

W. E. MILLER.
RAIL BRACE AND TIE ROD.
APPLICATION FILED NOV. 27, 1911.

1,042,024.

Patented Oct. 22, 1912.

Fig. 1.

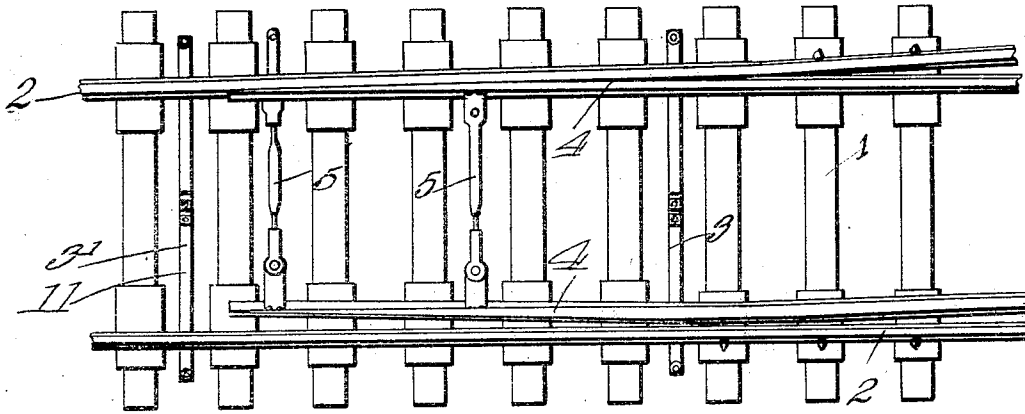
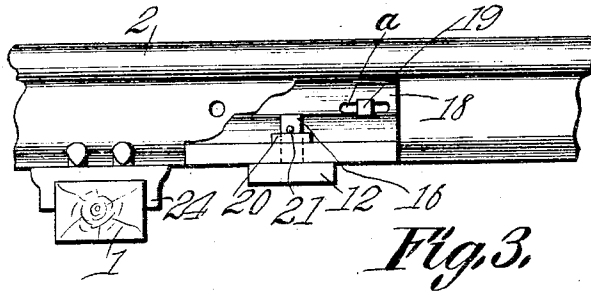
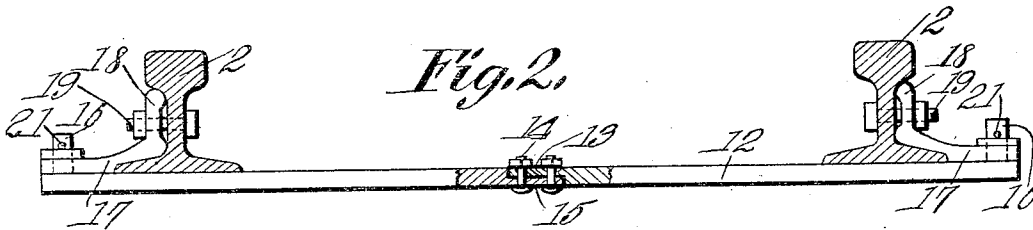


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM E. MILLER, OF PALISADE, NEVADA.

RAIL-BRACE AND TIE-ROD.

1,042,021.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM E. MILLER, a citizen of the United States, residing at Palisade, in the county of Eureka and State of Nevada, have invented new and useful Rail-Braces and Tie-Rods, of which the following is a specification.

The present invention relates to improvements in rail braces and tie rods, and the primary object of the invention is the provision of a rail brace and tie rod for maintaining the rigid or fixed rails of a switch in relative position at all times, the said rails being provided with fastening means to permit of the creeping or expansive action of the metal thereof due to varying temperatures, yet at the same time retain the rails relatively parallel.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts, and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings—Figure 1 is a plan view of a portion of a standard split switch with the present invention applied as in use thereon. Fig. 2 is a side elevation of the tie rod. Fig. 3 is an outer end view of said rail brace, a portion of the same being broken away to show the bolt openings formed in the rails.

Referring to the drawings, the numeral 1 designates the ties which are laid as usual at the switch, while 2 designates the fixed rails at the switch point. These rails are connected rigidly together by means of the tie rod 3, the detail structure of which will presently appear, the same being disposed between the ties as shown and where necessary. The switch rails or points 4 are disposed for sliding movement as is usual and are connected together by means of the braces or links 5 for movement in unison, this structure being clearly shown in Fig. 1.

As clearly shown in Figs. 2 and 3 of the drawings the tie rod 3 is formed of two sections 11 and 12, which are provided with the interlocking inner ends 13 which are held in a position with relation to each other by means of the bolts 14, the strips 15 of in-

sulation being interposed in said joint and around the bolts thereof, so that should the rails be employed for transmission of signal current, no short circuit will be possible through said rods. Mounted upon and projecting upwardly from the extreme end of each member 11 or 12 of the connecting rod 3, is a pin or stud 16, upon which is mounted the base flange 17 of a rail brace 18, said brace being secured to the web of the rail 2 by means of the bolts 19; the said brace being provided with the elongated slots *a* for the reception of said bolts and to permit of the longitudinal or creeping movement of the rails due to the expansion and other traffic conditions. In order to hold the flange 17 upon the end of the rods 11 and 12 and also upon the stud 16, there is a washer 20 and a cotter pin 21.

What is claimed is—

1. A device for securing the fixed rails of a switch relatively to each other, comprising two longitudinally disposed members having inner interlocking ends, means for securing said interlocking ends together, the outer ends of said rods being provided each with an upstanding stud, a rail brace having its flange disposed upon said stud, means for holding the flange upon the stud and relatively to the rod, and means for securing the brace to the rail to permit of longitudinal creeping or expansion of the rail.

2. A device for securing the fixed rails of a switch, of a means for securing the same against outward movement and to permit creeping thereof due to expansion, comprising two plates provided with shouldered interlocking ends, means for securing said ends together, a strip of insulation therebetween to insulate the plates from each other, a cylindrical stud carried upon the outer end of said rods beyond the rails, a rail brace having its flange fitting upon its respective stud, and adjacent the web of the rail, and means mounted upon the stud and above the flange of the brace for holding the brace relatively to its plate.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM E. MILLER.

Witnesses:

J. W. MIDDLETON,

W. G. WRIGHT.