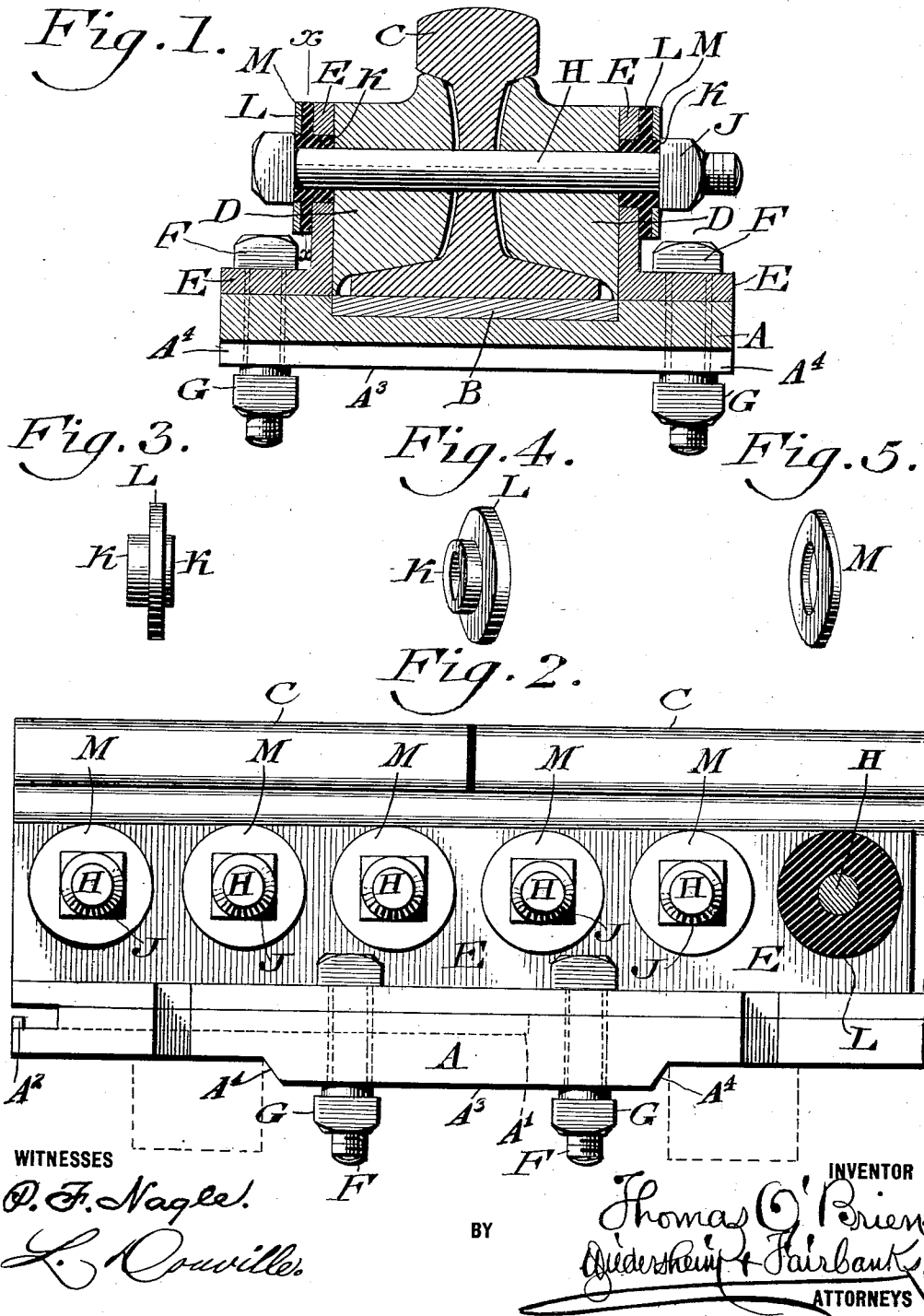


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INSULATED JOINT FOR RAILROAD RAILS.
APPLICATION FILED JULY 31, 1911.

1,017,311.

Patented Feb. 13, 1912.



UNITED STATES PATENT OFFICE.

THOMAS O'BRIEN, OF PHILADELPHIA, PENNSYLVANIA.

INSULATED JOINT FOR RAILROAD-RAILS.

1,017,311.

Specification of Letters Patent.

Patented Feb. 13, 1912.

