(No Model.)

C. THORNEWELL.

SWITCH OPERATING APPARATUS.

No. 568,815. Patented Oct. 6, 1896.

Fig. 1.

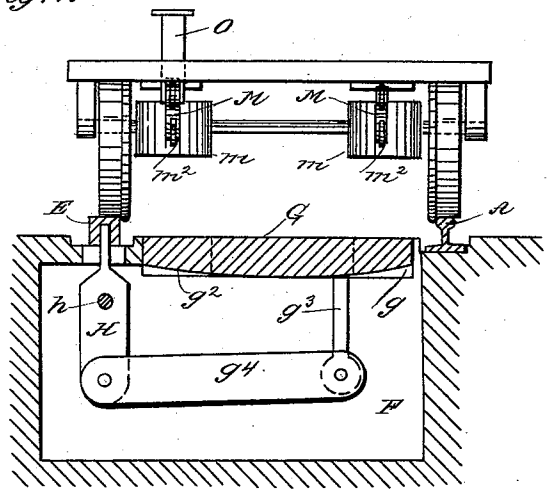


Fig. 2

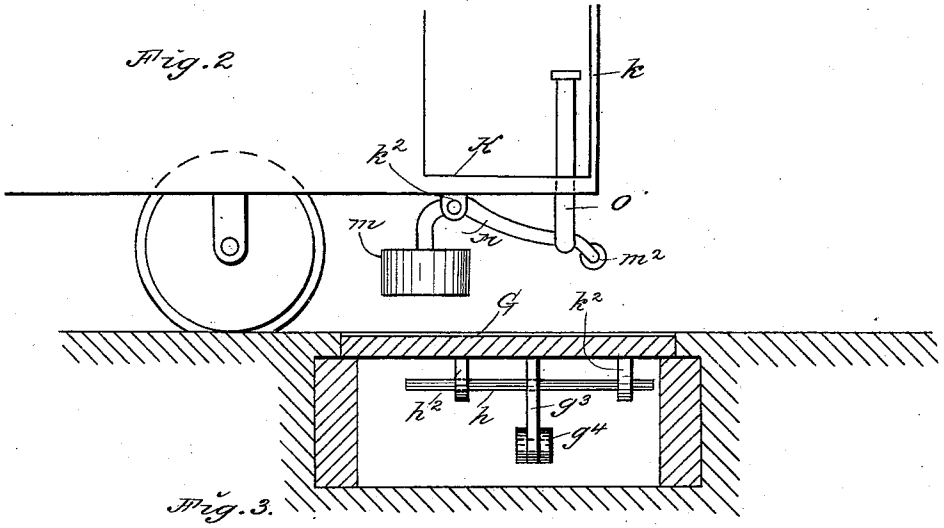
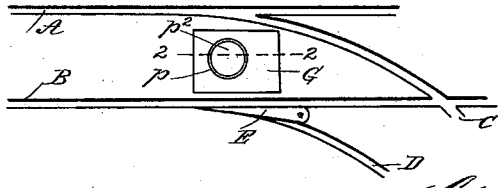


Fig. 3.



WITNESS:
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UNITED STATES PATENT OFFICE.

CHARLES THORNEWELL, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO ALFRED ABRAHAMS, OF SAME PLACE.

SWITCH-OPERATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 568,815, dated October 6, 1896.

Application filed April 16, 1896. Serial No. 587,748. (No model.)

To all whom it may concern:

Be it known that I, CHARLES THORNEWELL, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Switch-Operating Apparatus, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to railway-switches and means for operating the same; and the object thereof is to provide an improved switch-operating mechanism which is adapted to be operated from the platform of a car, a further object being to provide an apparatus of this class which is primarily adapted for use in connection with street-railway tracks and tramway-cars, though it may be connected with any kind or class of railways; and the invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a transverse section of a part of a railway-track, showing my improved switch-operating mechanism connected therewith, and showing also the end of a car with the device connected therewith for operating the switch-operating mechanism; Fig. 2, a side view of the end of the car and a section on the line 2 2 of Fig. 3, and Fig. 3 a plan view of a railway and switch provided with my improved switch-operating mechanism.

In the drawings forming part of this specification, reference being made to Fig. 3, A and B represent the main rails of a railway-track, and C and D the rails of a side track or switch, and E an ordinary switch plate or bar, and in the practice of my invention I provide a switch-operating mechanism which comprises a plate G, which is placed over a chamber F, which is suitably located beneath the rails of the track and beneath the switch plate or bar E. The plate G is supported at its opposite ends in rectangular slots g at each end thereof, and said plate is convex in cross-section on its under surface, as shown at g^2, and therefore adapted to rock on its end supports when pressure is applied to either side thereof from above.

Connected with the bottom of the plate G and at one side thereof is a depending rod or arm g^3, which is pivotally connected at its lower end with a transverse plate or bar g^4, one end of which is pivotally connected with a lever H, which is mounted on a rod h, which is supported by hangers h^2, which are secured to the top of the chamber F, or which may be supported in any desired manner, and the upper end of the lever H is connected with the switch plate or bar E, and if the plate G is rocked by applying pressure to either side thereof the switch bar or plate E will be operated so as to open and close the switch.

In my invention I connect with the platform K of a car, which is provided with the usual dashboard k, a suitable hanger or hangers k^2, to which is pivoted a crank-lever M, to the rear end of which is secured a weight m, and the front end of which is carried forwardly and downwardly and provided with a roller m^2, and pivotally connected with the front end of the lever M is a vertically-movable rod O, which passes upwardly through the platform of the car and is adapted to be operated therefrom. In practice I provide two of these devices, one of which is located at each side of the platform, and the vertically-movable rod O may be disconnected from one and connected with the other, if desired, or each lever may be provided with its own vertically-movable rod or bar.

The operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings.

All that is necessary to operate the switch or open or close the same is to depress the outer end of one of the levers M, so that the roller m^2 at the end thereof will come in contact with the adjacent side of the plate G, and this movement will open or close the switch, as may be desired, and the weight m on the lever M will return it to its normal position or to the position shown in Fig. 2.

This invention is simple in construction and operation and is perfectly adapted to accomplish the result for which it is intended, while being comparatively inexpensive, and it is evident that changes in and modifications of the construction herein described may be made without departing from the

spirit of my invention or sacrificing its advantages; and I reserve the right to make all such alterations therein and modifications thereof as fairly come within the scope of the invention.

The plate G is provided with a manhole p, which is provided with a cover p^2.

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

In a switch-operating apparatus of the character described, the combination with a switch-plate E, of a plate G placed over a chamber F, suitably located beneath the switch-plate, said plate being convex in cross-section on its under surface and being adapted to rock on its supports, a depending arm g^3 connected with said plate, a transverse plate g^4 pivotally connected with said arm g^3, a lever H pivotally connected with said plate g^4, a rod h on which said lever is mounted, said rod h being supported by hangers h^2, said lever H being connected with the switch-plate, hangers k^2 secured to the platform of the car, a weighted crank-lever carrying a roller m^2 and a vertically-movable rod connected with said crank-lever to operate the same, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 9th day of April, 1896.

CHARLES THORNEWELL.

Witnesses:

C. GERST,

C. G. MILLIN.