(No Model.)

W. WENSTROM.

RAILROAD CHAIR AND TIE.

No. 458,988. Patented Sept. 1, 1891.

Fig. 1.

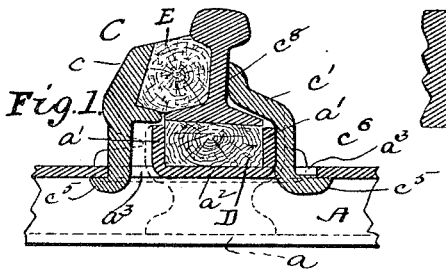


Fig. 2.

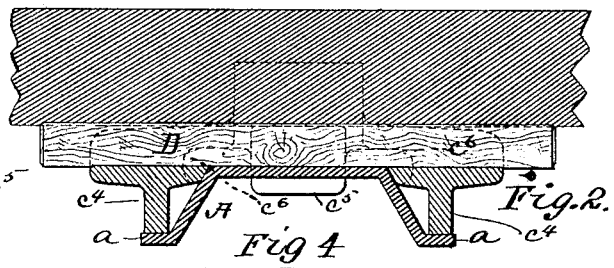
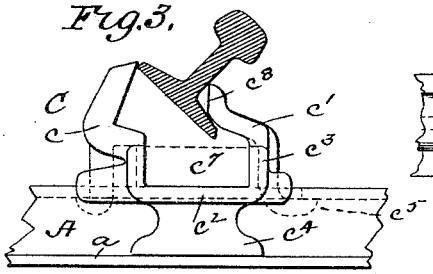


Fig 4

Fig. 3.



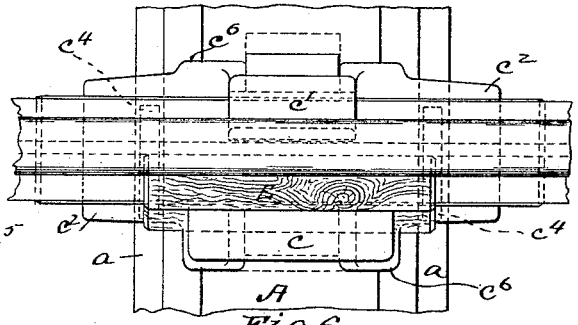
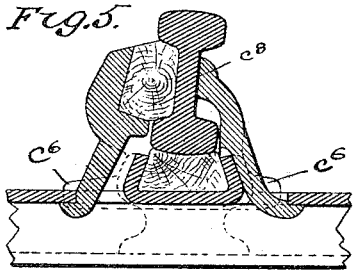


Fig. 6.

Fig. 5.



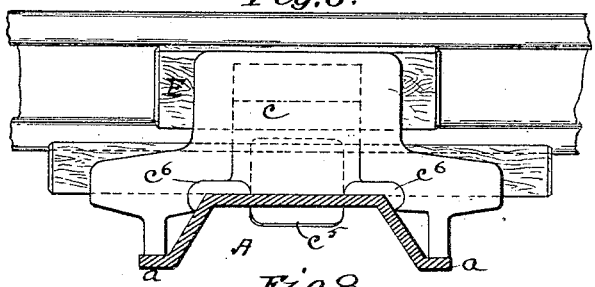
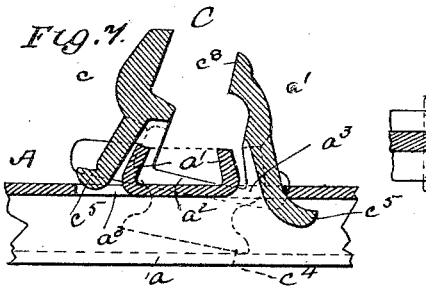
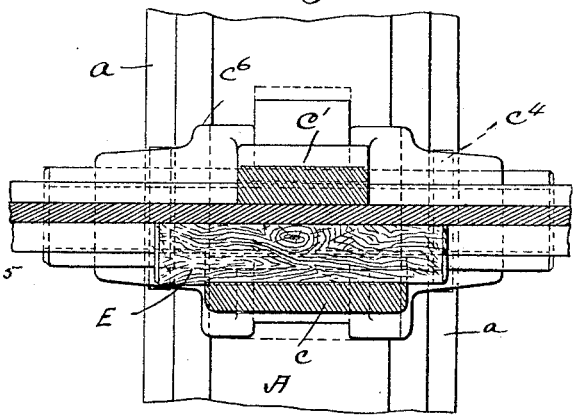


Fig. 8.

