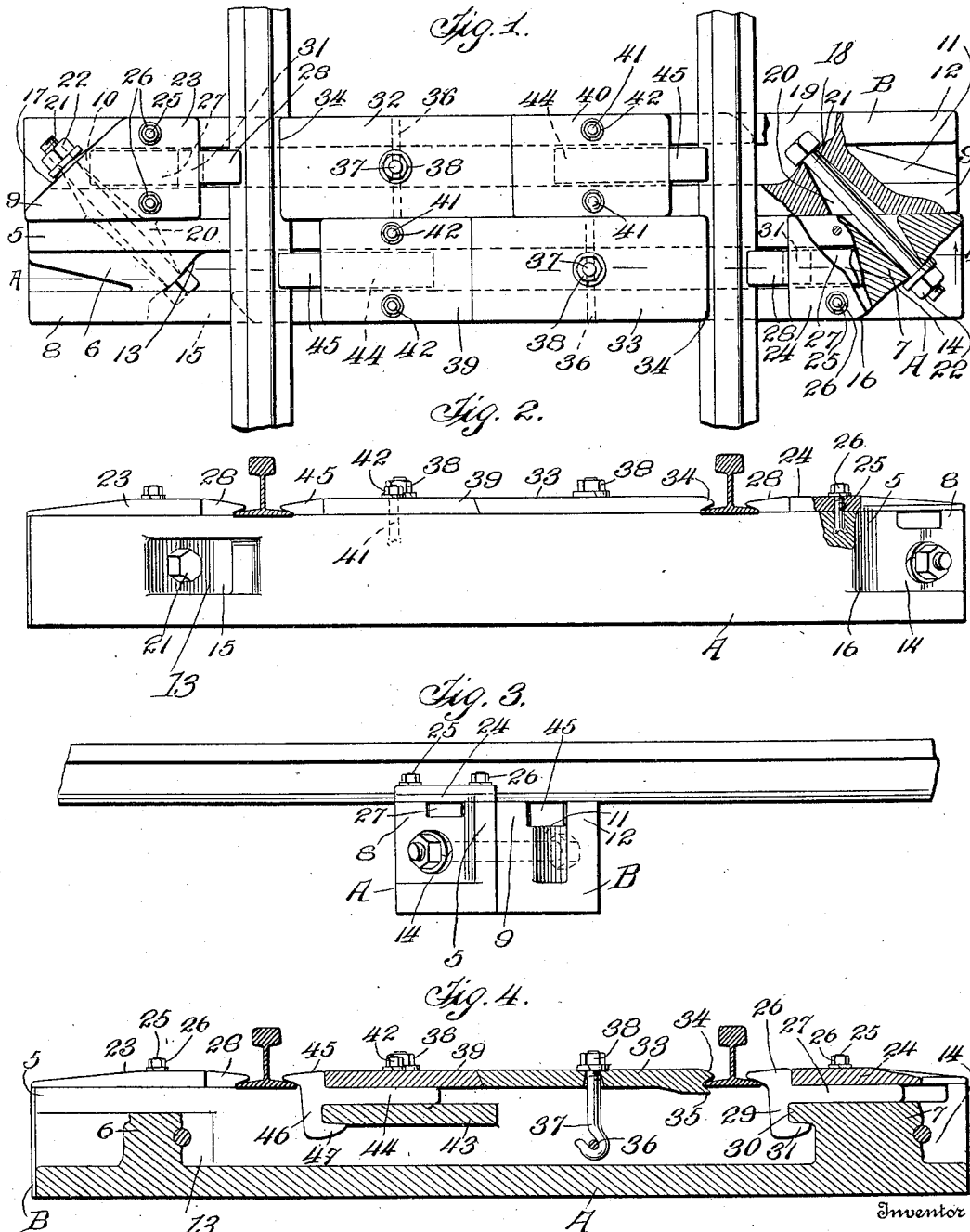


W. J. ALLSBROOKS.
METALLIC RAILWAY TIE.
APPLICATION FILED OCT. 28, 1909.

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Patented Apr. 5, 1910.



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Witnesses

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UNITED STATES PATENT OFFICE.

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METALLIC RAILWAY-TIE.

953,984.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM J. ALLSBROOKS, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented a new and useful Metallic Railway-Tie, of which the following is a specification.

My invention relates to railway ties and has for an object to provide a metallic railway tie having the rail fastening devices arranged to permit the rail to expand and at the same time securely hold the rail against lateral displacement.

A further object is to provide a railway tie having the rail fastening devices so disposed that a broken or defective member may be removed and replaced with a new one without affecting the position of the rails upon the tie.

A still further object is to provide a railway tie composed of two companion sections which can be adjusted relatively to each other to take up the wear upon the rail fastenings and will require no tool other than a wrench for this operation.

