

P. CAMPBELL.
STEEL TIE.
APPLICATION FILED MAR. 11, 1910.

990,704.

Patented Apr. 25, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

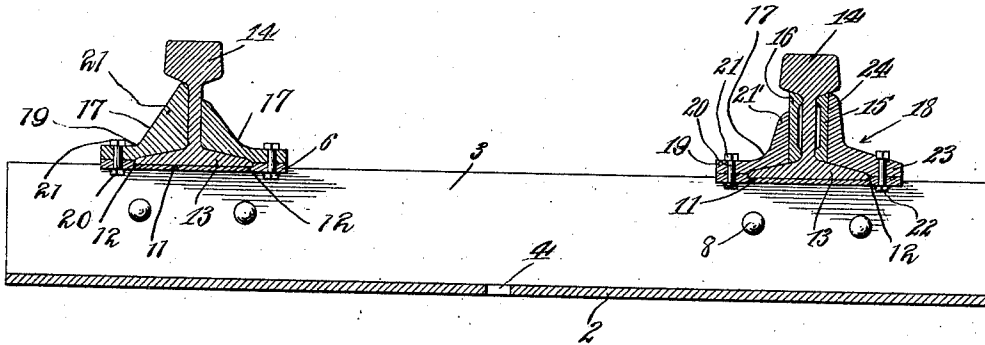
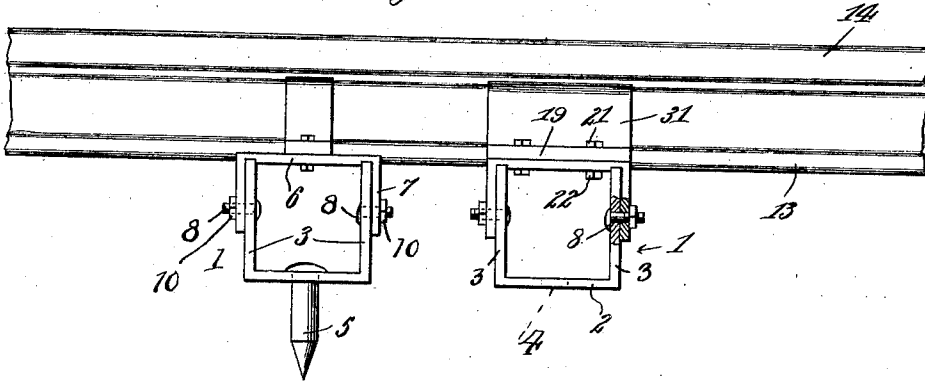


Fig. 2.

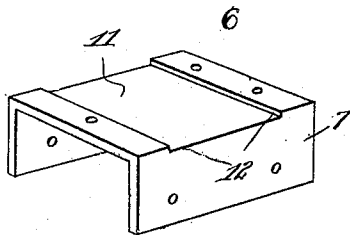


Fig. 5.

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2 SHEETS—SHEET 2.

