R. M. OLSON.

SWINGING GATE.

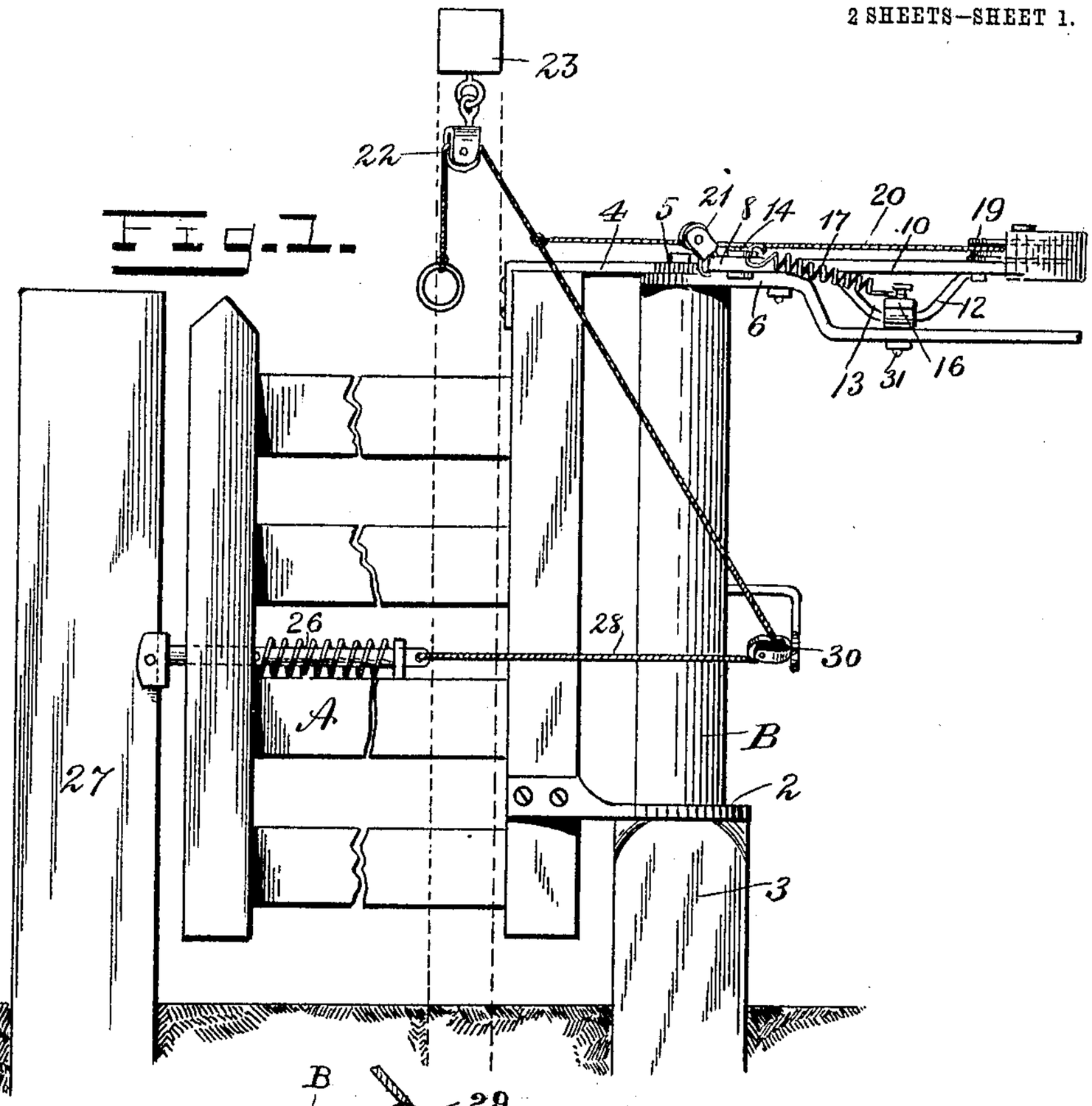
APPLICATION FILED FEB. 15, 1908.

