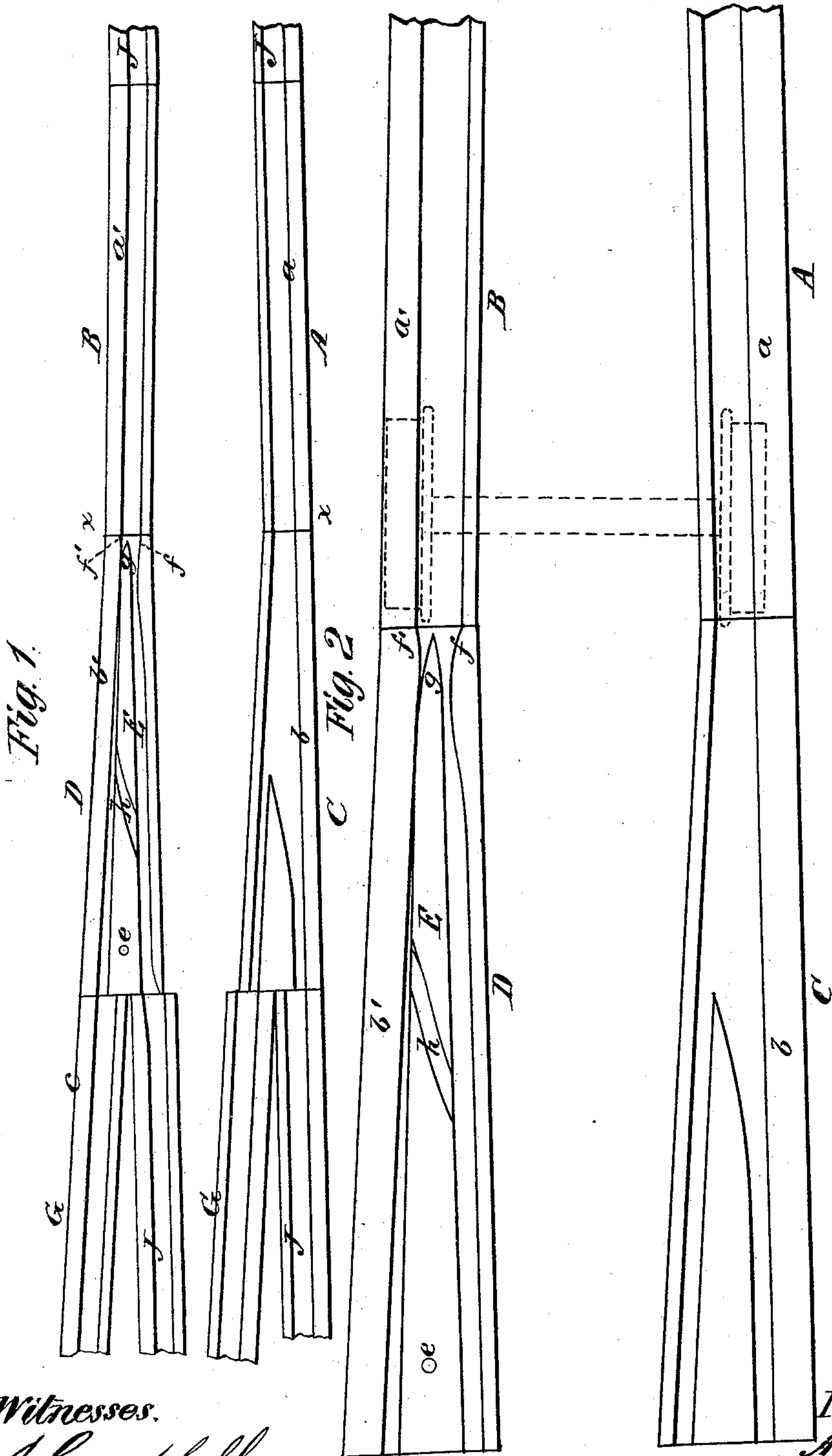


A. WHITTEMORE.  
Street-Railway Switch.

No. 222,617.

Patented Dec. 16, 1879.



Witnesses.

J. Campbell

Willes Conner

Inventor

Amos Whittemore  
By Atty. R. J. Campbell

# UNITED STATES PATENT OFFICE.

AMOS WHITTEMORE, OF CAMBRIDGEPORT, MASSACHUSETTS.

