(No Model.)

I. F. GOOD.

COMBINED RAILWAY TIE AND CHAIR.

No. 344,826. Patented July 6, 1886.

Fig. 1.

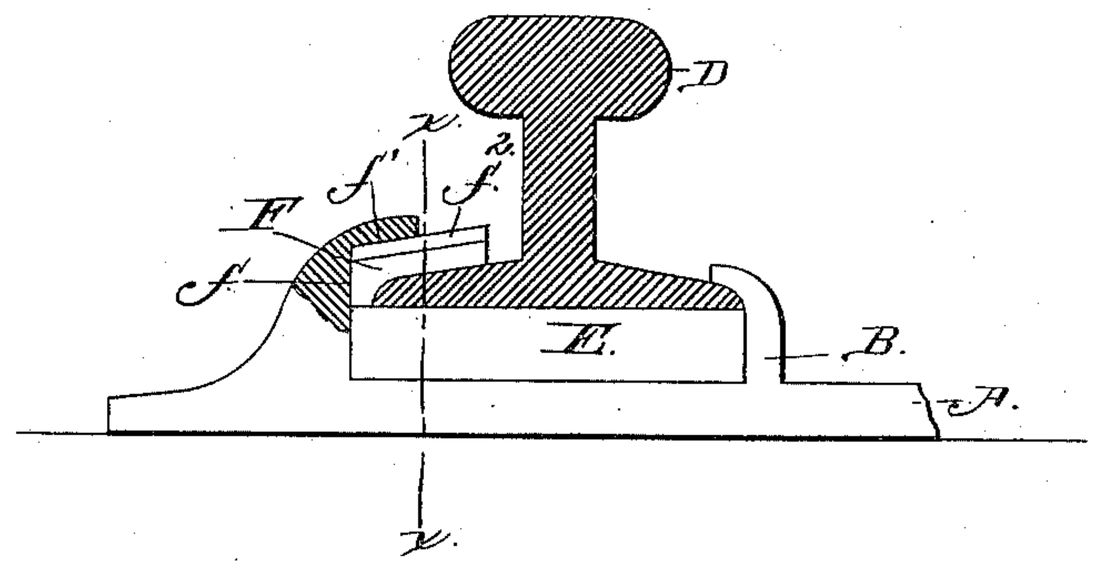


Fig. 2.

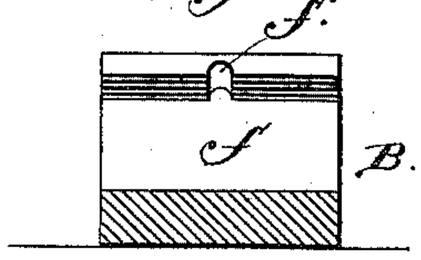


Fig. 3.

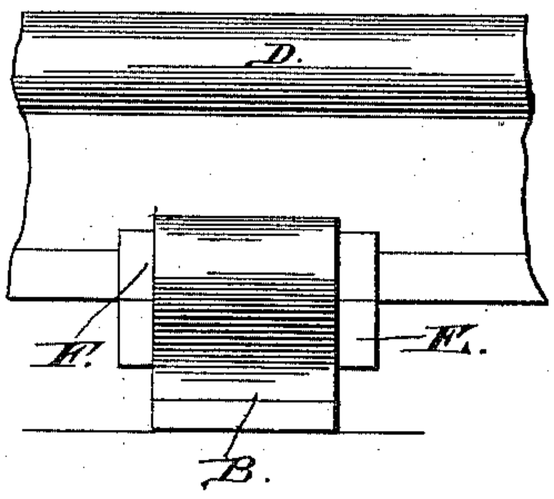


Fig. 4

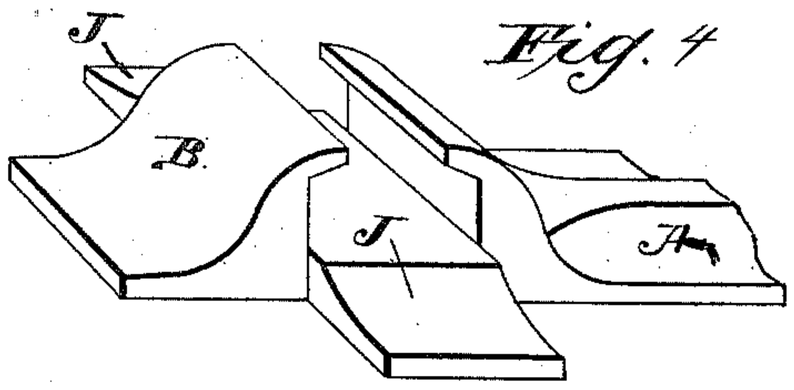
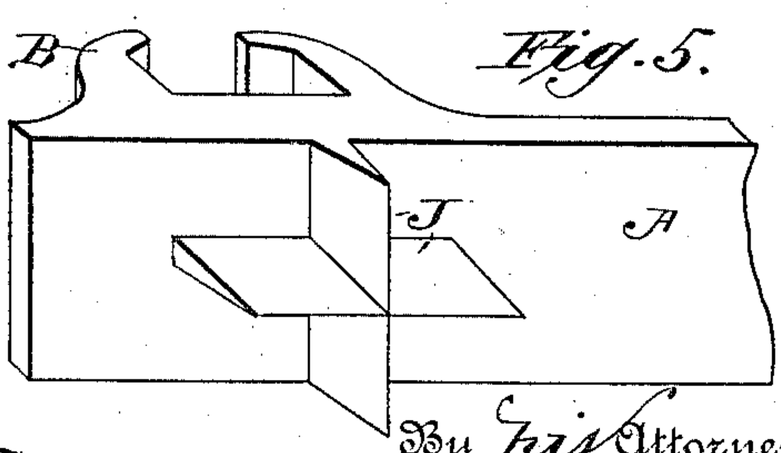


