

(No Model.)

3 Sheets—Sheet 1.

J. R. POTTER.
SWITCH FOR STREET CARS.

No. 426,211.

Patented Apr. 22, 1890.

Fig. 1

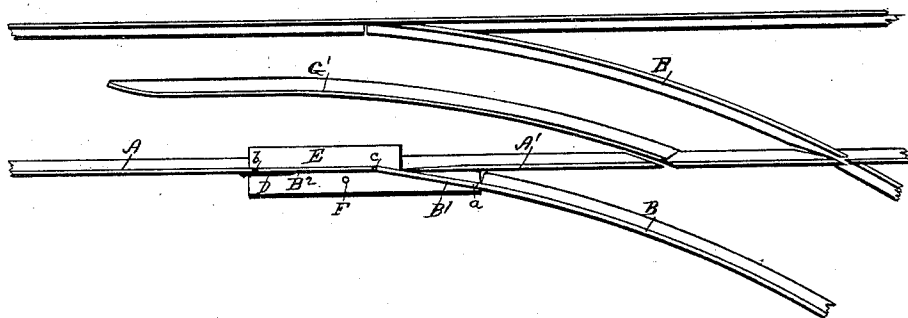


Fig. 2

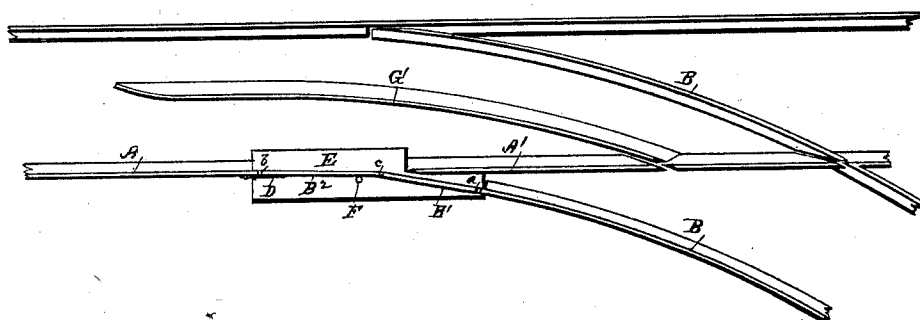


Fig. 3

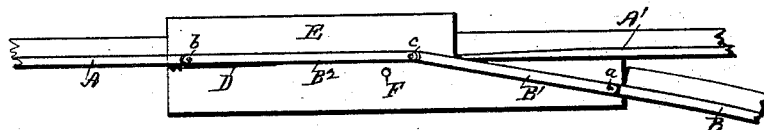
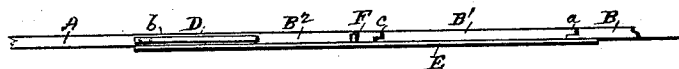


Fig. 4



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Herbert Wilford

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per S. Schofield
Attorney

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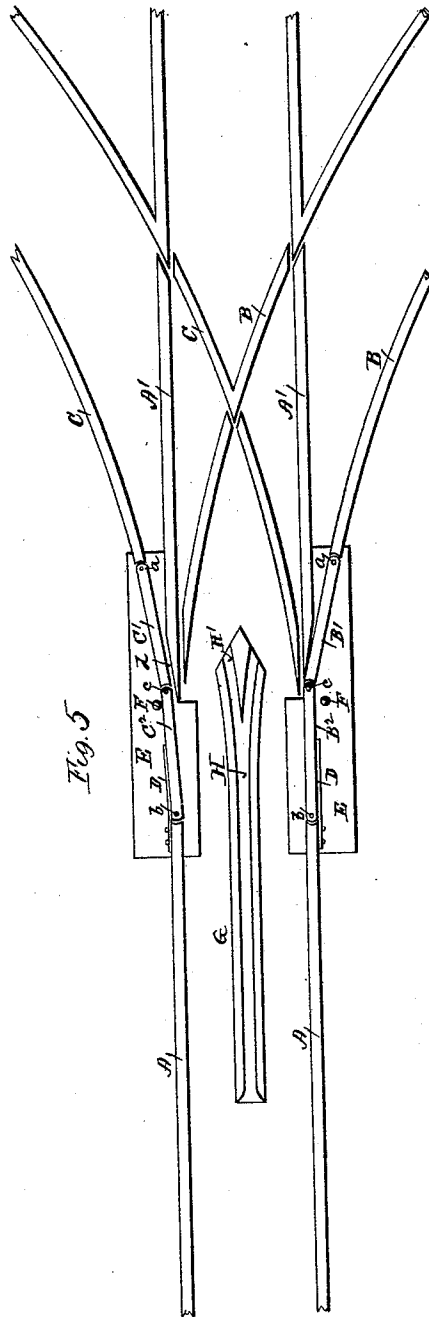