Fig. 3

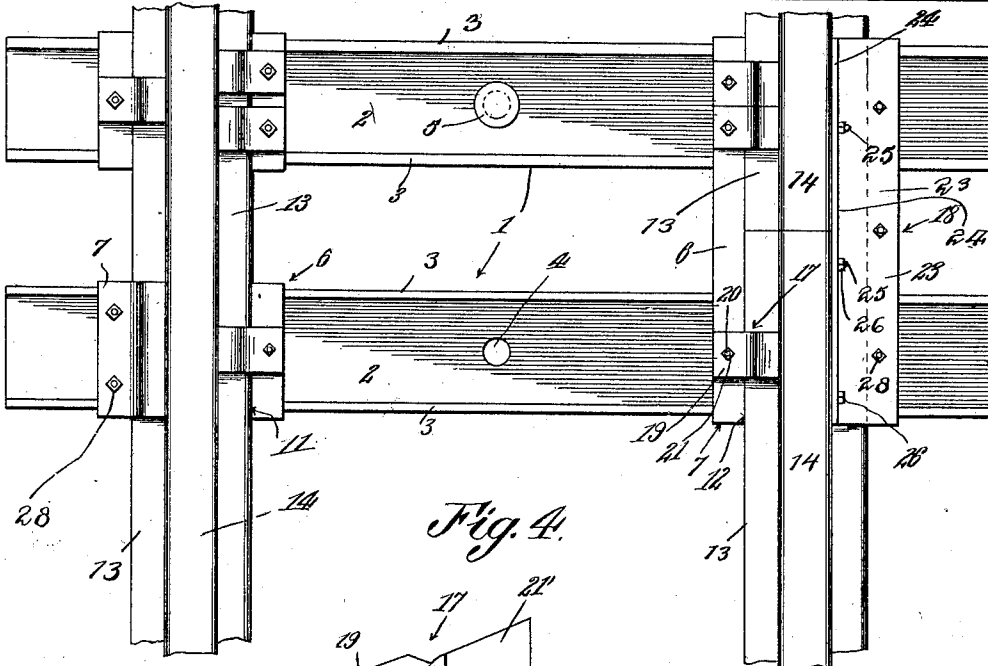
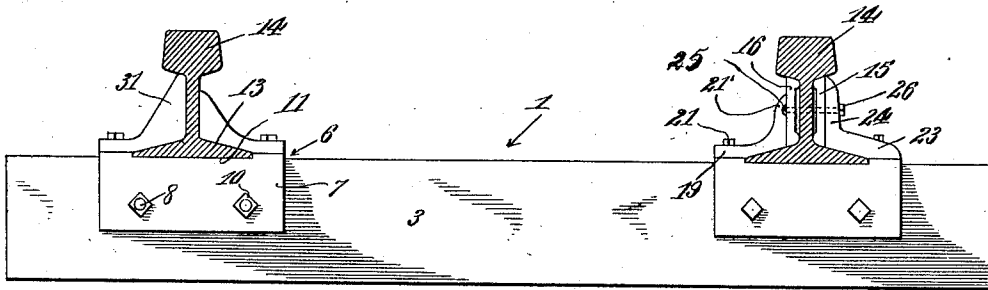


Fig. 4.

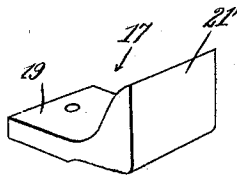


Fig. 6.

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UNITED STATES PATENT OFFICE.

PETER CAMPBELL, OF CARROLLTOWN, PENNSYLVANIA.

STEEL TIE.

990,704.

Specification of Letters Patent.

Patented Apr. 25, 1911.

Application filed March 11, 1910. Serial No. 548,566.

To all whom it may concern:

Be it known that I, PETER CAMPBELL, a citizen of the United States, residing at Carrolltown, in the county of Cambria and State of Pennsylvania, have invented new and useful Improvements in Steel Ties, of which the following is a specification.

This invention relates to a combined railroad tie and chair, and one of the objects of the invention is to provide a metallic tie of a substantially U-shaped cross-section having means whereby the tie may be easily and securely retained upon the road bed.

Another object of the invention is to provide a metallic tie with longitudinally extending bearing plates of a peculiar construction whereby the rail ends positioned upon the said plates are not only afforded a firm bearing but the lateral movement thereof entirely obviated, the said plates being removably connected to the tie and being provided with detachable rail clamps.

With the above, and other objects in view, which will appear as the description progresses, the invention resides in the novel construction and arrangement of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is an end elevation of the device constructed in accordance with the present invention. Fig. 2 is a central longitudinal sectional view of the same. Fig. 3 is a side elevational view of the same. Fig. 4 is a top plan view of the same. Fig. 5 is a perspective view of one of the chairs. Fig. 6 is a perspective view of one of the rail engaging members.