916,363.

Patented Mar. 23, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



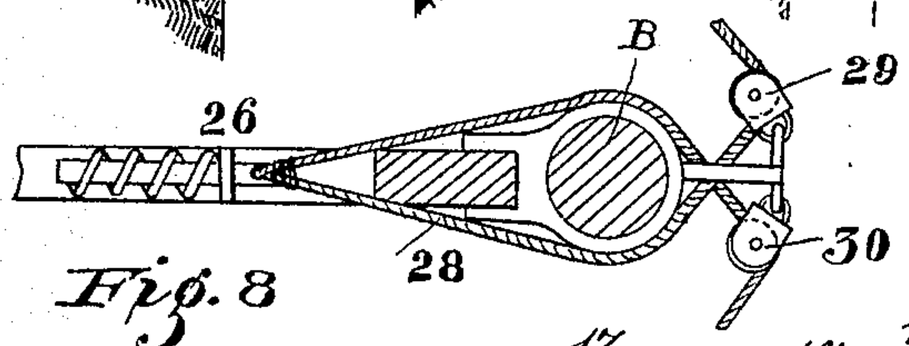
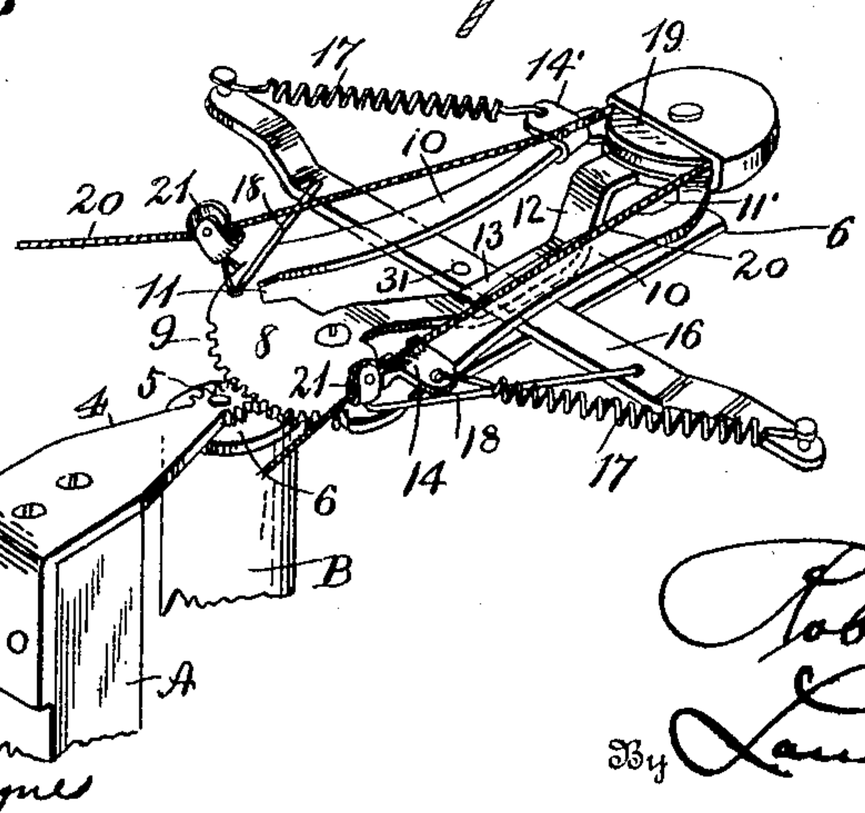


