(No Model.)

W. W. SALMON.

AUTOMATIC GATE.

No. 537,073. Patented Apr. 9, 1895.

Fig. 1

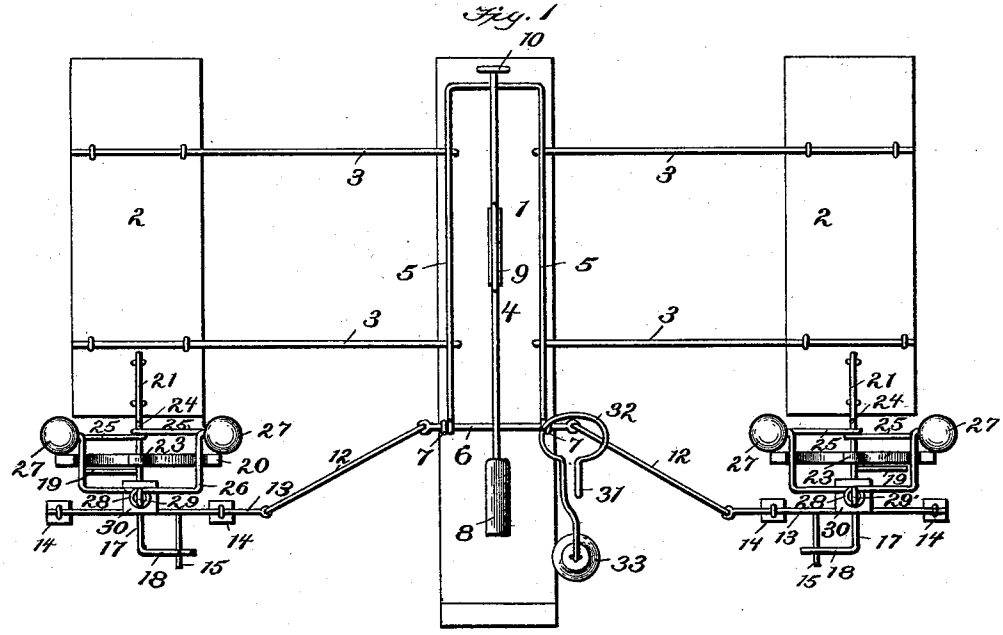


Fig. 2.

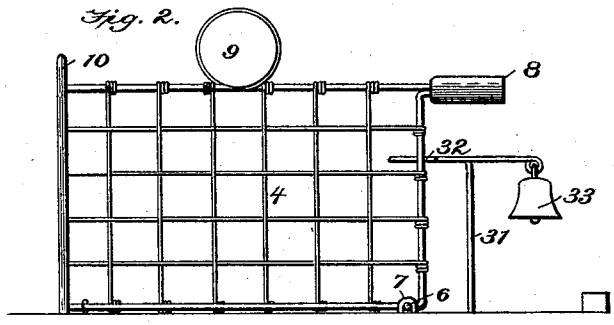
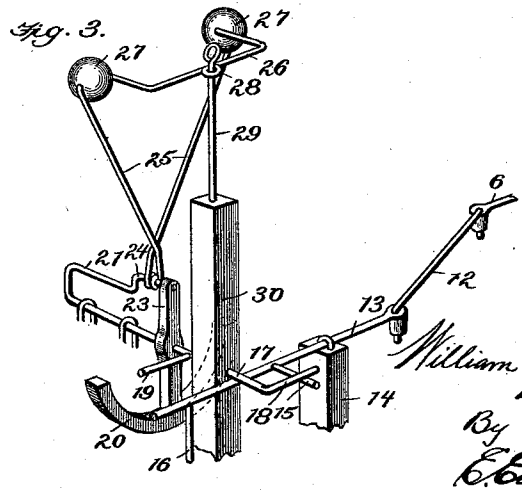


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM W. SALMON, OF LILLINGTON, NORTH CAROLINA.

AUTOMATIC GATE.

SPECIFICATION forming part of Letters Patent No. 537,073, dated April 9, 1895.

Application filed July 27, 1892. Renewed September 24, 1894. Serial No. 523,987. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. SALMON, a citizen of the United States, residing at Lillington, in the county of Harnett and State of North Carolina, have invented certain new and useful Improvements in Automatic Gates; 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.

My invention relates to improvements in gates, which may be automatically opened and closed by the wheels of a moving vehicle, and which may also be operated by a person on horseback without the necessity of his alighting therefrom.

The object of the invention is to provide a gate of an improved construction which shall possess superior advantages with respect to simplicity and efficiency in operation.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a plan view of a gate constructed in accordance with my invention. Fig. 2 is a sectional view of the same. Fig. 3 is a detail perspective view.

In the said drawings the reference numeral 1 designates a central cross piece or beam and 2, 2, end cross beams connected together by means of horizontal rods or bars 3.

