

(No Model.)

W. A. NEWTON.
AUTOMATIC SWITCH FOR RAILWAYS.

No. 576,605.

Patented Feb. 9, 1897.

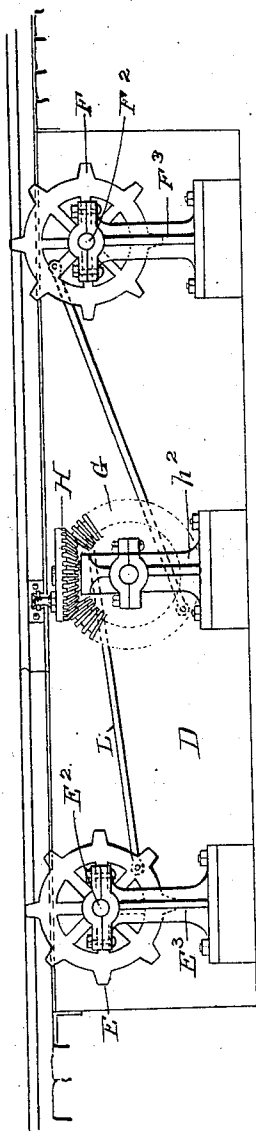


FIG. 1.

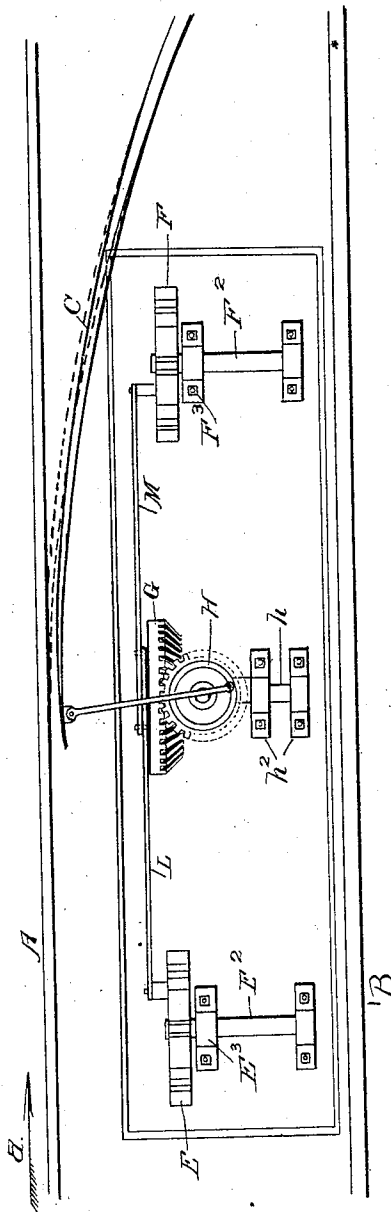


FIG. 2.

WITNESSES:

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WILLIAM A. NEWTON, OF CAMDEN, OHIO.

AUTOMATIC SWITCH FOR RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 576,605, dated February 9, 1897.

Application filed January 4, 1896. Serial No. 574,352. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. NEWTON, a citizen of the United States, and a resident of Camden, in the county of Preble and State of Ohio, have invented certain new and useful Improvements in Automatic Railway-Switches, 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 the object thereof is to provide an improved switch-operating mechanism which may be employed in connection with tramway-car tracks or on ordinary railways; and with this and other objects in view the invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a side view of my improved railway-switch-operating mechanism; and Fig. 2, a plan view thereof, showing the rails of the main track and the switch-plate or tongue of a side-track.

In the drawings forming part of this specification, A and B represent the rails of a main track, and C the switch-plate or tongue of a side-track, and in the practice of my invention I provide a switch-operating mechanism which is located in a chamber D below the track. This switch-operating mechanism consists of a sprocket-wheel E, which is suitably mounted at one end of said chamber on a shaft E², which is supported in standards E³, and in the opposite end of said chamber is a corresponding sprocket-wheel F, which is mounted on a shaft F², which is supported by standards F³, and adjacent to or opposite the free end of the switch-plate or tongue C is mounted a vertical beveled gear-wheel G, which operates in connection with a corresponding beveled gear-wheel H, which is mounted on a shaft h, supported by standards h².

The sprocket-wheels E and F and the vertical beveled gear-wheel G are preferably of the same diameter and the beveled gear-wheel H is half the diameter of the gear-

wheel G. The gear-wheel H is also preferably arranged in line with the bottom portion of the switch-plate or tongue, and pivotally connected with said plate or tongue, at the free end thereof, is a rod K, which is pivotally and eccentrically connected with the said wheel H, and pivotally and eccentrically connected with the sprocket-wheel E is a rod L, which is similarly connected with the gear-wheel G, and eccentrically connected with the sprocket-wheel F is a rod M, which is also similarly connected with the gear-wheel G.

The operation will be readily understood from the foregoing description, when taken in connection with the accompanying drawings, in view of the following statement:

It will be understood that a knocker or other device is connected with the car or engine or with the caboose of a railway-train for operating the switch mechanism, and if a car provided with such a device be passing on the main track in the direction of the arrow *a* and it is desired that said car should take the side-track the sprocket-wheel E is operated and turned in the forward direction, by means of which the gear-wheels G and H are operated and the switch is closed, so as to enable said car to take the side-track, and as the car proceeds along the side-track the sprocket-wheel F may be operated so as to open said switch in order that the next car may proceed on the main track, and this operation may, of course, be repeated whenever desired.

It will be apparent that the sprocket-wheel F may be omitted, if desired, in which event the sprocket-wheel E, the gear-wheels G and H, and the connected operative devices will serve to close the switch, so as to enable the car to take the side-track, after which the switch may be operated by hand in the usual manner; and it will also be apparent that the sprocket-wheel F may be arranged at any desired point, either along the side-track or the main track, and the connection between said sprocket-wheel and the gear-wheel G may be made in any desired manner, and this is also true, in a measure, of the sprocket-wheel E.

It will also be apparent that the means of connecting the sprocket-wheels E and F with the gear-wheel G may be changed or modified, and that the various connecting devices may be employed for this purpose, and that

said wheels may be connected by devices which will operate in a manner different from that herein described, and yet produce the desired result of opening and closing the switch.

5 My invention is not limited to the exact form of construction and combination of parts herein described, and I therefore reserve the right to make all such alterations therein and modifications thereof as fairly come within
10 the scope of the invention.

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

15 In a switch-operating mechanism, of the character described, the combination with the rails of the track of a sprocket-wheel E, mounted on a shaft E² supported in standards E³, another sprocket-wheel F mounted adjacent

to the sprocket-wheel E upon a shaft F² supported in standards F³, a beveled gear-wheel 20 G mounted adjacent to the free end of the switch-plate, a beveled gear-wheel H, a rod L, eccentrically connected with the wheel E, and with the gear-wheel G, and a rod M, eccentrically connected with the sprocket-wheel 25 F and with the gear-wheel G, all constructed and adapted to operate as set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 23d 30 day of December, 1895.

WILLIAM A. NEWTON.

Witnesses:

MURRAY L. PETERS,
AZEL PIERCE.