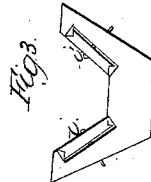
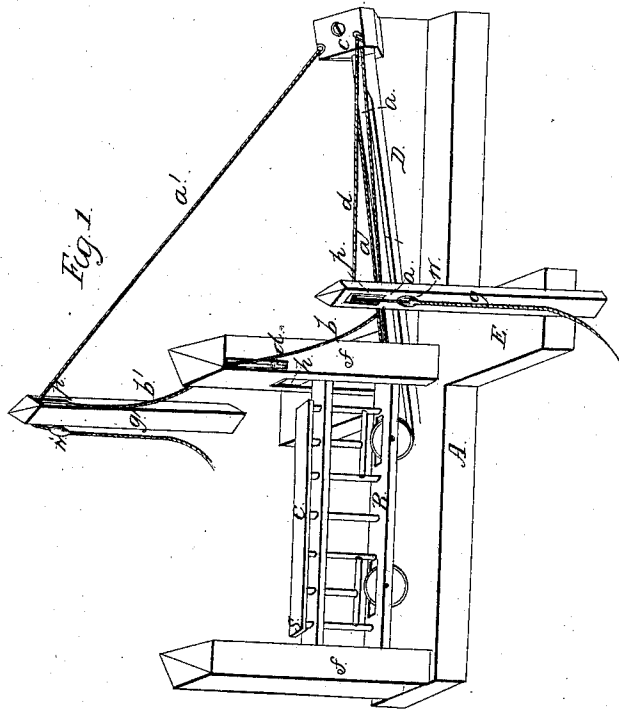


W. Elliott,

Automatic Gate,

No. 55,476,

Patented June 12, 1866.



Witnesses:  
Alex. Rowley  
Jas. D. Fuller

Inventor  
W. Elliott

# UNITED STATES PATENT OFFICE.

WILLIAM ELLIOTT, OF STOCKPORT, NEW YORK.

## IMPROVEMENT IN FARM-GATES.

Specification forming part of Letters Patent No. 55,476, dated June 12, 1866.

*To all whom it may concern:*

Be it known that I, WILLIAM ELLIOTT, of Stockport, in the county of Columbia and State of New York, have invented a new and Improved Mode of Constructing a Self-Closing Railway-Gate; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view; Fig. 2, a sectional view of the drop-catch for holding the gate open; Fig. 3, a sectional view of the pulleys at head of the inclined plane.

The nature of my invention consists in arranging posts, pulleys, and cords in combination with an inclined plane, so that the gate may be opened and closed without the inconvenience of dismounting or alighting from the carriage.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I place two posts,  $g g'$ , parallel to the line of the road and at such distances from the gate as that when the team is at the gate, on either side, one of these posts will be opposite the driver. In the top of each of these posts I place a pulley,  $p$  and  $p'$ . To the back end of the bottom rail, B, I attach two cords or chains,  $a a'$ , which pass up along the inclined plane D, thence around the pulleys  $i i'$ , inclosed in pulley-box  $c$ , (see also Fig. 3,) and over the pulleys  $p p'$ , and thence to or near to the ground. To each of these cords, near the pulleys, I attach a weight,  $w w'$ , sufficient to keep them straight.

To keep the gate open so as to allow the team to pass through, and then to close it without alighting, I place in the top of the frame or open post  $f f'$  a key or drop-catch, represented by Fig. 2, in which  $d d'$  are two knee-levers, the long arms extending upward and being when the gate is closed in the position indicated by the dotted lines, and when open as shown by the black lines. The short arms of these levers, being mostly behind the drop-catch  $h$ , are also represented by dotted lines. These are each provided with short pins or projections which operate in the slot  $e$  in the top of the key or catch  $h$ . To the upper ends

of the long arms of these levers are attached the cords  $b b'$ , which extend to the posts  $g g'$ , respectively, and are attached to them.

In the bottom rail, B, of the gate I insert two grooved pulleys, and on the top of the inclined plane D, I attach a round or half-round rod of iron,  $k$ , as a track for the pulleys. I place the posts  $f f'$ , the inclined plane D, and the gate all on the bed-piece A, which rests on the surface of the ground, using the cross-piece E only where it is found necessary to steady the whole and make it more permanent. The posts  $g g'$  are inserted firmly in the ground.

When the team reaches the gate the driver, being then opposite the post  $g$ , takes hold of the cord  $a$ , and, drawing on it, pulls the gate up the inclined plane D until the top piece, C, passes by the key or catch  $h$ , which immediately drops below the end  $s$ , and thus holds the gate open. After passing through, and the driver being opposite the other post,  $g'$ , he, with his whip or hand, strikes the cord  $b'$ , which, being attached to the lever  $d'$ , lifts the catch  $h$ , whereupon the gate immediately starts down the inclined plane, and, by its momentum thus acquired, closes the space and returns to its original position; and thus it is operated in approaching either side.

This device or arrangement of pulleys and cords, together with the fastening or its equivalent, may be employed on gates of other construction to make them somewhat automatic. For example, on a perpendicular opening or hoisting gate, by extending the cords  $a a'$ , which pass over the pulleys in the posts  $g g'$ , to the top of the frame in which the gate runs, pass each over a pulley-wheel in the corner of the frame, and thence along the upper or horizontal beam, over a pulley in the middle, down to the center of the gate, and there attach them. By pulling either the gate will be raised.

So, also, for opening and closing the ordinary railway-gate without the inclined plane, pass the cords from the posts  $g g'$  to pulleys at the bottom of the back part of the gate; pass one over a pulley on the back side of the post and extend it to the front end of the gate; pass the other over a pulley on the front side of the back post and extend it to the back end of the gate, both of them along on the upper side of the bottom rail; place or arrange other cords

and pulleys on the opposite side of the gate in the same manner, and by pulling on the proper cords the gate may be opened and closed as desired.

The same arrangement is applicable to the patent Harrah gate, which is lifted and folds up from its front end. This is now operated by the hand alone.

I do not intend to confine myself to the mode herein described for keeping the gate in its open position and relieving it when desired. A top rail is not necessary. The first picket or upright piece in the gate may be employed for the same purpose as the top rail.

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

1. Employing the inclined railway *D*, in combination with the cords, pulleys, and posts, arranged substantially as and for the purpose herein described.

2. The combination of the knee-levers *d d'* with the drop-catch *h*, arranged substantially in the manner and for the purpose set forth.

3. The combination and arrangement of posts, pulleys, and cords, as or substantially as herein described, when employed for opening and closing gates of any other construction.

WM. ELLIOTT.

Witnesses:

ALEX. S. ROWLEY,  
JOS. D. FULLER.