

M. J. MacKINNON.
RAILWAY RAIL JOINT.
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907,697.

Patented Dec. 22, 1908.

Fig 1

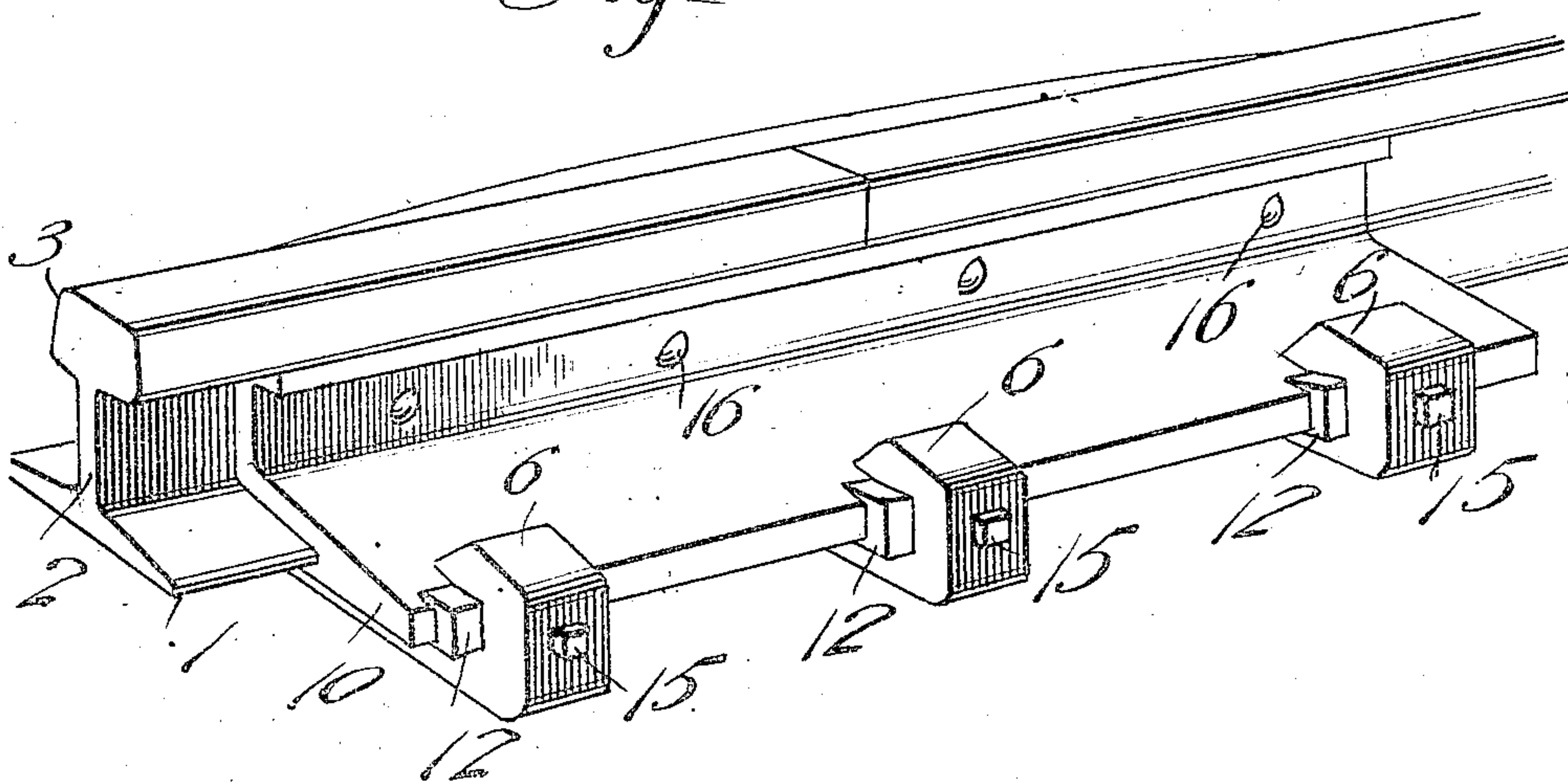


Fig 2.