Fig. 8

Fig. 3.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

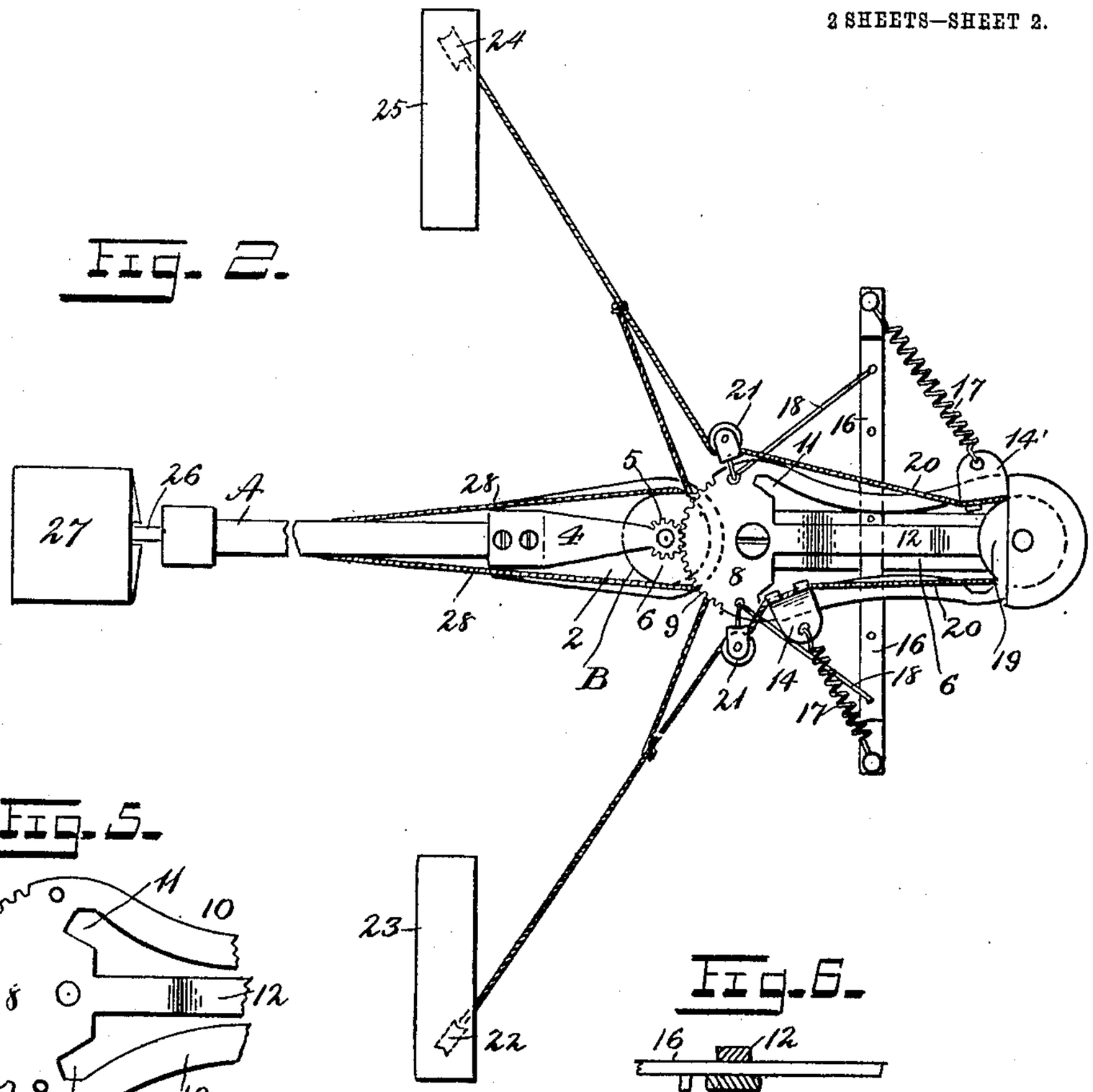
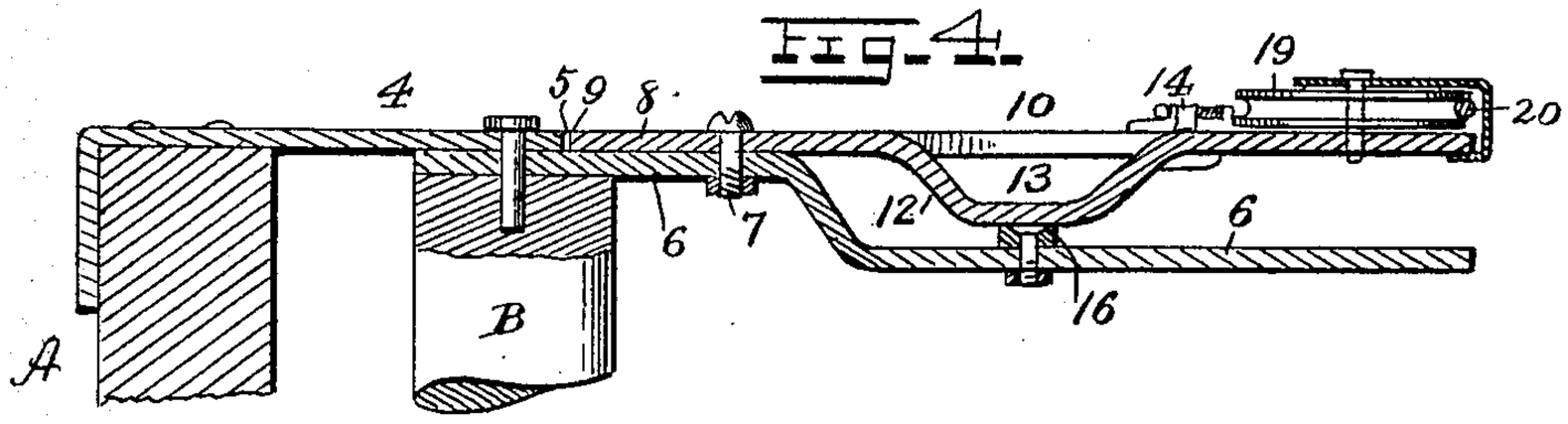


