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M. H. LOUDON.
RAILWAY GATE OPERATING MECHANISM.

APPLICATION FILED JULY 3, 1905.

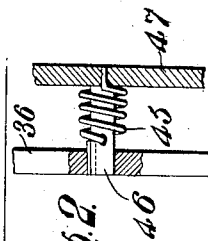
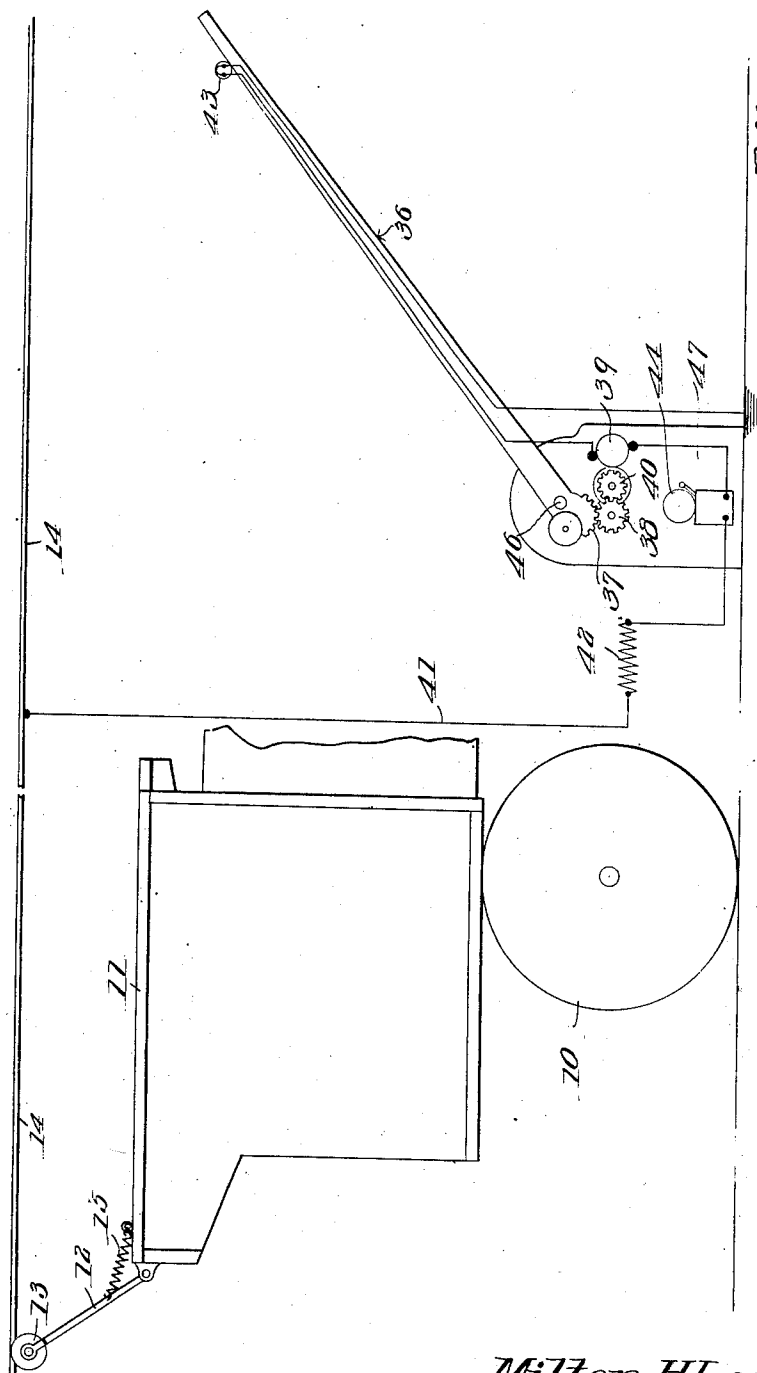


Fig. 1.

Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

MILTON H. LOUDON, OF KANSAS CITY, MISSOURI.

RAILWAY-GATE-OPERATING MECHANISM.

No. 846,326.

Specification of Letters Patent.

Patented March 5, 1907.

Application filed July 3, 1905. Serial No. 268,129.

To all whom it may concern:

Be it known that I, MILTON H. LOUDON, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented a new and useful Railway-Gate-Operating Mechanism, of which the following is a specification.

The principal object of the present invention is to provide means for closing the gates at a railway-crossing on the approach of a train, the mechanism being so arranged that as the train nears the crossing the gates will be lowered to approximately horizontal position and will remain down until the train has passed, after which the gates will be raised to open the crossing-road for traffic.

A further object of the invention is to simplify and improve the construction of the mechanism by which movement is imparted to the gate.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a view in elevation of a railway-gate and railway-gate-operating mechanism constructed in accordance with the invention. Fig. 2 is a fragmentary detail view of a part of the apparatus shown in Fig. 1.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

The gate-operating mechanism is preferably employed in connection with an electric railway signaling system of the type shown in Letters Patent of the United States issued to me on January 9, 1906, No. 809,515.

In Fig. 1 there is illustrated a portion of the signaling system shown in said Letters Patent. The cab 11 of the locomotive carries a trolley-pole 12, on which is mounted a trolley-wheel 13, engaging a trolley-wire 14. One of the driving-wheels 10 of the locomotive is generally employed as a return-conductor to the traffic rail or rails.

As above stated, the principal object of the invention is to provide means whereby the

gate at a railway-crossing may be lowered and held in lowered position until the train has passed. This is effected, as shown in Fig. 1, by providing the lower end of the gate-arm 36 with a segmental rack 37, which is engaged by a pinion 38, driven from a motor 39 through the medium of a friction-gear 40. The motor is in circuit with the overhead conductor 14 by a wire 41, which is in circuit with a rheostat 42, so that a current of low potential passing through the wire 14 will not affect the motor, but when a train approaches a predetermined distance from the gate the resistance will be lessened, owing to the shortened distance between the source of energy and the motor, and the motor will be started. At the same time incandescent lights 43, carried thereby, will be caused to burn and a bell 44 will be sounded. When the gate assumes a horizontal position, the motor still continues to run; but the friction-gear 40 will slip, and thus hold the gate in its shifted position.

In order to cause the gate to resume its normal or vertical position when the train has passed such a distance that the motor stops, there is a spring 45 employed, which is mounted upon the shaft 46 of the gate-arm, one end of the spring being secured to the shaft, as shown in Fig. 3, and the other end to the casing 47, that houses the gate-operating mechanism.

It will be seen that as the gate ascends the spring will be placed under tension, so that sufficient energy will be stored to cause it to lift the gate when the motor has ceased its operation.

I claim—

1. In a road-gate, the combination of a pivoted gate, a pivot-shaft on which the gate is mounted, an electric motor, a power-transmitting means between the motor and the gate, said power-transmitting means including friction-gear to permit running of the motor after the gate has been moved from one position to the other.

2. In apparatus of the class described, a pivotally-mounted gate, and an electric motor for actuating the same, a power-transmitting means between the motor and the gate, said power-transmitting means including friction-gear to permit the motor to continuously operate and hold the gate in lowered position, and means tending to resist the operation of the motor and move said gate to elevated position.

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3. In apparatus of the class described, the combination with a pivotally-mounted railway-gate, of an electric motor for operating the same, gearing connections between the
5 motor and the gate and including friction-gear which will permit continuous operation of the motor in order to hold the gate closed, a continuous conductor extending along the railway-line and electrically connected to the
10 motor, and a source of energy and a traveling

contact on each train, whereby on the approach of the train within a predetermined distance the motor will be operated.

In testimony that I claim the foregoing as my own I have hereto affixed my signature 15 in the presence of two witnesses.

MILTON H. LOUDON.

Witnesses:

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