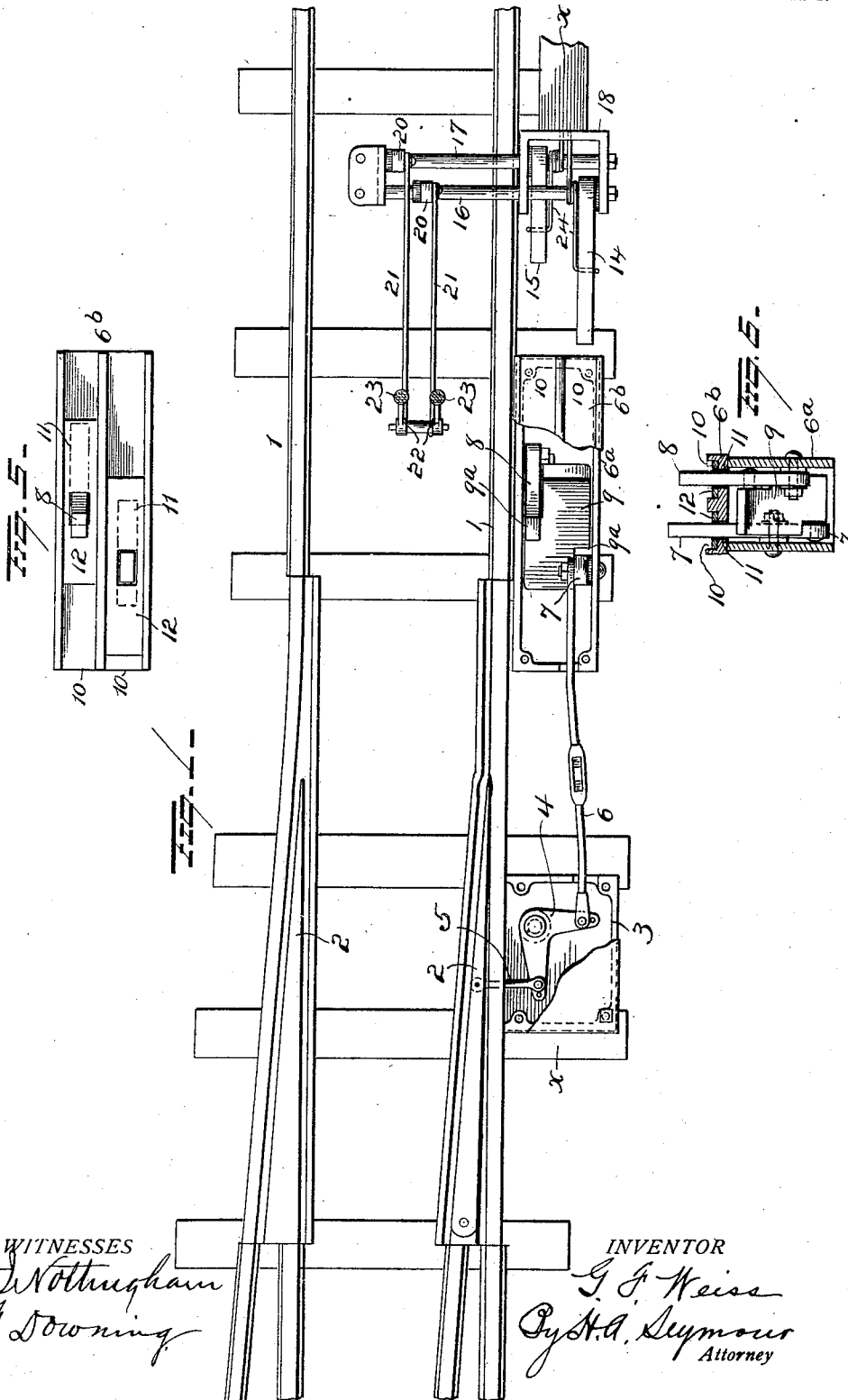


G. F. WEISS.
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APPLICATION FILED NOV. 16, 1908.

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Patented Sept. 7, 1909.

