

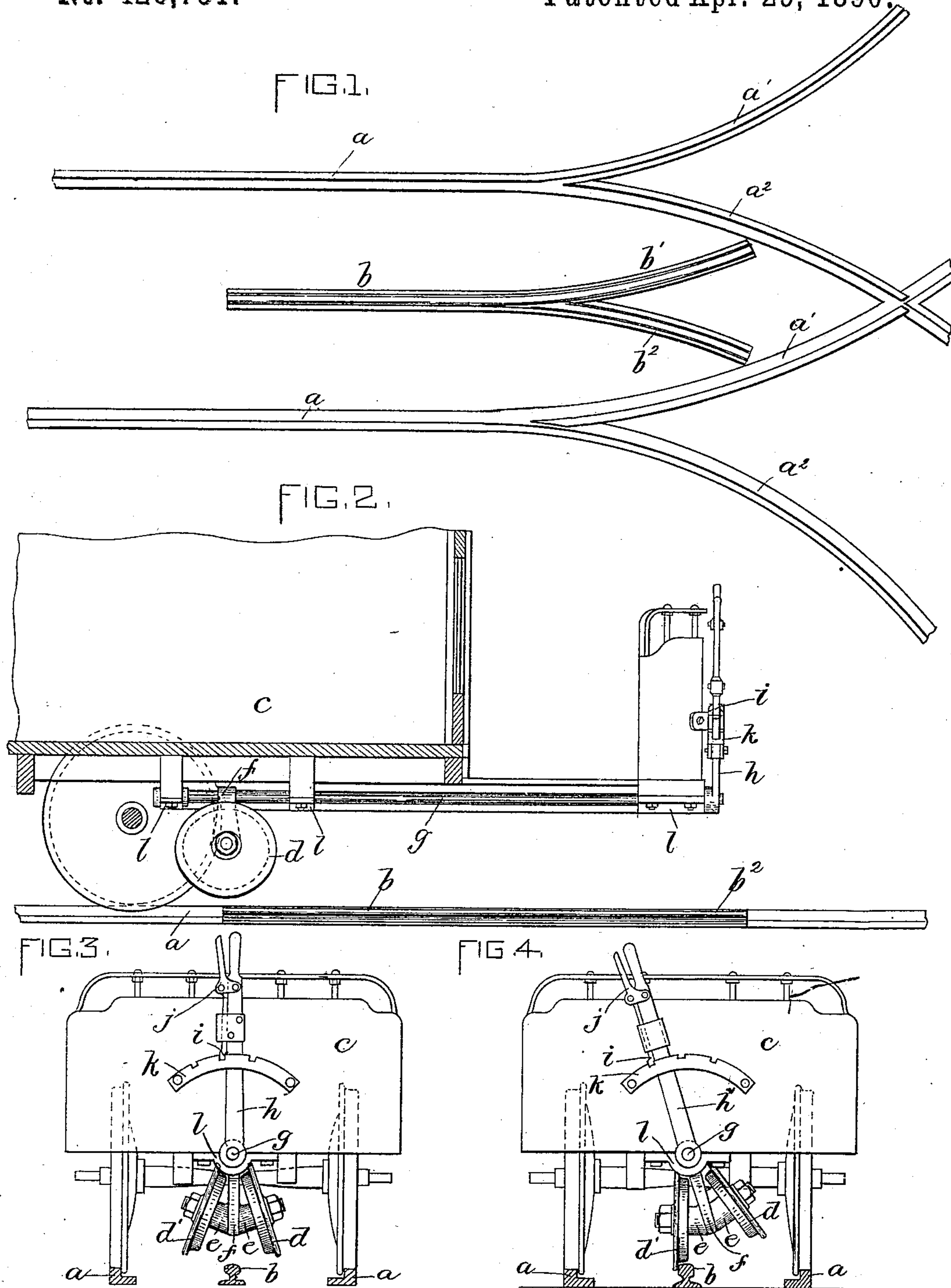
(No Model.)

A. E. APPLEYARD.

MEANS FOR SWITCHING OR GUIDING RAILWAY CARS.

No. 426,751.

Patented Apr. 29, 1890.



WITNESSES:  
H. Brown  
W. C. Ramsay.

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by Wright & Brown, Attys.



# UNITED STATES PATENT OFFICE.

ARTHUR E. APPELYARD, OF BOSTON, ASSIGNOR OF ONE-HALF TO H. L. MILLIS  
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## MEANS FOR SWITCHING OR GUIDING RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 426,751, dated April 29, 1890.

Application filed December 30, 1889. Serial No. 335,461. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR E. APPELYARD, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Means for Switching or Guiding Railway-Cars, of which the following is a specification.

This invention relates to appliances attached to a street-car adapted to be adjusted by the driver, so as to act upon a fixed guide-rail on the road-bed or track and divert the car from the main track onto a branch track by giving it a side pressure.

