(No Model.)

R. C. HART & R. S. FIELD.

RAILWAY SWITCH.

No. 578,924. Patented Mar. 16, 1897.

Fig. 1.

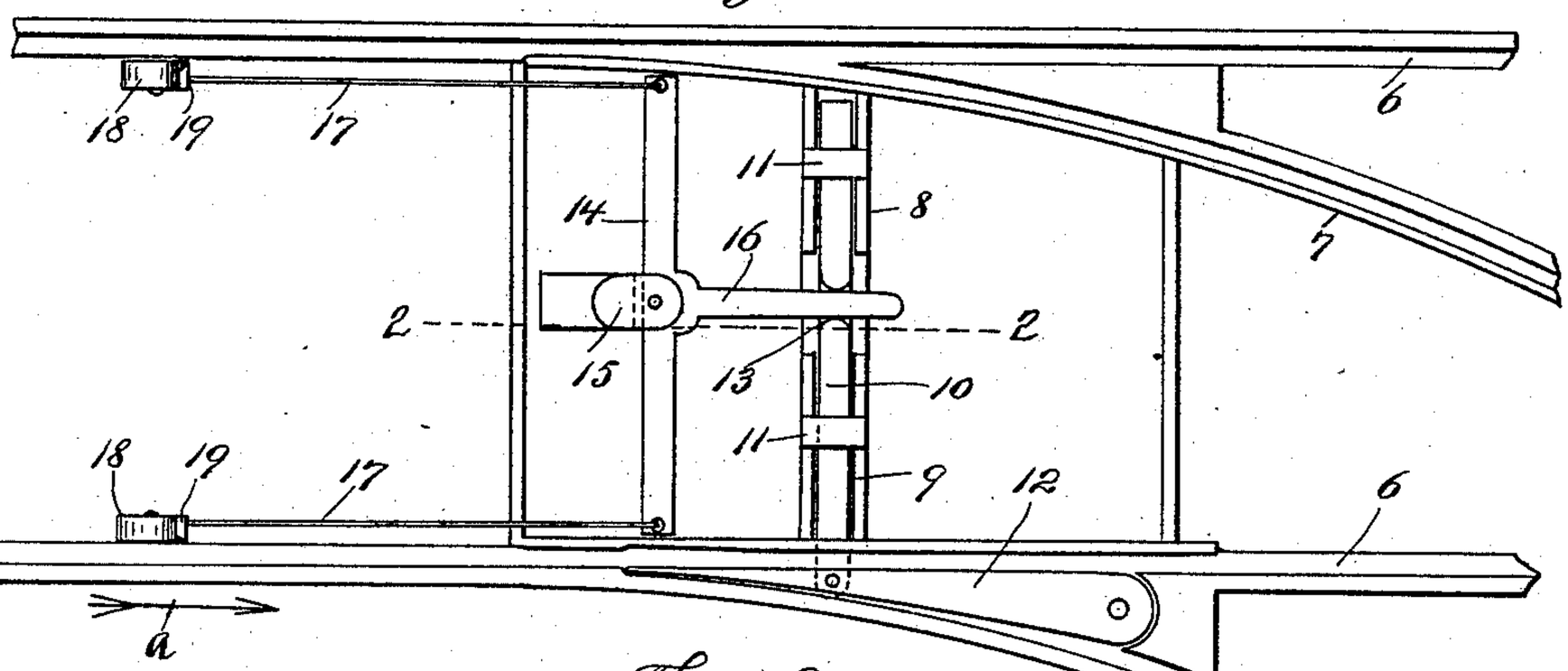


Fig. 2.