Fig. 5

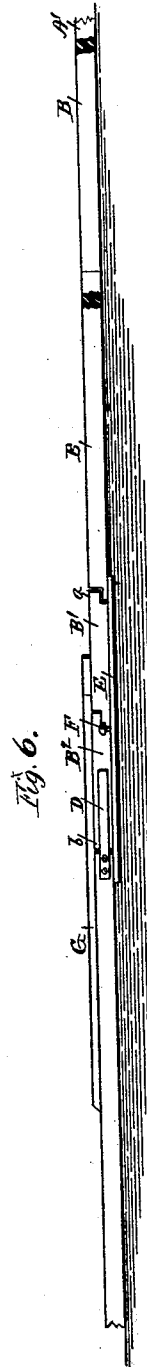


Fig. 6

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Fig. 7.

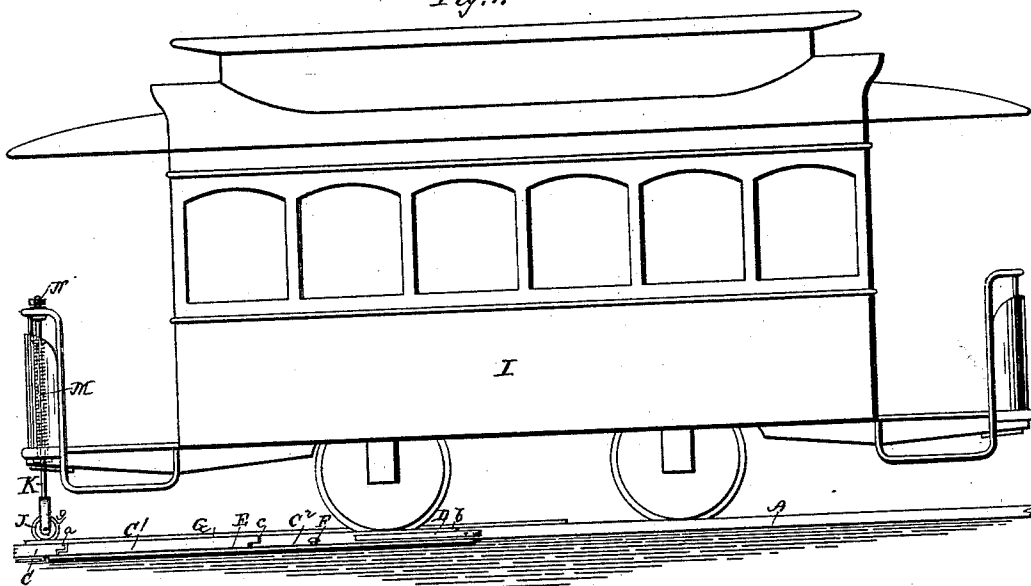
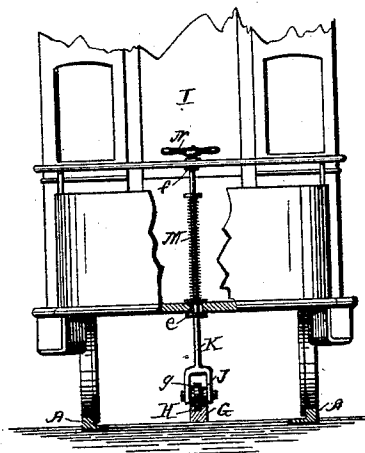


Fig. 8.



Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES R. POTTER, OF PROVIDENCE, RHODE ISLAND.

SWITCH FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 426,211, dated April 22, 1890.

Application filed July 8, 1889. Serial No. 316,893. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. POTTER, a citizen of the United States, residing at Providence, in the State of Rhode Island, have invented a new and useful Improvement in Switches for Street-Cars, of which the following is a specification.

My invention consists in the employment, with jointed rail-bars, of a fixed guide between the rails and a guiding-roller upon the car, said roller being adapted for engagement with the fixed guide, as hereinafter fully set forth.

Figure 1 represents a plan view of a railway-car track provided with my improved switch, the switch being closed for running on the main track. Fig. 2 represents a plan view of the same with the switch open for running from the main to the side track. Fig. 3 is an enlarged plan view of the laterally-moving jointed rail-bars of the switch and the plate for supporting the same. Fig. 4 is a side elevation of the jointed rail-bars and the track. Fig. 5 represents a plan view of a track having switches to oppositely-turned side tracks. Fig. 6 represents a side elevation of the tracks and switch. Fig. 7 represents a side elevation of a street-car passing over my improved switch, the direction of the side track being opposite to those shown in Figs. 1 and 5. Fig. 8 represents a detail forward elevation of the car and a section of the track, a portion of the fender and the platform of the car being broken away.

