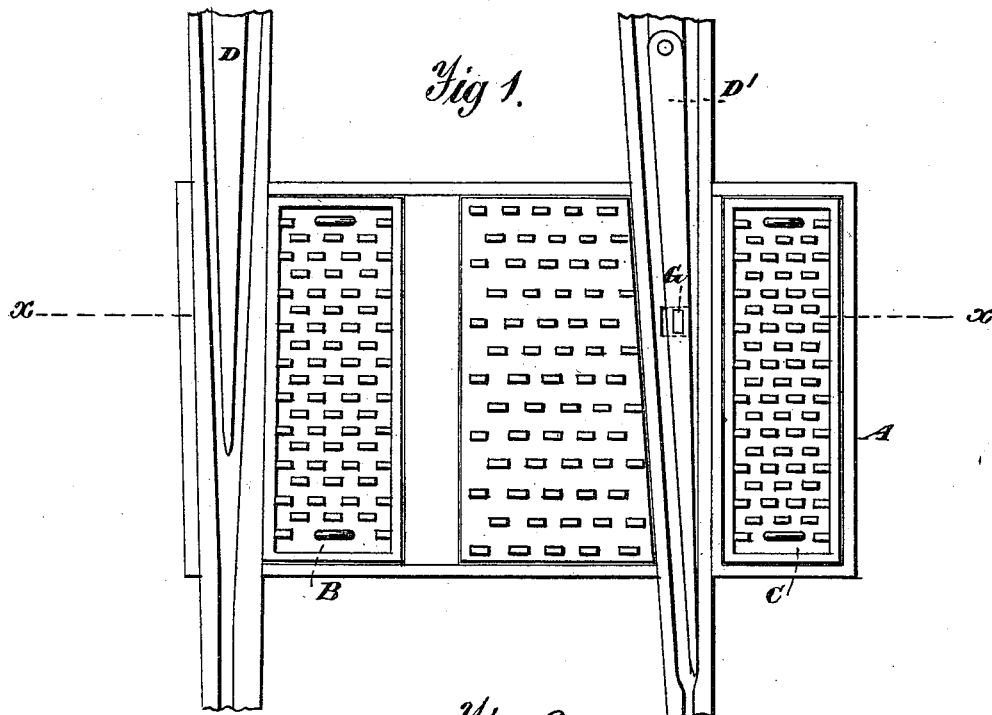


(No Model.)

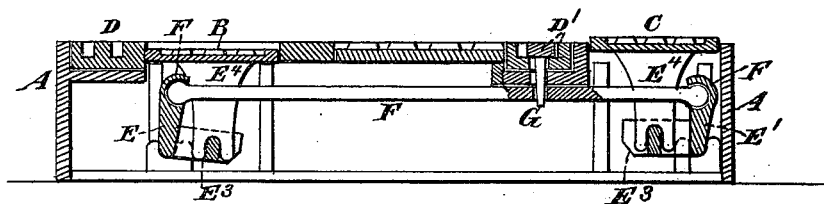
M. M. WHITE.  
RAILROAD SWITCH.

No. 266,665.

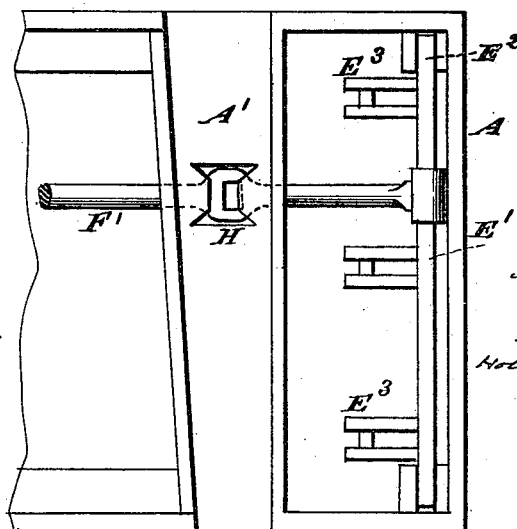
Patented Oct. 31, 1882.



*Fig. 2.*



*Fig. 3.*



Witnesses.  
A. Ruppert.  
J. J. Barker.

