

(No Model.)

R. M. HUNTER.  
RAILWAY.

No. 382,470.

Patented May 8, 1888.

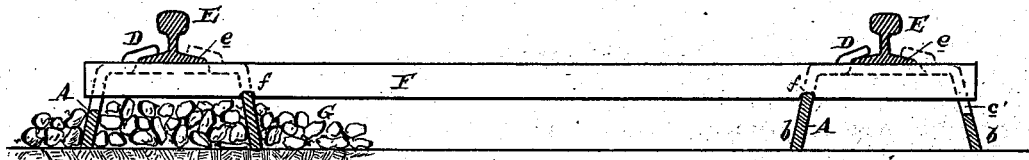


FIG. 1

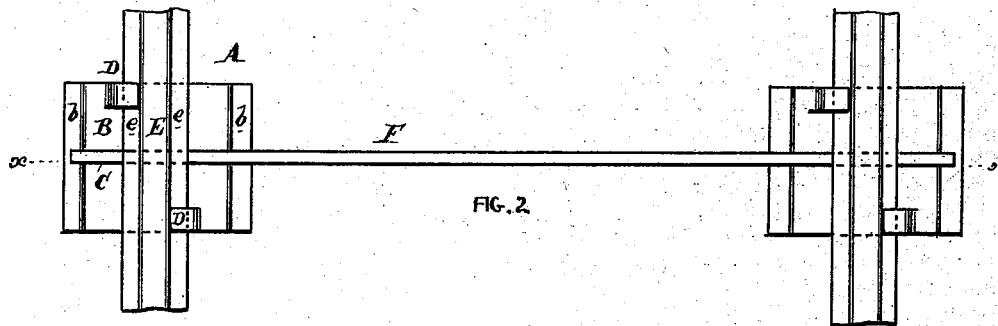


FIG. 2

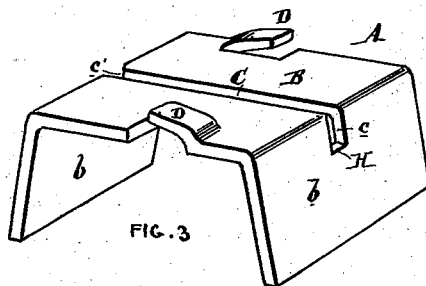


FIG. 3

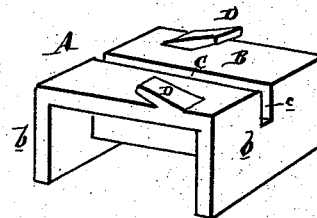


FIG. 5

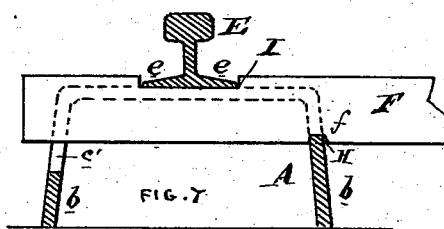


FIG. 7

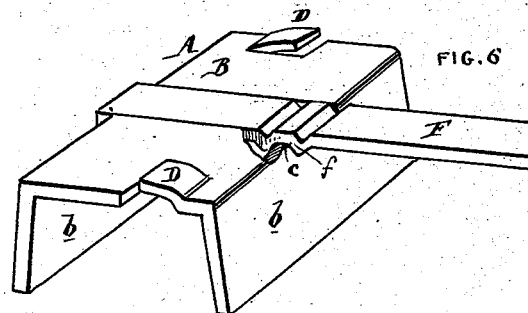


FIG. 6

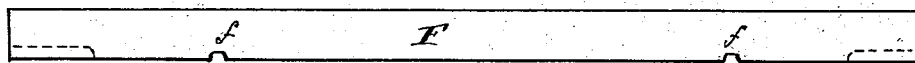


FIG. 4

Attest  
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# UNITED STATES PATENT OFFICE.

RUDOLPH M. HUNTER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO  
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## RAILWAY.

SPECIFICATION forming part of Letters Patent No. 382,470, dated May 8, 1888.

Application filed August 8, 1887. Serial No. 246,385. (No model.)

*To all whom it may concern:*

Be it known that I, RUDOLPH M. HUNTER, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Railways, of which the following is a specification.

My invention has reference to railways; and it consists in certain improvements, all of which are fully set forth in the following specification and shown in the accompanying drawings, which form part thereof.

The object of my invention is to form a simple, cheap, and durable cross tie and chair for railways. Many devices have been designed for this purpose, but in most instances they lack that simplicity so important to a mechanical construction of this kind. My aim has been to form the parts so that they interlock and produce a rigid structure without rivets, bolts, wedges, keys, or any parts not directly integral with the chairs or cross bars or ties.

In carrying out my invention I form a chair, preferably made of stamped sheet metal, having a central slot and two lugs for grasping the flanges of the rail, said lugs being arranged one on each side of the slot and pointing in opposite directions, so as to fit over a flange on each side of the rail. This chair is placed under the rail so that the rail sets down between the lugs, and the chair is then turned, and thereby the lugs are caused to pass above the flange of the rail and lock it to the chair. This and a similar chair under the other rail are then tied together by a cross bar or tie, which passes through the slots and is self-locked therein, and in such position prevents the turning or twisting of the chairs back to such a position as to unlock the rails. From this it will be observed that the construction consists of simply the two chairs and cross-tie, each of which parts is simple and of one integral piece.

