W. S. TRUXAL.

RAIL AND RAIL JOINT.

APPLICATION FILED MAY 21, 1910.

985,475. Patented Feb. 28, 1911.

Fig. 1.

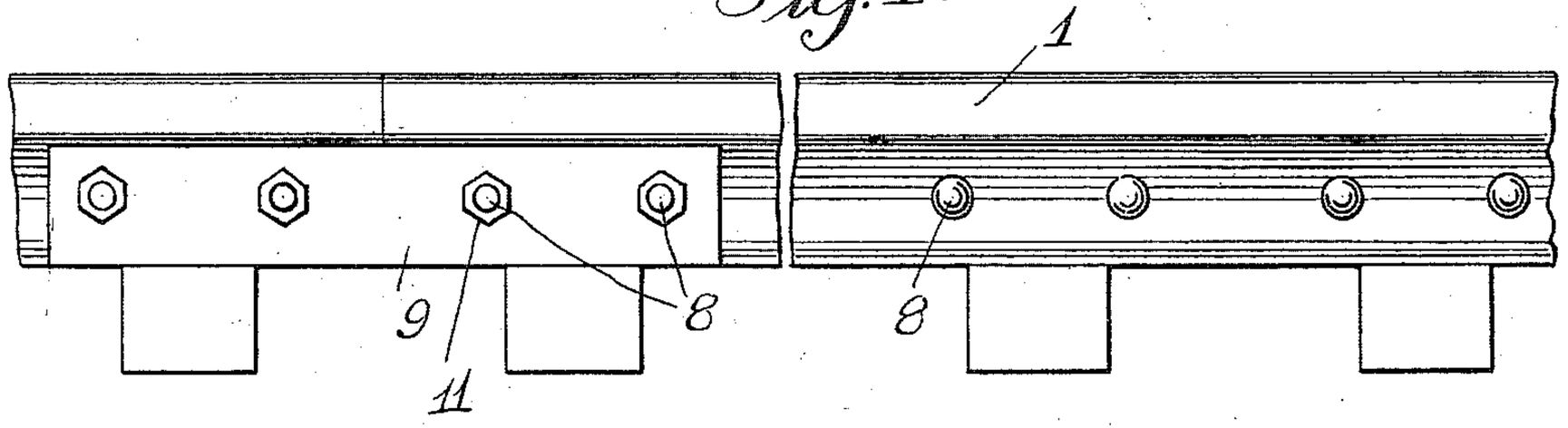


Fig. 2.

