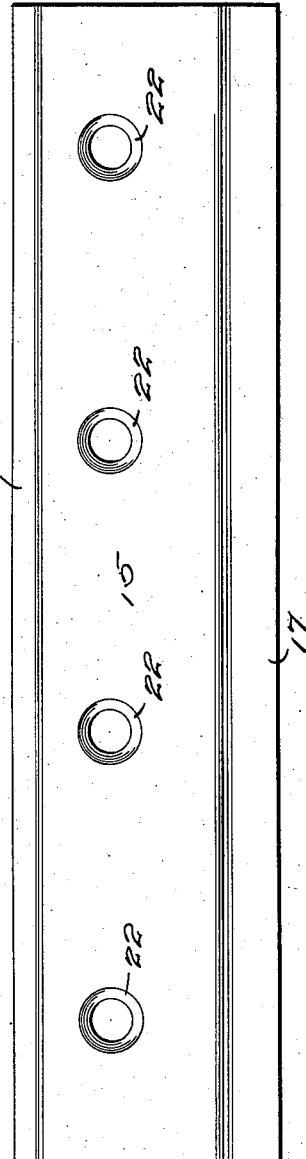
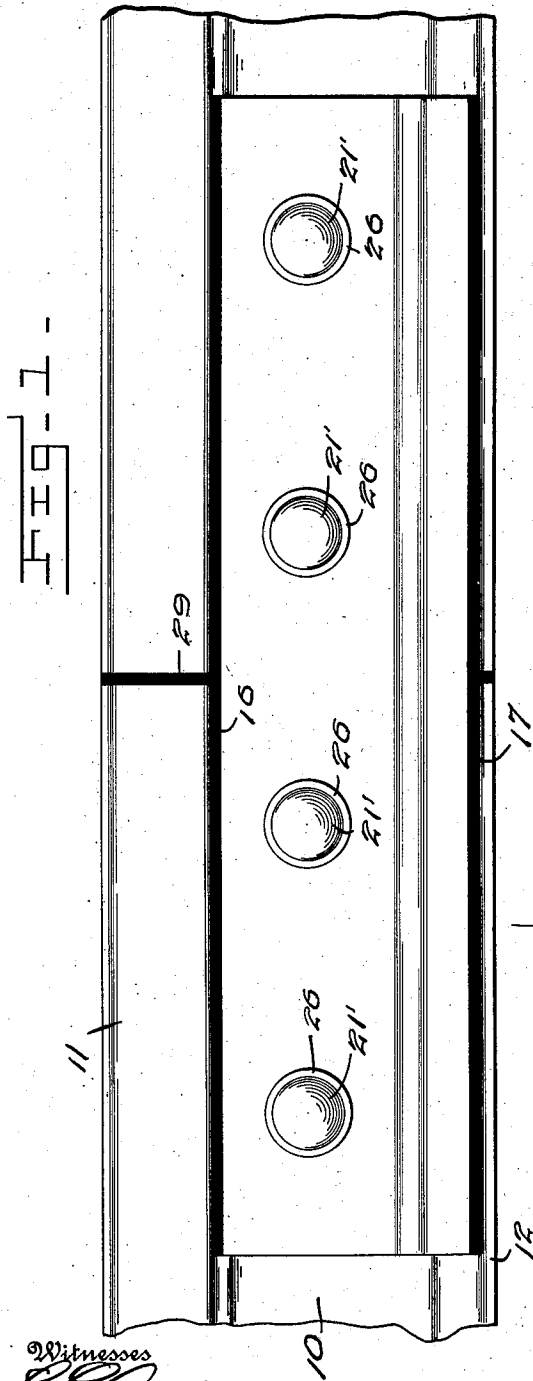


L. H. KINNEY & W. McGUIRE.
 AUTOMATIC BLOCK SIGNAL JOINT.
 APPLICATION FILED JUNE 2, 1911.

1,027,343.

Patented May 21, 1912.

