

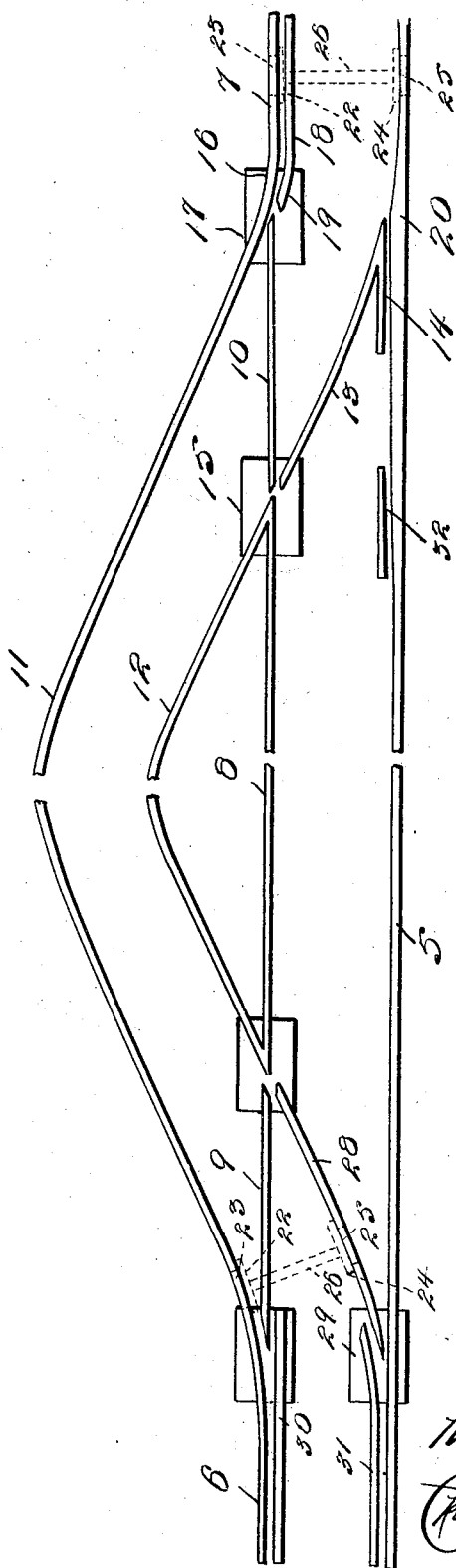
No. 765,572.

PATENTED JULY 19, 1904.

M. M. FITZGERALD.  
RAILROAD SWITCH.

APPLICATION FILED DEC. 23, 1903.

NO MODEL.



Witnesses  
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# UNITED STATES PATENT OFFICE.

MILAM M. FITZGERALD, OF SAN ANTONIO, TEXAS.

## RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 765,572, dated July 19, 1904.

Application filed December 23, 1903. Serial No. 186,407. (No model.)

*To all whom it may concern:*

Be it known that I, MILAM M. FITZGERALD, a citizen of the United States, residing at San Antonio, in the county of Bexar, State of Texas, have invented certain new and useful Improvements in Railroad-Switches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to switches or turnouts for railways, the object of the invention being to provide an arrangement wherein all cars traveling in one direction will of necessity pass onto the switch or turnout, while all cars moving in the opposite direction will keep the main track, an additional object of the invention being to provide a construction which will eliminate the use of the ordinary switch-tongue, as well as all other movable parts, the parts of the present structure being fixed.

Other objects and advantages of the invention will be understood from the following description.

In the drawing forming a portion of this specification there is shown a top plan view of a portion of a railway with a turnout and embodying the present invention.

Referring now to the drawing, the main track comprises a rail 5, which is a continuous rail, in that it is without breaks, excepting, of course, the ordinary intervals between the rail-sections where the latter are connected by the usual fish-plates, the track including also a second rail, which comprises sections 6 and 7 at the outer ends of the turnout or switch, the section 8 between the ends of the switch, and the sections 9 and 10, which are at the ends of the switch and between the rails thereof.

The entrance end of the switch is at the right hand of the drawing, the outside rail 11 of the switch being practically a laterally-deflected continuation of the rail-sections 6 and 7, there being an unbroken surface from the rail 6 over the rail 11 to the rail 7. The inside rail 12 of the switch is continuous from end to end of the rail-section 8. Between

the rails of the main track and alining with the rail 12 is a rail-section 13, one end being spaced slightly from the point formed by the meeting rails 8 and 12, said rail-section 13 being spaced also slightly from the section 10, which is offset slightly away from the rail 5. The rail 13 extends diagonally across the main track and terminates close to the tread of the rail 5, from which point there extends a guard 14 in a rearward direction and parallel with the tread of the rail 5. The mutually-adjacent portions of the rail-sections 8, 10, 12, and 13 are formed by a frog which includes also the plate 15, so that these parts are held rigidly in proper relation.