Fig. 7.





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RAILROAD CHAIR AND TIE.

SPECIFICATION forming part of Letters Patent No. 458,988, dated September 1, 1891.

Application filed December 30, 1890. Serial No. 376,303. (No model.)

To all whom it may concern:

Be it known that I, WILHELM WENSTROM, a subject of the King of Sweden, residing in Orebro, Sweden, have invented certain new and useful Improvements in Railroad Chairs and Ties, of which the following is a specification.

My invention relates to railroad-ties and supports for the rail, and involves the application of a metallic sleeper or tie, in combination with a chair, seat, or support for the rail, constructed to provide said rail with a firm fastening having a large contact-surface without the use of bolts, rivets, or other non-yielding clamping devices.

In the use of metallic ties or sleepers great strength and durability is obtained, but there is a disadvantage in the use of such ties for passenger traffic when the rails are secured directly thereto, owing to the non-elasticity of the several parts.

My invention is especially designed to overcome this difficulty. I propose, therefore, to place a cushion of wood or other elastic material between the tie and the rail, thus securing at the same time the strength of one form of sleeper with the ease and softness of the other.

My invention further includes a key for locking the several parts together, and also in other details of construction to be mentioned later on.

Referring to the drawings, Figure 1 is a central longitudinal section of my device. Fig. 2 is a central section taken at right angles to Fig. 1. Fig. 3 is a front elevation showing the manner of placing the rail in the seat. Fig. 4 is a plan with the rail in place. Fig. 5 is a central longitudinal section showing a double-headed rail in place. Fig. 6 is a side elevation of the same. Fig. 7 is a section showing how the chair or seat is secured to the tie, and Fig. 8 is a plan partly in section.

A is the tie, which is provided with flanges a, for a purpose to be mentioned hereinafter.

On the upper surface of each end of the tie where it is crossed by the rail I cut a pair of U-shaped slits, forming in each end of the tie two tongues a', which, when turned up at right angles, become the sides of a groove or trough a^2, leaving rectangular holes a^3 a^3.

C is a chair, seat, or support for the rail. It is an irregular metal casing composed of two sides c and c', which are united at each end by cross-pieces c^2. These cross-pieces are provided on their upper surfaces with flanges c^3, which inclose a channel or trough c^7, similar in size and shape to trough a^2, while the lower portions c^4 of said cross-pieces are extended downwardly to form the supporting-feet of the chair. The lower ends of the sides c and c' are extended below the plane of the top of the tie and carry notched hooks c^5. Lugs c^6, also notched, extend laterally from the sides of the chair C.

The device as thus far described is a kind of yoke or saddle which is placed astride the tie, the feet c^4 resting on the flanges a, the hooks c^5 engaging in the holes a^3, and the lugs c^6 embracing the upper corners of the tie. This brings the troughs a^2 and c^7 in alignment, and I therefore have one continuous channel, in which is placed a long strip D of wood or other elastic material. This strip D is the cushion for the rail. It extends beyond the cross-pieces c^2 at both sides, and thus presents a large bearing-surface for said rail. It further serves as a locking device between the tie and chair C. The base of the rail rests on the cushion D, and one side thereof abuts against the face c^8 of the side c' of the chair. In the space between the rail and the side c is inserted a wedge or key E, which completes the fastening of the device.

It will be observed that by my invention the connection between rail and sleeper is firm, yet elastic, and it is equally adaptable to a single or double headed rail. The lugs c^6 prevent longitudinal movement, while the notched hooks c^5, together with cushions D and feet c^4, prevent lateral, upward, or downward movement. The rail, having such a large bearing-surface, allows the space between the ties to be greatly increased, thus cheapening the cost of construction.

Having thus described my invention, I claim—

1. The combination, with a metal tie having a trough a^2, of a rail-supporting device having a trough or troughs in alignment with trough a^2 and a rail located in said troughs.

2. The combination, with a metal tie having flanges a and a trough a^2, of a rail-sup-

porting device having troughs in alignment with trough a^2 and feet which rest on flanges a, substantially as described.

3. The combination, with a metal tie having openings therein, of a rail-supporting device having hooks engaging in said openings, and lugs c^6, embracing the corners of the tie, as and for the purpose set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WILHELM WENSTROM.

Witnesses:
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