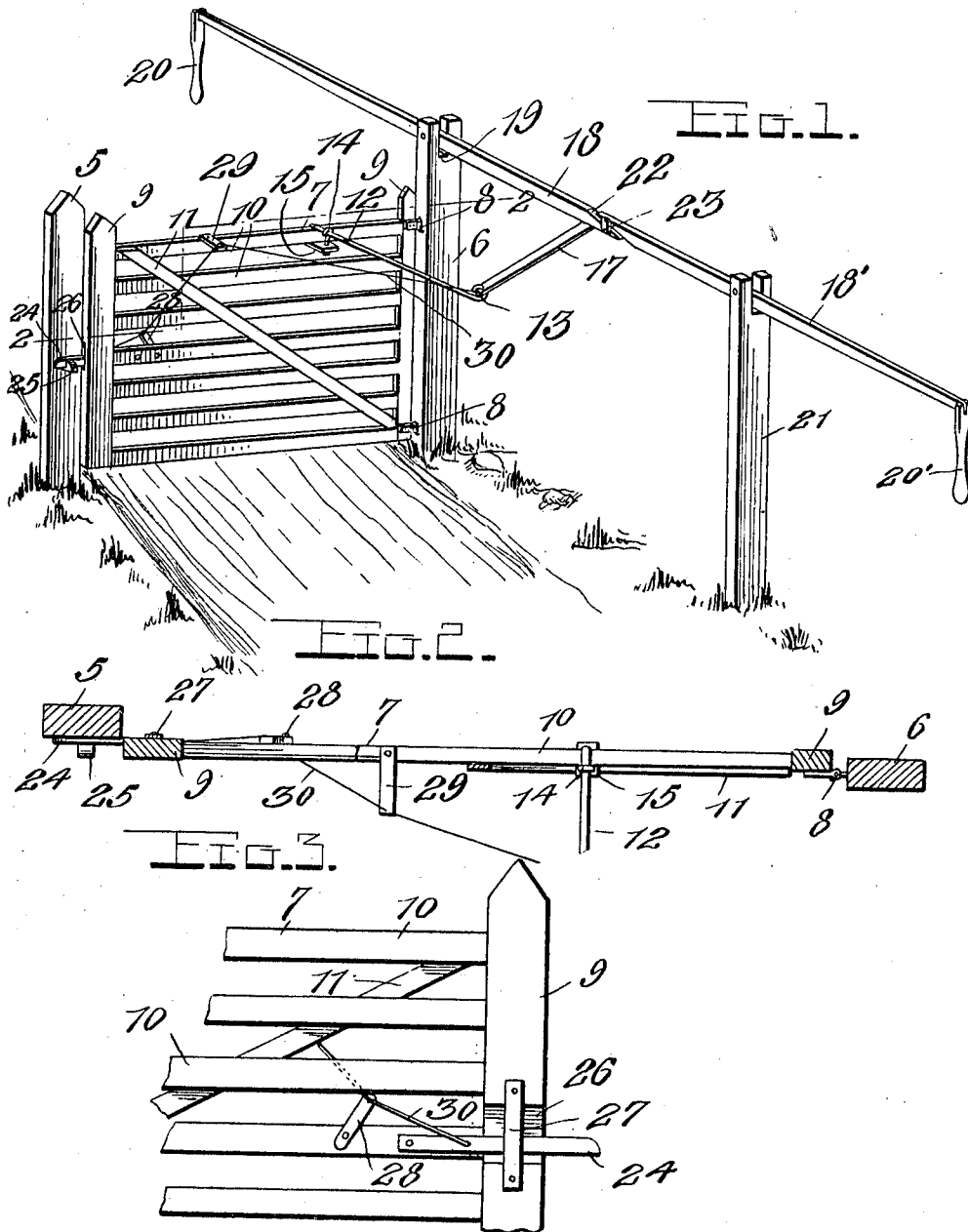


N. J. McADAMS.
GATE.
APPLICATION FILED JUNE 4, 1910.

970,090.

Patented Sept. 13, 1910.



Witnesses

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GATE.

970,090.

Specification of Letters Patent. Patented Sept. 13, 1910.

Application filed June 4, 1910. Serial No. 564,992.

To all whom it may concern:

Be it known that I, NATHANIEL JOSEPH McADAMS, a citizen of the United States, residing at Smyrna, in the county of Rutherford and State of Tennessee, have invented certain new and useful Improvements in Gates, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain new and useful improvements in gates and more particularly to a swinging gate which is adapted to be operated at a distance from the gate and is of such construction that the same may be opened or closed by the driver of a vehicle without dismounting therefrom.

Another object of the invention is to improve and simplify the construction of gates of the above character without sacrificing its strength or durability whereby the same may be constructed at a minimum expense.

A further object resides in the provision of a suitable latch mechanism and means for automatically operating said latch mechanism as the gate is opened.

With these and other objects in view, the invention consists of the novel features of construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved gate and the operating mechanism therefor; Fig. 2 is a section taken on the line 2—2 of Fig. 1; and Fig. 3 is a detail fragmentary elevation of the gate showing the arrangement of the latch mechanism.

Referring more particularly to the drawings 5 and 6 designate the outer and inner gate posts respectively. The gate 7 is hinged to the inner post 6 as shown at 8. This gate may be of any desired construction and constructed either of wood or metal as shown in the drawing which consists of the vertical end bars 9 and the parallel cross bars 10. These cross bars are connected and braced by means of a diagonal bar 11.

