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 AUTOMATIC BLOCK SIGNAL JOINT.
 APPLICATION FILED JULY 9, 1910.

992,374.

Patented May 16, 1911.

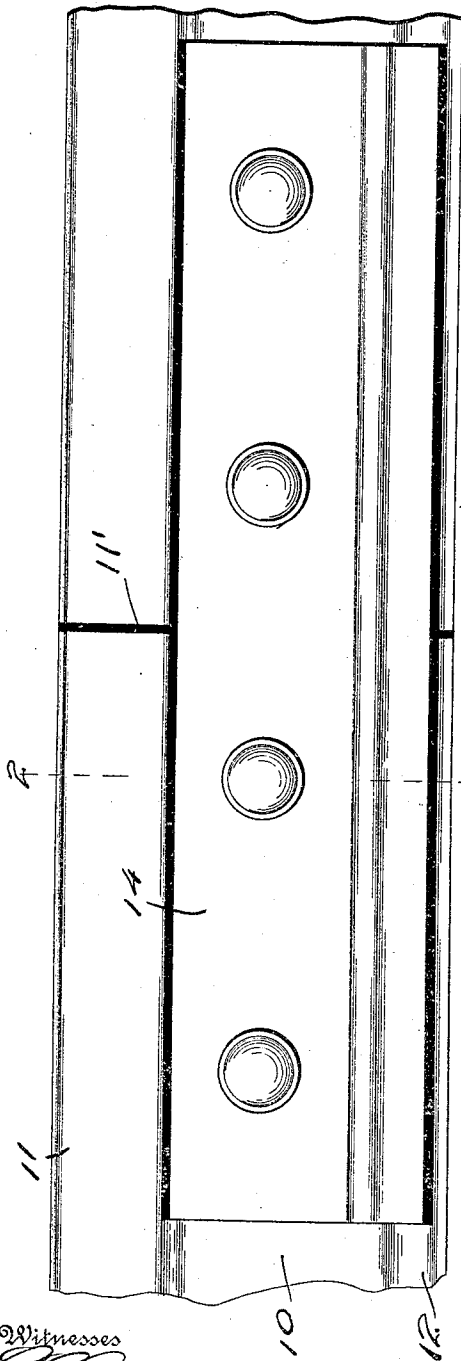


FIG. 1.

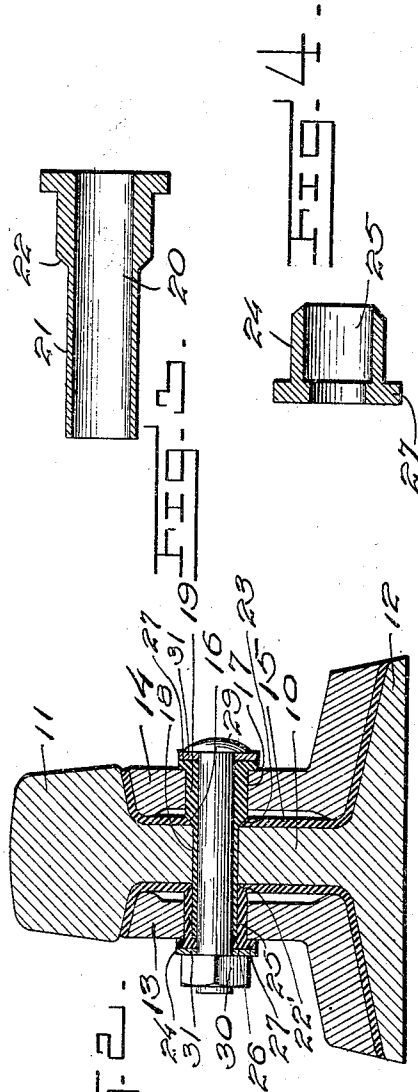


FIG. 2.



FIG. 3.

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AUTOMATIC BLOCK-SIGNAL JOINT.

992,374.

Specification of Letters Patent. Patented May 16, 1911.

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To all whom it may concern:

Be it known that we, WILLIAM MCGUIRE and LLOYD H. KINNEY, citizens of the United States, residing at Clifton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Block-Signal Joints, of which the following is a specification.

This invention relates to railway rails and has particular reference to insulation for joints and sectional rail systems.