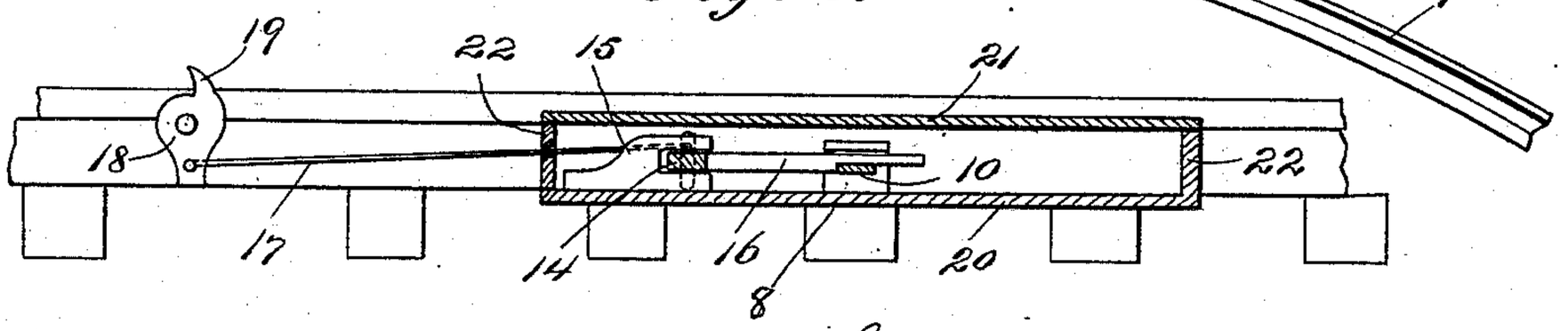
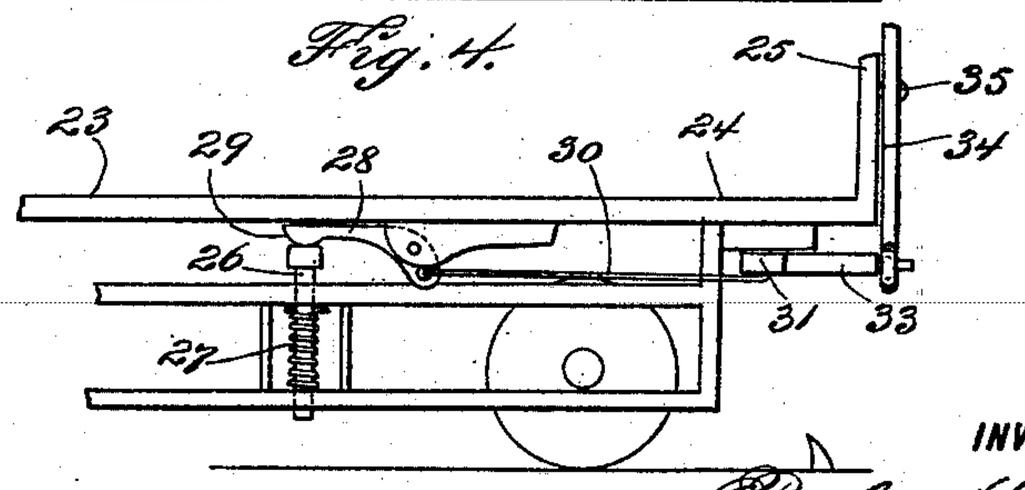


Fig. 3.

Fig. 5.

Fig. 4.



WITNESSES

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ROBERT C. HART, OF NEW HAVEN, CONNECTICUT, AND ROBERT S. FIELD, OF BROOKLYN, NEW YORK.

RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 578,924, dated March 16, 1897.

Application filed September 26, 1896. Serial No. 607,062. (No model.)

To all whom it may concern:

Be it known that we, ROBERT C. HART, a resident of New Haven, in the county of New Haven, State of Connecticut, and ROBERT S. FIELD, a resident of Brooklyn, county of Kings, State of New York, citizens of the United States, have invented certain new and useful Improvements in Railway-Switches, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar numerals of reference indicate corresponding parts wherever found throughout the several views.

This invention relates to railway-switch-operating devices; and the object thereof is to provide improved devices of this class which are adapted to be operated by improved mechanism connected with a car, a further object being to provide an improved switch-operating device for tramway-cars and improved devices which are connected with the bottom of the car and the platform thereof for operating the same.

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

Figure 1 is a plan view of a section of a railway-track, showing also a section of a side-track, a switch, and means for operating the same; Fig. 2, a sectional side view, the section being taken on the line 2 2 of Fig. 1; Fig. 3, a bottom plan view of one end of a car and the platform thereof, showing the switch-operating devices connected therewith; Fig. 4, a side view thereof; and Fig. 5, a front view of the dashboard, showing a lever which forms a part of the switch-operating devices.

In the drawings forming part of this specification we have shown at 6 the rails of a main railway-track and at 7 the rails of a side-track, and in the practice of our invention we place between the rails of the main track a cross-head 8, which is provided in its upper side with a longitudinal groove 9, in which is placed a sliding bar 10, which is held in place by cross-plates 11, and one end of the sliding bar 9 is pivotally connected with a switch-tongue 12, and said sliding bar is provided at about the middle thereof with a transverse groove 13, the side walls of which are rounded at the corners, as shown in Fig. 1. We also employ a lever 14, which is pivoted in a suitable support 15, and which is provided centrally thereof with an arm 16, which projects at right angles thereto and the end of which passes through the transverse groove 13 in the bar 10, and connected with each end of the lever 14 is a rod 17, which extends backwardly along the track to a predetermined point, where each of said rods is pivotally connected with a dog 18, which is pivotally connected with the inner side of each of the rails 6 or any other suitable support, and each of said dogs is provided with an upwardly-directed prong or projection 19.

