S. B. BENIGAR.

GATE OPENER.

APPLICATION FILED FEB. 16, 1914.

1,171,692.

Patented Feb. 15, 1916.

2 SHEETS—SHEET 1.

Fig. 5.

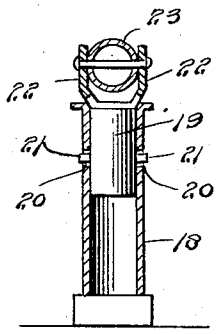


Fig. 1.

Fig. 6.

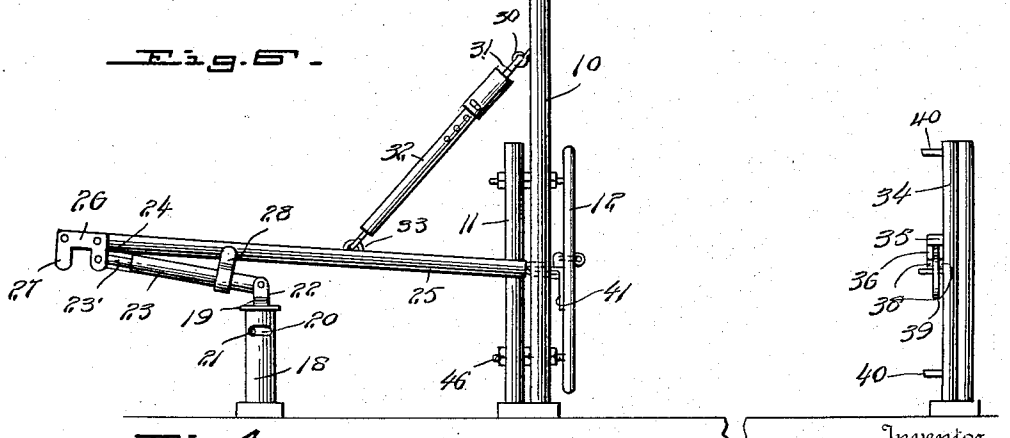
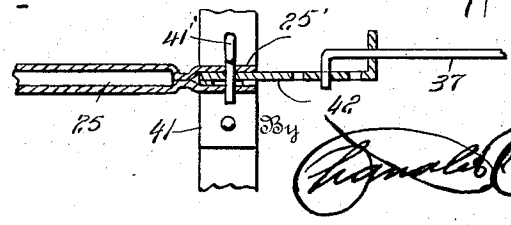


Fig. 4.



Witnesses

Chas. E. Kemble

Harry M. Peet

Inventor

S. B. Benigar.

By Thomas & Thomas

Attorneys

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

Fig. 2.

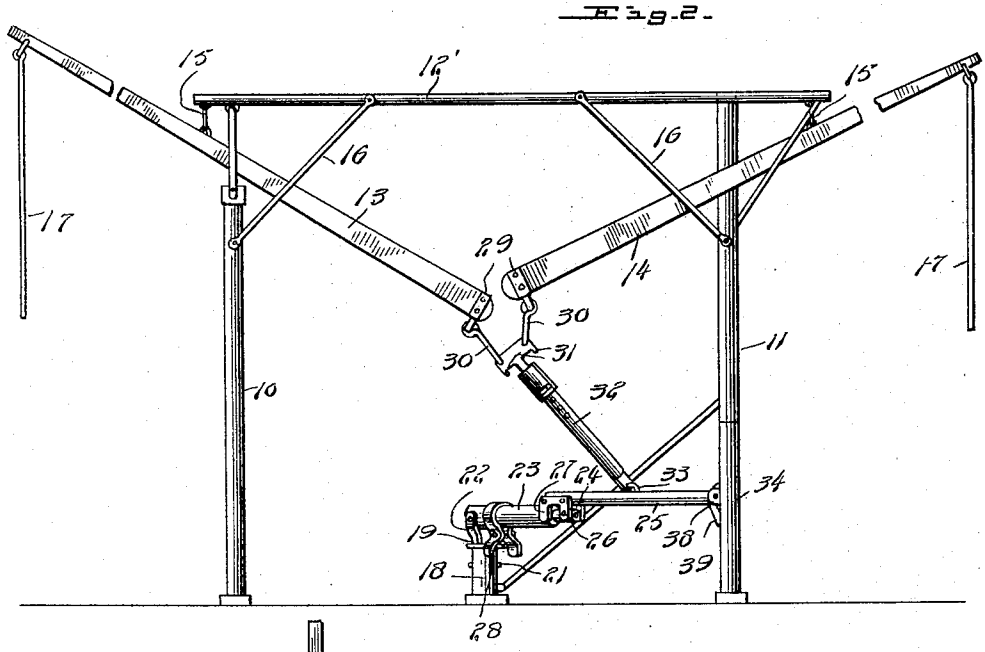


Fig. 3.