Fig. 5.

Fig. 6.

Fig. 4.



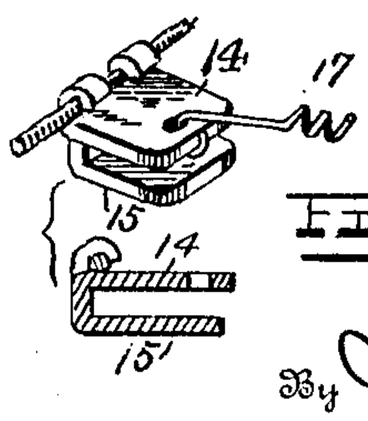


Fig. 7.

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UNITED STATES PATENT OFFICE.

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SWINGING GATE.

No. 916,363. Specification of Letters Patent. Patented March 23, 1909.

Application filed February 15, 1908. Serial No. 416,128.

To all whom it may concern:

Be it known that I, ROBERT M. OLSON, a citizen of the United States, residing at Iron River, in the county of Iron and State of Michigan, have invented certain new and useful Improvements in Swinging Gates, of which the following is a specification.

My invention relates to an improvement in swinging gates, and the object is to provide means whereby the gate can be opened and closed by a person from a wagon without the necessity of even stopping the draft animal, as the gate will open or swing from the direction of travel of the vehicle which is passing through the gate.

The invention relates to certain novel features of construction and combinations of parts which will be hereinafter described and pointed out in the claims.

In the accompanying drawings:—Figure 1 is a view in side elevation. Fig. 2 is a top plan view. Fig. 3 is a perspective view, of the operating mechanism. Fig. 4 is a sectional view. Fig. 5 is a top plan view of a section of the operating plate. Fig. 6 is a detail showing the manner of securing the cross bar, and Fig. 7 is a perspective of the slide for securing the spring. Fig. 8 is a detailed horizontal section.

A, represents the gate, and B, a post to which the gate is connected by a collar 2 at the base which is adapted to rotate on the post. The collar also forms a support for the gate as it rests upon an enlargment 3 in the post. At the top, an arm 4 is connected to the gate which arm is pivotally connected to the top of the post B. The end of the arm 4 which rests on the post is provided with teeth 5.