With the above advantages and other objects in view which will appear as the description proceeds, my invention embraces certain novel details of construction and combination of parts which will be hereinafter more fully described and claimed.

In the accompanying drawing forming part of this specification, Figure 1 is a plan view of a railway tie constructed in accordance with my invention. Fig. 2 is a side elevation of my improved railway tie. Fig. 3 is an end elevation of the same. Fig. 4 is a longitudinal sectional view, taken on the line A—B of Fig. 1.

Like characters of reference designate similar parts in the views shown.

Referring to the parts by their reference characters, A and B designate a pair of channel bars placed side by side. The channel bar A is provided on one of its wings 5 with a pair of spaced enlargements 6 and 7 extending across its channel to the opposed face of the other wing 8 and forming closures for the ends of the channel. The channel bar B is likewise provided on one of its wings 9 with enlargements 10 and 11 which engage the opposite wing 12 of the channel bar and form closures for the ends of the channel.

The enlargement 6 is provided with a

beveled end face 13 remote from the end face of the channel bar and the enlargement 7 with a beveled end face 14 adjacent the opposite end face of the channel bar. A substantially oblong opening 15 formed in the wing 8 exposes the beveled face of the enlargement 6. The opposite end of the wing 8 is cut away, as shown at 16, to expose the beveled face 14 of the enlargement 7. The enlargement 10 of the channel plate B is provided with a beveled face 17 adjacent the end face of the channel bar, and the enlargement 11 with a beveled face 18 remote from the opposite end face of the channel bar. A substantially oblong opening 19 formed in the wing 12 of the channel bar exposes the beveled face of the enlargement 11. The opposite end of the wing 12 is cut away to expose the beveled face of the enlargement 10. The beveled faces of the enlargements are perpendicular to the webs of their respective channel bars and extend to nearly the top faces of the flanges thereof.

Formed obliquely through the enlargements of the juxta-positioned wings 5 and 9 are orifices 20 through which bolts 21 are passed to clamp the channel bars together. The orifices are formed at approximately right angles to the bevel faces of the enlargements and are expanded in cross dimension to approximate a slot at their opening through the opposed faces of the juxta-positioned wings. The clamping bolts are inserted through the oblong openings in the wings of the channel bars and engaged through the aligned orifices of corresponding enlargements until their heads are in contact with the beveled faces of the enlargements. Nuts 22 travel upon the threaded extremities of the bolts and bear against the beveled faces of the enlargements. The orifices being of greater cross dimension at their openings through the opposed faces of the juxta-positioned wings will permit the channel bars to be moved relatively to one another by tightening the nuts upon the bolts. The object of this relative adjustment of the channel bars is to take up the wear upon the rail fastenings so that a tight connection of the parts may be maintained at all times.

Removably secured to the diagonally opposite ends of the channel bars is a pair of abutment plates 23 and 24. The abutment plates may be secured to the top faces of the

channel bars in any preferred manner, the connection here being shown by threaded lugs 25 secured to the wings of the channel bars and adapted to be engaged through
5 suitable openings in the abutment plates. Lock nuts 26 carried upon the extremities of the threaded lugs securely clamp the abutment plates in position.

Slidably fitted between the bottom faces
10 of the abutment plates and top faces of the before mentioned enlargements are clamps 27 each terminating at one end in a perpendicular head 28 that extends over the outer side of a rail base flange, as shown.
15 Formed in alinement with the head of each clamp is a stop 29 which engages the end face of the adjacent enlargement, which latter is undercut as shown to provide a rib 30, under which a hook 31 formed upon the
20 stop 29 is engaged to rigidly hold the clamp against lateral or rocking movement.

Slidably mounted upon the top faces of the channel bars approximately intermediate the ends thereof, are clamping plates 32
25 and 33, each of which is provided with a beveled end face 34 to extend over the inner side of a rail base flange. An integral lug 35 projects downwardly from the bottom face of each clamping plate and engages the
30 bottom face of the rail base flange. Positioned transversely the channel bars below the clamping plates are rods 36. Hooks 37 engage the rods 36 and project upwardly through suitable openings in the clamping
35 plates, being then threaded and provided with nuts 38 that bear against the top faces of the clamping plates to securely lock the same to the top faces of the channel bars. The openings in the clamping plates are of
40 sufficient size to loosely engage the shanks of the hooks 37 so as to permit the clamping plates to be slid upon the top surface of the channel bars without disengaging the hooks from the rods. The object of this
45 construction is to permit each clamping plate to be adjusted relatively to the base flange of the rail so as to take up any wear upon the engaging surface of the clamping plate.