One object of the invention is to provide a simple and efficient construction of insulation spliced between the rails and the splice bars, so that all of the parts are thoroughly insulated from each other.

Another object is to provide an improved construction of bolt insulating devices so that when the nuts of said bolts are tightened the insulating sleeve thereon will engage the insulating members between the rail and the splice bars so that there will be a frictional and binding contact between the said insulating members.

With these and other objects in view the invention consists in the construction, combination and arrangements of parts which will be hereinafter more fully described and particularly pointed out in the appended claims, it being understood that the changes in the specific structure shown and described may be made within the scope of the claims without departing from the spirit of the invention.

In the drawings: Figure 1 is a side elevation of the preferred form of our invention. Fig. 2 is a cross section of the same, on the line 2-2. Fig. 3 is a sectional detailed view of the insulating sleeve for the bolt showing one part. Fig. 4 is a similar view of the other part.

Referring now to the drawings 10 represents the web of an ordinary rail having a usual tread member 11 and base 12, on either side of which is disposed the splice bars 13 and 14. Clamped between the rail and the splice bars are the insulating strips 15 which conform to the contour of the side of the rail, and are provided with bolt openings 16 which may be of any desired number conforming to the number of openings in the web of the rail and the splice bars. The openings 17 in the splice bars, are of somewhat larger diameter than the openings 18 in the web of the rail, to accommodate the

enlargement 19 of the insulating sleeve 20. The insulating sleeve is reduced at 21 to pass through the opening 18 of the web of the rail and provided with the beveled shoulder 22 adapted to engage the correspondingly beveled wall 23 of the opening 16 of the insulating strip. The reduced portion 21 of the insulating sleeve 19 extends transversely through the rail, and the opposite splice bar 13, and has its extremity lying flush with the outer face of the said splice bar. A washer member 24 is provided with the counter sunk opening 25 to receive the ends of the reduced portion 21, the end of said reduced portion abutting against the angular shoulder 26. Both the washer member 24 and the enlargement on the opposite end of the sleeve 19 are provided with the flanged head 27 adapted to lie against the outer faces of the splice bars, and interposed between the head 29 and the said flange 27, and between the nut 30 and the flange 27 of the washer 24, of the bolt 29 are the ordinary metal washers 31. The sleeve 19 is slipped through from the right of Fig. 2, and the washer member 24 slipped in from the left with the beveled edges 23 of the openings of the insulating strips engaging the beveled faces 22 and 22' respectively of the sleeve 19 and the washer member 24, so that when the nut of the bolt is tightened the said beveled edges and faces will be brought into binding contact and slightly spread the material of the insulating medium at such contact point to effect a more perfect insulating joint.

From the foregoing it will readily be seen that we have provided a simple, cheap, and efficient insulating means for a rail joint or sectional rail.

A slice of insulation 11', is placed between the meeting ends of the rails.

What is claimed is:

1. An insulating device for a sectional rail joint comprising strips of insulating material interposed between the rail and the splice bars, said insulating strips being provided with openings adapted to register with the openings of the joint, said openings having beveled edges, an insulating sleeve adapted to pass through said openings and provided with a beveled angular shoulder near one end adapted to engage the beveled faces of the opening in one of said strips and a washer member disposed on the end of said sleeve and provided with beveled ends

adapted to engage the beveled edge of the opening in the other of said strips.

2. An insulating device for railway rail joints comprising insulating strips disposed
5 on opposite sides of the rail and between the rail and the splice bars, said strips being formed with openings having beveled edges therearound, insulating sleeves through
10 which the bolts of the joints are adapted to pass, each of said sleeves having an enlargement at one end, a beveled face on said enlargement for engagement with the beveled edges of said openings, a reduced portion on said sleeve extending across the joint
15 and through the bolt opening, and a washer

member having its inner end beveled to engage the beveled edge of an opening in the adjacent insulating strip, said washer member being formed with a counter sunk opening of approximately the same diameter as
20 the reduced portion of the sleeve and adapted to receive the said reduced portion.

In testimony whereof we affix our signatures, in presence of two witnesses.

WILLIAM McGUIRE.
LLOYD H. KINNEY.

Witnesses:

JAMES KINNEY,
M. E. SMITH.