

No. 827,991.

PATENTED AUG. 7, 1906.

W. J. OVERTON.
RAIL JOINT.

APPLICATION FILED DEC. 21, 1905.

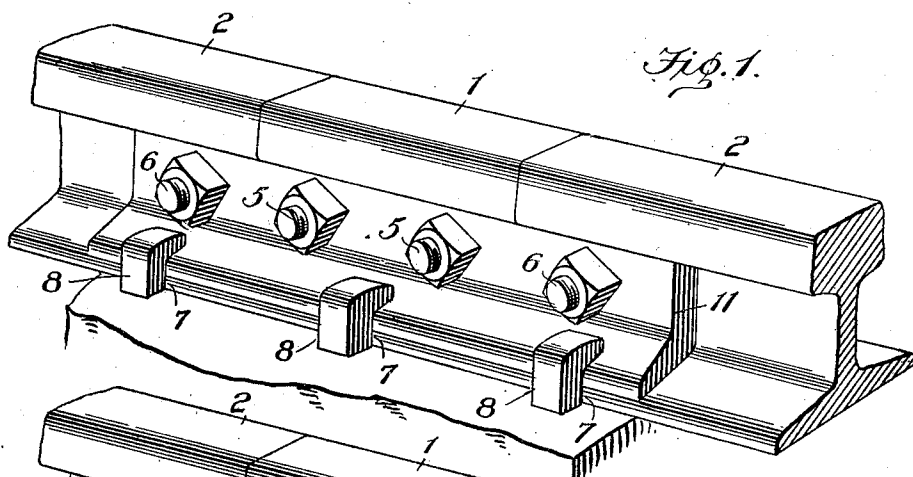


Fig. 1.

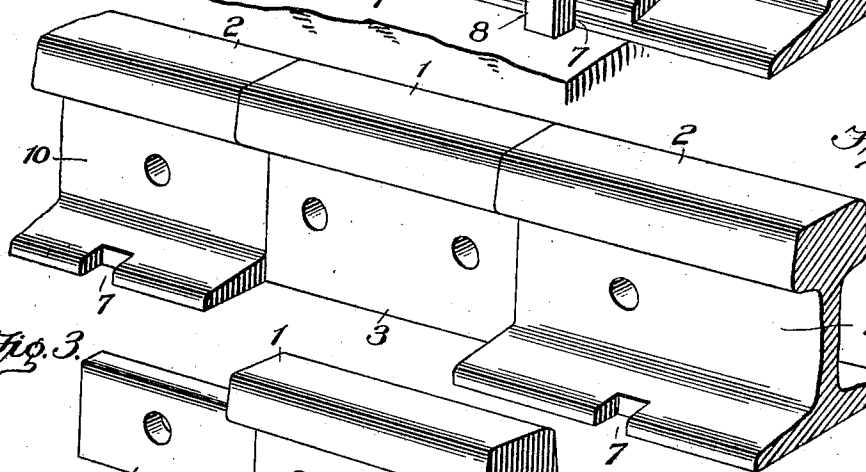


Fig. 2.

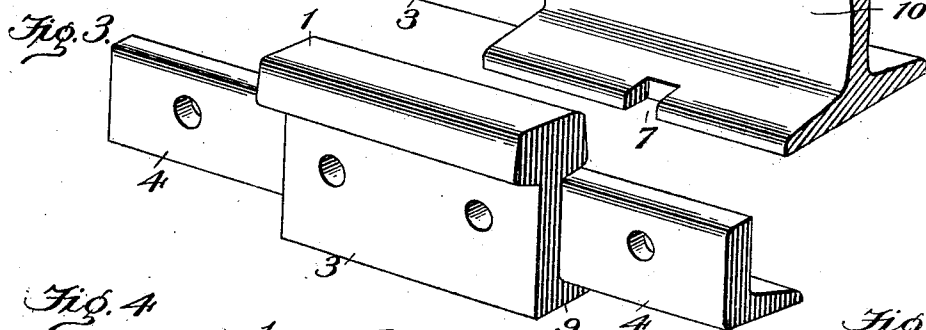


Fig. 3.

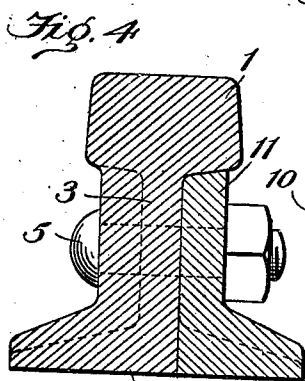


Fig. 4.