Rigidly secured to the top faces of the channel bars are a second pair of abutment plates 39 and 40 which bear against the rear ends of the clamping plates and extend to within a slight distance of the base flange of
50 the opposite rail of the track. The abutment plates may be secured in position in any desired manner, the connection being here shown by threaded lugs 41 secured to the channel bar wings and projecting upwardly
60 through suitable openings formed in the abutment plates. Lock nuts 42 carried upon the threaded extremities of the lugs bear against the top faces of the abutment plates and securely clamp the same to the channel
65 bars. Positioned transversely the channel

bars below the abutment plates are bracing ribs 43. Slidably mounted between the abutment plates and bracing ribs are clamps 44 having heads 45 that extend over the rail base flange, as shown. Formed integral with
70 the heads 45 and in alinement therewith are stops 46 that bear against the end faces of the bracing ribs and are provided with hooked extremities 47 to engage the under surface thereof and securely hold the clamps
75 against rocking movement.

It is evident that the base flanges of the rails are not positively held at any point and may freely expand and contract without injuring the fastening devices. It will be further seen that the abutment plates and clamping plates form a housing over the channels of the channel bars to prevent ashes, cinders, etc., of the road bed from gaining access to the interior of the channel bars so that the
80 fastening devices will not become choked and their removal impeded.

From the foregoing description, taken in connection with the accompanying drawings, it is thought that the construction and operation of my invention will be easily understood without a more extended explanation, it being understood that various changes may be made in the form, proportion and minor details of construction without sacrificing any of the advantages or departing from the spirit of the invention.
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What is claimed is:

1. In a railway tie, a pair of channel bars placed side by side, each having one of its wings formed with an integral internal enlargement adjacent each end, said enlargements being provided with obliquely disposed orifices each having one end flared and opening through the contact face of the channel bar, the flared ends of adjacent orifices being adapted to register, and bolts passed obliquely through the registering orifices to clamp said channel bars together.
100 105

2. In a railway tie, a pair of channel bars placed side by side each having one of its wings formed with an enlargement adjacent each end engaging the opposite wing, the enlargement at one end of the wing having an inclined face remote from the end face of the wing and the enlargement at the other end of the wing having an inclined face adjacent the opposite end face of the wing, the opposite wing of the channel bar being mutilated to expose the inclined faces of said enlargements, each of said enlargements being provided with an orifice at right angles to its inclined face and opening through the lateral face of the wing, the orifices of adjacent enlargements being adapted to register, bolts passed through said registering orifices, and nuts carried upon the bolts adapted to engage the beveled faces of said enlargements to clamp said channel bars together.
110 115 120 125

3. In a railway tie, a pair of channel bars
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placed side by side each having an enlargement formed at each end of one of its wings engaging the opposed face of the opposite wing, each of said enlargements having a flat top face below the top edges of the channel bar, bolts passed obliquely through said enlargements to clamp the channel bars together, abutment plates rigidly secured to the diagonally opposite ends of said channel bars above said enlargements, clamps slid-
 10 ingly mounted between said abutment plates and enlargements adapted to extend over one side of the base flange of the rail; and clamping plates removably secured to the intermediate portions of said channel bars adapted to extend over the opposite side of said rail base flange.

4. In a railway tie, a pair of channel bars placed side by side each having an enlargement formed at each end of one of its wings adapted to close the ends of its channel, each of said enlargements having a flat top face below the top edges of the wings, bolts passed obliquely through said enlargements to clamp the channel plates together, abut-
 20 ment plates rigidly secured to the diametrically opposite ends of the juxtapositioned channel bars above said enlargements, clamps slidably mounted between said abutment plates and top faces of said enlargements adapted to extend over one side of a rail base flange, clamping plates slidably mounted on the top faces of said channel bars intermediate the ends thereof adapted
 30 to engage the opposite side of said rail base flange, rods arranged transversely the channel bars below said clamping plates, and hooks carried by said clamping plates for

engagement with said rods to securely anchor said clamping plates in position. 40

5. In a railway tie, a pair of channel bars placed side by side and each having one of its wings provided with an enlargement adjacent each end adapted to close the ends of its channel; bolts passed obliquely through
 45 said enlargements to clamp the channel bars together, abutment plates arranged on the diametrically opposite ends of the channel bars above said enlargements, clamps adapted to extend over one side of the base flange of a rail, each of said clamps having a shank slidably fitted between said abutment plates and top faces of the adjacent enlargements, and a stop at right angles to said shank adapted to abut against the adjacent end
 55 faces of said enlargements, clamping plates removably secured to the top faces of said channel bars and adapted to engage the opposite side of said rail base flange, a second pair of abutment plates arranged on
 60 the top faces of said channel bars contiguous to said clamping plates and terminating adjacent the base flange of the opposite rail of the track, and removable clamps slidably mounted in said channel bars below the
 65 second named abutment plates and adapted to engage the base flange of the second named rail.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature 70 in the presence of two witnesses.

WILLIAM JEFFERSON ALLSBROOKS.

Witnesses:

MARTIN KELLER,
 E. K. ELLIS.