In the drawings, Figure 1 is a cross section on line *xx* through a railway embodying my invention. Fig. 2 is a plan view of same. Fig. 3 is a perspective view of one of the chairs. Fig. 4 is an elevation of the tie-bar. Fig. 5 is a modified form of chair. Fig. 6 is a perspective view with part broken away, showing a modification in which a cross-tie bar is

used on its face instead of on its edge; and Fig. 7 is a sectional elevation of a modified form of chair and cross tie.

A represents the chairs, which consist of the top part, B, having the two lateral downwardly-extending legs *b*. This chair has the slot C across its top, which extends down, as at *c'*, part way into the legs *b*. It has also the two lugs D, which are preferably stamped up from the sheet metal making the chair and point in opposite directions, with sufficient room between them to allow the rail to pass, so as to rest upon the top B of the chair. The shoe is placed diagonally under the rail and then turned so as to make the lugs D D fit over the two flanges *e* of the rail A, in which position the slot C is at right angles to the rail. Another shoe is placed under the other rail in the same way, and then the cross-tie F has its ends placed through the slots C of the two chairs, and they are thus prevented from turning so as to release the rails. To lock the chairs against spreading, I notch the cross-tie F at *f*, near each end, which receives the edge H of the slot part *c* on the inside, the end of the tie passing through the other part, *c'*, of the slot C, as shown in Figs. 1 and 2. The last-mentioned slot, *c'*, should be deeper than the first-mentioned slot, as it has a greater vertical depth of tie F to receive, owing to there being no notch *f*, but to allow both slots to be of substantially the same depth it is simply necessary to cut down the ends of the cross-tie, as indicated in dotted lines, Fig. 4.

In place of making the chairs of stamped metal, they may be made of castings, as indicated in Fig. 5.

While the cross tie has been shown as placed on edge, it is not to be understood as being necessary, as it might be placed down upon its face, as shown in Fig. 6, and in which bends in the bar or tie act as the locking notches.

In Fig. 7 is shown a construction in which the cross-tie is notched upon its upper edge, as at I, so as to form a lock on the rail A itself, in which case the notch *f* might be dispensed with. The slot *c'* is shown deep, so as to allow tilting of the shoe until the tie is inserted into right position.

I do not limit myself to the minor details, as it is very evident that they might be modified in numerous ways and yet be fully within my invention.

5 Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The two parallel rails and two chairs, each having clamping-lugs to grip the flanges of the rail upon being turned, and a transverse slot, in combination with a cross-tie made of a flat bar turned on edge, connecting said chairs, and extending through the slots therein to prevent them from turning.

15 2. The two parallel rails and two chairs, each having clamping-lugs to grip the flanges of the rail upon being turned, and a transverse slot, in combination with a cross-tie connecting said chairs, having notched ends to lock it to the chairs, and extending through the slots therein to prevent them from turning.

3. The two parallel rails and two chairs, each having clamping-lugs to grip the flanges of the rail upon being turned, and a transverse slot, in combination with a cross-tie connecting said chairs, having notched ends to receive the flange of the rail, and extending through the slots therein to prevent them from turning.

4. The two parallel rails and two chairs, each having clamping-lugs to grip the flanges of the rail upon being turned, and a transverse slot, in combination with a cross-tie connecting said chairs, having notched ends to receive the flange of the rail and also the edge of the slot of the chair to lock it to said rail and chair, and extending through the slots therein to prevent them from turning.

5. A railway-chair having two lugs, D D, pointing in opposite directions and separated a distance at least equal to the width of the rail-flanges, and a transverse slot, C, across the chair between the lugs and opening through the top of the chair.

6. A railway-chair having two lugs, D D,

pointing in opposite directions and separated a distance at least equal to the width of the rail-flanges, and a transverse slot, C, across the chair between the lugs, in combination with the rail and cross-tie F, having notches *f* to lock the said tie to the chair.

7. A railway-chair having two lugs, D D, pointing in opposite directions and separated a distance at least equal to the width of the rail-flanges, and a transverse slot, C, across the chair between the lugs, in combination with the rail and cross-tie F, having notch *f* to lock said tie to the rail and chair.

8. A railway-chair formed of sheet metal and having the upper face and lateral legs, and provided with holding-lugs for the rail, pointing in opposite directions and stamped from the same piece of sheet metal, and also provided with a slot at right angles to the direction of the rail when laid upon the chair.

9. The railway-chair consisting of the top part, B, having lugs D D, pointing in opposite directions and of line, so as to fit over the rail-flange, the side legs, *b b*, and the slots C *c c'*, in which the slot part *c'* is deeper than part *c*.

10. The combination of two parallel rails with two chairs, each having two lugs for fitting over the rail-flange when the chair is turned, and two legs, one on each side of the rail, said chair being slotted in its top and down into the legs to form two widely-separated bearings in each chair, and a cross-tie formed of metal and adapted to fit down into the slots to prevent the chairs from turning and unite two chairs of which one is under each rail.

In testimony of which invention I hereunto set my hand.

RUDOLPH M. HUNTER.

Witnesses:

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E. M. BRECKINREED.