2 SHEETS—SHEET 1.



WITNESSES

E. Nottingham
G. J. Downing

INVENTOR

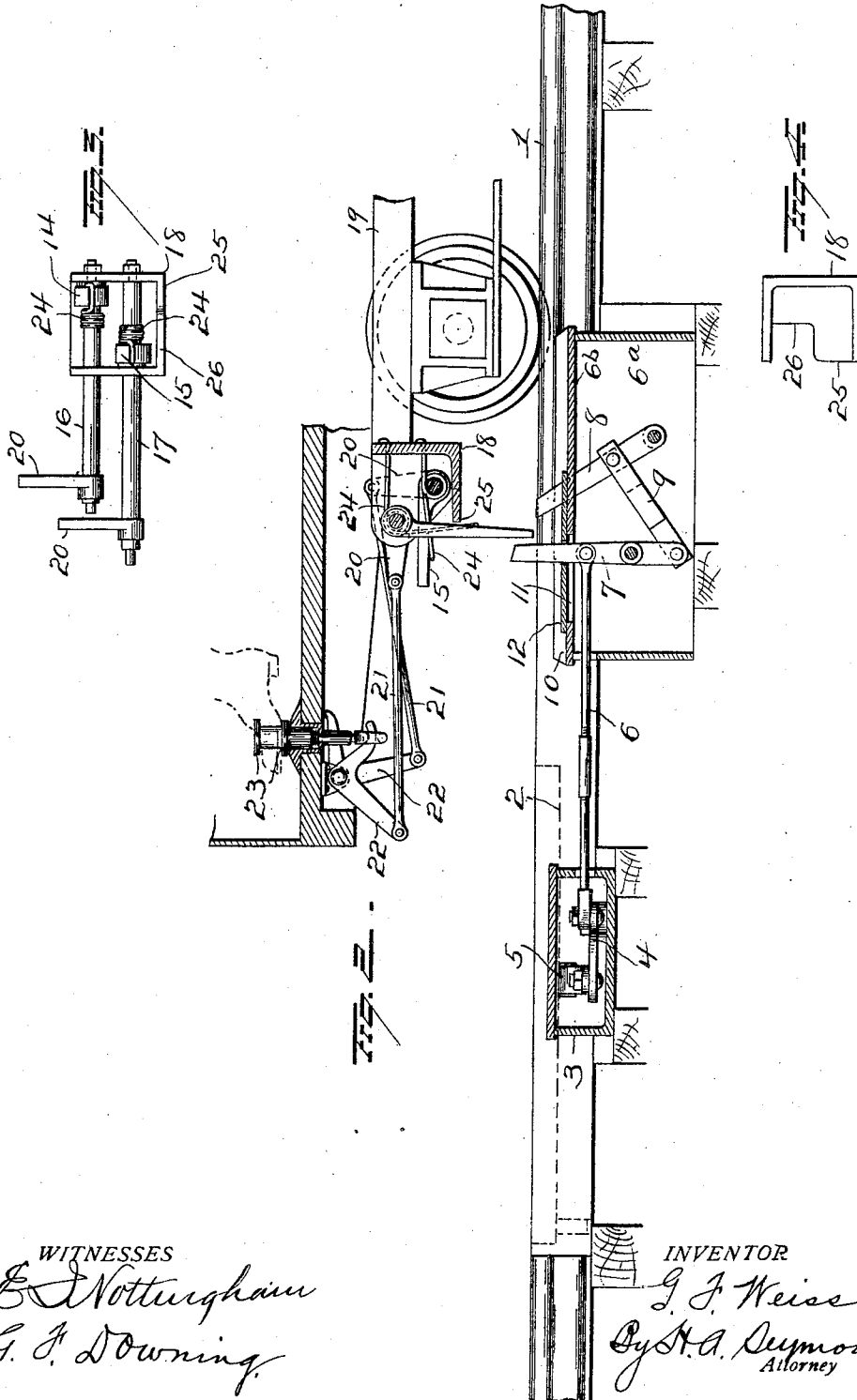
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UNITED STATES PATENT OFFICE.

GEORGE F. WEISS, OF MOBILE, ALABAMA, ASSIGNOR OF ONE-FOURTH TO E. H. BRITTON,
ONE-FOURTH TO W. A. RAMSEY, AND ONE-FOURTH TO V. P. GAINES.

RAILWAY-SWITCH DEVICE.

933,730.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed November 16, 1908. Serial No. 462,860.

To all whom it may concern:

Be it known that I, GEORGE F. WEISS, a resident of Mobile, in the county of Mobile and State of Alabama, have invented certain new and useful Improvements in Railway-Switch Devices; 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.

This invention relates to improvements in railway switch devices and more particularly to such as are adapted for use with street railways,—the object of the invention being to provide simple and efficient means for opening or closing a switch at the will of the motorman on the car without the necessity of stopping the car.

With this object in view the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view showing a railway switch and a portion of my improvements for operating the same. Fig. 2 is a longitudinal sectional view. Figs. 3 and 4 are views illustrating the construction and arrangement of the devices carried by the car for controlling the operation of the switch, and Figs. 5 and 6 are detail views.

