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GATE OPERATING ATTACHMENT.
APPLICATION FILED JUNE 29, 1908.

Patented Nov. 16, 1909.
2 SHEETS—SHEET 1.

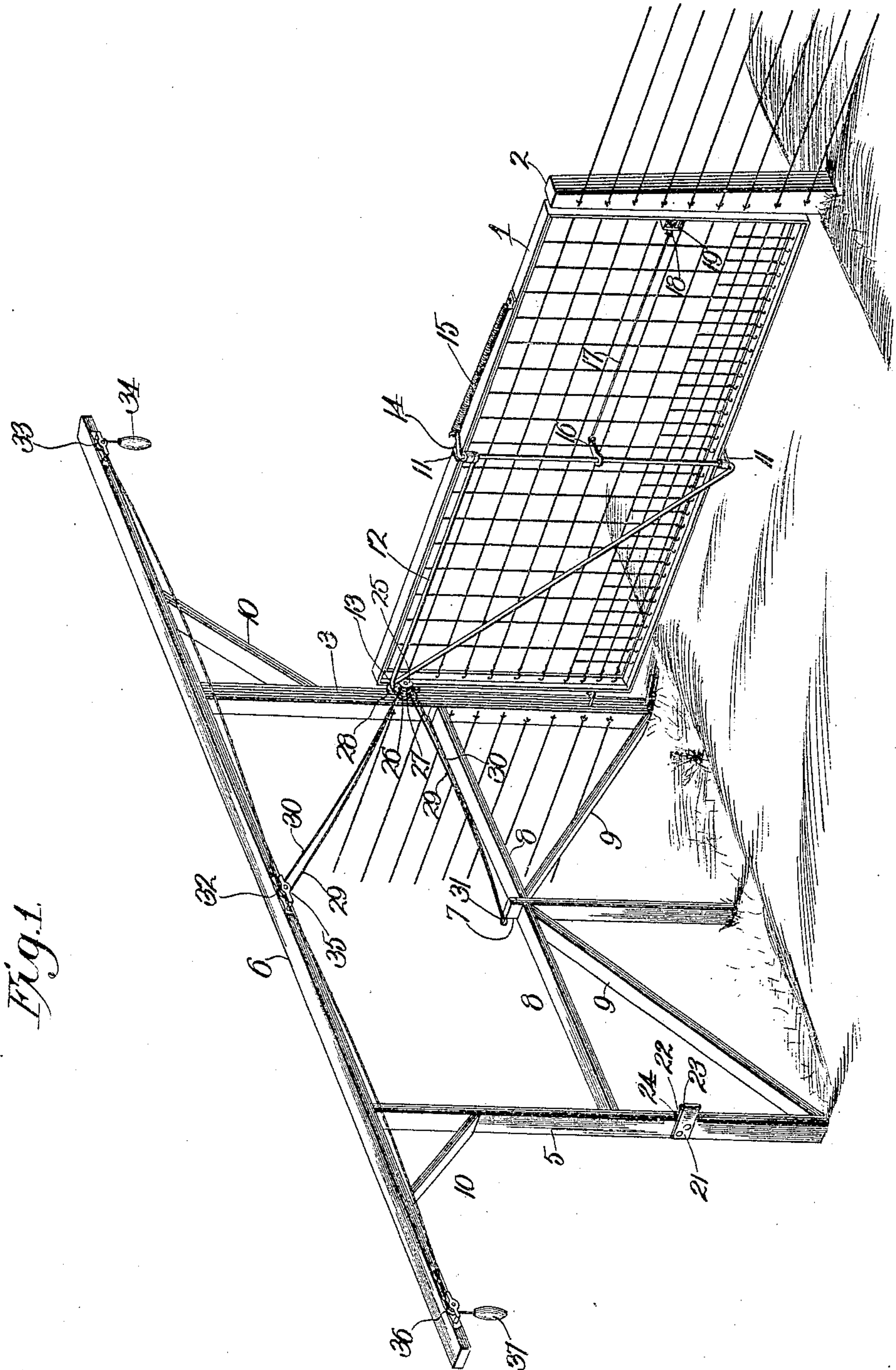


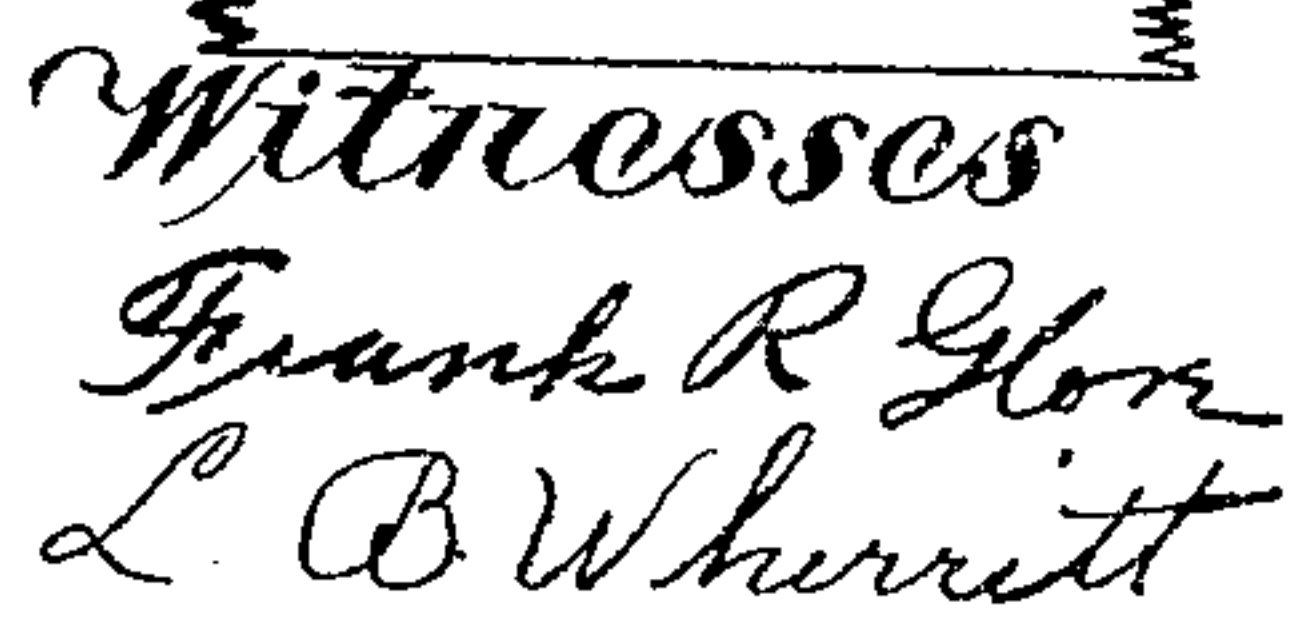
Fig. 1.

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UNITED STATES PATENT OFFICE.

JOHN B. FAULKNER, OF HOLT, MISSOURI, ASSIGNOR OF ONE-HALF TO R. E. BEVINS, OF KANSAS CITY, MISSOURI.

GATE-OPERATING ATTACHMENT.

940,306.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed June 29, 1908. Serial No. 441,017.

To all whom it may concern:

Be it known that I, JOHN B. FAULKNER, a citizen of the United States, residing at Holt, in the county of Clay and State of Missouri, have invented certain new and useful Improvements in Gate-Operating Attachments, of which the following is a specification.

My invention relates to gates and more especially to gates of that class which can be opened and closed by a person at either side of the gate, and my object is to produce gate-opening and closing attachments which, perform their function efficiently and reliably, can be easily and quickly applied to any hinged gates and are of simple, strong, durable and cheap construction.

