(No Model.)

M. H. PIERCE.

RAILWAY CHAIR.

No. 422,830. Patented Mar. 4, 1890.

Fig. 1.

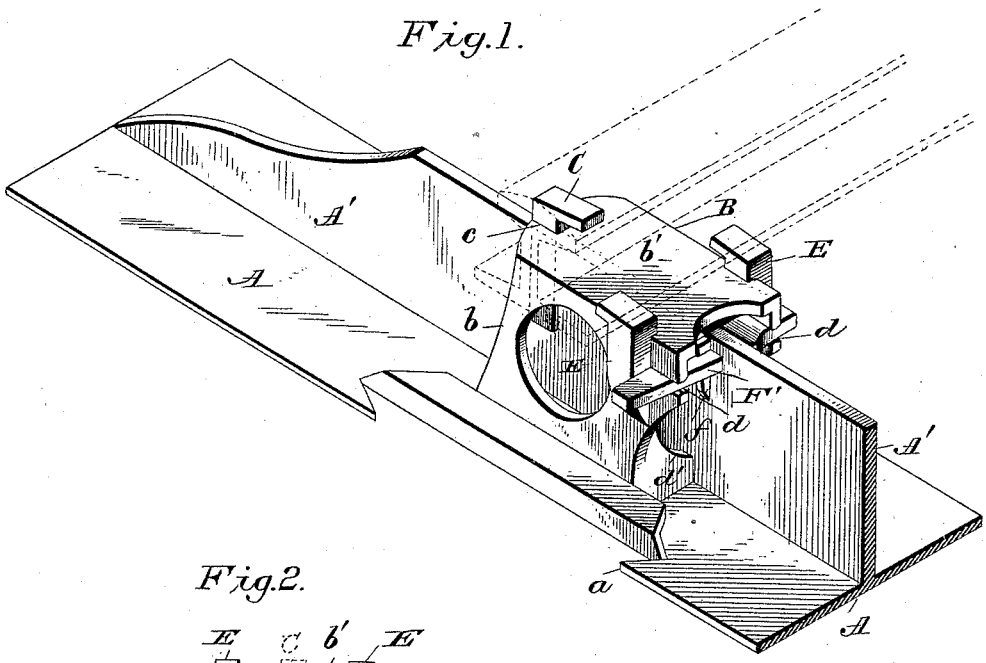


Fig. 2.

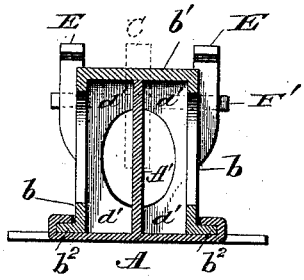
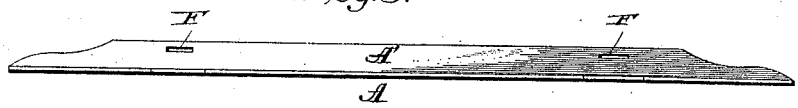


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

MARK H. PIERCE, OF WILMINGTON, DELAWARE.

RAILWAY-CHAIR.

SPECIFICATION forming part of Letters Patent No. 422,830, dated March 4, 1890.

Application filed December 19, 1889. Serial No. 334,281. (No model.)

To all whom it may concern:

Be it known that I, MARK H. PIERCE, a citizen of the United States of America, residing at Wilmington, in the county of New Castle and State of Delaware, have invented certain new and useful Improvements in Railway-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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in railway chairs and ties.

The object of the invention is to provide a transverse metallic tie having a vertical flange for securing a chair thereto, which chair is movable upon the tie and is adapted by means of a wedge to be locked in position so as to confine the rail upon the chair, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a metallic tie and chair constructed in accordance with my invention. Fig. 2 is a vertical sectional view, and Fig. 3 is a side view, of the tie detached.

A refers to the tie, which is provided centrally with a vertical web A′. The side edges of the base of the tie are cut or swaged while hot without being cut at an angle, as shown at *a*, and said portion is bent upwardly and inwardly toward the vertical flange A′, so as to provide a groove on each side of the said vertical flange or web, with which projecting portions at the base of the chair will engage to prevent the vertical movement of said chair. This metallic tie A is adapted to be placed upon and secured to wooden or other cross-ties or laid on a good earth road-bed without the wooden cross-ties, and the height of the flange A′ is sufficient to allow paving-blocks to be placed adjacent to the web A′, so that they can rest upon the horizontal flanges.

