No. 740,029. PATENTED SEPT. 29, 1903.

J. L. MAYES.

RAILROAD JOINT.

APPLICATION FILED AUG. 10, 1903.

NO MODEL.

FIG 1

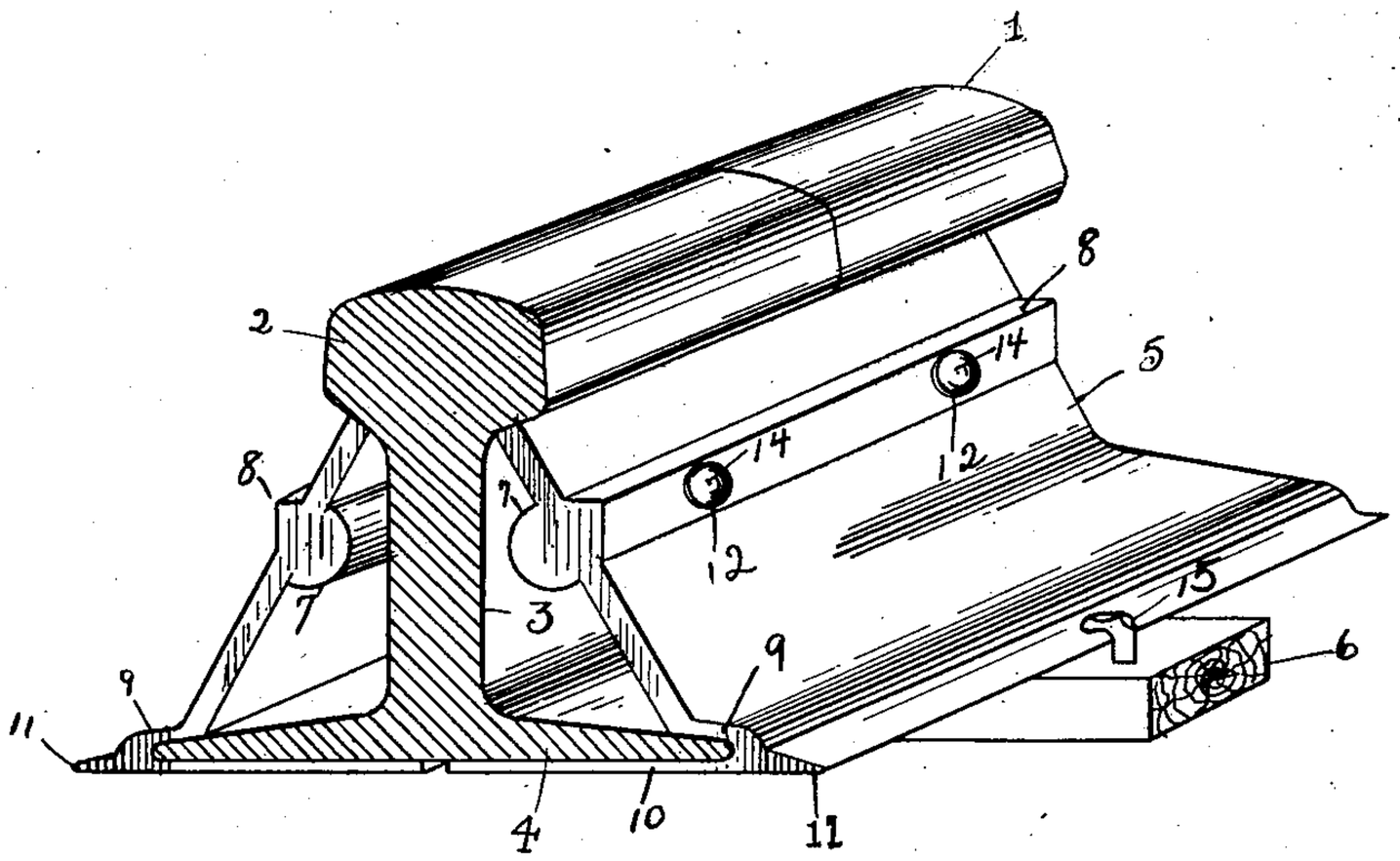
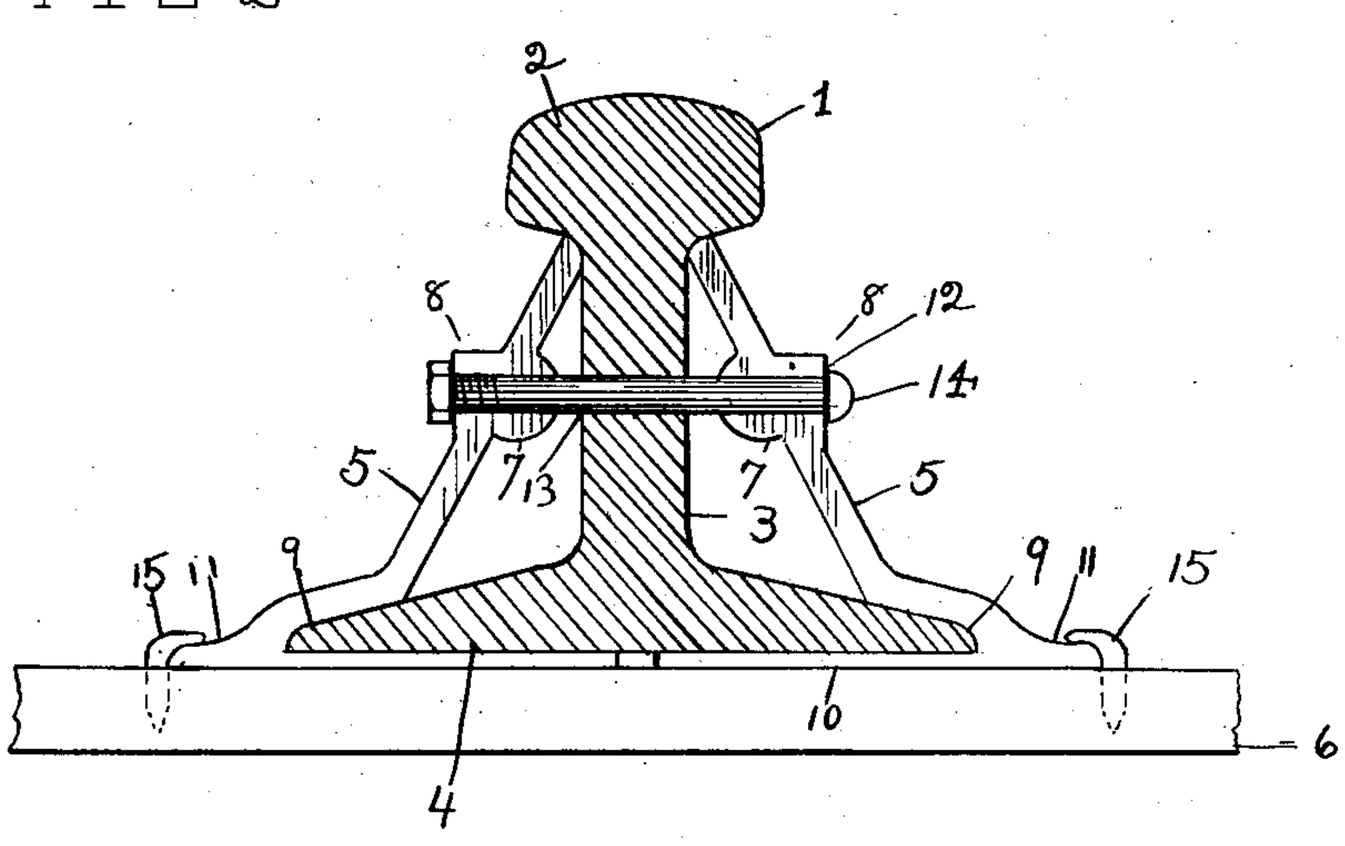