2 SHEETS-SHEET 1.



Witnesses
R. L. Cunningham
Harry M. Teet

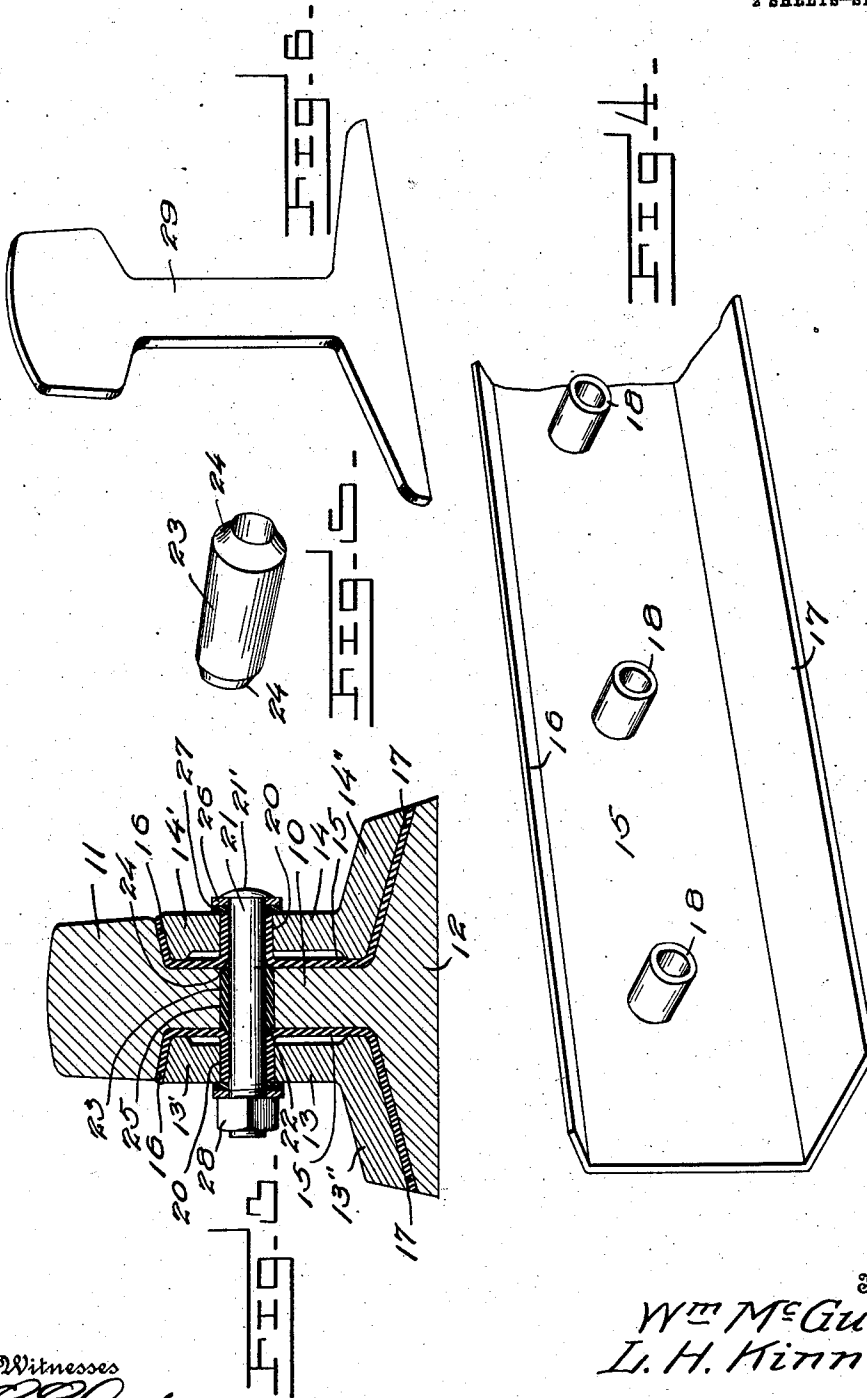
Inventor
Wm McGuire &
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 Attorney

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UNITED STATES PATENT OFFICE.

LLOYD H. KINNEY AND WILLIAM McGUIRE, OF CLIFTON, PENNSYLVANIA.

AUTOMATIC-BLOCK-SIGNAL JOINT.

1,027,343.

Specification of Letters Patent.

Patented May 21, 1912.

Original application filed July 9, 1910, Serial No. 571,181. Divided and this application filed June 2, 1911.
Serial No. 630,896.