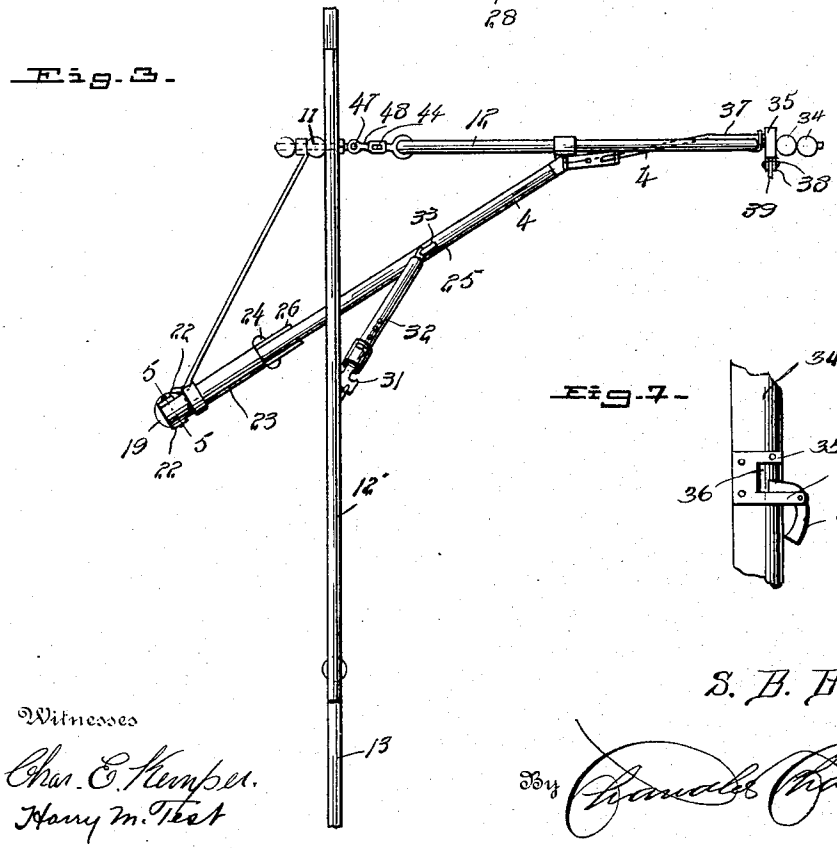


Fig. 7.

Witnesses

Chas. E. Kemper.

Harry M. Peat

Inventor

S. B. Benigar.

By Randolph & Randolph

Attorneys

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

SAMUEL B. BENIGAR, OF GREENFIELD, OHIO.

GATE-OPENER.

1,171,692. Specification of Letters Patent. Patented Feb. 15, 1916.

Application filed February 16, 1914. Serial No. 819,044.

To all whom it may concern:

Be it known that I, SAMUEL B. BENIGAR, a citizen of the United States, residing at Greenfield, in the county of Highland, State of Ohio, have invented certain new and useful Improvements in Gate-Openers; and I do hereby 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.

This invention relates to improvements in gate openers, and particularly to hand operated gate openers.

One object of the invention is to provide a novel means for simultaneously unlatching the gate and swinging it open.

One object of the invention is to provide novel means forming a part of the opening means for holding the gate both in open and closed positions.

Other objects and advantages will be apparent from the following description, when taken in connection with the accompanying drawings.

In the drawings: Figure 1 is a side elevation of a gate. Fig. 2 is an end elevation thereof. Fig. 3 is a top plan view. Fig. 4 is a detail sectional view on the line 4—4 of Fig. 3. Fig. 5 is a section on the line 5—5 of Fig. 3. Fig. 6 is a view similar to Fig. 1 showing the gate in open position. Fig. 7 is a fragmentary elevation of the post 34 showing the latch member in elevation.

Referring particularly to the accompanying drawings, 10 and 11 represent two posts, the latter of which has hinged thereto the gate 12, while the former is spaced a proper distance in line with the first post inwardly of the gate. Extending between the posts and connected to the upper ends is a beam 12′. Suspended from the ends of the beam 12′ by means of the links 15 are the operating levers 13 and 14. Suitable guides 16 are carried by the posts and beam, the inner ends of the operating lever playing between the guides and the post. Depending from the outer ends of the lever are hand holds 17 which are grasped to swing the levers.