The cross-head 8, the sliding bar 10, the lever 14, and the parts connected therewith are all preferably inclosed in a suitable box or casing, as shown in Fig. 2, consisting of a bottom 20, a top plate 21, and end plates 22, and we also connect with the bottom of a car operating devices, which are adapted to operate in connection with the dogs 18 to open and close the switch, and these devices are shown in Figs. 3 to 5, inclusive, and will now be described.

In Fig. 3 we have shown the bottom of one end of a car, and in Fig. 4 a side view thereof, the bottom being designated by the reference-numeral 23, and being also provided with a platform 24 and the dashboard 25, and mounted at the opposite sides of the truck-frame, and preferably between the axles, are vertically-movable bolts 26, which are held in their highest position by springs 27, and pivoted in front of each of said bolts is a lever 28, the rear ends of which bear on the heads of said bolts, as shown at 29, and the front ends of which are projected downwardly, and connected with the downwardly-projecting front ends of each of said levers is a rod 30, the outer ends of which are connected with the ends of a lever 31, which is pivotally supported at 32 beneath the platform of the car, and which is provided centrally with an outwardly-directed arm 33, with which is pivotally connected a lever 34, which projects upwardly in front of the dashboard, and which is pivotally connected with said dashboard at 35.

By moving the upper end of the lever 34

transversely of the dashboard either of the bolts 26 may be depressed, as will be readily understood, the bolt depressed depending upon the direction in which the lever 34 is moved, and the operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof.

If a car be moving along the main track in the direction of the arrow *a* and it is desired to take the side-track, all that is necessary is to operate the lever 34 so as to depress the bolt 26 on the left-hand side of the car, which operation will draw the switch-tongue 12, or the free end thereof, to the left, and the switch will thus be opened, so as to enable the car to take the side-track, and if the switch be set to the siding as the car approaches and it is necessary or desirable for the car to remain on the main track the lever 34 is operated so as to depress the bolt 26 on the right-hand side of the car, which operation will throw the switch-tongue in the position shown in Fig. 1, and the car may proceed on the main track.

This device is simple in construction and operation and perfectly adapted to accomplish the result for which it is intended, and it is evident that changes in and modifications of the construction herein described may be made without departing from the spirit of our invention or sacrificing its advantages.

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

1. A railway-switch consisting of a main track a side-track adjacent thereto, a cross-head between said main track having in the upper portion a longitudinally-extending groove, a sliding bar actuating therein, cross-plates securing said bar in position, a switch-tongue pivotally connected with said sliding bar, said bar being provided midway thereof with a transverse groove having rounded side walls, a lever pivotally connected with a support, an arm secured centrally thereto and extending at right angles therefrom and passing through the said transverse groove, a rod secured to each end of said lever extending backwardly along the track a predetermined distance, a dog pivotally secured to each end of said rod, an upwardly-directed prong or projection secured to the free end of each of said dogs, a box or casing inclosing said cross-head and connecting parts and operating devices secured in the bottom of a car and adapted to act upon said switch mechanism, said parts being combined substantially as and for the purpose described.

2. An automatic railway-switch, a main track, a side-track adjacent thereto, a cross-head between said main rails a sliding bar secured in the upper portion of said cross-head, a switch-tongue pivotally engaging said bar, said bar being provided midway with a transversely-extending groove, a lever pivotally supported, an arm secured centrally thereto, a rod secured to either end of said lever and extending backwardly a predetermined distance along the track, a dog secured to the outer end of each of said rods, an upwardly-directed prong or projection in connection with each of said dogs, a casing engaging said operating parts, a car having on the bottom thereof a platform, a dashboard adjacent thereto vertically-movable bolts connected with said car between said axle, springs operating on said bolts, a lever pivoted in front of said bolts and engaging the same at their rear ends rods engaging the front ends of each lever, a second lever pivotally secured below the said platform and engaging the free end of said rod, an outwardly-directed arm engaging said last lever and means for actuating the same, all of said parts being combined substantially as and for the purpose described.

In testimony that we claim the foregoing as our invention we have signed our names, in presence of the subscribing witnesses, this 21st day of September, 1896.

ROBERT C. HART.
ROBERT S. FIELD.

Witnesses:
CHARLES S. ROGERS,
M. A. KNOWLES.