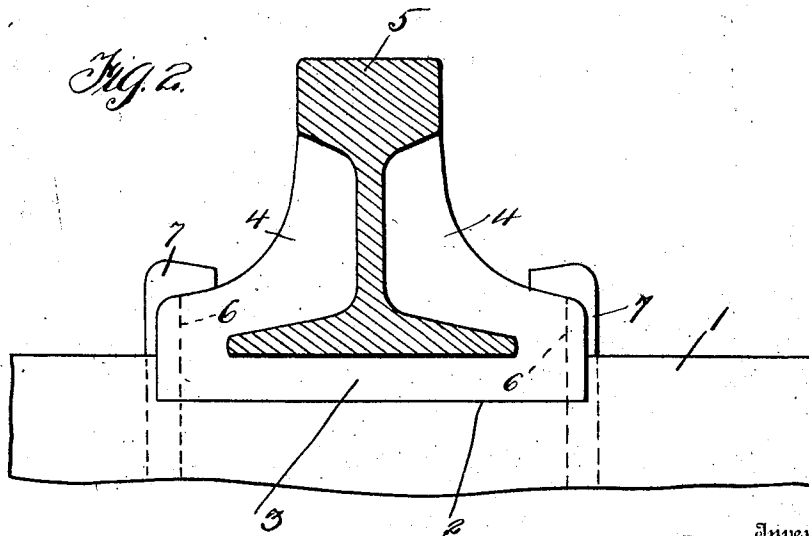
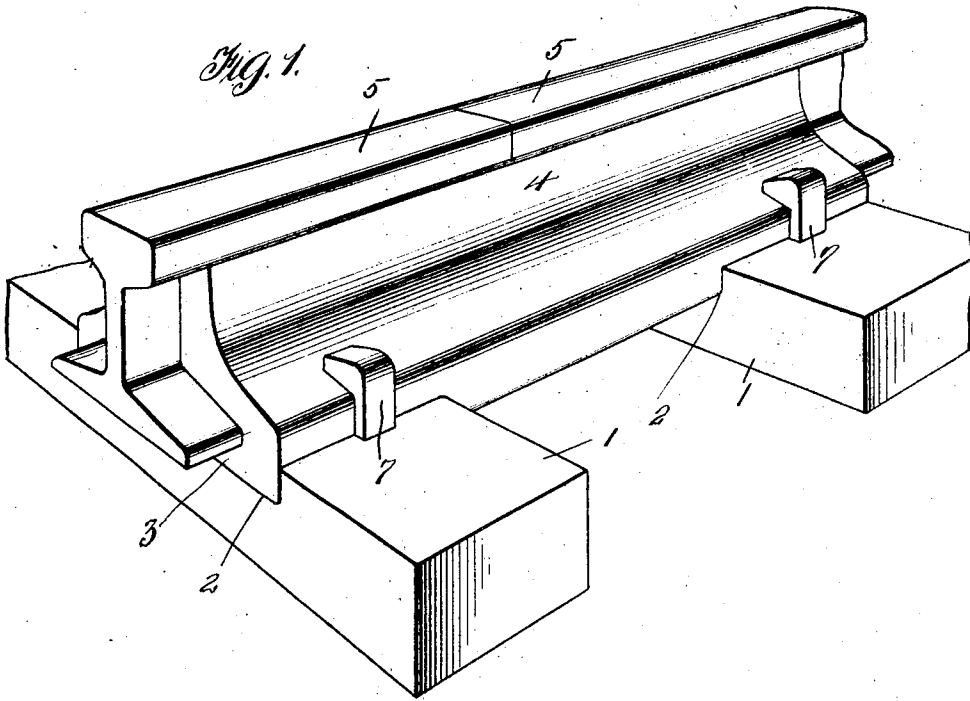


C. F. MARTIN.
RAIL JOINT.

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932,305.

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Witnesses

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CHARLES F. M. FIN, OF ROBINSON, ILLINOIS.

RAIL-JOINT.

932,305.

Specification of Letters Patent. Patented Aug. 24, 1909.