In the drawings the numeral 1 designates the rail ties. These ties are arranged in pairs spaced a suitable distance away from each other and comprise a bottom portion 2 having a pair of upstanding longitudinally extending side walls 3. The horizontal portion of the tie is centrally provided with a suitable orifice, designated by the numeral 4, the same being adapted for the reception of a headed retaining element, such as a spike or the like designated by the numeral 5 which enters the ground and effectively retains the tie in position upon the road bed. These ties are adapted to receive a filling of suitable material such as ashes or the like, so as to provide a ballast for the ties. The ties 1 have their vertical walls 3 provided

with alining cut away portions, the same being adapted for the reception of a bearing plate 6. The bearing plate 6 is of a thickness corresponding with the cut away portions provided by the ties 1 and the said bearing plate is further provided with a plurality of flanges 7 which are adapted to lie against the outer faces of the vertical walls of the ties. The sides of the ties as well as the depending flanges of the bearing plate are provided with alining openings, the same being adapted for the reception of bolts 8 which have their threaded portions provided with nuts 10. The bearing plates are provided with centrally arranged longitudinal channels 11, and the substantially vertical walls 12 provided by these channels are adapted to receive the edges of the base flanges 13 of the rail members 14. The rail members 14 are provided with the usual fish plates 15 and 16 whereby the same are connected together.

In order to effectively sustain the rails upon the plates 6 I have provided the said plate with rail engaging members 17 and 18. The engaging members 17 are adapted to be positioned upon the inner faces of the rails, and comprise a body portion 19 having an opening alining with a similar opening in the bearing plate 6, and the said openings are adapted for the reception of a retaining bolt 20, the bolt being provided with nuts 21. The member 17 has its inner face cut away to correspond with the inclined base flange of the rails and the said clamp is further provided with a vertical lip 21' which is adapted to bear against the fish plate upon the inner face of the rails. The clamp 18 is adapted to extend the entire length of the bearing plate 6, and the same comprises a horizontal member 23 provided with a flange 24 which underlies the ball of the rails. The portion 23 of this member 18 is provided with a plurality of spaced openings, the same alining with similar openings provided by the bearing plate 6 at the side of its longitudinally extending channel. These openings are adapted for the reception of suitable headed bolts 22 and the threaded portions of the bolts are adapted for engagement with the usual securing nuts 26. The vertical flange 24 of the member 18 is also provided with a plurality of openings alining with the open-

ings of the fish plates and the webs of the rails, and these openings are likewise provided with a plurality of threaded bolts, the said bolts being each secured through the medium of nuts 28.

From the above description, taken in connection with the accompanying drawings, it will be noted that I have provided a comparatively simple and thoroughly effective device for the purpose intended, and it is to be further noted that longitudinal or lateral movement of the rails when positioned is entirely prevented, and it will be further noted that by providing the bearing plate 6 with the depending flanges, the vertical walls of the ties are effectively strengthened and that the ties are prevented from movement in any direction.

In Fig. 4 I have illustrated the bearing plate 6 extending over two ties on the right hand side of the figure. The structure is substantially similar to that set forth except that the said bearing plates having a larger surface serve as a means whereby the meeting ends of the rail may be supported.

Having thus fully described the invention, what I claim as new is:—

A metallic tie comprising a base and vertical longitudinally extending side walls formed integrally with the base, the said base being centrally provided with an opening, a headed securing member for this opening whereby the tie is retained upon the road-bed, the upper edges of the vertical walls being provided with spaced recesses adjacent the ends thereof, bearing plates in these recesses, said bearing plates having their ends provided with depending flanges, the flanges and the sides of the tie being provided with openings, removable securing elements for these openings, the bodies of the bearing plates being each provided with a longitudinally extending depression, and removable rail clamp members secured to the bearing plates.

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

PETER CAMPBELL.

Witnesses:

AUGUSTINE A. LIEB,
RUBERT H. SHARBAUGH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
