E. P. JONES.

GATE MECHANISM.

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1,160,290.

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Fig. 1.

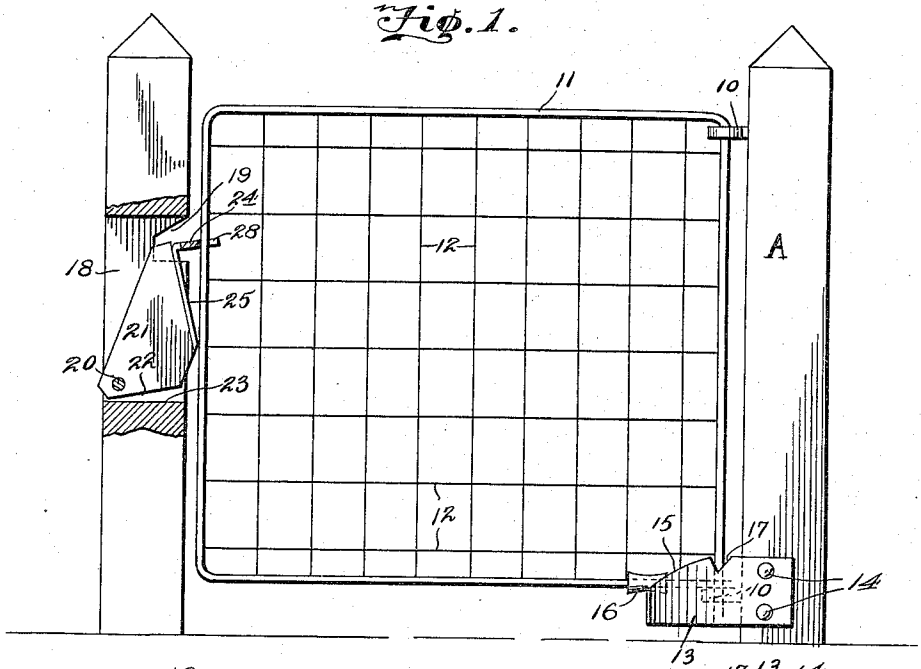


Fig. 2.

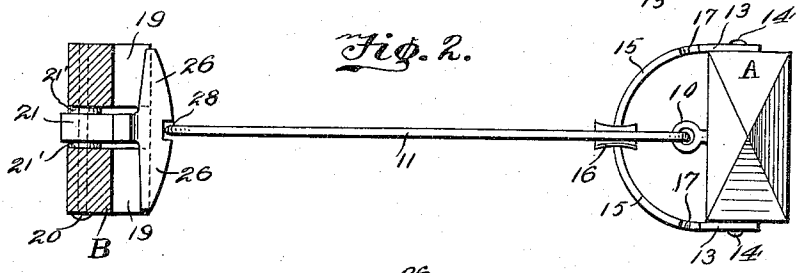
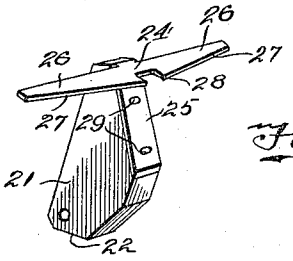


Fig. 3.



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GATE MECHANISM.

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To all whom it may concern:

Be it known that I, ELMER P. JONES, a citizen of the United States, residing at Bowling Green, in the county of Wood and State of Ohio, have invented certain new and useful Improvements in Gate Mechanism, of which the following is a specification.

My present invention relates to certain new and useful improvements in gate latch mechanism and more particularly to an improved gate latch of the gravity type; and the principal and most important object of the present invention is to provide a device of the above character which includes means for supporting the same in an operative position, irrespective of the position of the gate member.

Another object of the present invention is to provide an improved latch of the foregoing nature which is so formed whereby it is normally held in an operative position so that it may be readily engaged by the gate, locking the same in a secure position and preventing further movement by reason of the fact that the entire weight of the latch bears against the adjacent edge of the gate.

A further object of this invention is to provide a device of the type in question that is extremely simple in construction, and which, it is believed, may be manufactured at a comparatively low cost.

The above and other objects are accomplished by such means as are shown in their preferred form in the accompanying drawings, described in the following specification, and then more specifically pointed out in the appended claims.

In the accompanying drawings wherein like characters designate like parts throughout the several views; Figure 1 is a front elevation of a gate structure illustrating my invention in correlation therewith. Fig. 2 is a vertical plan view of the structure shown in Fig. 1 illustrating the latch supporting post in cross section. Fig. 3 is a perspective view of the improved latch means.

The gate, in connection with which my invention has been illustrated, is of that type now in general use, yet it is to be understood that the application of my invention is not limited to this specific structure and that the improved latch mechanism may be used in connection with any desirable form of gate if it is so desired.

