

N. S. WHITE.

RAILWAY CHAIR AND TIE.

No. 188,710.

Patented March 20, 1877.

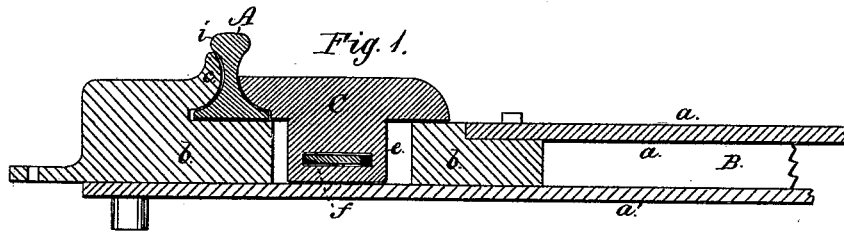


Fig. 2.

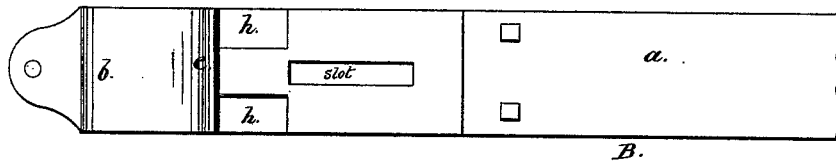


Fig. 3.

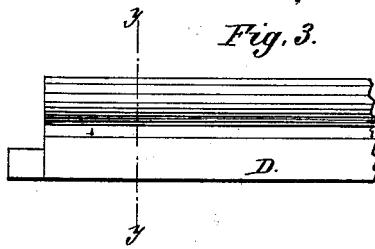


Fig. 4.

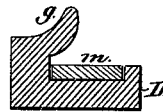
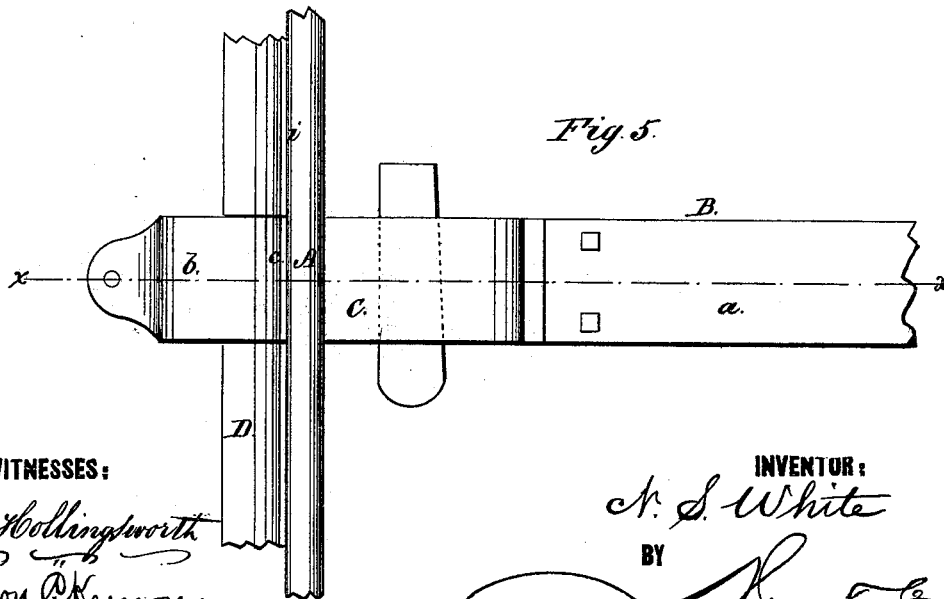


Fig. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

NORMAN S. WHITE, OF MILLERSTOWN, PENNSYLVANIA.

IMPROVEMENT IN RAILWAY CHAIRS AND TIES.

Specification forming part of Letters Patent No. **188,710**, dated March 20, 1877; application filed October 27, 1876.

To all whom it may concern:

Be it known that I, NORMAN S. WHITE, of Millerstown, in the county of Butler and State of Pennsylvania, have invented a new and Combined Railway Chair and Tie; and I do hereby declare that the following is a full, clear, and exact description of the same.

The object of my invention is to provide an improved bed or support for railway-rails; and to this end I employ a continuous chair or rail-bed, extending between and joined to the metal sleepers or ties, and secure the rail by a detachable clamp-piece, as hereinafter set forth.

In the accompanying drawing, forming part of this specification, Figure 1 is a sectional elevation taken on line *xx*, Fig. 5. Fig. 2 is a plan view of the tie or sleeper, with the rail, chair, or support for the rail and rail-clamping piece detached. Fig. 3 is a side view of a fragment of one of the chairs or supports for the rail. Fig. 4 is a cross-section thereof on line *yy*. Fig. 5 is a plan view:

A indicates the rail; B, the sleeper; C, the detachable clamp, and D the continuous chair or bed-piece for the rail. The sleeper is constructed, preferably, of a wrought-iron body, composed of top and bottom pieces *a* and *a'* and cast-iron heads *b*. The top piece *a* is bolted to the inner ends of the heads *b*, and the bottom piece *a'* extends beneath the heads to the extent of their length, and is also suitably secured thereto by bolts or other devices. The said parts are thus firmly connected or tied together and maintained rigidly in their proper relative positions. The heads *b* are provided with an elevated flange or cheek-piece, *c*, for embracing the outer side of the rail A. The rail is clamped between said flange or cheek and a detachable piece, C, which is secured to the head by means of a slotted tongue, *e*, and key *f*. The tongue *e* enters a vertical mortise formed in the head *b* contiguous to the rail, and the key *f* is inserted through a horizontal slot in the head. The mortise is elongated to allow the piece C to be moved up to or back from the rail when it is desired to clamp it in position or to detach it from the bed, as required in constructing or repairing the railway. The rail A rests upon the chairs D, which extend between the sleepers, and

are mortised into them at *h*, Fig. 2, thus forming a continuous bed or support for the rail, as shown.

The chairs consist of straight bars provided with a side flange or cheek-piece, *g*, which is secured by means of rivets, and conforms to the shape of the side of the body of the rail, and supports its head *i* against the lateral strain due to the action of the car-wheels. The advantage of the chair being unprovided with a flange or cheek-piece on the inner side is, that the rail may be easily placed in position or detached. A wooden strip, *m*, is laid in a continuous groove or socket formed in the chairs D, as shown in Fig. 4, for the purpose of imparting elasticity to the rail-bed, and thereby preventing undue wear of the rails and rolling-stock, and also for facilitating leveling of rails which may have become worn.

The parts composing my improved device are thus so constructed as to securely clamp the rails, prevent spreading or accidental detachment of the same, and support their heads during the passage of a train. Said parts are at the same time adapted to be easily detached or separated for the purpose of transportation and substitution or repair.

What I claim is—

1. The continuous chairs or rail-support D, having the outer flange or cheek-piece, in combination with the flanged cast-metal heads of the sleepers and the detachable clamp-pieces C, as shown and described, for the purpose specified.

2. The combination of the detachable clamp-piece C, having slotted tongue, the heads *b*, provided with the flange and an elongated vertical mortise, and the wedge-key, all constructed and arranged as shown and described, for the purpose specified.

3. The combination, with the cast-iron heads *b*, of the bottom piece *a'* and shorter top piece *a*, composing the sleeper, said parts being constructed and joined together substantially as specified.

The above specification of my invention signed by me this 14th day of October, 1876.

NORMAN S. WHITE.

Witnesses:

A. W. HART,
SOLON C. KEMON.