The rail 7 merges into the rail 11, as above intimated, at the curved portion 16, formed integral with the plate 17, said plate having formed thereon also a part of the guide-rail 18, having its extremity 19 slightly curved and parallel with the curved portion 16 just described. One end of the rail-section 10 is formed upon the plate 17 and is spaced slightly from the extremity of the curved portion 19 of the rail 18, as also from the curve 16, such spacing being sufficient to permit of the passage of a wheel-flange therethrough.

The portion of the rail 5 opposite to the curved portion of the guide-rail 18 is thickened in its tread portion, as shown at 20, this thickening being on the inner side of the tread and being of such dimensions as to maintain parallelism between the inner faces of the treads of the rail 5 and the curve 16 up to the point of the rail 13, the rail 13 maintaining this parallelism beyond its point. The tread of the rail 5 is gradually reduced in width toward the rear end or free end of the guard-rail 14, and the offsetting of the rail-section 10 is such as to compensate for this gradual narrowing of the tread, said rail-sections being offset to such a degree that the inner side of its tread is parallel with the inner side of the tread of the opposite portions of the rail 5.

Supposing a car traveling to the left over the rails 5 and 6, the flange 22 of a wheel will pass behind the guide-rail 18 and the flange 24 of the opposite wheel 25 will then

come in contact with the side of the thickened portion 20 of the tread of the rail 5, the effect of the thickened portion of the tread of the rail 5 being to press the contacting flange and  
 5 therewith its wheel laterally, so that motion will be communicated through the axle 26 to the opposite wheel to cause it to follow the curvature 16. The wheel 25 is also caused to move positively in a lateral direction, so  
 10 that it will run fairly onto the rail 13, with its flange against the inner flange of the latter. The succeeding pairs of wheels will be pressed laterally in the same manner and will be positively directed onto the switch-rails.  
 15 At the opposite end of the switch the wheel on the rail 11 passes to the rail 6, while the wheel on the rail 12 passes to the rail-section 28, between the rails 5 and 6, then to the plate 29, and then to the rail 5, there being  
 20 provided a guide-rail 30, which overlaps the space between the section 9 and the main portion of the rail 6, so that the flanges of the wheels will strike this guide-rail at the time that the flanges of the opposite rails are about  
 25 to leave the rail-sections 28, so that the wheels will be properly directed onto the main track. The guide-rail 30 in conjunction with the guide-rail 31, which latter is adjacent to the guide-rail 30, serves to properly direct the  
 30 wheels of cars passing in the opposite direction, so that they will certainly follow the main-track rails. An additional guide-rail 32 is disposed adjacent to the inner side of the rail 5 opposite to the plate 15, so that lateral  
 35 movement of the wheels in the direction of the turnout will not occur while said wheels are passing the gap on the plate 15.

It will be seen from the foregoing that with the present construction all cars passing in  
 40 one direction are positively directed onto the switch, while those passing in the opposite

direction are kept positively from the switch, so that high speeds may be maintained.

In practice modifications of the specific construction shown may be made, and any  
 45 suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

1. The combination with main-track rails, 50 of switch-rails deflected laterally therefrom, the tread of the main-track rail opposite to the direction of deflection of the switch being broadened in the direction of the switch and having its maximum breadth at a point in ad- 55  
 vance of the adjacent switch-rail at the entrance end of the switch, said breadth being merely reduced past the entrance end of the switch, the opposite main-track rail being deflected laterally with the inner face of its tread 60  
 parallel to the inner face of that portion of the broadened portion of said rail-tread past the entrance end of the switch.

2. The combination with main-track rails, 65 of switch-rails deflected laterally therefrom, the tread of the main-track rail opposite to the direction of deflection of the switch being broadened in the direction of the switch at a point in advance of the adjacent switch-rail, at the entrance end of the switch, and a guide- 70  
 rail extending from a point adjacent to said laterally-deflected main-track rail portion beyond the end of the switch, said guide-rail being at one end parallel with the switch-rail and at its opposite end parallel with the main- 75  
 track rail.

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

MILAM M. FITZGERALD.

Witnesses:

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