To one of the cross bars 10 and adjacent to the hinged or pivoted end of the gate, a rod 12 is secured. This rod extends outwardly from one side of the gate and has an eye 13 formed on its outer end. The other end of the rod is bent downwardly over the edge of the gate bar. An eye bolt 14 is disposed upon the rod 12 upon the opposite

side of the gate bar 10. A connecting plate 15 is arranged upon the lower ends of the bolt 14 and the downwardly turned end of the rod 12. Nuts are threaded thereon which bind upon the plate 15 and rigidly secure the rod 12 to the gate bar. A bar 17 is provided with an opening in one end through which the eye 13 of the rod 12 is disposed. The other end of the bar 17 is connected to one end of an operating lever 18. This operating lever is disposed in a recess 19 in the upper end of the gate post 6. This operating lever is pivotally arranged on the post at its approximate center and to the other end thereof a depending handle 20 is pivotally connected. A post 21 is arranged at a distance from the inner gate post 6 and beyond the end of the lever 18 to which the bar 17 is connected. In the upper end of this post 21 a second operating lever 18' is pivotally mounted and also has a handle 20' connected to one end. The other end of the lever is disposed adjacent to the end of the first mentioned operating lever. These adjacent ends of the levers 18 and 18' are beveled or inclined as shown at 22 and are connected by means of the plates 23 which are pivoted to said levers upon opposite sides thereof.

In order to prevent accidental opening of the gate or to prevent the same being opened by live stock, I provide a suitable latch mechanism which consists of the pivoted latch bar 24. This latch bar is arranged upon the central cross bar 10 of the gate and extends beyond the vertical end bar 9 thereof. A latch keeper 25 is secured to the outer gate post 5 with which the latch bar is adapted to engage, said keeper preventing the lateral movement of the gate when the same is closed. The latch bar 24 is disposed in a recess 26 formed in one side of the end bar 9 of the gate and is vertically movable therein. A plate 27 is disposed across this opening or recess and secured to the bar 9 and serves as a guide for the latch bar 24. A vertically disposed arm 28 is pivoted at one end to the cross bar 10 of the gate and extends above the same. This arm is arranged adjacent to the pivoted end of the latch bar 24. At a point inwardly of the arm 28 adjacent to the center of the gate a second arm 20 is pivoted upon the edge of the bar 10 and extends transversely or outwardly therefrom. To the free ends of each of these arms a flexible operating element 30

is secured. One end of these flexible actuating elements is secured to the latch bar 24 to allow of its pivotal movement, the other end thereof being secured to the eye 13 of the rod 12. The actuating element 30 would preferably be of wire of the proper gage to prevent the same being easily broken.

In the operation of the gate, upon a downward pull of either of the depending handles 20 or 20', the connected end of the operating levers 18 and 18' will be moved upwardly between the posts 6 and 21. The initial movement of these operating levers will bend the rod 12, said rod being slightly resilient and adapted to return to its normal condition after the initial movement of the operating levers. This bending or flexing of the rod 12 is sufficient, however, to draw upon the flexible connection 30 and swing the arms 28 and 29 whereby the latch bar 24 is raised. This upward movement of the latch bar 24 will leave the free end thereof above the latch member 25. The continued movement of the levers 18 is accomplished by the movement of the gate itself after the latch bar is disengaged from the member 25 as it will be obvious that the force which is necessary to actuate the latch bar will cause the gate to swing open with considerable force after the release of said bar. As the inner ends of the operating levers 18 move upwardly, the beveled ends 22 thereof swing toward each other and also have a slight relative longitudinal movement. After the operator has driven through to the opposite side of the gate, he moves the end of the operating lever 18 upwardly which forces the connecting bar 17 downwardly and swings the gate inwardly to its closed position between the posts 5 and 6.

From the foregoing it will be seen that I have produced an extremely simple and efficient gate which may be very quickly operated to move the same to its open or closed position. It is unnecessary for the driver of the vehicle to dismount therefrom to operate the gate. It will be understood that if desired a latch member 25 may be secured to the post 21 against which the end of the gate is disposed when in open position, so that the gate may be latched in such opened position. Owing to the resiliency of the rod 12, the same will give or bend upon the downward pressure of the bar on the end thereof so that the gate will be swung to its closed position, although the end of

said rod is disposed upon the opposite side of the levers 18 from the gate 7. The rod 12 is comparatively short, and it will be understood that its length must be regulated in accordance to the size and extent of movement of the gate 7.

My improved gate may be constructed at a very low cost and is highly durable and efficient in its operation.

While I have shown and described the preferred combination and arrangement of the various parts, it will be understood that the same is susceptible of numerous minor modifications without departing from the essential feature or sacrificing any of the advantages of the invention.

Having thus described the invention what is claimed is:—

1. The combination with inner and outer gate posts and a gate hinged upon the inner post for swinging movement, of a resilient rod rigidly secured at one end to said gate and extending laterally therefrom, pivotally mounted operating levers loosely connected at their ends, a connecting bar between one of said levers and said resilient rod, latch operating mechanism connected to one end of said rod, said rod being upwardly movable in the operation of the gate to operate said latch mechanism.

2. The combination with inner and outer gate posts and a gate hinged upon the inner post for swinging movement, a resilient rod secured to and extending transversely from the gate, pivotally mounted operating levers extending upon opposite sides of the gate, a connecting bar between one of said levers and said resilient rod, a latch bar pivoted to said gate for movement in a vertical plane, guide means for said bar carried by the gate, a latch member secured to the outer gate post adapted to be engaged by said bar to hold the gate in closed position, and a wire connecting said latch bar and resilient rod, the initial movement of the operating levers being adapted to flex said rod and draw upon the wire to release said latch bar whereby the gate may be swung to its open position.

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

NATHANIEL JOSEPH McADAMS.

Witnesses:

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J. D. PRUITT.