## IMPROVEMENT IN STREET-RAILWAY SWITCHES.

Specification forming part of Letters Patent No. **222,617**, dated December 16, 1879; application filed November 3, 1879.

*To all whom it may concern:*

Be it known that I, AMOS WHITTEMORE, of Cambridgeport, in the county of Middlesex and State of Massachusetts, have invented a new and valuable Improvement in Railroad-Switches; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, in which—

Figure 1 is a plan view, showing my improved switch applied between main-track rails and turnout-rails. Fig. 2 is a larger plan view of a divergent rail-section and turnout-section, showing car-wheels dotted and in a position from which they pass from the main track to a turnout.

Similar letters of reference indicate corresponding parts in both figures.

The object of my invention is to enable the driver of a street-car to switch from a main track to a turnout, or to follow the main track, or to pass from a turnout upon the main track, by simply guiding his horses to the right hand or to the left, according to the direction he may desire to go.

The nature of my invention consists in combining a pivoted frog or tongue and a turnout-section with the well-known turnout-section, and with a rail-section which diverges from the main-track line, as will be hereinafter explained, whereby the driver can move the front end of his car laterally by the draft of his horses and bring the car into line with the turnout-flanges of the turnout-sections.

In the annexed drawings, A B designate rails which are straight, and constructed in the usual well-known manner for city car-roads. These rails, like all which I shall describe, are rigidly secured to the rail-bed. The rails A B are arranged so that the rail B diverges from the rail A, as shown, leaving a broader gage at the ends  $x$ , which abut against the turnout-sections C D, than the common gage between the parallel rails J.

The turnout-sections C D connect the main-track rails, and also the main track, with the turnout rails G G, in the manner shown in Fig. 1. The flanges  $a$   $b$  are in line with the corresponding flanges of the main track, and the flanges  $a'$   $b'$  guide the wheels of the cars to the turnout-rails.

The turnout-sections C D are made tapering, and between the flanges of the section D, and pivoted at  $e$ , is a long tapered tongue, E, the smaller end,  $g$ , of which is in close relation to the diverging end of the rail B, and is abruptly beveled, as shown.

The inner sides of the flanges of the section B are beveled outward at  $f$   $f'$ , for the purpose of allowing the flanges of the wheels of a car passing from the diverging rail B upon the section D to shift the free end of the tongue E either to the right or the left, whichever direction the driver desires to guide his car.

The operation is as follows: Suppose a car to be approaching the turnout from the main track on that side on which the sections A B are located, and the driver desires to pass to the turnout-rails G G. When the car is on the sections A B the driver will guide the horses to the right, and thereby slip the front end of the car laterally, so that the flanges of the right-hand wheels will be guided by the flange  $a'$  of rail-section B upon the end of section D, between the bevel  $f'$  and the end  $g$  of the tongue E. This end of the tongue will thus be moved to the left, and the car will pass over sections C D onto the rails G G. If the driver desires to pass from the rail-sections A B over the sections C D and keep on the main track, he simply keeps his horses in line with the main track J J and causes the flanges of the right-hand wheels to switch the tongue E to the right.

If a car, while passing from the rails A B over the sections C D to reach the main-track rails, should become displaced by the flange of the rear right-hand wheel accidentally getting between the tongue E and the flange  $b'$  of section D, (the front wheels being on the main-track line,) I have an oblique groove,  $h$ , in the tongue E, which will guide the rear right-hand or displaced wheel across this tongue and replace the car on the main track.

It will be seen from the above description that a car is caused to pass from the main track upon the turnout or branch track by the draft of the horses moving one end of the car laterally, the divergence of the rail B from the rail A allowing this movement to be given to the car at the will of the driver.

To apply my invention to a road I have



only to add the rail-sections B D and tongue E to the sections J, G, A, and C, which are already in common use.

Having described my invention, what I claim as new is—

1. In a street-railway, a pivoted frog or tongue, in combination with a divergent section of the track, substantially as described.

2. In combination with the section D and its pivoted tongue E, the replacing-groove *h* in the tongue, substantially as described.

AMOS WHITTEMORE.

Witnesses:

M. P. CALLAN,

J. CAMPBELL.