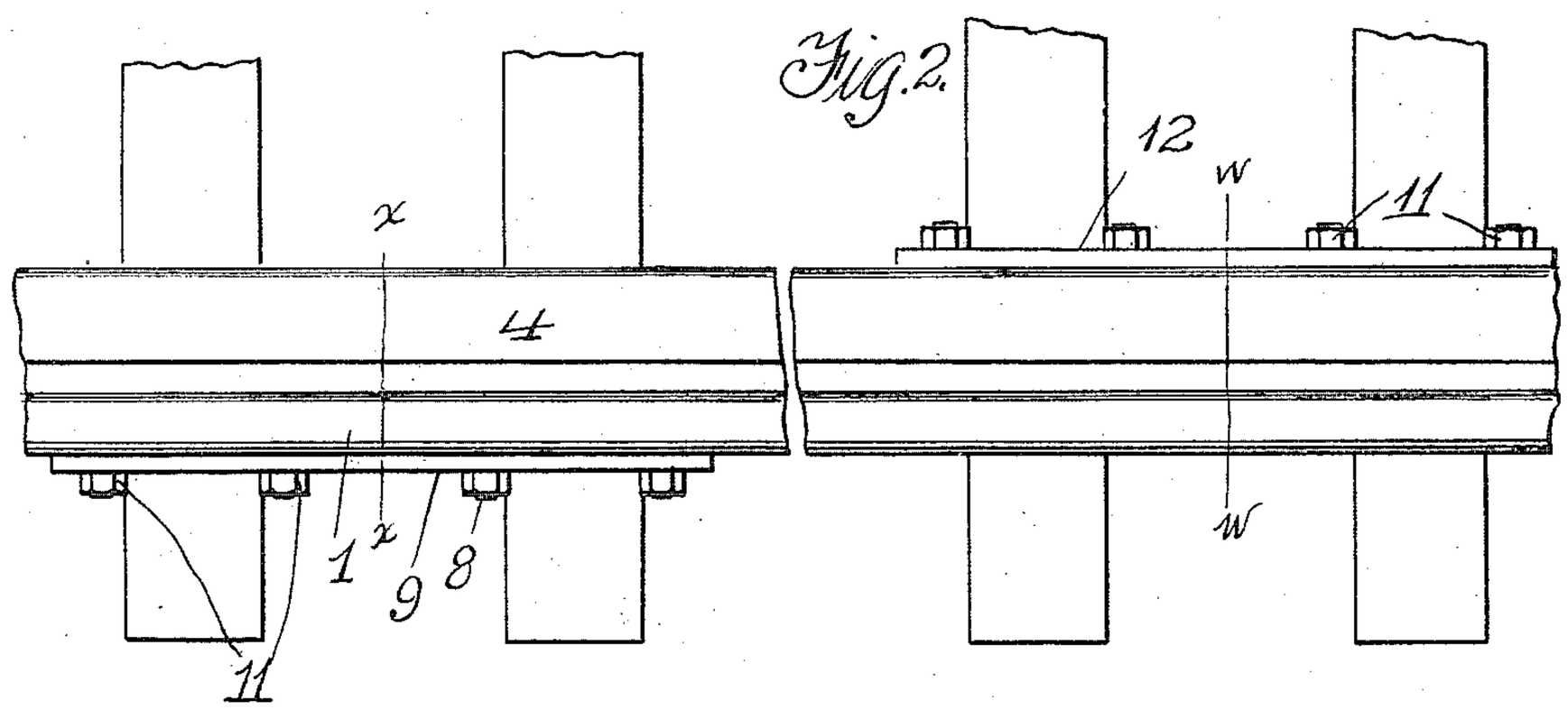


Fig. 3.

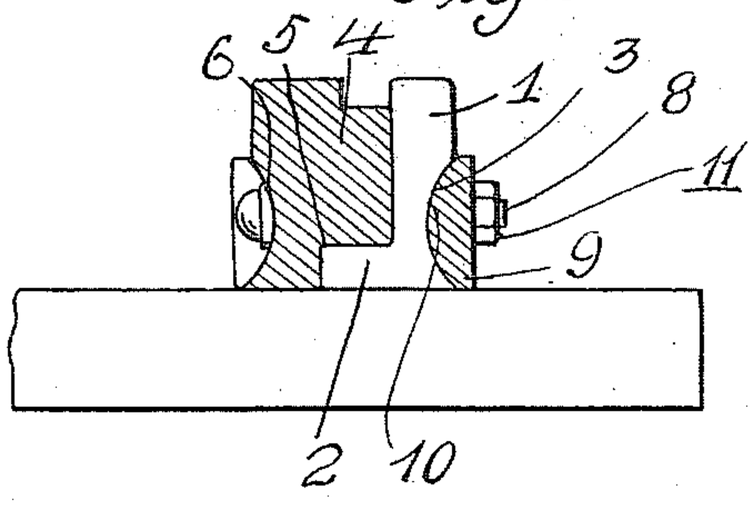


Fig. 4.

