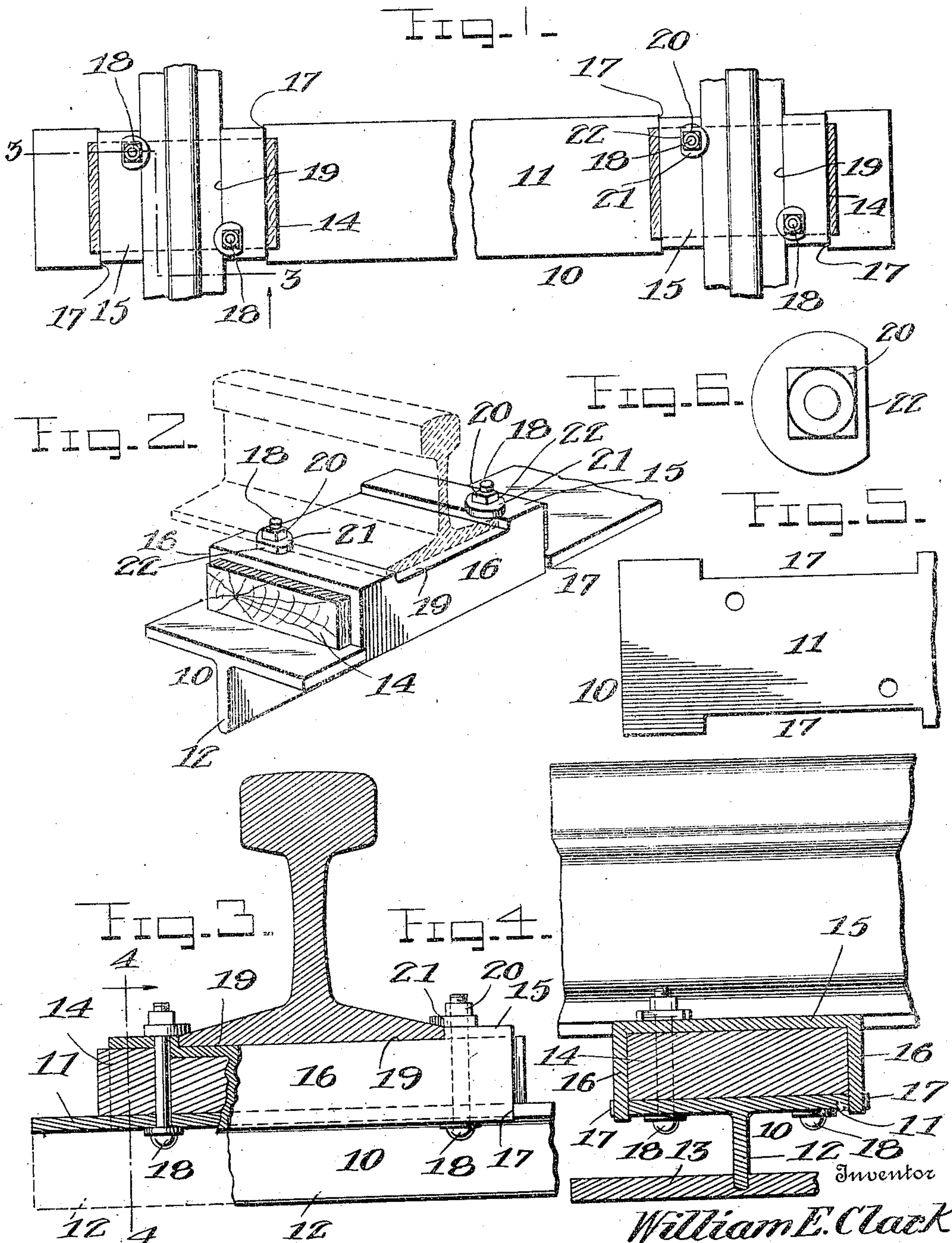


W. E. CLARK.
RAILWAY TIE AND FASTENING.
APPLICATION FILED SEPT. 22, 1909.

958,225.

Patented May 17, 1910.



Witnesses

W. H. Rockwell
Emory C. Croff.

By

W. E. Clark
S. P. Volhaupter
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM E. CLARK, OF CHARLESTOWN, NEW HAMPSHIRE.

RAILWAY-TIE AND FASTENING.

958,225.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed September 22, 1909. Serial No. 518,939.