Mounted on the post and beneath the pivoted arm 4 is an arm 6 which extends rearwardly therefrom. Pivotally connected to this arm at 7 is a plate 8 having teeth 9 adapted to engage the teeth 5 of the pivoted arm 4. This plate is provided with curved guide bars 10, 10, having recesses 11, and 11′, at each end. The central bar 12 of the plate 8 is preferably bent downwardly as at 13 to prevent any interference with the slides 14, 14′, which are mounted on the guide bars 10. Each of the slides is provided with a hooked projection 15 which is received beneath the guide bar whereby the slide is held on the guide bar, and can be removed when it is desired to replace a loose slide. A cross-bar 16 is pivoted to the arm 6, and connected to this arm and to the slides 14 and 14′, are coil springs 17 to give the desired tension thereto. A pin 31 on the lower side of the cross-bar is adapted to engage the side of the arm 6 to limit the rotary movement of the gate, and at the same time prevent an over-taxation of the springs. Plate 8 is also connected to the cross-bar by means of rods 18, 18, and it is these rods which swing the cross bar 16 on its pivot when the gate is operated so that the pin 31 will engage the side of the arm 6.

Passing around a pulley 19 on the rear end of the plate 8 is a rope or cable 20, which is connected to the slides 14, 14′, in any suitable manner, and passes around the pulleys 21, 21, on the pivoted end of the plate 8, and then one end of the rope passes over a sheave 22 on a post 23 on one side of the gate, and the other end of the rope over a similar sheave 24 on a post 25.

A latch bolt 26 is mounted on the gate A, and is adapted to enter an opening in a post 27 for holding the gate in closed position. Leading from the latch-bolt is a rope or cable 28, one end of which passes back of the post B, and through a pulley 29 on the post, and is connected to the rope 20. The other end of the rope 28 passes around the post in the opposite direction, and over pulley 30, and thence to the rope or cable 20 on the opposite side from the other end of the gate.

When it is desired to operate the gate, the person or occupant of the vehicle will pull on the rope or cable 20, causing the slide 14 to be withdrawn from the recess 11′, and the slide 14′ on the opposite side of the gate to be withdrawn from the recess 11, whereby the slides will travel along the guide bars until the slide 14 has reached the recess 11, and the slide 14′ on the opposite side of the gate has reached the recess 11′. When the slide 14 has nearly reached the recess 11 at the end of the guide bar, the rope 28 which is connected to the latch bolt, and to the rope 20, will become taut, thereby withdrawing the bolt from the opening in the post 27, thereby releasing the gate and as the slide 14 reaches the recess 11, and the slide 14′ reaches the recess 11′, the gate will be caused to swing or rotate through the con-

nection of the teeth 5 and 9 of the plate 8 and pivoted arm 4, and the coil spring connected to the slide 14 will be expanded.

In closing the gate, the occupant of the vehicle after having passed through the gate, pulls on the rope, causing the slide 14 to travel toward the recess 11′, and the slide 14′ to travel toward the recess 11, and the same effect is given to the different parts as in the operation in opening the gate.

It is evident that more or less slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth, but:—

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

1. In a gate, the combination with a post for supporting the gate, of a plate, an arm connected to the gate in engagement with the plate, slides on the plate, springs for holding the slides in position, and means for operating the slides whereby the plate is operated for opening and closing the gate.

2. In a gate, the combination with a base for supporting the gate, of a plate, an arm connected to the gate in engagement with the plate, guide bars on the plate, slides on the guide bars, springs holding the slides in position, locking means on the gate, and means engaging the locking means and slides whereby the gate is unlocked and the plate operated for opening and closing the gate.

3. In a gate, the combination with a base for supporting the gate, of a plate, an arm connected to the gate in engagement with the plate, a cross bar connected to the plate, guide bars on the plate, slides on the guide bars, springs connecting the cross bar and slides, and means for operating the slides for opening and closing the gate.

4. In a gate, the combination with a post for supporting the gate, of a plate, an arm on the gate for engaging with the plate, slides on the plate, a cross bar connected to the plate, springs connecting the cross bar and slides, locking means on the gate, and means engaging the locking means and slides whereby the gate is opened and closed.

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

ROBERT M. OLSON.

Witnesses:
A. J. Pohland,
George H. Cressy.