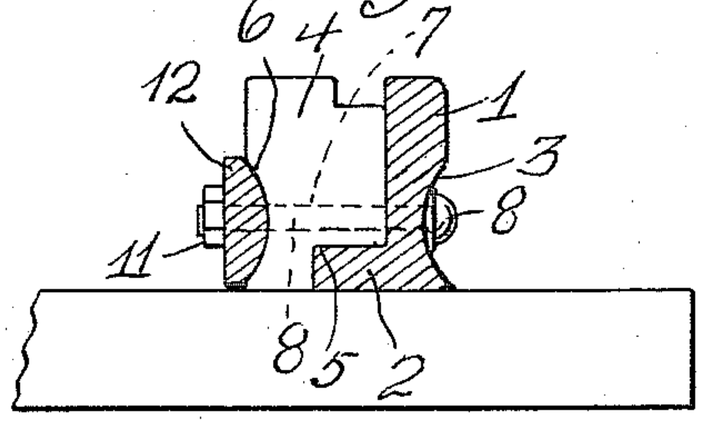
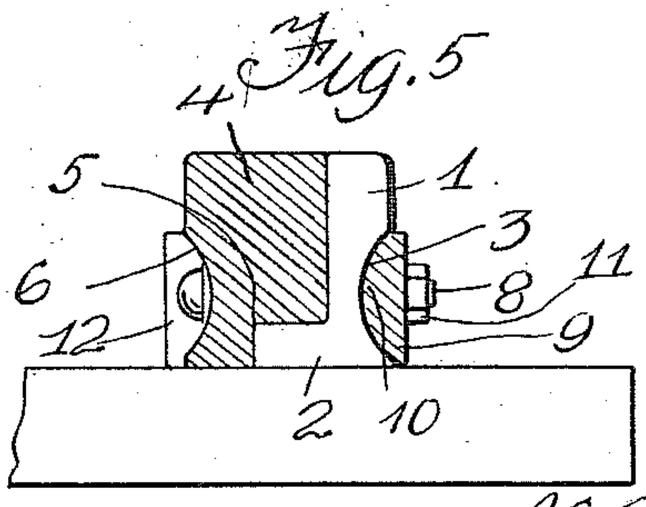


Fig. 5



WITNESSES

Samuel Payne

R. H. Fuller

INVENTOR

W. S. Truxal.

by A. C. Ewart & Co.

Attorneys.

UNITED STATES PATENT OFFICE.

WINFIELD S. TRUXAL, OF HOMESTEAD, PENNSYLVANIA.

RAIL AND RAIL-JOINT.

985,475. Specification of Letters Patent. Patented Feb. 28, 1911.

Application filed May 21, 1910. Serial No. 562,714.

To all whom it may concern:

Be it known that I, WINFIELD S. TRUXAL, a citizen of the United States of America, residing at Homestead, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Rails and Rail-Joints, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to rails and rail-joints, and the object of my invention is to provide a sectional or two-part rail that is simple in construction, inexpensive to manufacture, and easy to install upon ties or sleepers.

Another object of the invention is to provide a rail that can be advantageously used in connection with steam railways for providing a continuous tread for the rolling stock, thereby eliminating the jarring and bumping at present experienced by rolling stock passing over joints.

A further object of this invention is to provide a rail consisting of parts easily and quickly connected together to provide a strong and durable structure.

These and such other objects as may hereinafter appear are attained by the mechanical construction to be hereinafter specifically described and then claimed, and reference will now be had to the drawing forming a part of this specification, wherein there is illustrated the preferred embodiments of my invention, but it is to be understood that the structural elements thereof can be varied or changed, as to the size, shape, and manner of assemblage, without departing from the scope of the invention.

In the drawings: Figure 1 is a side elevation of a portion of a rail in accordance with the invention. Fig. 2 is a plan of the same. Fig. 3 is a cross sectional view taken on the line *x*—*x* of Fig. 2. Fig. 4 is a similar view taken on the line *w*—*w* of Fig. 2, and Fig. 5 is a cross sectional view of a rail designed for steam railways.

The rail shown in Figs. 1 to 4 inclusive has been designed for street railways, the rail comprising a tread section 1 having the lower edge thereof upon one side provided with a longitudinal base flange 2 extending from one end of the tread to the opposite end thereof. The tread 1 at the lower edge and upon the side opposite the base flange 2 is provided with a longitudinal groove 3, said groove also extending from one end of the tread to the opposite end thereof.

Mounted upon the base flange 2 of the tread 1 and engaging the inner side of the tread is a rail body 4, the lower inner edge of said body being cut away, as at 5, to provide clearance for the base flange 2. The outer side of the rail body 4 is cut away to provide in connection with the upper portion of the tread section 1 a longitudinally extending groove for the wheel flange. The inner side of the rail body 4 is provided with a longitudinally extending groove from end to end thereof.