Fig. 5.



Witnesses
M. Fowler
H. Birchard

Inventor
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By his Attorneys
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UNITED STATES PATENT OFFICE.

ISRAEL F. GOOD, OF ALLENTOWN, PENNSYLVANIA.

COMBINED RAILWAY TIE AND CHAIR.

SPECIFICATION forming part of Letters Patent No. 344,826, dated July 6, 1886.

Application filed December 9, 1885. Serial No. 185,165. (No model.)

To all whom it may concern:

Be it known that I, ISRAEL F. GOOD, a citizen of the United States, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented a new and useful Improvement in a Combined Railway Tie and Chair, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in combined railway ties and chairs; and the novelty consists of the peculiar and novel construction and combination of parts, substantially as hereinafter fully set forth, and specifically pointed out in the claims.

The object of my invention is to provide means whereby the rail may be securely and rigidly held in the chair, to provide a foot for firmly supporting the tie from lateral movement in the road-bed, and to provide a railroad-tie which shall be very simple, strong, and durable in its construction, thoroughly effective in operation, and cheap and inexpensive of manufacture.

In the accompanying drawings, Figure 1 is a transverse vertical view through the rail, showing a portion of the chair in section and the key and cushion in elevation. Fig. 2 is a cross-sectional view through the chair on the line *x x* of Fig. 1, with the key, cushion, and rail removed. Fig. 3 is a side elevation of the chair and rail. Fig. 4 is a detached perspective view of a tie having my improved foot. Fig. 5 is a similar view of another form of foot.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A designates a portion of the tie, which is made of metal and has the chair B formed integral or in one piece therewith. D designates the rail, which is of the ordinary form, and E a cushion that is inserted between the rail and the chair, and on which the rail rests and is supported thereby. The cushion serves as a yielding support for the rail, and it may be made of any suitable or preferred material—such, for instance, as compressed paper, rubber, or wood. I prefer the latter material, and it may be inclosed within a metallic sheath, if desired. The cushion may be made slightly tapering and driven in between the feet of the rail and the chair, to force the foot of the rail against the curved cheeks of the chair to hold the rail securely in place.

One of the cheeks, *f*, of the chair is provided on its inner face, and the upper end with a groove or recess that forms a seat, *f'*, which is adapted to receive a rib or projection, f^2, that is provided on the outer face of a key, F. This key is curved on its side faces to correspond to the curvature of the cheek *f* of the chair, and the foot of the rail, which it snugly and closely fits when the cushion E is forced beneath the rail, and at one edge the key has a downwardly-extended flange, f^3, that bears against the cushion or block E and fits between the opposing faces of the cheek *f* and the foot of the rail, as will be clearly seen from Fig. 1. The ends of the tie are provided with projecting feet J, which are tapered longitudinally, and serve to firmly and rigidly support the tie in the bed of the road and prevent any movement or play thereof.

In Fig. 4 of the drawings the feet J are extended laterally from opposite sides of the tie and in the plane of the chair, and the said feet are cast or formed integral with the tie and for the purpose of strength and durability. In Fig. 5 of the drawings the feet J are also formed integral with the tie and tapered longitudinally, and they depend downwardly from the lower face of the tie and are arranged at right angles to each other.

It is obvious that the two forms of feet shown in Figs. 4 and 5 can be combined in one tie to give increased bearing-surface when circumstances may require or necessity demand, and that the tie is very firmly and securely held in the road-bed.

What I claim as new is—

1. The combination of a chair having one of its cheeks, *f*, provided with a grooved seat, *f'*, intermediate of its edges, a cushion, E, fitted beneath the rail in the chair, and a key, F, bearing against the feet of the rail and having a rib to fit in the seat, and a flange, f^3, that bears on the cushion and fits between the cheeks of the chair and the lower edge of the rail, as set forth.

2. A railway-tie provided with an integral chair and angular feet projecting outwardly from the tie in the plane of the seats in the chair thereof, as set forth.

3. A railway-tie provided with a chair and

laterally and vertically disposed feet projecting at an angle from the tie and tapered longitudinally, as set forth.

4. A railway-tie provided with a chair and integral feet projecting outwardly from the chair and downwardly from the lower face thereof, the said feet being tapered longitudinally, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ISRAEL F. GOOD.

Witnesses:
GEO. FRY,
ISRAEL H. TROXELL.