Disposed between the posts, and out of the line thereof is a vertical tubular member 18, in which is mounted a block 19. In the sides of the tubular member 18 are formed horizontal slots 20 through which project the radial pins 21 carried by the block 19. The upper end of the block 19 is formed with a pair of spaced lugs or ears 22 between which is pivotally carried one end of a weighted member 23. The outer end of the member 23 is reduced as at 23′, and has pivotally connected thereto a pair of ears 24 carried by one end of a bar 25. These ears form an integral part of the pair of plates 26 which is also provided with a pair of fingers 27. These fingers straddle the outer end of the member 23 when the parts are in normal position and the gate closed. Carried by the inner end portion of the member 23 are the depending fingers 28, between which the bar 25 engages when the parts are in the position shown in Fig. 6, with the gate open. Carried by the inner end of each of the operating leyers 13 and 14 is a yoke 29, each of these yokes carrying a depending link 30. These links are loosely connected to a pair of ears 31 carried by the upper end of a bar 32, which bar is loosely connected at its other end to a ring or eye 33 carried by the bar 25 intermediate the length thereof.

Disposed a suitable distance from the post 11 is the latch post 34, and carried by this post is a plate 35 formed with a recess 36 which receives the end of the sliding latch bolt 37 mounted on the gate. Formed on this plate 35 are the parallel ears 38 between which is pivotally mounted a weighted angular detent 39. This detent is arranged to be moved by the latch bolt to permit the bolt to enter the recess of the plate, and to be moved by its weighted end so as to confine the end of the bolt within the recess, and hold the gate in closed position. Extending from the post 34 below the plate 35 is a stop 40 which limits the movement of the gate toward closed position.

Mounted on the center of the gate is a slotted bracket 41. Straddling the bracket is the bifurcated end 25′ of the bar 25, and disposed between the bracket and one of the portions of the bifurcation is the apertured end of a plate 42. A vertical pin 41′ is passed through the bifurcated end of the bar 25, the apertured end of the plate, and through the slotted bracket. Connected to the other end of the plate 42 is one end of the before-mentioned latch bolt 37.

By pulling down on either of the levers 13 and 14, the initial movement will lift the bar 25 and cause the same to withdraw the latch bolt longitudinally of the gate and out of the recess of the plate 35 so that

the end of said bolt will be clear of the detent. Further movement of the lever causes the pivoted ends of the member 23 and the bar 25 to move upwardly, the bar 25, at the same time, drawing the gate into open position. The block 19 necessarily rotates slightly within the tubular member 18, the final position of the parts being as shown in Fig. 6. In this position the member 23 has moved past the vertical position and by reason of its weight has fallen to the other side of its pivot. The weight of the member 23 in connection with the weight of the bar 25 causes these members to assume the position of Fig. 6 and draw the gate into open position. To close the gate, either of the levers is pulled down so that the member 23 will be thrown past the center of its pivot. When the member 23 has passed the vertical, its weight will cause it to fall and complete the closing of the gate, the latch bolt actuating the detent and entering the recess of the plate 35.

Secured to the hinged end of the gate by means of the clamps 43 is a vertical bar 44 which has formed on one edge near the upper end, a vertical series of notches 45. Carried by the post 11 are the bolts 46, one end of each of which projects through the post adjacent the gate and is provided with a vertical pintle 47. A pair of members 48 are each provided with an eye to receive one of the pintles 47, and each is provided with an angular opening through which the bar 44 extends. The upper of the members 48 is provided with a transverse pin 49 which is arranged to enter one or another of the notches 45. By removing the pin 49, the bar 44 together with the gate can be raised or lowered to the height desired and held in such position by the replacing of the pin 49 so that it will enter one of the recesses.

Attention is particularly directed to the fact that the member 23 swings through a vertical arc to both sides of its point of pivot, and holds the gate in open or closed position, according to the side of the pivot on which the member falls. It will also be noted that this member will complete the opening or closing movement of the gate the instant that it swings slightly beyond the vertical.

What is claimed is:

An operating mechanism for a swinging gate comprising a vertical hollow post having slots in its opposite sides, a member rotatably mounted therein and having laterally extending pins engaged in the slots to limit the rotary movement of said member, the upper end of said member having a pair of apertured ears, a lever having one end pivotally mounted between the ears, a member having a plurality of pairs of depending legs, one pair of which is pivotally connected to the other end of said lever while another of the pairs of legs is adapted to straddle said lever in normal position, a link rigidly connected to the said legged member and adapted to be loosely connected to the gate and means for raising the said link to open the gate and swing the said lever in a vertical arc over the said post and simultaneously rotate the member within the post, and means carried by the said lever for embracing engagement with the said link to hold the lever and link against lateral movement when the gate is open, said legged member holding the lever against pivotal movement when the gate is closed.

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

SAMUEL B. BENIGAR.

Witnesses:
MARGARET WILLET,
D. S. HISER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."