In assembling the tread section 1 and the rail body 4, it is preferable to staggeredly or alternately arrange the same, that is, with the confronting ends of the tread sections 1 intermediate the confronting ends of the rail bodies 4, thus providing practically a continuous rail for the wheels of rolling stock.

The tread sections 1 and the rail bodies 4 adjacent to the ends thereof are provided with bolt openings 7 to accommodate bolts 8. At the juncture of the tread sections 1 a splice bar 9 is used, said bar having a convex face 10 adapted to fit in the groove 3. The bolts 8 are extended through the rail bodies 4, tread sections, and the splice bar 10 and then nuts 11 mounted upon the protruding ends of the bolts to lock the splice bar 10 in engagement with the tread sections 1. At the juncture of the rail bodies 4 a similar splice bar 12 is used, said bar being mounted in the grooves 6 of the bodies 4, with the nuts 11 holding the splice bar in position.

In Fig. 5 of the drawings there is illustrated a modification of the invention, wherein the rail body 4 is made of a depth equivalent to the tread 1, this type of rail being applicable to steam railways, and when laid in the manner heretofore prescribed for the rail shown in Figs. 1 and 2 of the drawings, a continuous tread will be provided for the rolling stock of a steam railway.

From the foregoing it will be observed that the splice bars are used upon those sides of the rail at which a joint occurs, thus eliminating the use of extra splice bars or two bars for each joint, as is the present practice. By the construction herein set forth just as durable and rigid a rail is obtained and even though parts thereof are

worn, it is possible to renew the worn parts without renewing other parts, thus saving considerable expense in the maintenance or track construction.

What I claim, is:

1. In combination, a pair of rails, each comprising a vertically disposed body portion substantially rectangular in cross section and adapted to be seated upon a tie, said body portion having its lower inner corner cut away to provide a clearance, an L-shaped tread section adapted to be mounted upon the tie and abutting against the inner face of said body portion and having its base extending into the cut away portion of the body and snugly engaging the walls of said cut away portion, said L-shaped tread section of the same height and of less width than the width of the body portion, the outer vertical face of said body and the outer vertical face of said tread section each provided at the lower portion thereof with a longitudinally-extending concave groove, splice bars having convex inner faces arranged in said groove, the splice bars in the groove of said body being staggered with respect to the splice bars in the groove of the tread section, and headed bolts extending transversely through said body and section and arranged above the base of the section, the heads of said bolts seated in said groove and the threaded ends of said bolts extending through and projecting from said splice bars, and nuts mounted upon the projecting ends of said bolts, the cut away portion of said body being of less height than the width of said section at the top thereof, and said body being of greater width than the vertical portion of the tread section.

2. In combination, a pair of rails, each comprising a vertically disposed body portion substantially rectangular in cross section and adapted to be seated upon a tie, said body portion having its lower inner corner cut away to provide a clearance, an L-shaped tread section adapted to be mounted upon the tie and abutting against the inner face of said body portion and having its base extending into the cut away portion of the body and snugly engaging the walls of said cut away portion, said L-shaped tread section of the same height and of less width than the width of the body portion, the outer vertical face of said body and the outer vertical face of said tread section each provided at the lower portion thereof with a longitudinally-extending concave groove, splice bars having convex inner faces arranged in said groove, the splice bars in the groove of said body being staggered with respect to the splice bars in the groove of the tread section, headed bolts extending transversely through said body and section and arranged above the base of the section, the heads of said bolts seated in said groove and the threaded ends of said bolts extending through and projecting from said splice bars, and nuts mounted upon the projecting ends of said bolts, the cut away portion of said body being of less height than the width of said section at the top thereof, said body being of greater width than the vertical portion of the tread section, and said body having its upper inner corner cut away to provide in connection with the upper portion of the tread section a longitudinally-extending groove for the flange of a wheel, said cut away portion at the lower inner corner of said body being of greater width than the cut away portion at the upper inner corner of said body.

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

WINFIELD S. TRUXAL.

Witnesses:
K. H. Butler,
John S. Stephany.