The invention consists in the improved appliances, hereinafter described, for exerting side pressure on a fixed guiding-rail, said appliances being attached to the car and adapted to be operated by the driver.

Of the accompanying drawings forming a part of this specification, Figure 1 represents a plan of a portion of a railway-track, showing a supplemental guiding-rail located between the usual track-rails. Fig. 2 represents a longitudinal section of a car, showing a supplemental guiding-wheel and operating devices therefor embodying my invention. Figs. 3 and 4 represent end views of the devices shown in Fig. 2.

The same letters of reference indicate the same parts in all of the figures.

In the drawings,  $a$   $a$  represent the main-track rails.

$a'$   $a'$  represent a branch from the main track in one direction, and  $a^2$   $a^2$  represent a branch from the main track in the opposite direction.

$b$  represents the supplemental rail, which has two curved sides  $b'$   $b^2$ , the former being parallel with the curved branch rails  $a'$ , while the latter  $b^2$  is parallel with the curved branch rails  $a^2$ .

$d$  and  $d'$  represent two flanged supplemental guiding-wheels mounted upon short studs attached to a lever  $f$ , which is affixed to and projects downwardly from a rock-shaft  $g$ , extending longitudinally of the car, said shaft being journaled in bearings  $l$   $l$  on the bottom of the car. The wheels  $d$   $d'$  are located at opposite sides of the lever  $f$ , and are arranged obliquely to each other, as shown

in Figs. 3 and 4, the arrangement being such that when the rock-shaft  $g$  is turned to one position the wheel  $d$  will bear upon one edge of the guiding-rail  $b$ , and when the rock-shaft has turned to another position the wheels  $d'$  will bear against the opposite edge of said guide-rail. When the rock-shaft is an intermediate position, neither wheel will bear upon the guide-rail, both being separated from said rail, as shown in Fig. 3. To the rock-shaft  $g$  is attached a lever  $h$ , which extends upwardly at the front of the platform of the car, and is provided with a locking-bolt  $i$ , adapted to engage notches in a segment-bar  $k$ , affixed to the platform or fender of the car, the lever  $h$  having a handle  $j$  connected with the latch  $i$ , whereby the latter may be withdrawn from its engagement with the segment-bar  $k$ . The segment-bar is formed to hold the lever  $h$  and the rock-shaft  $g$  in either of the positions above described—that is to say, with either wheel in contact with the guide-rail, or with both wheels separated from the guide-rail. The wheels  $d$   $d'$  have flanges, as shown in Figs. 3 and 4, and when either wheel is pressed against the guide-rail its flange bearing against one side of said rail will enable the curved portion of the guide-rail to guide the car laterally onto either of the branch tracks, as will be readily seen, so that the driver may switch the car onto either branch by bringing one wheel or the other to a bearing on the guide-rail, accordingly as the car is to pass upon one branch or the other.

It is obvious that in case the track has but one curved branch the guide-rail would have but one curved side. For example, if only the curved branch rails  $a'$   $a'$  are employed and a straight continuation of the rails  $a'$   $a'$  takes the place of the curved rails  $a^2$   $a^2$ , (shown in Fig. 1,) the curved side  $b^2$  of the supplemental guiding-rail will be omitted.

It will be seen that by the above-described appliances the operator is enabled to switch the car by lateral pressure exerted upon the car by the engagement of a movable wheel upon the car with a curved guiding-rail.

It will be observed that the track is composed of fixed rails without movable switches, and that the branches  $a'$   $a'$  and  $a^2$   $a^2$  are con-



tinuously open, so that lateral pressure on the car in one direction will switch it onto the rails  $a' a'$  and pressure in the opposite direction will switch it onto the rails  $a^2 a^2$ .

5 I may in some cases arrange the operating devices so that they can be worked by the conductor or other attendant on the rear platform, thus relieving the driver of the responsibility.

10 I claim—

1. The combination, with a car, of a rock-shaft journaled in bearings under the car, a downwardly-projecting arm attached to said shaft, flanged rollers  $d d'$ , mounted on studs  
15 at opposite sides of said arm, and means for turning said shaft in its bearings to bring said rollers to different lateral positions, as set forth.

2. The combination, with a car, of a rock-  
20 shaft journaled in bearings under the car, a downwardly-projecting arm attached to said shaft, flanged rollers  $d d'$ , mounted on studs

at opposite sides of said arm, means for turning said shaft in its bearings to bring said rollers to different lateral positions, and means  
25 for locking said shaft and rollers in different positions, as set forth.

3. The combination, with a car, of a rock-shaft journaled in bearings under the car, a downwardly-projecting arm attached to said  
30 shaft, flanged rollers  $d d'$ , mounted on studs at opposite sides of said arm, a lever attached to the shaft at the end of the car, whereby the shaft may be turned to adjust the rollers laterally, and locking devices for said lever, as  
35 set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 20th day of December, A. D. 1889.

ARTHUR E. APPELYARD.

Witnesses:

C. F. BROWN,  
W. C. RAMSAY.