Application filed July 31, 1911. Serial No. 641,450.

To all whom it may concern:

Be it known that I, THOMAS O'BRIEN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new useful Insulated Joint for Railroad-Rails, of which the following is a specification.

My invention consists of an insulated joint for railroad rails embodying insulating members applied to the cheek pieces or side bars in relation to the bolts which with said cheek pieces or side bars clamp the rails at the sides thereof, thus insulating said bolts from said cheek pieces or side bars, and consequently the rails.

The invention is satisfactorily illustrated in the accompanying drawing, but the important instrumentalities thereof may be varied, and so it is to be understood that the invention is not limited to the specific arrangement and organization shown and described.

Figure 1 represents a vertical section of an insulated joint for railroad rails embodying my invention. Fig. 2 represents a partial side elevation and partial vertical section thereof on line $x-x$ Fig. 1. Fig. 3 represents a side elevation of an insulating member employed. Fig. 4 represents a perspective view thereof. Fig. 5 represents a perspective view of a washer employed.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings:—A designates a metallic base plate on which is placed the bed plate or cushion B of wood fiber or other insulating material said cushion extending in a recess in the upper face of said base plate A to a position on opposite sides of the joint of adjacent rails, see Fig. 2, the inner terminal of said recess forming a shoulder A' which prevents creeping ahead of said cushion, the other terminal having a shoulder A² rising therefrom to prevent creeping of said cushion, in the other direction, see Fig. 2, said shoulder A' being shown in dotted lines in said figure. On the underside of the plate A, is the downward projection A³, the ends of which form shoulders A⁴ which abut against the ties on which said plate is imposed, thus preventing shifting of said plate.

C designates railroad rails the same being

supported on said bed plate and consequently on said base plate. On the opposite sides of said rails are the blocks D of wood or other insulating material, the same having their upper portion bearing against the under side of the head of the rail, and their lower portion resting on the base of the rail and the plate B.

E designates metallic side bars or cheek pieces whose vertical limbs are placed against the blocks D and whose horizontal limbs rest on the base plate A and are secured thereto by the bolts F and nuts G said bolts passing through said horizontal limbs and the adjacent portions of the base plate below the same, thus firmly connecting the check pieces with said base plate.

Passing through the vertical limbs of the bars E are the bolts H which pass also through the blocks D and the web of the rails C, they being provided with the nuts J whereby said bars and blocks may be clamped tightly together and the blocks similarly clamped to the rails, thus assisting in firmly supporting and sustaining the latter.

In order to insulate the bolt from the bars E, I employ the rings or circular collars K of insulating material, each of said collars occupying an opening in the vertical limb of the bar and surrounding the bolt at the portion of the same that passes through said limb. Extending radially from the circumference of each collar is the rim L which occupies a position on the exterior of the vertical limb of the chair. Fitted on the outer portion of the collar K is the washer M which bears against the vertical rim of said collar and is tightened thereagainst by the nut J, it being seen that owing to the collars K and the radiating rims L thereon and the position of said members K, L, on the sides of the vertical limbs of the bars E and in the openings in said limbs around the adjacent portions of the bolts H, the latter although under the electric influence of the rail are insulated from the bars and vice-versa for purposes requiring the same, it being seen that the nuts J contact with the outer edges of the insulating collars K and the washers M contact with said edges and with the sides of the radiating rim L of said collars, while the portions of the bolts

adjacent to their heads and nuts are encircled by the collars K thus reliably effecting the insulation of the bolts as stated.

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

1. In an insulating joint of the character stated, a metallic base plate having a recess in the upper face thereof, a cushion of insulating material in said recess, the same being adapted to have railroad rails imposed thereon, flanged bars rested on said base plate, blocks of insulating material interposed between said bars and said rails, bolts passed through the horizontal flanges of said bars and the adjacent portion of said base plate below the same, and tightening nuts on said bolts, and an integral downward projection on the under side of said

base plate, the terminals of the same forming shoulders which engage the ties on which said base plate is seated. 20

2. In an insulating joint of the character stated, a metallic base plate having a recess upon its upper face, a cushion of insulating material in said recess extending upon opposite sides of the joint between adjacent rails and being adapted to have said rails imposed thereon, said recess having shoulders on the opposite terminals thereof, and a downward projection on the under side of the plate having shoulders abutting against the adjacent faces of adjacent ties. 25 30

THOMAS O'BRIEN.

Witnesses:

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