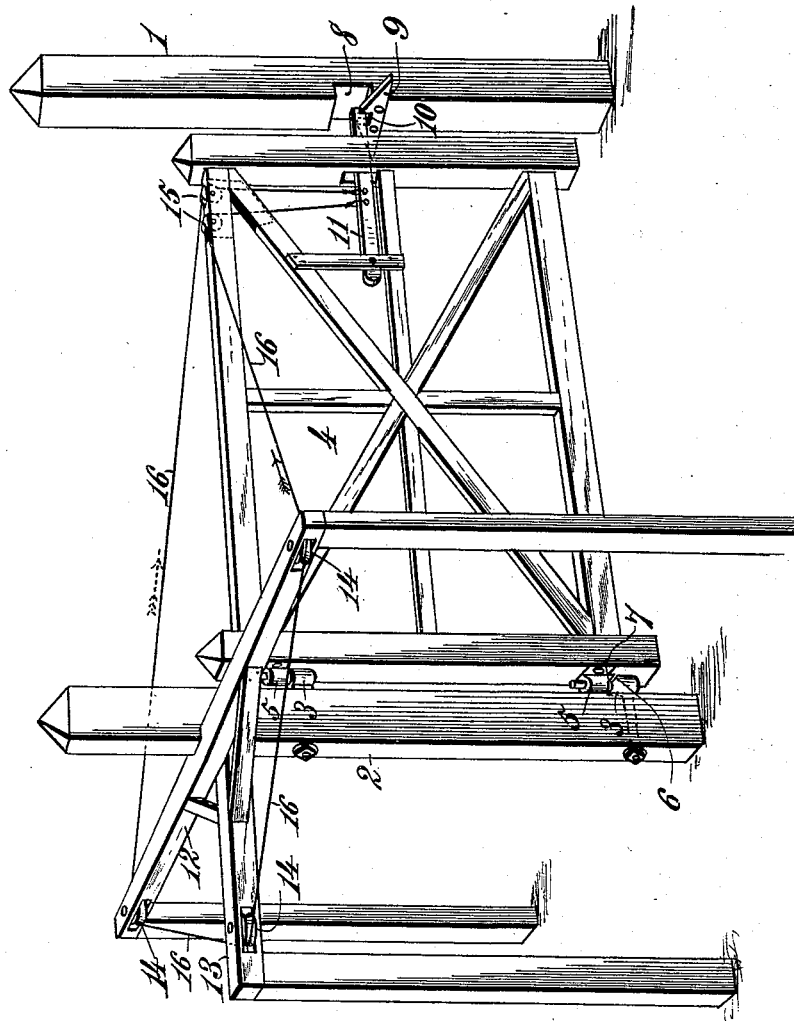


(No Model.)

C. E. MATHERS.
GATE OPENING MECHANISM.

No. 490,974.

Patented Jan. 31, 1893.



Witnesses.

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By

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UNITED STATES PATENT OFFICE.

CHESTER E. MATHERS, OF PUSHMATAHA, ALABAMA.

GATE-OPENING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 490,974, dated January 31, 1893.

Application filed August 27, 1892. Serial No. 444,316. (No model.)

To all whom it may concern:

Be it known that I, CHESTER E. MATHERS, a citizen of the United States, residing at Pushmataha, in the county of Choctaw and State of Alabama, have invented new and useful Improvements in Gate-Operating Mechanisms, of which the following is a specification.

My invention relates to improvements in devices for operating gates, whereby a gate may be opened by a person on horseback or in a buggy, or other vehicle, without dismounting or getting out of the vehicle, and may be retained in an open position until the person and his horse or vehicle have passed through, when the gate will of its own weight swing to its closed position, and it has for its object to provide a novel, simple, economical and efficient device for this purpose which may be applied to gates of the ordinary type.

To this end my said invention consists in the novel combination, construction, arrangement and operation of parts hereinafter described and claimed, reference being made to the accompanying drawing, in which the figure is a perspective view of a gate with my improved device applied thereto.

