

G. A. MORRIS.
RAIL CONNECTION.
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1,007,724.

Patented Nov. 7, 1911.

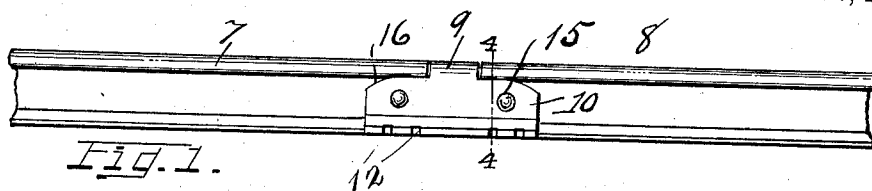


Fig. 1.

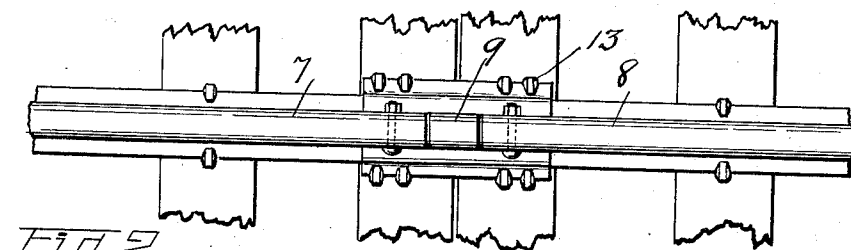


Fig. 2.

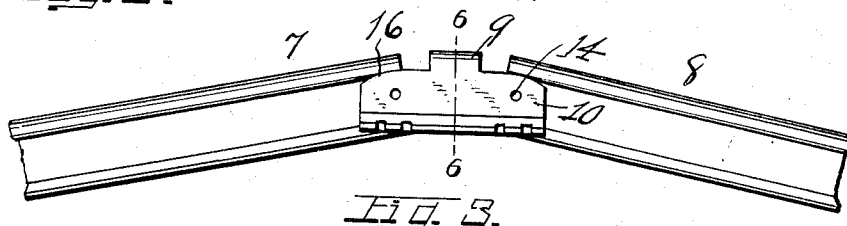


Fig. 3.

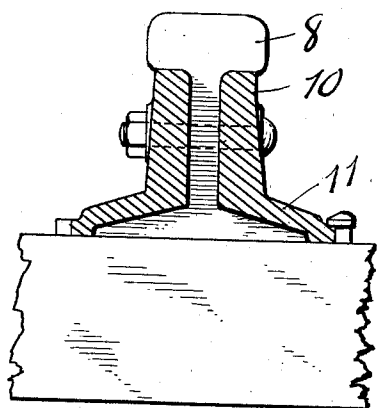


Fig. 4.

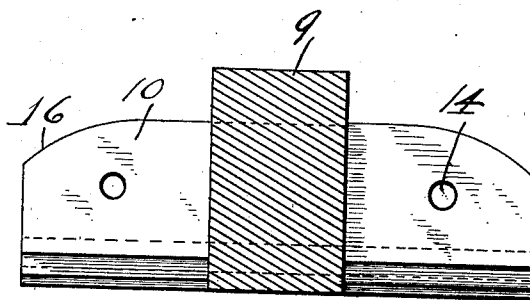


Fig. 5.

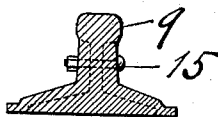


Fig. 6.

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RAIL CONNECTION.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE A. MORRIS, a citizen of the United States of America, residing at Rome, in the county of Floyd and State of Georgia, have invented certain new and useful Improvements in Rail Connections, of which the following is a specification.

This invention relates to railway tracks and particularly to a means for connecting the meeting ends of rails, the said invention being known particularly as a rail connection.

An object of this invention is to provide combined fish plates and a rail section, the said fish plates being in position to embrace the sides of adjacent ends of rails whereby the said rails are confined against transverse movement when the rail connection has been anchored to the cross ties in the usual manner, the said connection permitting expansion and contraction of the rails without liability of their dislodging from the connection.

A still further object of this invention is to provide a rail connection capable of use in splicing a rail which has become damaged whereby a section of a rail may be removed and the rail connection forming the subject matter of this invention may be interposed between the ends of the rails for the purpose of bridging the space occasioned by the removal of the impaired portion of the rail, the said connection being capable of adjustment between the said ends of the rail without removing the said rail from the cross ties, except the rail must be moved vertically to separate the ends to a sufficient degree to admit the interposition of the connection between the said ends.