With these objects in view, the invention consists in certain novel and peculiar features of construction and organization as hereinafter described and claimed, and in order that it may be fully understood reference is to be had to the accompanying drawings, in which:

Figure 1 is a perspective view of a gate equipped with mechanism embodying my invention. Fig. 2 is an enlarged top plan view of a portion of the gate in the same position it occupies in Fig. 1. Fig. 3 is an enlarged top plan view of a portion of the gate in its other or opened position. Fig. 4 is a horizontal section on a still larger scale, of the latch post and latch-post end of the gate, taken in the plane of the latch mechanism.

In the said drawings, 1 indicates a gate of the type shown or of any other suitable or preferred type, to close a road-way, at the opposite sides of which are stationed the latch and hinge posts 2 and 3 respectively, 4 indicating the hinge-connection between the gate and the hinge post.

5 indicates a latch-post at the inner side of the gate and at the hinge-post side of the roadway to secure the gate in opened position.

6 indicates a beam secured upon the upper ends of posts 3 and 5, and 7 indicates an anchor post arranged about midway between posts 3 and 5, the said anchor post and posts 3 and 5 being preferably connected by suitable braces 8 and 9. The beam 6 is also preferably braced from posts 3 and 5 by braces 10.

11 are bearing brackets secured to the top and bottom rails of the gate as shown or in any other suitable manner, and projecting inwardly therefrom and forming bearings for a swing-frame 12, preferably of triangular form and arranged with one arm vertical and journaled in said bearings, one arm horizontal and projecting rearwardly and its third arm extending from the lower end of the vertical arm to the rear end of the horizontal arm, the frame being formed by preference with a vertically-disposed eye 13 at the junction of its horizontal and inclined arms. The vertical arm terminates at its upper end in a crank-arm 14 which overlies the gate by preference and normally extends forwardly and outwardly and is connected by a retractile spring 15 to the gate at a point between the swing-frame and the front end of the gate, said spring holding the rear end of the swing frame yieldingly toward the gate.

16 indicates a crank-arm projecting outwardly from the vertical arm of the swing-frame and connected by a wire or other flexible connection 17 to the latch-bolt 18 slidingly mounted in a keeper 19 and in the front rail of the gate, as shown most clearly in Fig. 4, the said latch-bolt by preference being rounded at its front end and held yieldingly advanced by a spring 20 interposed between it and the keeper.

21 indicates a pair of similar catches secured to latch-posts 2 and 5 and adapted for engagement respectively by the latch-bolt when the gate is closed or open, each catch having a socket 22 for the reception of the rounded end of the latch-bolt, the sockets being flanked at their inner sides by cam-ports 23 to repress the latch-bolt as the gate is closed or opened, and at their opposite sides by stop-ports 24 to prevent the gate swinging beyond its closed and opened positions as will be readily understood.

25 is a bracket equipped with a pair of grooved sheaves 26 and 27 and provided with a link 28 pivotally engaging eye 13 of swing-frame 12, and engaging said sheaves is a pair of cords or cables 29 and 30, the lower ends of which are attached to the anchor post 7 as at 31. Cable 29 extends up and around a sheave 32 and thence along beam 6 to a point a suitable distance outward of the gate, at which point it engages

and depends from a sheave 33 carried by beam 6 and is equipped at its lower end with a pull or handle 34. The cable 30 extends over a sheave 35 journaled on the same rod with sheave 32, and from said sheave 35 extends inwardly along the beam 6 to and depends from a sheave 36 and is provided at its lower end with a pull or handle 37.