In the said drawing the numerals 1, 2, represent posts of any ordinary or suitable construction to one of which 2, are secured upper and lower pintle portions 3, of hinges whereby the gate 4 is hinged to swing upon the said post 2, in opening and closing, the other or socket portions 5 of said hinges being being secured to the gate 4. The pintle portions 3 of said hinges are formed with cam-recesses 6, and the socket portions 5, thereof are formed with corresponding cam projections 7, whereby after the gate is opened and the cord, rope or chain, hereinafter described, released, said gate will close of its own weight, as will be readily understood.

The post 1 is provided at a suitable point intermediate its ends with a recess 8, in which, or in front of which, is secured a latch-plate 9, provided with a central recess 10, said latch-plate being inclined from its ends to the recess 10, whereby the latch hereinafter referred to may ride up either incline when the gate is closing, and drop into the recess 10, thus securing the gate in its closed position. Sufficient space is left between the upper end

of the recess 8, and the upper end of the latch-plate 9, to permit the latch to pass.

Pivoted at its rear end to the gate 4, and at its front end adapted to engage the recess 10 in the latch-plate 9, is a latch 11, which may be of any suitable material and construction. A bar or arm 12 is fixedly secured in any suitable manner to the rear of the post 2 (the said bar or arm extending out from both sides of and at right angles to the post 2), and is suitably supported at its ends by uprights as shown. This bar or arm 12 extends substantially parallel with the roadway and a secondary arm or bar 13 is secured to said post 2, and projects therefrom in the same vertical plane and at right angles to the bar or arm 12. The bars 12 and 13 may be connected by braces, as shown. At or near the ends of the arm or bars 12 and 13, recesses are formed in which are disposed grooved pulleys 14, and in the top rail of the gate 4, directly above the latch 11, two recesses are provided and in said recesses grooved pulleys 15 are arranged.

The numeral 16 represents a cord, rope, chain or other suitable flexible device, one end of which is secured to the latch 11, and the other end of which is then trained over one of the grooved pulleys 15, and then over the grooved pulley 14 at one end of the bar or arm 12, over the pulley 14 in the bar or arm 13, over the pulley 14, at the other end of the bar or arm 12, and then over the second pulley 15, from whence it is carried down and secured to the latch 11.

The manner of operating my improved device is as follows: When it is desired to open the gate the operator takes hold of the cord, chain or other analogous part and moves it in the direction indicated by the arrow in full lines, whereby the latch 11 will be released from the latch plate 9, and continuing his hold upon the said cord 16 the gate is caused to swing open as the operator passes to and through the gate, when he has passed through, the cord or chain is released and the gate of its own weight closes by reason of the cam-hinge shown. The arrangement is such, it will be seen, that the gate can be operated from both sides; when operated from the side opposite that above described, the cord, chain

or rope 16, is moved in the direction indicated by the arrow in dotted lines; otherwise the operation is the same. The bar or arm extends a sufficient distance from the post 2, to
5 enable a horseman or person traveling in a buggy or other conveyance to grasp the cord, rope or chain 16 and open the gate without dismounting or alighting.

The improved device herein described may
10 be applied to almost any gate of ordinary construction, as will be obvious.

Having thus described my invention what I claim is—

The combination with a latch post 1, a gate
15 post 2, and a gate 4 hinged to the gate post and provided with a latch 11 and pulleys 15,

of a horizontal bar or arm 12 secured intermediate its extremities to the gate post, extending substantially parallel with the roadway and provided at each end with a pulley 20
14, a secondary arm 13 extending from the gate post and provided with a pulley, and a single continuous cord 16 trained over said pulleys and having both ends secured to the gate latch, substantially as described. 25

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

CHESTER E. MATHERS. [L. s.]

Witnesses:

J. WESLEY JOHNSTON,
JOSEPH J. KENNEDY.