The chair B is made up of a casting in a single piece, said casting having vertical portions *b* and a connecting horizontal portion *b*′, the under side of which rests upon the upper edges of the vertical flange A′ of the tie. The lower ends of the side pieces extend outwardly, as shown at b^2, and are adapted to engage with the recesses formed by the upwardly and inwardly turned edges of the side flanges.

One end of the top portion of the chair B is cut away or notched, as shown at *c*, so that it will engage with a headed bifurcated retaining device C, which is bolted or riveted to the flange A′, the under face of the head thereof being slightly inclined at the angle of the flange of an ordinary rail. The ends of the chair B below the upper portion thereof are provided with recesses *d d*, and beyond said recesses with inwardly-projecting portions *d*′, the inner vertical edges of which are adapted to abut against the vertical flange of the tie, and at the ends of these recesses are formed the retaining devices E E, one being on each side of the chair, the under faces of the heads thereof being slightly inclined and extended toward the retaining device C. At a proper point the vertical flange A′ has a longitudinal slot F, through which a wedge-shaped key is adapted to be passed, one of the faces of which abuts against the outer vertical edges of the rail-retaining devices E and also against the outer face of the inwardly-projecting portions *d*′. This wedge-shaped key is adapted to hold the chair securely in place against longitudinal movement upon the tie; and the locking-wedge F′ is provided with a vertical opening, through which a wedge-shaped pin *f* may be driven for locking and retaining the wedge F′ in place, and in order that the locking-pin *f* may be driven in place the upper face of the chair is cut away, as shown.

In laying a track the metallic tie A is spiked or bolted to the ordinary wooden tie or laid on a good earthen road-bed, and after being secured in place the chairs B are placed over the vertical flange A′ and moved thereon so that the outwardly-projecting portions b^2 thereof will engage with the recessed portions formed in the outer edge of the tie, after which the rails may be placed upon the chair and said chair moved so that the retaining devices C E will overlap the base of the rail, when the chair can be locked in place by the wedge. By means of this device the tracks

can be readily laid and taken up, and a sufficient space is provided to permit paving-blocks to be laid on a horizontal line with the surface of the chairs. It will also be observed that the tracks can be removed without in any way disturbing the pavement.

Having thus described my invention, I claim—

1. The combination of a sleeper or tie having a central flange with longitudinal slots, the horizontal base-flange having upwardly and inwardly curved edges, a bolt or retaining device secured to the vertical flange to one side of the slot therein, and the laterally-movable chair retained upon the sleeper against vertical displacement, said chair having inwardly-projecting portions which engage with the base of the rail, and a wedge or locking-key for holding the chair against the rail, substantially as shown, and for the purpose set forth.

2. In combination with a tie or sleeper having a vertical flange and bifurcated bolt or retaining device C secured to said flange to extend above the same, of a movable chair having a projecting portion E, which engages with the flange of the rail, and means, substantially as shown, for holding the chair against lateral movement upon the tie or sleeper, for the purpose set forth.

3. A chair for railways, cast in one piece, having a flat upper portion upon which the rail rests, projecting rail-retaining devices E, vertical side walls, the lower edges of which extend outwardly, inwardly-projecting walls located near one end of the chair, and recesses *d*, said chair being adapted to be used in connection with a sleeper or tie and a locking-key, constructed as shown.

4. In combination with a wrought or rolled iron tie or sleeper having the edges bent upwardly and inwardly adjacent to the portion where the chair is secured, a bifurcated bolt or retaining device secured to the vertical flange, and a longitudinal slot for the reception of a locking-key, when combined with a chair constructed substantially as shown.

5. In combination with a metallic tie or sleeper having a central vertical flange with longitudinal slots formed therein, and upwardly-projecting headed bolts secured to the vertical flange, the heads thereof projecting toward the center of the tie, a chair adapted to rest upon the upper edge of the vertical flange and upon the side flanges, the upper portion of said chair having a recess within which the retaining device C will lie, projecting portions E, and horizontal recesses *d*, with which the locking-key passed through the slots in the vertical flange of the tie will engage to prevent lateral and vertical movement of the chair, substantially as set forth.

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

MARK H. PIERCE.

Witnesses:

ISAAC DILLIN,

JAMES MONAGHAN.