate the elevation of one of the weights causes the end of the gate which is adjacent to the post C to fall, thus disengaging the pin *o* and permitting the gate to swing free under the control of the other weight. When the gate is open it is obvious

that an equilibrium is established between the weights, which remains undisturbed until the proper lever is actuated, when the gate closes.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The duplex weight $f f'$ to operate a gate, in connection with the curved shoulder c , cords $d d'$, and pulleys $a a'$ when the weights singly are lighter, and together are heavier, than the end of the gate, as specified.

2. The fixed latch o and reversed notch p , operating in combination with the slotted upper hinge m and the curved shoulder, cords, pulleys, and weights, as and for the purpose specified.

3. In combination with a swinging gate the curved shoulder c , cords $d d'$, pulleys $a a'$, equal weights $f f'$, cords $i i'$, and levers $g g'$, substantially as and for the purposes specified.

In testimony that I claim the foregoing improvement in gates as above described I have hereunto set my hand and seal this 18th day of September, 1871.

J. D. MORRISON. [L. S.]

Witnesses:

S. DAVIS,
EUGENE SMITH.

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