1, 1, represent the main rails of a track and 2 the pivoted switch rail of a siding or turnout. Located adjacent to one of the main rails is a box or casing 3 which incloses a bell-crank lever 4 having one of its arms connected with the switch rail by means of a rod 5. To the other arm of the bell-crank lever 4 one end of a rod 6 is pivotally attached and this rod projects through an opening in the end of the box or casing 3 and enters another box or casing 6^a located near the track. Within the box or casing 6^a a lever 7 is supported intermediate of its ends and to this lever, the rod 5 is pivotally attached at a point above the pivotal support of said lever. Another lever 8 is pivoted at its lower end within the box or casing 6^a. A diagonally disposed link 9 is pivotally attached to the lever 7 below the pivotal support of the latter, and at the other end said link is pivoted to the lever 8 approximately the same distance from the pivotal support of the latter as is the connection of the lower

end of said link from the pivotal support of the lever 7. From this construction it will be seen that when the lever 7 is moved in one direction it will operate to throw the pivoted switch rail and also to move the lever 9 in the reverse direction. When the lever 8 shall be moved to return it to its original position, motion will be transmitted through the link 9, lever 7, rod 6, bell-crank 4 and rod 5 to return the switch to its original position. The levers 7 and 8 are out of line with each other and are adapted to be operated by shoes carried by the car. Assuming the switch to be set to permit the car to run on the main track and the motorman desires to run on the siding, he will operate one of the shoes on the car so that it will engage the lever 8 and thus effect the shifting of the switch rail. If it is desired that the next car shall run on the main track, its motorman will operate another shoe so that it will engage the lever 7 and thus shift the switch rail to its original position and also cause the lever 8 to assume its original position. Such simultaneous movement of the levers 7 and 8 will be effected by the link 9 and this link (which is disposed in a plane between the two levers) is made with shoulders 9^a which act as stops to limit the movements of the levers.

The cover 6^b of the casing 6^a is made with grooves 10 and with slots 11 in the bottoms of said grooves for the passage of the levers 7 and 8. The levers 7 and 8 also pass through slides 12 which are movable in the grooves 10 and serve to prevent the entrance of dirt etc., through the slots 11 into the casing. When one of the levers shall have been moved by a shoe on the car to shift the switch rail, the upper end of such lever will become disposed approximately flush with the upper face of the adjacent slides and thus the shoe will be permitted to move past the lever.

The covers of the boxings or casings may be made removable to afford access to the operating parts for cleaning and repairs, and suitable guides may be provided to prevent vertical displacement of the slides 12.

The shoes 14—15 (hereinbefore alluded to) are carried by shafts 16—17 mounted in a suitable bracket 18 secured to the truck frame 19 of the car. The shoes are disposed in different planes so that one will always be used to operate the lever 7 of the

track devices and the other of said shoes will always be used to operate the lever 8 of said track devices. Each shoe shaft is provided with an arm 20 and each arm is connected by means of a rod with one arm of a bell-crank lever 22 mounted under the platform of the car. Two foot pieces or treadles 23 are located in position to be operated by the motorman and are connected respectively with the bell-crank levers. 22. Springs 24 are coiled on the shafts 14—15, one end of each of said springs being secured to the bracket 18 and the other end bearing against one of the shoes to hold the latter sufficiently elevated. It is apparent that either of the shoes may be depressed or lowered by the motorman when he desires to operate the track devices for opening or closing the switch and that when the switch 20 has been passed by the car and the motorman removes his foot from the treadle, the shoe will be raised to its normal position by the action of spring 24. When the shoes are lowered, they will engage stops 25—26 afforded by the bracket 18.

Various slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope.

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

1. In railway switch mechanism, the combination with a pivoted switch rail and a bell-crank lever having one of its arms connected therewith, of a rod connected with the other arm of said bell crank, two levers located in parallel planes and adapted to be moved by devices carried by a car, one of said levers pivotally supported between its ends and connected above its pivotal support with said rod, and a link connected at one end with said last mentioned lever and connected at its other end with the other lever.

2. In railway switch mechanism, the combination with a pivoted switch rail, a bell crank lever having one of its arms connected with said switch rail, and a rod connected

with the other arm of said bell-crank lever, of two operating levers located in parallel planes at one side of the track and adapted to be actuated by devices carried by a car, one of said operating levers being pivotally supported between its ends and connected above its pivotal support with said rod, the other operating lever pivotally supported adjacent to its lower end and a link between said operating levers, said link being attached to one of said operating levers below the pivotal support thereof and to the other operating lever above its pivotal support.

3. In railway switch mechanism, the combination with a pivoted switch rail, of two operating levers adapted to be actuated by devices on a car, one of said operating levers being pivotally supported between its ends, the other operating lever being pivotally supported adjacent to its lower end, a link connected with the first mentioned operating lever below its pivotal support and with the other operating lever above the pivotal support thereof, said link having shoulders to be engaged by the operating levers, and connections between one of said operating levers and the switch rail.

4. In railway switch mechanism, the combination with a pivoted switch rail, of a box or casing, upright levers mounted in said box or casing and projecting above said box or casing, devices connecting said operating levers with the switch rail, the top of the box or casing having slots for the passage of the upper ends of said operating levers, the top of the casing also having parallel grooves slides movable in said grooves for covering the slots and having openings through which the operating levers pass, shoes carried by a car for actuating said operating levers, and means for controlling the positions of said shoes.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GEORGE F. WEISS.

Witnesses:

ROBERT E. GORDON,
W. A. RAMSEY.