To all whom it may concern:

Be it known that I, WILLIAM E. CLARK, a citizen of the United States, residing at Charlestown, in the county of Sullivan and State of New Hampshire, have invented certain new and useful Improvements in Railway-Ties and Fastenings, of which the following is a specification.

This invention relates to the subject of railway ties and fasteners, and has in view an improved rail tie construction and rail fastening wherein all of the advantages of the wooden tie are preserved, while at the same time meeting the present modern requirements in railway track construction.

To this end the invention contemplates a simple and practical form of rail support adaptable to any suitable form of tie body, metallic or otherwise, and providing not only a substantial and deep wooden bearing cushion for the rail, but at the same time having cooperating elements which securely fasten the rail in place and at the same time resist, in an effectual manner, side or lateral thrust, particularly at curves.

With these and many other objects in view, which will more readily appear to those familiar with the art, as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

The essential features of the invention are necessarily susceptible to structural modification without departing from the scope thereof, but a preferred and practical embodiment thereof is shown in the accompanying drawings, in which—

Figure 1 is a plan view of a complete rail tie and fastening, embodying the invention. Fig. 2 is an enlarged perspective view of one end portion of the tie showing one of the rail supports and the fastenings associated therewith. Fig. 3 is a detail vertical longitudinal sectional view on the line 3—3 of Fig. 1. Fig. 4 is a detail vertical cross sectional view on the line 4—4 of Fig. 3. Fig. 5 is a detail top plan view of one end portion of the tie body. Fig. 6 is a detail view of one of the rail holding clip nuts.

Like references designate corresponding parts in the several figures of the drawings.

In carrying out the invention, the improved rail support construction and rail

fastenings may be associated with any acceptable form of tie body, metallic or otherwise, which presents a flat top or base upon which may be mounted the several elements constituting the invention. However, in practice, it is preferred to combine the invention with a metallic tie, such for instance as a metallic tie body of a T-bar design as shown in the drawings. The tie body is designated in the drawings by the reference number 10, and in the form shown, includes a flat top flange 11 and a depending vertical web 12. This web may have associated therewith wooden, metal, or other suitable anchoring pieces 13 suitably secured to the lower edge portion of the web and projecting from the sides of the latter so that the ballast may be tamped about said pieces and the tie web in such a manner as to securely hold the tie in position in the road bed. These anchoring pieces 13, of whatever character, preferably terminate short of the central part of the tie body to avoid center-bound track.

The improved support for each rail essentially comprises a wooden rail bearing cushion 14 arranged on the flat top 11 of the tie body, and an inverted U-shaped metallic rail chair or chair plate 15 arranged over and embracing the said cushion and having vertical side leg portions 16 loosely interlocking at their lower ends in keeper notches 17 formed in the side edges of the tie body. The wooden bearing cushion is of a sufficient thickness to provide a substantial and deep wooden cushion for the rail, and said cushion, as well as the chair plate, are held securely in position through the medium of diagonally opposite vertically arranged fastening bolts 18 passed upward from beneath the top flange of the tie body and vertically through the bearing cushion 14 and the chair plate 15 respectively at opposite sides of the vertical plane of the transverse rail seat 19 notched into the top of the chair plate 15. This rail seat receives, in a registering fit, the rail flange, and the latter is engaged upon opposite sides of the seat by rail-holding clip nuts 20 which are threaded on the upper ends of the bolts above the top of the chair plate. The clip nuts 20 are provided with mutilated clamp flanges 21, the cut-away portions 22 of which, when alined with the rail seat 19, permit the ready insertion and removal of the rail, while at

the same time, when the nuts are turned, the flanges 21 are moved over and onto the rail flange.

Other equivalent fastenings could be substituted without departing from the invention.

I claim:

10 A tie-body having a top flange provided in opposite edges with angular notches, a wooden rail-bearing cushion arranged flatly on top of said body, an inverted U-shaped chair-plate placed astride said cushion and having its side legs registering within said

notches, the said chair plate being formed in its top side with a depression constituting 15 a metallic rail seat with shoulders at the sides, and rail-fastenings having members extending through the chair plate, the cushion, and the flange of the tie-body.

In testimony whereof I hereunto affix my 20 signature in the presence of two witnesses.

WILLIAM E. CLARK.

Witnesses:

R. C. BRADDOCK,
EMORY L. GROFF.