

(No Model.)

T. S. BROOKS.
RAILWAY TIE AND CHAIR.

No. 466,218.

Patented Dec. 29, 1891.

Fig. 1.

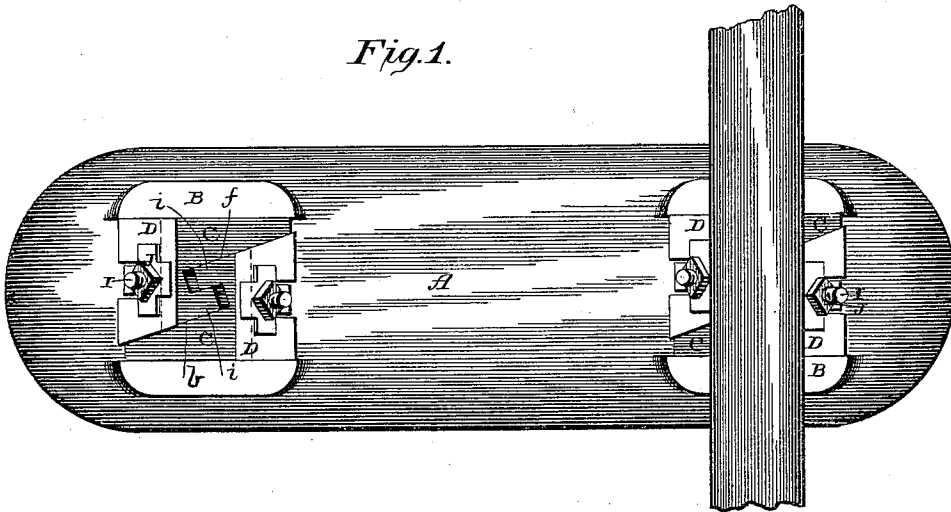
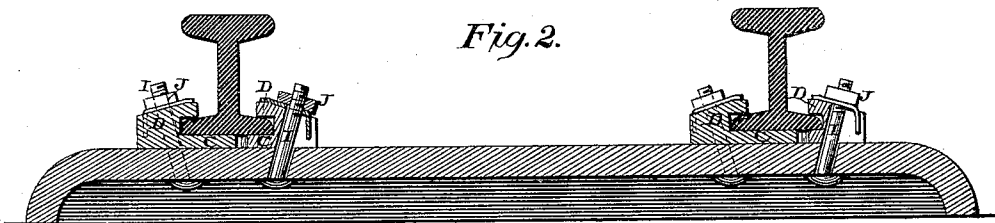


Fig. 2.



Witnesses:

E. P. Ellis.

J. M. Washit.

Inventor:

T. S. Brooks.

per
Lehmann & Patterson,
Attys.

UNITED STATES PATENT OFFICE.

THEODORE S. BROOKS, OF GARRISON'S, NEW YORK.

RAILWAY TIE AND CHAIR.

SPECIFICATION forming part of Letters Patent No. 466,218, dated December 29, 1891.

Application filed January 17, 1891. Serial No. 378,139. (No model.)

To all whom it may concern:

Be it known that I, THEODORE S. BROOKS, of Garrison's, in the county of Putnam and State of New York, have invented certain new and useful Improvements in Railway Ties and Chairs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in railway ties and chairs; and it consists in the construction and arrangement of parts which will be fully described hereinafter, and particularly referred to in the claims.

The objects of this invention are to provide a cheap metallic tie, which is rounded upon the per side, having short parallel supporting-ribs at each end, between which a chair is placed, and to improve the construction of the chair shown in my patent, No. 438,524, granted to me October 14, 1890, in the manner hereinafter shown and described.

Figure 1 is a plan view of a tie to which my invention is applied, the rail being broken away at one end of the tie, so as to show the overlapping ends of the parts of the chair. Fig. 2 is a vertical section of the same.

A represents a tie, which may be stamped, rolled, or cast of iron or steel, and which will be given the requisite thickness to enable it to stand all of the usage to which a tie is ordinarily subjected. This tie is made rounding upon its top and at its ends, so as to shed all moisture and thus prevent it from remaining upon and rusting the tie. Upon the top of both ends of the tie are made the rail-supporting ribs or flanges B, which extend in a line with the length of the tie and between which the two parts of each chair C are placed. These parts C have suitable flanges D formed upon their outer ends, so as to catch over the lower flange of the rail, and the inner end of each part extends inward under the rail at a suitable angle, as shown.

The flat portions of the two parts of the chair are provided with the angles *b* near their outer edges, the angles *f* near their inner edges, and the inner edges *f'*, terminating in the interlocking projections *i*, which extend

at an angle parallel with the angles *b* and *f*. It will be noticed that this is a material change from the construction shown in my said patent, as the two parts of the chair interlock and at the same time gradually expand to fit and wedge tightly between the ribs or flanges of the tie, the inner ends of these parts projecting inwardly at any angle, as shown. The flanges will be brought more directly opposite to each other, and thus be made to hold the rail more rigidly in position. The outer edge of each of these flanged parts D is formed at any angle, as shown, where the nut rests upon it, and through the outer end of each part is formed an open-ended slot, so as to allow the part to be adjusted back and forth, as circumstances may require.

Passing up through the tie and through the open-ended slot through each part of each chair is a bolt I, which has its head set at an angle, and which is screw-threaded at its upper end, so as to receive the nut J upon it. Between the inclined side of the flange and the nut is a plate, which has its corners cut away, so as to form extensions upon all four of its edges, and three of these extensions, after the nut has been tightened in place, are turned up, so as to catch over opposite sides of the nut, and thus prevent it from being loosened. The fourth one of these extensions is turned down, so as to catch in the open-ended slot, and thus lock the plate rigidly in position. As the nuts bear against the inclined surfaces of the flanges, it is only necessary to loosen one of the nuts and tighten up upon the one on the opposite side of the rail, and the rail can be aligned with the utmost precision. After the rail has been moved in position the nut upon the opposite side is tightened and then locked in position.

A tie constructed as here shown and described will last much longer than a tie made of wood, and a chair made as here shown is strong, serviceable, easily adjusted, and reliable in every way at the the same time that it forms a means for aligning the rail at any point.

These ties can be applied to any road without the necessity of removing the rails.

Having thus described my invention, I claim—

1. The herein-described metallic tie, ellip-

tical or U-shaped in cross-section, with the depending rounded ends, and having on its upper surface at each end two short parallel separated supporting-ribs B B, integral with the tie, the upper surface of the tie being otherwise flat, the rails resting on said ribs, so that a space is left between the ribs under the rails, and clamps capable of being slipped into said spaces after the rails have been placed in position, all combined substantially as shown and described.

2. The herein-described metallic tie, formed integral and U-shaped in cross-section, with depending ends, and having at each end the short parallel supporting separated ribs B B projecting upwardly from its otherwise flat top face to support the rails and form a space under them open at the ends, so that the

clamps can be slipped in under the rails, as set forth.

3. The combination, with a tie and a rail, of the herein-described chair, composed of two similar parts, each extending from one side of the rail beneath the same to the other side and having the holding edge D and slot at its outer edge and the angle *b* near its outer edge, the inner edge cut at an angle parallel with angle *b* and terminating with interlocking projections parallel with said edges, combined to operate substantially as shown.

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

THEODORE S. BROOKS.

Witnesses:

WILBUR JENKINS,
LORENZO D. ROBINSON.