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To all whom it may concern:

Be it known that I, CHARLES F. MARTIN, a citizen of the United States of America, residing at Robinson, in the county of Crawford and State of Illinois, have invented certain new and useful Improvements in Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a rail chair particularly designed for rail joints, and the objects of my invention are, first, to provide a chair that will firmly brace the confronting ends of two rails and prevent lateral and vertical displacement; second, to obviate the necessity of using bolts and nuts and separate splice bars as a fastening medium for the confronting ends of two rails; third, to provide a strong and durable rail joint that will eliminate the jolting and bumping of rolling stock when passing over a joint; and fourth, to provide a rail joint that will prevent vertical displacement of the confronting ends of two rails and at the same time allow for the expansion and contraction of said rails.

The above objects are attained by a rail chair that will be hereinafter described in detail and then claimed.

Referring to the drawings:—Figure 1 is a perspective view of a rail chair constructed in accordance with my invention, and Fig. 2 is an end view of the same.

Referring to the drawings in detail 1 designates a pair of ties or sleepers having the upper surfaces in proximity to one end cut away so as to provide a U-shaped recess to constitute a seat. The bottom wall of the recess is indicated by the reference character 2 and the side walls which extend vertically are indicated by the reference character 2^a. Mounted upon the bottom wall 2 of each recess and snugly engaging the side walls of each recess is a rail chair which is of a length as to bridge steps between the ties 1. The rail chair comprises a base 3 substantially U-shaped in cross section and having the vertical walls 3^a thereof snugly engaging the vertical walls of the recesses and of a height as to project above the upper face of the ties. Formed integral with the top of the walls 3^a of the rail chair are longitudinally-extending fish plates 4 which are of a length equal to the length of the base 3. The base 3 of the rail chair is adapted to support the rails 5 and the fish plates 4 are

adapted to incline the base of the rails 5, abut against the webs 5^a of the rails 5 and engage the lower face 5^b of the tread of the rails for supporting said tread. The walls 3^a of the rail chair abut against the edges of the base of the rails 5 whereby the rails are securely maintained in position through the medium of the walls and fish plates 4.

The outer face of each of the walls 3^a of the rail shaft and the lower edges of the fish plates 4 are provided with vertically disposed notches 6 to receive spikes 7 driven in the ties 1 for holding the chair in the seats 2. The heads of the spikes 7 are adapted to extend over the fish plates 4, and prevent vertical displacement of the chair, while the seats 2 and the shanks of the spikes prevent lateral displacement.

It will be observed that the fish plates 4 are reinforced and are of greater width at the juncture of the rail webs with the base flanges thereof than at any other place throughout the fish plates, and this reinforced portion is adapted to prevent the webs of the rails from cracking or breaking adjacent to the base flanges thereof.

Since the confronting ends of the rails 5 rest directly upon the base plate 3, and the heads of said rails are supported by the splice bars 4, a continuous tread will be provided for the rolling stock adapted to pass over the rails 5, and in consequence of this continuous tread, the jarring and jolting of rolling stock is eliminated and the longevity of the rails and rolling stock considerably prolonged.

Having now described my invention what I claim as new, is:—

A rail joint comprising the combination with a pair of ties, each having its upper face provided with a U-shaped recess adjacent to the end of each tie, of a rail chair mounted in said recess and consisting of a base and a pair of vertical walls, said chair substantially U-shaped in cross section and said walls snugly engaging the vertical recess of the ties and said walls of a height as to project above the recess of the ties, said chair adapted to support a pair of rail ends and of a length as to bridge the steps between the ties, longitudinally-extending fish plates formed integral with the upper terminus of the walls of the chair and embracing the bases of the rails, engaging the webs of the rails and further engaging the lower face and the tread of the rails, said

fish plates at the junction of the webs and
base flanges of the rails being reinforced,
said fish plates at the junction thereof with
the walls of the chair provided with notches,
5 said walls of the chair having the outer faces
thereof provided with notches alining with
the notches in the fish plates and spikes en-
gaging in said ties, extending upwardly in
said notches and overlapping the longitudi-

nal edges of said fish plates to prevent lat- 10
eral and vertical displacement of said chair.

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

CHARLES F. MARTIN.

Witnesses:

MAX H. SROLOVITZ,
C. A. RENZIEHAUSEN.