The numeral 4 denotes the gate proper, having bottom side bars 5, connected with a rod 6, pivoted or journaled in lugs 7, secured to the center piece 1. The gate, which may be made of any suitable material is provided with a counterbalance weight 8, and a target 9, and its front end is adapted to engage with an upright 10, when closed.

Connected with the rod 6, at each end, is a link 12, pivotally connected with horizontal rock bars 13, which have their bearings in short posts 14. Each of these rock bars is provided with an arm 15, and a similar arm 16, at a right angle to the arm 15, so that when one of said arms is in a vertical position the other will be in a horizontal position.

Journaled in each of the end beams 2, is a rock shaft 17, having two oppositely extending arms 18 and 19, which are adapted to strike the arms 15 and 16, when the shaft 17, is actuated. Intermediate of its ends the said rock shaft is provided with a counter balance weight 20, and at its inner end is provided with an arm 21, which is adapted to be struck by a wheel of a vehicle to actuate the rock shaft. This arm preferably consists of a metal rod or stiff wire having one end bent downwardly at a right angle and secured to the rock shaft while the other end is secured to the arm 23 of the counterbalance weight 20; being bent upwardly and outwardly at this end forming a crank arm 24, connected to two radial rods 25. These are joined together at their outer or free ends by means of a rod 26, provided with weighted balls 27. The rod 26, at its center is formed with a loop 28, which engages with a vertical rod 29, secured to a post 30, between the posts 14. At one side of the center beam is a vertical spring bar 31, having its upper end bent inwardly and then curved forming a loop 32, and then extended outwardly and provided with a bell 33.

The operation will be readily understood. When in normal position, or when the gate is shut, the arms 21, will be raised or elevated so as to lie in the path of an approaching vehicle. As the vehicle reaches the arm one of the front wheels thereof will strike the arm, depressing it and actuating the rock shaft with which it is connected, causing the arm 18, to strike arm 15 of the rock shaft 13, and partially rotate the same. This will cause a corresponding movement to be imparted to the link 12, which in time will actuate the rod 6, and swing the gate upward and outward, thus opening the same and allowing the vehicle to pass through after which the parts are returned to normal position by the counterbalance weight 20. When the above operation takes place the link 12 and rock bar or shaft 13, on the opposite side of the gate are correspondingly actuated which will cause the arm 15 thereon to assume a vertical position and the arm 16 a horizontal position, so that after the vehicle has passed the gate when its wheel strikes the arm 21, on the opposite side, the rock shaft 17 will be operated and by means of the arms 16 and 19, will rotate the bar 13 in the opposite direction and return the gate to normal position.

It will be seen that the arms 15 and 16, are

not attached to or secured to arms 18 and 19 in any manner, so that the latter and their rock shafts are free to move independently of the arms 15 and 16 and their rock shaft.

A horseman approaching the gate can readily open the same by pulling upon the radial arms 25, and can shut the same by similarly operating the arms upon the other side.

The side bars 5 at the bottom of the gate, when the latter is opened will strike the loop 32, of the spring bar 31, vibrating the same and causing an alarm to be sounded on the bell, which will be found very advantageous in the night in notifying a vehicle approaching in the opposite direction, whereby accidents may be avoided.

By this invention a gate can be opened and closed without stopping the vehicle or requiring any one to alight for that purpose, and as the operation is effected by the momentum of the vehicle it will cause a great saving in time and labor.

I prefer to paint the target on the gate, the posts, the weighted balls carried by the radial bars, and such other parts as may be deemed necessary, white or some light color, so as to be easily seen in the dark.

Rock shaft 17, must be on a level with the road, so that it is necessary to make excavations at the ends of beams 2, to receive the arms 15, 16, 18, 19 and 20, which project below the road.

Having thus described my invention, what I claim is—

1. The combination with the gate of the horizontal rock bars connected therewith having arms at right angles to each other, the rock shafts having arms adapted to engage therewith, and the arms connected with said rock shafts and adapted to be operated by the wheel of a vehicle, substantially as described.

2. The combination with the pivoted gate, having side bars and a pivoted rod connected with said bars, of the links connected with said rod, the rock shafts connected with the links, and having arms at right angles to each other, the rock shafts having counterbalance weights and arms adapted to engage with said last mentioned arms, and the arms connected with the counterbalance weights and adapted to be actuated by the wheel of a vehicle, substantially as described.

3. The combination with the gate, having side bars and a pivoted rod connected with said side bars, of the links connected with said rod, the rock shafts connected with said links and having arms at right angles to each other, the rock shafts having counterbalance weights and arms adapted to engage with said last mentioned arms, the arms connected with the counterbalance weights adapted to be actuated by the wheel of a vehicle, the diagonal rods connected with said arms and with each other, and provided with weighted balls, the spring bar bent into a loop at its upper end and provided with a bell, substantially as described.

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

WILLIAM W. SALMON.

Witnesses:
E. EVERETT ELLIS,
M. DORIAN.