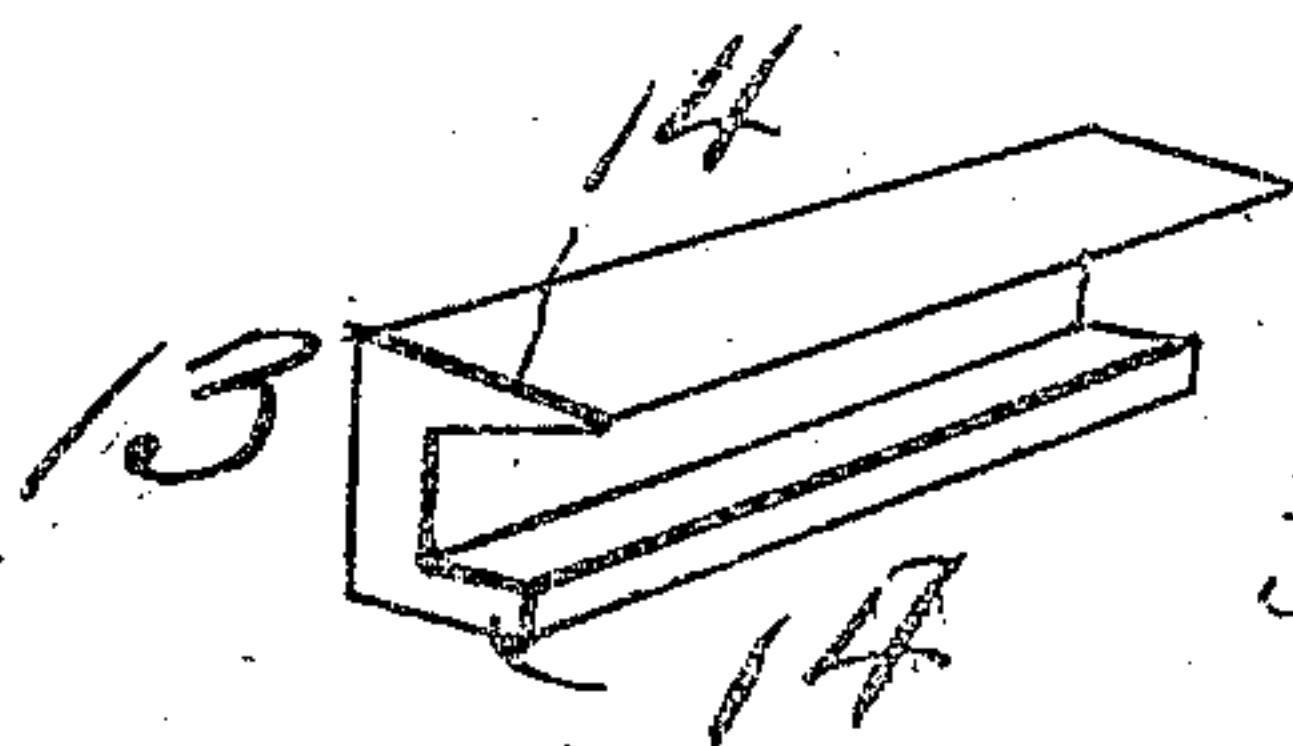
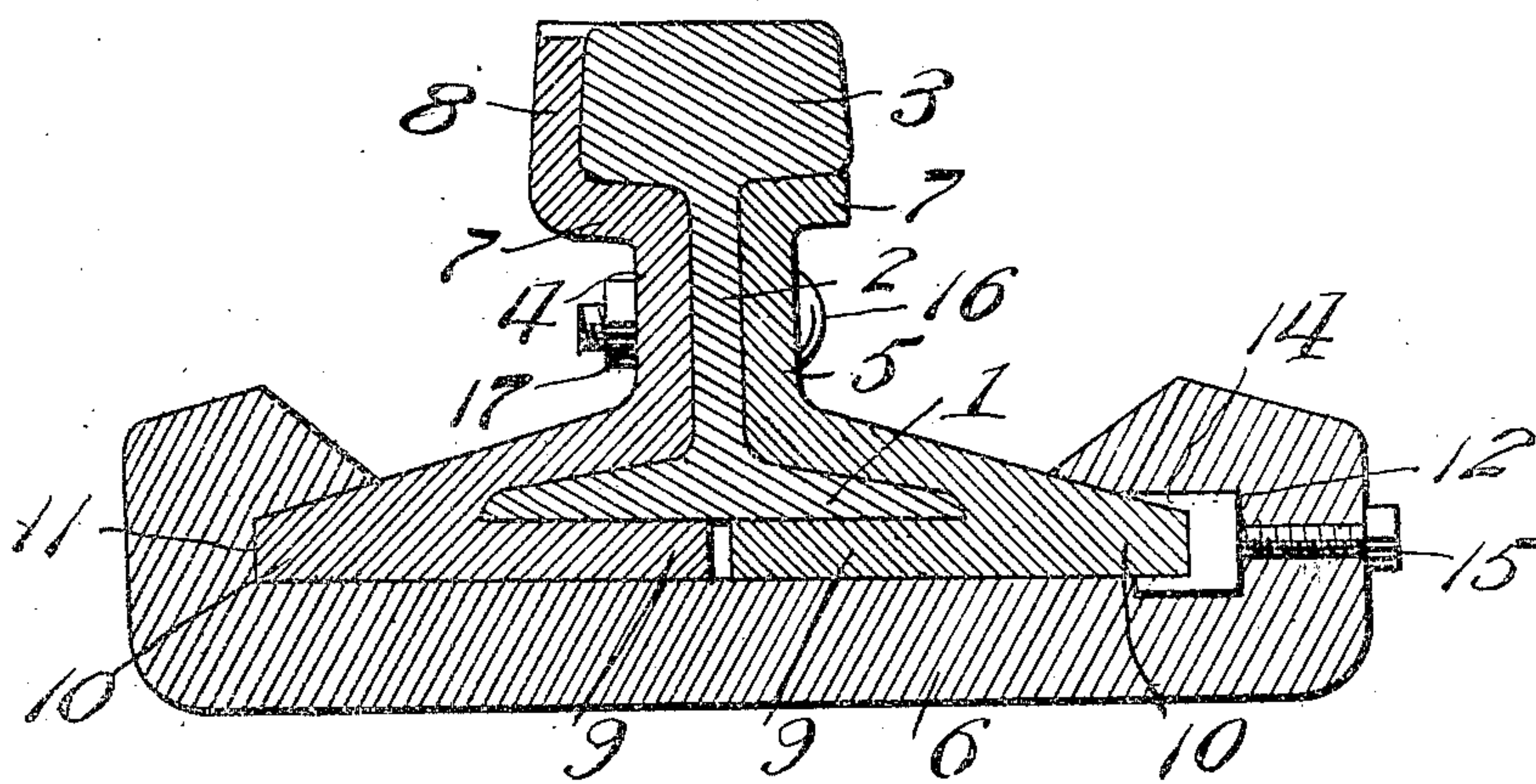