In the accompanying drawings, Figs. 1 and 2, A and A' represent the rails of the main track at opposite sides of the switch, and B B the turn-out rails of the side track, and the rails A and B at the inner side of the curve of the side track are connected by means of the jointed rail-bars B' and B², which are jointed to each other at the point c, the rail-bar B' being jointed to the rail B at the point a and the rail-bar B² jointed to the rail A at the point b, the rail-bars B' and B² being also supported for lateral movement upon the flat plate E, the pin F, inserted into the plate E, serving to limit the outward movement of the said bars, as shown in Fig. 2, and the spring D, attached to the outer side of the rail A, serving to force the rail-bars B' and B² inward, so that the rail-bar B' will rest against

the end of the rail A', the switch being thus closed.

Fig. 5 shows a main track with the switches to opposite side tracks, in which A A A' A' represent the rails of the main track, B B the turn-out rails of the track leading in one direction, and C C the turn-out rails of the track leading in the other direction. The rails B and C, which form the inner curve of the turn-out tracks, are connected with the rails A A of the main track by means of the toggle-jointed rail-bars B' B² and C' C², respectively, the rail-bars B' C' being pivoted to the rails B and C, respectively, at the points a a, and the rail-bars B² C² being pivoted to the rails A A at the points b b, the rail-bars B' B² and C' C² being loosely connected to each other at the points c c.

At the outer sides of the rail-bars B' and C' are placed the springs D D, which are secured to the outer sides of the rails A A, and upon the metal plates E E, which support the rail-bars B' B² and C' C², are placed the pins F F, which serve to limit the outward movement of the rail-bars B' B² and C' C², the rail-bar C² being shown in Fig. 1 as resting against the pin F, so that the space d will be left between the rail-bar C² and the beveled end of the rail A' for the passage of the flange of the car-wheel, so that the car can pass from the track A A A' A' onto the side track C C. The rail-bar B' is shown in Fig. 5 as resting against the beveled end of the rail A', and the rail-bar B² is at a slight distance from the pin F, the rail-bars B' and B² being held in the said position by the action of the spring D, and the same will be the position of the rail-bars C' C², except when forced from said position by the lateral movement of the car-wheels.

Centrally of the track A A A' A' is placed the fixed guide G, provided with the bifurcated groove H, and upon the forward end of the car I is placed the guide-roller J, the said guide-roller being held at the lower end of the rod K, which slides vertically in the bearings e and f, and which is held in an elevated position by means of the spiral spring M.

To the upper end of the rod K is attached the handle N, by means of which the rod K can be forced downward against the upward action of the spring M, so that the flange g of

the roller J will enter the groove H, and upon the release of the handle N the spring M will cause the flange *g* of the roller to be raised above the level of the groove H.

5 In addition to the vertical movement of the rod K and its attached roller J, the rod is also made capable of a limited angular movement about its axis, in order that the plane of the roller J may be varied toward the side track
10 over which the car is to pass from the main line.

In operating, to switch the car from the main line A A' A' A' onto the side track C C, the horses can be guided to one side, so that
15 the lateral pull will bring the forward wheel of the car against the inner side of the rail-bar C², thus forcing the said bar C² outwardly against the pin F and opening a space *d* for the flange of the forward wheel between the
20 rail-bar C' and the beveled end of the rail A', as shown in Fig. 5, and then the car will pass from the main track A A' A' A' onto the side track C C; or, instead of guiding the horses to one side, so as to draw the car-wheel against
25 the rail C², the driver can force the guide-roller J downward by taking hold of the handle N, so that the flange *g* of the roller will enter the groove H of the fixed guide G, and then by turning the rod K slightly by means
30 of the said handle N the flange *g* of the roller will be caused to enter the branch groove H', and thus cause the forward wheel of the car to be turned toward the rail-bar C² to open

the passage *d* between the rail C' and the beveled end of the rail A' for the passage of the
35 car-wheel, as before.

For a single turn-out track from the main line, a centrally-arranged guide-bar G', as shown in Fig. 1, may take the place of a
40 grooved bar G, as shown in Fig. 5, the flange of the roller J pressing against the side of the guide-bar to cause the car to turn to the side track.

The movable guiding-roller and the fixed guide for operating upon the same, in combination with the jointed rail-bars, is also adapted to guide street-cars driven by electricity
45 or other power, and constitutes a valuable improvement in car-switching devices.

When the wheel of the car is running over
50 the plate E, the car may be supported by the flange of the wheel bearing upon the said plate, so that the rail-bars will be free to move.

I claim as my invention—

The combination, with a railway-switch
55 having the rails of the main and side tracks at the inner side of the curve connected by means of the laterally-moving jointed rail-bars, of the fixed guide between the rails, and a railway-car provided with a guide-roller
60 adapted for engagement with the fixed guide, substantially as and for the purpose specified.

JAMES R. POTTER.

Witnesses:

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JOHN S. LYNCH.