M. M. White  
Inventor.  
Holloway & Blanchard  
Attys.

# UNITED STATES PATENT OFFICE.

MOORES M. WHITE, OF NEW YORK, N. Y.

## RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 266,665, dated October 31, 1882.

Application filed June 12, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, MOORES M. WHITE, a citizen of the United States of America, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Railroad-Switches, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in switches for horse-railroads of that type in which the weight of the animal is made to move the tongue of the switch; and the object of my invention is to provide an improvement upon the switch for which Letters Patent were granted to Henry Douglass on the 18th day of March, 1879, No. 213,325. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view, showing the balanced moving platform onto which the animal is driven for the purpose of changing the position of the tongue of the switch, the frog in position on the fixed portion of the platform, and the movable tongue. Fig. 2 is a sectional elevation on line *x x* of Fig. 1; and Fig. 3 is an enlarged plan view with the top plate and platform removed, showing a portion of the mechanism for shifting the tongue of the switch, and especially the form of the aperture through which the arm moves which shifts said tongue.

Similar letters refer to similar parts throughout the several views.

In practice the device for which a patent was granted to Douglass, above referred to, has been found to be defective, in that there is in said device no provision for preventing a rolling or turning movement of the tongue, except the pin or pivots on which it oscillates, the consequence being that as the wheels of the car enter upon it the weight is made to rest upon one side thereof, which has the effect to cause it to be rapidly worn away around said pivoted point, and to such an extent as to allow the tongue to roll or turn partially upon its edge, and thus endanger its proper operation, and at times to give a wrong direction to the car. My object being to provide a remedy for the above-named difficulty, I provide a cast-iron frame, A, of the form required, and upon its upper surface place two vertically-moving balanced plat-

forms, B and C, said upper surface being provided with depressions A' for the reception of the frogs D and D', they being placed at such a distance from each other as to allow the wheels of the cars to pass over them and be directed upon the rails of the tracks, which are connected to them at their ends. That portion of the upper surface of the frame A which is between the frog D' and platform B is fixed to said frame, and has no motion imparted to it. The balanced platforms above alluded to are supported upon rock-shafts E E', which have their bearings in boxes or projections formed upon the interior of the frame, as shown at E<sup>2</sup> in Fig. 3. From the surface of the rock-shafts lugs E<sup>3</sup> E<sup>3</sup> project, and upon which rest brackets or bearings E<sup>4</sup> E<sup>4</sup>, which project downward from the vertically-moving platforms B and C. From the upper surfaces of the rock-shafts lugs F project, to which there is attached a connecting-rod, F', which unites said shafts in such a manner that as one of the balanced platforms resting upon said shafts is forced downward by the weight of the animal the opposite one will be carried upward.

The above-described parts are substantially the same as the parts for the same purpose described in the patent of Douglass, and constitute no part of my invention. In switches of this type it is necessary that there should be formed in the lower surface of the depression A', in which the frog which carries the movable switch-tongue rests, an aperture for the passage of an arm, G, which passes through a slot formed in the connecting-rod F, by which the required movement is imparted to the tongue. The fact that the tongue of the switch moves over this aperture renders it possible for dirt to enter said aperture, and hence it becomes necessary that provision should be made for its ready passage through the same without affecting the operations of the switch. For the purpose of effecting this result, and for the further purpose of preventing the rocking or turning of the switch-tongue as the cars pass over it, I provide an opening of the form shown in Fig. 3 at H, the elongated outer portions of which constitute a free passage for any dirt that may pass down by the sides of the tongue as it is moved to and fro, while the contracted central walls of the aperture form abutments or supports against which the arm G rests when in position to guide the car upon either track

of the road, the effect being to effectually prevent the rolling or turning of the tongue of the switch by the wheels of the car. The arrangement of the switch-tongue upon the frog D is  
5 clearly shown in Fig. 1.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

10 In a switch for tramways, the combination, with the movable tongue and its moving arm, of the frog and its seat, said seat being provided with an aperture, formed substantially

as herein described, whereby it is made to afford a ready passage for dirt and to support said moving arm, and thus prevent the rolling 15 or turning action upon the movable tongue of the switch, substantially as hereinbefore described.

In testimony whereof I affix my signature in presence of two witnesses.

MOORES M. WHITE.

Witnesses:

A. P. SMITH,  
SETH WILKS.