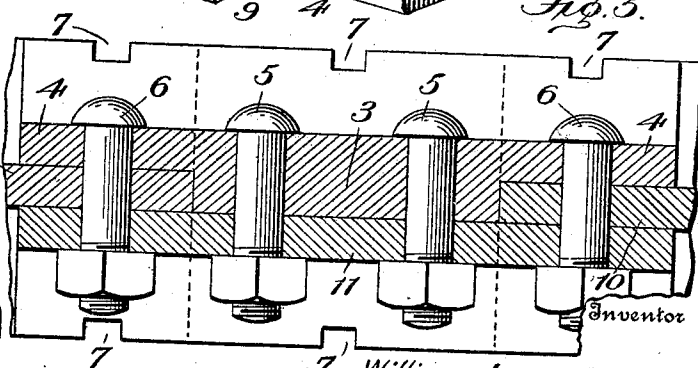


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM JAMES OVERTON, OF SPARROWS POINT, MARYLAND.

RAIL-JOINT.

No. 827,991.

Specification of Letters Patent.

Patented Aug. 7, 1906.

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To all whom it may concern:

Be it known that I, WILLIAM JAMES OVERTON, a citizen of the United States, residing at Sparrows Point, Baltimore county, in the State of Maryland, have invented certain new and useful Improvements in Rail-Joints; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

For securing the ends of railway-rails I have produced an expansion-joint of improved construction, and in the claim appended hereto I will point out that which constitutes my improvement in connection with the accompanying drawings, and in which—

Figure 1 shows in perspective parts of the ends of the rails with my improved expansion-joint. Fig. 2 shows a similar view with one of the joint parts removed. Fig. 3 shows in perspective the rail-joint part having the solid tread-head, the integral arms, and web extending below the arms. Fig. 4 is a vertical cross-section of the rail-joint. Fig. 5 is a horizontal section of the joint, taken through the web of the rails.

The rail-joint consists of a solid tread-head part 1 of the exact counterpart of the rail-treads 2 2 and forms when secured between the rail ends a continuation of the tread thereof; a web part 3, which forms a continuation of the web of the rails, and an arm 4, integral with and projecting from each end of the joint-web, which arms lap with and are secured to one side of the webs of the rails. In this joint part the solid tread-head overhangs one side of its web part and forms with its web part a square joining with the web and with the tread of the abutting rails.

A fish-plate corresponding to the arms of the joint part is secured to it beneath its overhanging tread part by nutted bolts 5 5, and crossing the joints of the rails is secured by nutted bolts 6 6 to the rail-webs and to the arms of the joint part. This construction gives double the thickness to the joint-web, and the arms being integral with the web, and the tread gives the joint strength and stability, while each arm acts as a fish-plate for the rail-joints on one side and with the fish-plate on the other side crossing both rail-joints, and being bolted to both rails and to the joint part gives a firm connection of the

rail-joint with the rails. The base of the arm and the base of the rails are formed with registering notches 7 to receive the spikes 8, by which the joint part and the rails are spiked to the road cross-ties and reinforce the bolted connections of the rail and joint parts. The abutting walls of the joint part and of the rails and the arms integral with the joint part allow for the expansion of the rails. By the integral character of the joint-head, its web-base, and arms the alinement of the joint with the rail ends is kept true and the joint and rail ends prevented from sinking. The joint part by its flat broad base 9 and its integral arms forms a chair-support for the ends of the rails, and for this purpose the broad base of the joint-web extends below its integral arms and has a firm support on the road-ties, while the arms of the joint part extend upon the base of the rail-web and beneath the tread-head of the ends of the rails, securely holding the ends of the rails.

It is important to note that the strength and safety of the joint is due to the direct fastening of the web of the rail-joint to the fish-plate and the latter by its flange to the flanges of the rails and to the webs of the rails and to the arms of the rail-joint and the base-flanges of the arms spiked to the base-flanges of the rails, making five points of fastening for the rail-joint section—that is to say, by the bolts 5 5, by the fish-plate flange, by the bolts 6 6, by the arms 4 4 of the joint, and by the flanges of the arms—and, so far as I know and can find, the means whereby these five ways of fastening a rail-joint is new.

Another feature of importance is the fastening of the fish-plate flange and the flanges of the arms directly to the cross-tie and the fastening of the rail-flange to the tie by the fish-plate flange, as in Fig. 1, and this, so far as I know and can find, is also a new feature of construction.

It will also be noted that the arms 4 have base-flanges which supplement the base-flanges of the rails to which and to the cross-tie they are both spiked at the edge notches.

I claim—

A rail-joint section having a tread-head, a web, and a base-flange the latter at one side only of said web, a plate on the flanged side of said web integral therewith and forming a flanged arm projecting from each end of said section, the opposite side of said web extending below the base-flange of each arm, and a

fish-plate having a thickness to fit and abut
between the ends of the rail-flanges and hav-
ing its ends overlapping said flanges, nutted
bolts securing the fish-plate to the web of
5 said joint-section, to the joint-arms, and to
the ends of the rails, and spikes fastening the
fish-plate to the rail-flanges and to the cross-
ties.

In testimony whereof I have signed my
name to this specification in the presence of 10
two subscribing witnesses.

WILLIAM JAMES OVERTON.

Witnesses:

A. E. H. JOHNSON,
ANNE B. JOHNSON.