FIG 2



WITNESSES

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No. 740,029. Patented September 29, 1903.

UNITED STATES PATENT OFFICE.

JOHN LEWIES MAYES, OF ST. LOUIS, MISSOURI.

RAILROAD-JOINT.

SPECIFICATION forming part of Letters Patent No. 740,029, dated September 29, 1903.

Application filed August 10, 1903. Serial No. 168,893. (No model.)

To all whom it may concern:

Be it known that I, JOHN LEWIES MAYES, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Railroad-Joints, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to an improved railroad-joint, and has for its object to provide a railroad-joint consisting of a combined tie-plate and rail-brace.

In the drawings, Figure 1 is a perspective view of the rail held in place by means of the device of my invention. Fig. 2 is a transverse vertical sectional view of the same, taken at a point where one of the bolts passes through the supporting device and the rail.

My present invention is an improvement upon the railroad-joint heretofore patented to me by United States Letters Patent No. 694,655, under date of March 4, 1902; and, like my said former invention, it consists of two mating side pieces adapted to be arranged upon opposite sides of the rails, each of said side pieces being adapted to contact with and support the ball or upper flange of the rail and also to contact with and support the lower flange, each of the said side pieces being removable for purposes of replacement or repair without disturbance of the opposing side piece.

In Fig. 1 the contacting rails are indicated by the numeral 1. The ball of the rail is indicated by the numeral 2, the web of the rail by the numeral 3, and the lower flange by the numeral 4, while the side pieces are distinguished by the numeral 5, the ties being marked with the numeral 6. The side pieces 5 are of the form shown in section in Fig. 2 and in perspective in Fig. 1, having a longitudinal rib 7 upon their inner sides and a longitudinal rectangular strengthening-shoulder 8 upon their outer sides and in alinement with the ribs 7.

The side pieces 5 are provided on the inner side of their lower extremities with a groove 9, adapted to receive and closely contact with the lower flange 4, the base of the side pieces 5 extending inwardly to form the base-plate 10 and outwardly to form the pointed longitudinal blade 11. The side pieces 5 are provided with the horizontal perforations 12, which correspond with perforations 13 in the web of the rail, the perforations 12 and 13 being adapted to receive the bolts 14 for the purpose of fastening the side pieces 5 to the rail. The side pieces 5 are secured to the ties 6 by means of spikes 15, which are driven, as shown in the drawings, so that their heads extend over and engage the blade 11.

By means of my invention I have provided independent removable side pieces adapted to engage with and sustain the ball of the rail and to receive therefrom the shearing strains to which it is subjected, the side pieces, furthermore, being strengthened by the longitudinal ribs and forming of themselves truss supports or braces to aid in the distribution of the strains between the ball and the lower flange of the rail, the side pieces also serving as a base-plate wider than the width of the lower flange of the rail and distributing the load carried by the rail upon a large area of the supporting-ties.

In accomplishing my invention I have produced a railroad-joint equally adapted for use on straight lines or curves and combining a high factor of safety with great economy of material. The side pieces, by reason of their manner of contacting and support, prevent the whole rail from lateral movement, while protecting the ball of the rail from shearing stresses, in which particulars the advantages of my improvement over the prior art are manifest.

In my construction as shown all strain on the bolt-head and nut is practically eliminated, the stresses to which the ball of the rail is subjected being directly carried by the side pieces and not by the bolt, thus making the sustaining strength of the track practically continuous and practically as great at the joint as in the center of the rail.

Having thus described my invention, what I claim as new, and desire to have secured to me by the grant of Letters Patent, is—

1. A device of the class named, consisting of two mating side pieces, each of said side pieces being provided with an inwardly-projecting longitudinal strengthening-rib and an outwardly-projecting longitudinal rectangular shoulder, the bases of the side pieces

being extended outwardly to form blades and inwardly to form base-plates, the side pieces being provided with horizontal transverse perforations corresponding with perforations in the rail, and adapted to receive bolts extending through the side pieces and the rail, substantially as described.

2. A device of the class named, consisting of two mating side pieces, each of said side pieces being provided with an inwardly-projecting longitudinal strengthening-rib and an outwardly-projecting longitudinal rectangular shoulder, the bases of the side pieces being extended outwardly to form blades and inwardly to form base-plates, the side pieces being provided with horizontal transverse perforations corresponding with perforations in the rail, and adapted to receive bolts extending through the side pieces and the rail, the side pieces being also provided upon the inner side of their lower ends with grooves adapted to receive the outer edges of the lower flange of the rail, substantially as described.

3. A device of the class named, consisting of two mating side pieces, each of said side pieces being provided with an inwardly-projecting longitudinal strengthening-rib and an outwardly-projecting longitudinal rectangular shoulder, the bases of the side pieces being extended outwardly to form blades and inwardly to form base-plates, the side pieces being provided with horizontal transverse perforations corresponding with perforations in the rail, and adapted to receive bolts extending through the side pieces and the rail, the upper edges of the side pieces being adapted to contact with and support the lower edges of the ball of the rail at or near its web, substantially as described.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

JOHN LEWIES MAYES.

Witnesses:
M. G. IRION,
EDW. HARRINGTON.