10 In practice the pulls or handles will preferably be disposed apart a sufficient distance to permit the occupant of a buggy or wagon to operate the gate without dismounting, such occupant when approaching the
15 gate from the outside grasping the pull or handle 34 and giving it a sharp pull downward and then immediately relaxing his hold. As a result of this action, the swing-frame is caused to assume the angle approximately indicated by the dotted lines,
20 Fig. 2, moving to such position against the resistance of spring 15 and the latch-bolt actuating-spring 20. By the time the swing-frame attains such position, the latch-bolt
25 is withdrawn from the catch and the resistance of spring 15 is such that it ceases to yield, because the resistance of the gate to swinging movement is less than that offered by the spring 15. The gate therefore swings
30 open to the position shown in Fig. 3, and the momentum it acquires is sufficient to cause the latch-bolt to ride over the cam 23 of the catch of post 5, the spring 20 immediately readvancing the bolt and causing it
35 to enter the socket of such catch to lock the gate in its opened position, it being understood in this connection, that the instant the pull on the cable is relaxed the spring 15 returns the swing-frame to its original position
40 with respect to the gate, as shown in Figs. 1 and 2, the momentum acquired by the gate being sufficient to complete the opening movement of the latter after the swing-frame attains its original position,
45 and it will also be noticed in this connection, that the opening movement of the gate is through the instrumentality of a pull applied upon it by the swing-frame. After passing through the gateway, the operator
50 recloses the gate by a downward pull on and a quick release of the other pull or handle 37. By reference to Fig. 3, it will be seen that when said pull or handle 37 is drawn downward, it first swings the swing-frame
55 outward in the direction indicated by the arrow, Fig. 3, for the purpose of withdrawing the latch-bolt, and that as soon as said bolt is withdrawn, the swing-frame closes the gate by a push instead of by a pull as
60 in opening the gate, the spring 15 in this closing operation affording the necessary resistance to make such push effective and to give the gate the necessary impetus to effect its closure, it being obvious that without
65 such spring the swing-frame would simply

continue to swing away from the gate without giving it sufficient impetus to close. It will be understood of course, that the latch-bolt actuating-spring might be made sufficiently strong to dispense with spring 15, but I have found in practice that to easily and quickly give the gate sufficient impetus to secure its full swing in either direction, the spring 15 is desirable.

From the above description it will be apparent that I have produced attachments 75 for opening and closing gates, embodying the features of advantage enumerated as desirable, and while I have illustrated and described the preferred embodiment of the same, it is to be understood that I reserve the right to make such changes in the form, proportion, detail construction and arrangement of the parts, as properly fall within the spirit and scope of the appended claims. 85

Having thus described the invention what I claim as new and desire to secure by Letters Patent is:—

1. The combination with a hinged gate, of a swing-frame carried by the gate, with its free end projecting toward the hinge-end of the gate, yielding means for holding the free end of the frame pressed toward the gate, and a suitably guided cable connected and bearing a slidable relation with the free end of the swing-frame, to swing the latter away from the gate to impart swinging movement thereto. 90 95

2. The combination with a hinged gate and locking mechanism to secure the gate open or closed, of a swing-frame carried by the gate and projecting rearwardly from its pivotal point of connection with the latter, yielding means for holding the free or rear end of the swing frame pressed toward the gate, means pivotally movable with the swing-frame and connected to said locking mechanism, and a cable suitably guided and connected and bearing a slidable relation with the free end of the swing-frame to swing the latter away from the gate to cause it to impart swinging movement thereto. 100 105 110

3. The combination with a hinged gate, of a swing-frame pivoted to the gate and projecting toward the hinge-end of the latter from said pivotal point, a retractile spring connecting the swing-frame and the gate, tending to hold the free end of the former close to the latter, and a suitably-guided cable connected to the free end of the swing-frame whereby the latter may be swung away from the gate to impart swinging movement to the latter. 115 120

4. The combination with a hinged gate, of a swing-frame pivoted to the gate and projecting toward the hinge-end of the latter from said pivotal point, a retractile spring connecting the swing-frame and the gate, tending to hold the free end of the former close to the latter, and a suitably- 125 130

guided cable anchored at one end inward of the gate and bearing a slidable relation to the swing-frame so that when the free or opposite end of the cable is pulled, it shall swing the free end of the swing-frame away from the gate to impart swinging movement to the latter.

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

JOHN B. FAULKNER.

Witnesses:

L. B. WHERRITT,
G. Y. THORPE.