In the drawings, I have shown a supporting post A of the usual construction which is provided with spaced apart brackets 10 in order to efficiently support the gate structure hereinafter described. This supporting post may be formed of any suitable or desirable material it being understood that such changes will not deviate from the spirit and scope of my invention.

The gate structure illustrated comprises a rectangular frame 11 supporting a section of reticulated material 12. The frame of the gate structure extends through the respective brackets 10, the latter forming suitable bearings for supporting the gate during the opening and closing movement thereof. In connection with this gate structure, I have illustrated a second post B designed to support the improved latch mechanism. As set forth above this post may be constructed of any desirable material and that such changes of material will not deviate from the spirit and scope of my invention.

For the purpose of accommodating the latch means, the post B is provided with an intermediate opening 18 which communicates with the respective sides thereof as shown. Cut-out portions 19 are further provided which are arranged adjacent the upper terminus of the opening and which receive certain portions of the latch mechanism as will hereinafter appear.

A pivot member 20 is journaled transversely through the post B and extends through the opening 18 adjacent its lower terminus. A latch operating member 21 is secured to the pin 20 so that it is normally held in pivoted relation with the post. Spacing members 21′ are arranged on the pivoted member 20 and at each side of the member 21 in order to space the latter from the adjacent walls of the opening. Upon reference to Fig. 1 of the drawing, it will be recognized that the pivot point of the member 21 is adjacent its lower edge, and that the portion thereof above the pivot point will act as an operating means for the latch, in order to normally hold the same in connection with the gate structure. In its normal position, the lower face 22 of the operating member rests upon the lower wall 23 of the opening in order to hold the latch, (which will be presently described) in an operative position so that it will effectually engage the gate structure during the return movement thereof.

A latch member 24 is further provided which has depending therefrom at an angle,

an elongated extension 25. Arms 26 radiate from the respective ends of the latch member, the front edges of which are beveled as shown at 27 in order to guide the gate structure to the cut-out portion 28 and simultaneously rock the supporting member 21 on its pivot. The extension 25 is preferably secured to the front face of the member 21 as at 29 in order to support the latch in a plane transverse thereof so that the arms 26 extend outwardly through the cut-out portions 19 of the post in the manner shown clearly in Fig. 2.

When the gate structure is in a closed position, the latch member will be securely held in engagement therewith by the weight of the upper end of the member 21, which member is at this time out of engagement with the lower wall 23 of the opening 18. However when the gate is to be opened the operator by grasping one of the arms 26 may force the upper end of the member 21 rearwardly and thus permit the gate to move. Upon the releasement of pressure on the arms 26 the member 21 will fall by action of gravity until it engages the lower wall 23 of the opening 18. In this latter position the member 21 will support the arms 26 in a position whereby they may be readily engaged by the gate upon its return movement.

The member 21 and the latch member may be constructed of any suitable or desirable material, yet it is advisable that the member 21 be constructed of metal so that it will effectually operate the latch member in the manner set forth above.

Finally I desire it to be understood that while the form of my invention illustrated herein as the preferred form is the most efficient, yet certain conditions will necessarily vary in concurrence with the adoption of my device and it is understood that various minor changes in the details of construction and proportion of parts may be resorted to when required without sacrificing any of the advantages of my invention as defined in the appended claims.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A gate latch of the character described including the combination with a support and a swinging gate structure, said support having an opening formed therein, a pin journaled through said support and extending through said opening, an operating member, the lower end of said operating member secured to said pin, one face of said operating member normally engaging the lower wall of said opening, a latch member, an extension depending from said latch member and secured to said operating member, arms extending from said latch member, said arms being constricted toward their outer free extremities, said latch member provided with a central cut-out portion, the said support having opposite cut-out portions formed therein for receiving said arms, substantially as described.

2. A gate latch of the character described including the combination with a swinging gate structure and a support arranged in proximity thereto, said support having an opening formed therein, an operating member arranged within said opening, said operating member being of substantially triangular shape in side elevation, a pin journaled through said support and pivotally supporting said operating member, the pivot point of said operating member being arranged rearwardly of the center of gravity thereof, a latch member, an extension formed on said latch member and fixed to the front face of said operating member, said latch member having laterally extending arms, said arms being constricted toward their outer free extremities whereby when said body structure is moved into engagement with said latch member, the forward portion of the lower face of said operating member will be withdrawn from engagement with the lower wall of said opening, the entire weight of said operating member bearing against said gate structure, as and for the purpose set forth and described.

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

ELMER P. JONES.

Witnesses:

JONATHAN E. LADD,

BERNICE FREDERICK.

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