

(No Model.)

P. W. ROSS.
METAL RAILWAY TIE.

No. 423,447.

Patented Mar. 18, 1890.

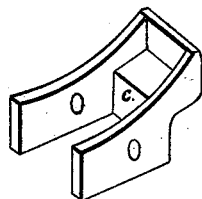


Fig. 6

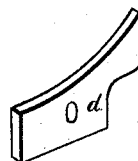


Fig. 7.

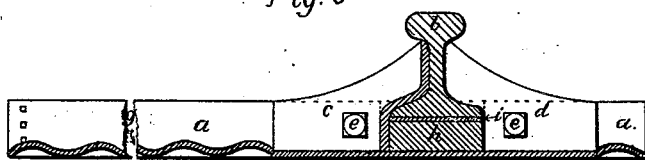


Fig. 4.

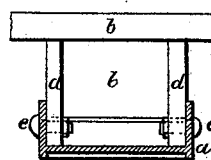


Fig. 5

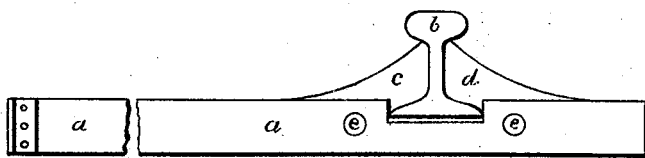


Fig. 2.

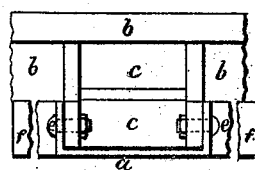


Fig. 3.

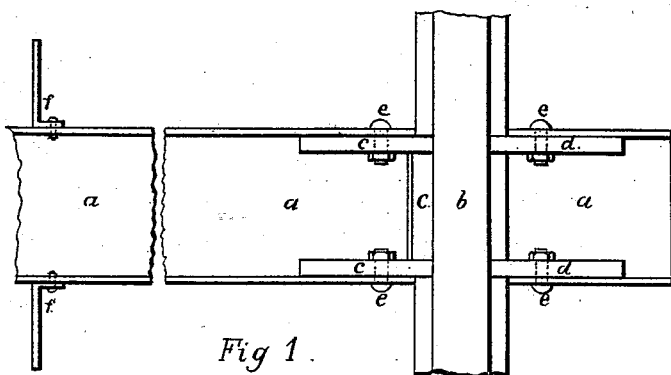


Fig 1.

Witnesses

Mo. Limbrick Truolony
Chas. Thompson Parsons

Inventor

Percy William Ross.

UNITED STATES PATENT OFFICE.

PERCY WALLACE ROSS, OF LOS ANGELES, CALIFORNIA.

METAL RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 423,447, dated March 18, 1890.

Application filed July 22, 1889. Serial No. 318,323. (No model.)

To all whom it may concern:

Be it known that I, PERCY WALLACE ROSS, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Improvement in Metal Railway-Ties, of which the following is a specification.

My invention relates to an improvement in metal railway-ties; and the objects of my invention are, first, to prevent the jar of the rail upon tie; second, to secure rail to tie, prevent spreading or upsetting of rails and low joints; third, to obviate the lateral slipping of track upon curves. I attain these objects in the following way, reference being made to the accompanying drawings.

Figure 1 is a ground plan; Fig. 2, a side view; Fig. 3, a front view; Fig. 4, a longitudinal section; Fig. 5, a transverse section; Fig. 6, a U angle-plate, and Fig. 7 clips.

Similar letters refer to similar parts through the several views.

The tie *a* is a channel-piece of steel or iron with a slot at each end to admit the rail. Under the rail and on the tie I place a block of wood *h* of sufficient thickness to reach nearly to the top of slot, the grain of wood being parallel to length of tie. On this block *h*, I place a piece of rubber, sheet-lead, or tarred compressed oakum *i* of sufficient thickness to extend above the top of slot, but not to the top of tie. This is to prevent the contact of rail

with tie, preventing jar of train passing over it. I secure the rail to the tie by what I denominate a "U" angle-plate *c*, which fits the rail and extends to bottom of tie, and, being turned at right angles to rail, is bolted to each side of tie. This prevents also the spreading of rails, upsetting of rails, or low joints. The angle-plates *c* are to be secured to both sides of rail at rail-joint, but between the clips *d* may be used on one side.

To prevent lateral slipping of track on curves, I corrugate the bottom of tie *a* up to attachment of angle-plate *c*, and at center of tie I bolt wings *f*, extending at right angles from tie, which are covered and embedded in the ballast of the road-bed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a channel-form tie having the recesses in its vertical sides, of the cushion of wood and sheet-lead or its equivalent, the grain of the wood running lengthwise of the tie, substantially as described.

2. The combination, with a channel-form tie, of the angle-plates and clips of the form shown adapted to secure the rails to the tie, substantially as described.

PERCY WALLACE ROSS.

Witnesses:

JOHN LIMBRICK TRUSLOW,
CHARLES THOMPSON PARSONS.