To all whom it may concern:

Be it known that we, LLOYD H. KINNEY and WILLIAM McGUIRE, 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 improvements in insulated joints for railway rails, and is a division of a prior application filed by us July 9th, 1910 and Serial Number 571,181.

One object of the invention is to provide a simple and efficient construction of insulation applied 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 frictional and binding contact between the said insulating members.

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

In the drawings: Figure 1 is a side elevation of the meeting ends of a pair of rails, showing our invention applied. Fig. 2 is a side elevation of one of the insulating strips. Fig. 3 is a cross section of a rail and splice bars, showing the insulating means. Fig. 4 is a perspective view of one of the insulating strips from the opposite side shown in Fig. 2. Fig. 5 is a detailed perspective view of the middle section of the insulating sleeve. Fig. 6 is a detail view of the strip for insulating the sections of the rail.

Referring now to the drawings 10 represents the web of an ordinary rail having the usual tread member 11 and base 12, on either side of which are disposed the splice bars 13 and 14. These splice bars comprise the vertical portions 13' and 14' and the flange lower portions 13'' and 14'', the said

flange portions being adapted to rest on the upper face of the base of the rail.

A plate of insulation 15 is formed with an upper outwardly inclined flange 16 and the lower outwardly and downwardly inclined flange 17 slightly larger than the first named flange. The flange 16 is adapted to fit between the upper face of the vertical portion of the splice bar and the lower face of the tread of the rail, while the larger flange 17 is interposed between the outwardly extending portion of the splice bar and the base of the rail. The main body portion of said plate is disposed between the web of the rail and the vertical portion of the splice bar.

Formed integrally with the body portion of the plate 15 and extending from the same face as the flanges 16 and 17 and disposed centrally therebetween is a series of tubular members 18 which when said plate is disposed against the rail will extend outwardly through the bolt openings 20 of the splice bars, which are of necessity made somewhat larger than the diameter of the bolt, the interior diameter of said tubular portions being such that the clamping bolt 21 will fit snugly therein. At the base of the tubular portions 18 are formed the annular beveled faces 22 which are engaged by the beveled ends 24 of the cylindrical member 23 which are disposed in the bolt openings 25 formed through the web of the rail, and which are also made somewhat larger than the diameter of the bolt, and have an interior diameter to receive said bolt snugly therethrough.

The parts are assembled as illustrated in Fig. 3, two of the plates 15 being used and disposed on opposite sides of the rail between the rail and the splice bars, and the bolts 21 passed transversely through the tubular members 18 and the member 23. Between the head 21' of the bolt and the splice bar 14 are disposed the two washers 26 and 27, the former of which being a metallic washer while the other or inner one is an insulated washer, thus thoroughly insulating the head of the bolt from the metallic portions of the joint. On the opposite end of the bolt, which projects from the opposite splice bar is a similar pair of washers disposed in the same relation as those just mentioned, and on the outer end of the bolt is placed a securing nut 28. Thus when the nut is secured tightly onto

the bolt the parts will be drawn snugly together, and the beveled faces 24 will have a tendency to spread the beveled faces 22 and thus thoroughly insulate the parts.

5 Between the sections of the rail is disposed a thin strip of insulation 29, in cross section of the same contour as the cross section of the rail, to insulate the sections of the rail from each other.

10 From the foregoing it will readily be seen that we have provided a simple and efficient device of this character and one which is cheap to manufacture.

What is claimed is:

15 An insulating device for railway rail joints comprising insulating strips disposed on opposite sides of a rail between the rail and the splice bars of the joint, tubular extensions on the said strips formed integrally
20 therewith, and disposed through the bolt openings formed in the splice bars, said

tubular portions registering with the bolt openings of the rail to form a continuous passage therethrough, for the reception of a bolt, beveled walls surrounding the openings 25 in said strips, and tubular sleeves disposed within the bolt openings of the rail, and having their opposite ends circumferentially beveled to engage the said beveled edges of the openings in the strip. 30

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

LLOYD H. KINNEY.

WILLIAM McGUIRE.

Witnesses as to the signature of Lloyd H. Kinney:

R. A. SHEPHARD,

STEPHEN WILLIAMS.

Witnesses as to the signature of William McGuire:

GEORGE C. FELTER, Jr.,

ELSE C. SCHNELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."