A still further object of this invention is to provide a rail connection which will retain the meeting ends of rails in position without the use of bolts or other fastening devices, thereby minimizing the parts and reducing the cost of manufacture.

With the foregoing and other objects in view, the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully set forth and claimed.

In describing the invention in detail, reference will be had to the accompanying drawings forming part of this specification

wherein like characters denote corresponding parts in the several views, in which—

Figure 1 illustrates a fragment of two rails having their adjacent ends fastened by a connection embodying the invention; Fig. 2 illustrates a top plan view thereof showing the connection and the rails attached to cross ties; Fig. 3 illustrates a side elevation of fragments of rails with the connection interposed ready for and in position for assembling the parts; Fig. 4 illustrates a sectional view through the connection on the line 4—4 of Fig. 1 with the rail shown in elevation; Fig. 5 illustrates a longitudinal sectional view of the rail connection; and Fig. 6 illustrates a transverse sectional view on the line 6—6 of Fig. 3.

In these drawings 7 and 8 denote fragments of rails which are of the ordinary type and they will, therefore, not be described in detail.

The connection comprises in its construction a central portion 9 having a head which is, in cross section, the same in contour as the contour of the head of a rail in order that the said central tread portion 9 may align with and form a continuation of the rails 7 and 8. The central portion 9 is formed integral with the side plates 10 which may be termed "fish plates." The distance between the lower edge of the side plates 10 and the lower surface of the central portion 9 is preferably equal to the thickness of the base flange of a rail for it is the purpose of the inventor to have the base flange of the rail extend under the side plates 10 in order that the said side plates may have their lower edges resting on the upper surfaces of the base flanges of the rail. The end surfaces of the middle portion are vertical and at right angles to the linear surface of the fish plates, and are therefore adapted to fit against or parallel with the ends of an ordinary railway rail. The side plates 10 are further provided with flanges 11 which are flared transversely of the connection and have their lower edges on the plane of the lower surface of the central portion 9, in order that the edges of the flanges and the lower surface of the central portion 9 may rest on cross ties. The flanges are notched as shown at 12 for the reception of the rail spikes 13 whereby the said connection is secured to the cross ties.

I have shown the side plates 10 as being provided with apertures 14 which are provided for the purpose of receiving the bolts 15. The provision of the bolts will be found 5
superfluous for most uses and I therefore do not wish to be understood as regarding the presence of the apertures and bolts as a material part of this invention for they may be omitted without departing from the 10
scope of the claim. When the meeting ends of rails are embraced by the side plates of the connection and the connection is firmly anchored to the cross ties, lateral displacement of the rails cannot take place at the 15
point of connection with the rail connection for owing to the fact that the flanges of the connection are flared, the said connection has a relatively wide base which will prevent its tilting.

20 The upper surfaces of the side plates are inclined at the corners to form curved surfaces 16 and to permit the application of the said side plates to the meeting ends of the rail when the said rails are adjusted to 25
the position shown in Fig. 3, the purposes of which have been heretofore indicated, but the upper portion of these plates, adjoining the middle portion, is straight lined and is adapted to fit snugly under the head 30
or tread portions of the rails, to support the same at their ends. After the side plates of the connection have been applied between the heads and base flanges of the rails when the said rails are in the elevated position 35
shown in Fig. 3, the ends of the said rails will gradually extend closer to the central

portion 9 of the connection as the rails are moved to the horizontal plane and it is the purpose of the inventor to have the central 40
portion 9 of such length as to practically fill the space between the ends of the sections of the rail when the said rails are in the horizontal position.

Owing to the fact that the rail connection embraces the webs and base flanges of the 45
rail and that the connection is without a bottom except at the lower part of the central portion 9 the rails may be applied to the connection in the position shown in Fig. 3 and are free to slide longitudinally of the 50
connection until they contact with the central portion 9.

I claim—

In combination with railway rails of ordinary construction, a pair of spaced fish 55
plates having substantially vertical ends and having substantially horizontal intermediate top surfaces and having longitudinal curved surfaces joining the substantially horizontal surfaces and the substantially 60
vertical surfaces and having an integral central tread portion with vertical end surfaces interposing the substantially horizontal portions, all substantially as shown and described for the purposes specified. 65

In testimony whereof, I affix my signature in the presence of two witnesses.

GEORGE A. MORRIS.

Witnesses:

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G. W. SHARP.