J. F. McCONNELL.

RAILWAY TIE.

APPLICATION FILED JULY 16, 1912.

1,050,368.

Patented Jan. 14, 1913.

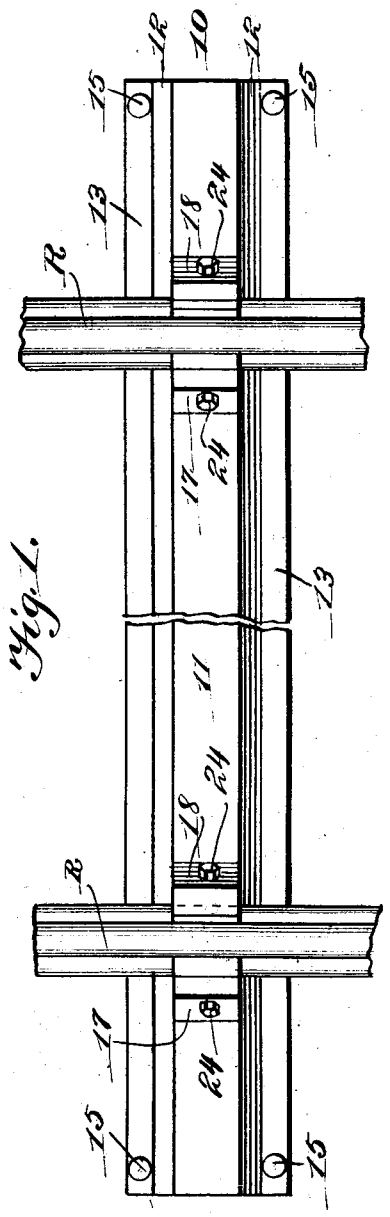

Fig. 1.

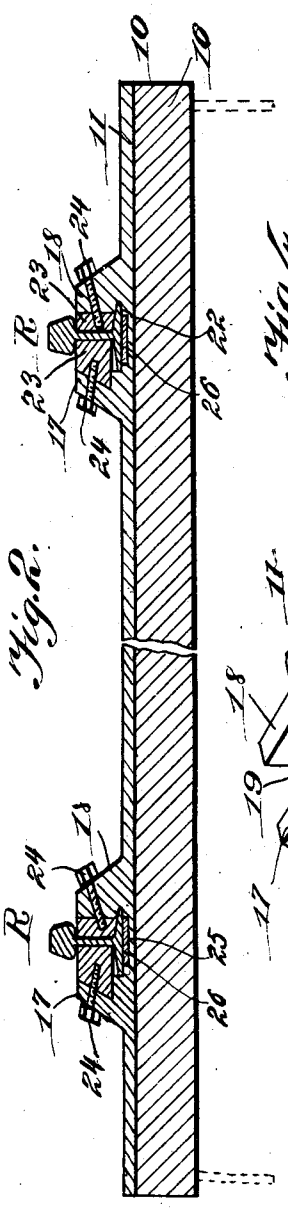

Fig. 2.

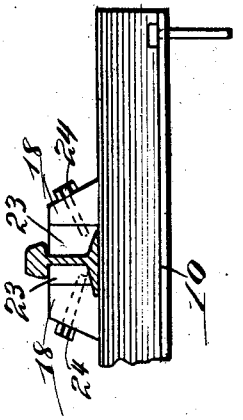

Fig. 4.

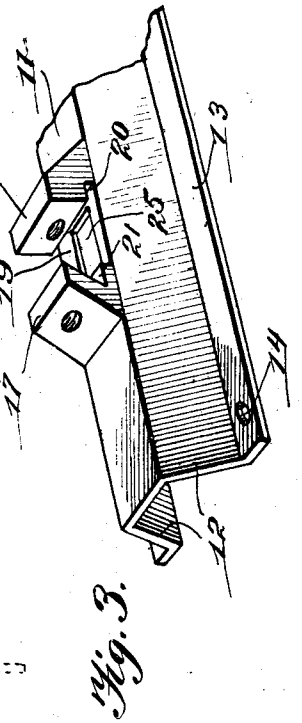

Fig. 3.

Witnesses

William C Linton.

Charles S Wilson

Inventor

J. F. McConnell.

By

Attorney

UNITED STATES PATENT OFFICE.

JOHN FRANKLIN McCONNELL, OF OXFORD, INDIANA.

RAILWAY-TIE.

1,050,368. Specification of Letters Patent. Patented Jan. 14, 1913.

Application filed July 16, 1912. Serial No. 709,677.

To all whom it may concern:

Be it known that I, JOHN F. McCONNELL, a citizen of the United States, residing at Oxford, in the county of Benton and State of Indiana, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification.

This invention relates to metallic railway ties, and is designed particularly to construct a device of this nature which will be so formed that the tie can in no way sink into the road bed, or in any way be worked out of place.

It is further designed to provide a means whereby the rails may be secured to the tie without the use of the ordinary spikes now in use, and provide a means whereby the same attaching mechanism may be used several times in connection with new rails if desired.