Fig 3.

Witnesses

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RAILWAY-RAIL JOINT.

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To all whom it may concern:

Be it known that I, MICHAEL J. MACKINNON, a citizen of the United States of America, residing at Portland, in the county of Multnomah and State of Oregon, have invented new and useful Improvements in Railway-Rail Joints, of which the following is a specification.

My invention relates to improvements in railway rail joints, and its primary object is the provision of a rail joint which will prevent the rounding and the sagging of the ends of the rails.

A further object of my invention is the provision of a rail joint which is simple, durable and efficient, and which can be manufactured and sold at a comparatively low cost.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of parts hereinafter fully described, claimed and illustrated in the accompanying drawing, wherein:

Figure 1 is a perspective view illustrating the application of my improved rail joint. Fig. 2 is a vertical sectional view taken on a plane extending through one of the clamps, and Fig. 3 is a detail perspective view of one of the wedge blocks.

Referring to the drawing by reference numerals, 1 designates the bases, 2 the webs and 3 the heads of a pair of railway rails.

My improved rail joint comprises a pair of angle bars 4 and 5 and a plurality of clamps 6. The vertical members of the angle bars are formed to provide horizontally disposed and longitudinally extending flanges 7 which are adapted to engage the under surfaces of the heads 3 of the rails, whereby to add strength and rigidity to the heads. The flange 7 of the angle bar 4 is provided with a vertically rising extension 8 which is adapted to snugly embrace the outer face of the heads 3 of the rails, as fully disclosed in Fig. 2 of the drawing. The greatest altitude of the extension 8 is disposed at the meeting ends of the rails and in a plane slightly above the plane of the heads 3 of the rails. The upper edge of the extension 8 inclines downwardly in reverse

directions from this point. The extension 8 is adapted to carry the wheels of the train over the joints of the rails, whereby to prevent the rounding of the rails.

The horizontal members of the angle bars 4 and 5 are provided with base members 9 which are adapted to overlie and underlie the bases of the rails, and which are formed integrally with said members of the angle bars. The base members 9 and the horizontal members of the angle bars 4 and 5 are continued to provide lateral extensions 10 which are designed to give the rails a broad bearing surface at their meeting ends. The ties are preferably recessed to receive the bases 9 and extensions 10 of the rail joint. The clamps 6 are designed to prevent the lateral separation of the angle bars and are adapted to overlie the bases 9 and the extensions 10 thereof, as fully disclosed in Fig. 2 of the drawing. Each clamp 6 is provided with a groove 11 adapted to snugly receive the extension 10 of the angle bar 4, and with a seat 12 adapted to receive the extension of the angle bar 5. The vertical and horizontal walls of the seats 12 are spaced from the extension 10 of the angle bar 5 to receive wedge blocks 13. The wedge blocks 13 are provided with flanges 14 adapted to embrace the extension of the angle bar 5. The wedge blocks 13 are adapted to retain the clamps in applied position against accidental displacement, and are held in applied position by means of set screws 15. Three clamps 6 are preferably used, one being located at a point in alinement with the meeting ends of the rails and another at the edge of the joint. The angle bars are secured to the rails by means of bolts 16 and nuts 17, any number of which may be used. It should be apparent from the above description taken in connection with the accompanying drawing, that I provide a rail joint which will prevent the sagging and rounding of the ends of the rails, one which is simple, durable and efficient, and which can be manufactured at a comparatively low cost.

Changes in the form, proportions and minor details of construction may be made

within the scope of the claim without departing from the spirit or sacrificing any of the advantages of the invention.

Having fully described and illustrated my invention, what I claim is:

A railway rail joint comprising a pair of angle bars, a clamp provided with a groove and a seat adapted to receive the side edges of the angle bars, a wedge mounted in the seat, said wedge being provided with

flanges adapted to embrace one side edge of one of the angle bars, and a set screw carried by the clamp for engagement with the wedge.

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

MICHAEL J. MACKINNON.

Witnesses:

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P. HILL.