With the above and other objects in view, this invention consists in the construction, combination, and arrangement of parts, all as hereinafter more fully described, claimed and illustrated in the accompanying drawings, wherein:—

Figure 1 is the top plan view of a tie constructed in accordance with the present invention. Fig. 2 is a central longitudinal section thereof. Fig. 3 is a perspective view of one terminal of the tie. Fig. 4 is a fragmentary side elevation illustrating a modified means of securing the rail to the tie.

The tie forming the subject matter of the present invention comprises a sheet metal casing having the walls thereof sloping and bent outwardly at their terminals. This construction prevents the tie from sinking into the road bed from the weight of the trains passing thereover as does the tie now in use. Spikes or other suitable means pierce openings formed in the flanges at the lower terminals of the sloping walls and secure ties against any lateral displacements. A suitable wooden or other filler is mounted in the tie, thus presenting a rigid structure and preventing the metal casing from being bent or collapsed. This filler may be omitted and road bed allowed to enter between the walls of the tie and serving as a filling.

Formed on the flat surface of the metal casing adjacent to each terminal thereof are a pair of upwardly extending projections, the inner surface of one projection being provided with a depression at the base thereof for the reception of one side of the base of the rail, while opposite projection is provided with an angular depression at a higher elevation than the opposite projection. This angular projection is adapted to receive a block constructed of wood, paper fiber, or wood fiber, which is inserted between the web of the rail and the projection. A similar block is interposed between the opposite side of the web of the rail and the opposite projection. These blocks are held in position by bolts which pierce said projections and engage said blocks. A depression is formed under the base of each rail for the reception of a block of wood or other material, to eliminate the jars, etc.

Reference being had more particularly to the drawing, 10 indicates generally a sheet metal casing having the flattened bearing surface 11 and outwardly sloping walls 12. A horizontal flange 13 is formed along the lower longitudinal side of each wall 12, each flange being pierced by an opening 14 at each terminal thereof. Spikes or other suitable fastening means 15 pierce the openings 14 and engage the road bed to prevent any lateral displacement of the tie.

In order to provide rigidity to the metal casing, and at the same time retain a certain resiliency, a wooden or fibrous filler 16 is inserted between the sloping walls 12, and conforms in contour to the shape of the casing 10.

Formed on the bearing surface 11, adjacent to each terminal thereof, are a pair of lugs 17 and 18. These lugs are so located that a space 19 is formed therebetween for the reception of the rail. The lug 18 is provided with a recess 20 at the lower end thereof adjacent to the bearing surface 11, said recess forming a continuation of the space 19. A recess 21 is formed in the opposite projection 17 at an elevation from the bearing surface 11, and has its inner wall thereof substantially parallel to the outer side of the projection, and its lower surface horizontal. The walls of both of the projections 17 and 18 slope toward each other, while the inner walls thereof are substantially vertical. The rail, indicated generally as R, is located in the space 19 in such a manner that one side of the base 22 rests in the depression of the projection 18, while the opposite side of the base 22 rests against the inner wall of the opposite projection 17. A pair of blocks 23 are interposed between

the projections 17 and 18 and the web of the rail, the block 23 located adjacent to the projection 17, being received in the recess 21 of said projection. These blocks are retained in position by the bolts 24 which pierce the projections and engage the block.

Relative to the modification illustrated in Fig. 4, the construction thereof is exactly similar to that illustrated in Fig. 2 with the exception that the depression 21 forming the projection 17 is eliminated, the blocks simply being interposed between the web of the rail and the projection.

In order to minimize jars and the like, a depression 25 is formed in the surface of the tie 11 between the lugs 17 and 18 directly under the base of each rail R, for the reception of a wooden papier-mâché, etc., block 26.

It will be understood that the angle of the inner walls of the lugs 17 and 18 may be changed and other details of construction altered without departing in any manner from the spirit of the present invention.

Having thus fully described my invention, what I claim as new, and desire to secure by U. S. Letters Patent, is:—

1. A structure of the class described, comprising a tie having a pair of spaced projections formed therein, said projections forming a channel to receive the web and base flanges of a rail, one of said projections being recessed adjacent the tie, the other projection being recessed adjacent its upper edge, blocks positioned within the channel and adapted to bear against the rail, and fastening means extending through said projections into the blocks.

2. The combination with a tie having a pair of spaced projections formed thereon, of a rail positioned within the channel formed by said projections, one of the projections being longitudinally grooved adjacent the tie for the reception of one of the base flanges of the rail, an interior wall of the other projection being recessed adjacent its upper edge, whereby the tie may be easily positioned, said tie being recessed under the rail to receive a cushioning member, blocks fitted within said channel and threaded bolts working through alined openings formed in the projections and blocks.

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

JOHN FRANKLIN McCONNELL.

Witnesses:

BRITTON C. GRAMES,

VICTOR A. McCONNELL.