

(No Model.)

H. B. ROWLAND.
RAILROAD TIE AND FASTENING.

No. 502,638.

Patented Aug. 1, 1893.

Fig. 1.

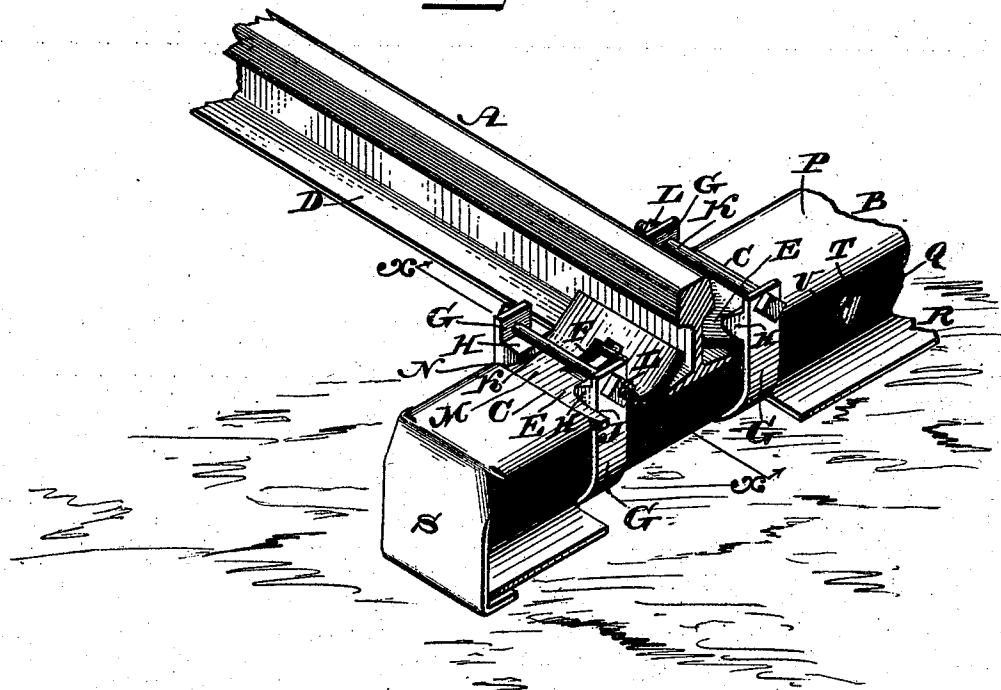


Fig. 2.

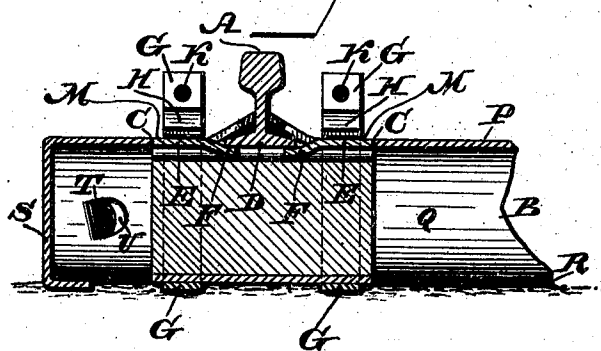
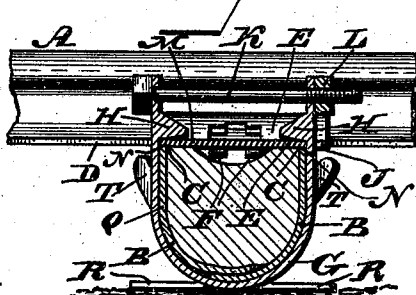


Fig. 3.



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RAILROAD-TIE AND FASTENING.

SPECIFICATION forming part of Letters Patent No. 502,638, dated August 1, 1893.

Application filed June 18, 1892. Serial No. 437,112. (No model.)

To all whom it may concern:

Be it known that I, HORACE B. ROWLAND, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Railroad-Ties and Fastenings, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to improvements in railroad rail ties and fastenings, and consists—first, of a novel fastening for a rail, as hereinafter fully described.

It further consists of a metallic tie formed of parts as hereinafter set forth.

It further consists of the combination of parts hereinafter set forth.

Figure 1 represents a perspective view of a rail tie and fastening, embodying my invention. Fig. 2 represents a longitudinal vertical section thereof. Fig. 3 represents a transverse vertical section on line *x, x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings:—A designates a railroad rail, and B a railroad tie; the latter having a cutaway portion or recess C on the top thereof, on which the base D of the rail is seated.

E, E, designate cheek pieces which are seated on the top of the tie in the recess C, and have the depressed inner tongues F, adapted to engage the under side of the base D of the rail, the upper side of the base supporting the sides of the cheek pieces. To hold the cheek pieces in place, the straps or clamps G are provided, the same encircling the tie, and having the horizontal flanges H, H, adapted to contact with and bear upon the cheek pieces E, and thereby hold the same tightly clamped to the tie, thus binding the rail in place.

In each of the cheek pieces, and on opposite sides of the tie, are the recesses J, in which, one end of each of the straps G are secured, when the strap is fastened, so as to be prevented from slipping sidewise on the said cheek piece and tie. The straps G are fastened in place by means of the bolts K, which pass through openings in the ends of the straps, and have the nuts L on their screw-

threaded ends. The outer ends M of the cheek pieces or those in contact with the top wall N of the tie, where it is recessed, are inclined in opposite directions, corresponding with the said wall N, thereby providing for an increased binding action of the said cheek pieces on the rail, as they are forced in their places on the tie. It will be seen that the rail, fastened as herein described, is held firmly upon the tie, and prevented from moving in either lateral or longitudinal direction, and owing to the tongues of the cheek pieces is also reliably secured against any rocking motion in either direction. At the same time the fastenings may be easily unloosened when desired, and the rail removed from the tie.

The tie B is formed of a single piece of sheet metal, and consists of a top P, the sides Q with the flanged bases R, and the end pieces S. The sides Q are provided with the wing pieces T, set-out therefrom in order to present additional surface to the ballast, and thereby render the tie more steady or immovable when pressed upon by the rail as the car passes over it. The openings U in the sides formed by the raised pieces T, permit the entrance of ballast within the hollow tie, thereby loading or weighting it, thus assisting in keeping it in place. The sides Q are preferably curved, and have at their bases the flanges R, which extend outwardly, thereby presenting comparatively broad surfaces for the ballast to rest thereon. The end pieces S, which extend beyond the sides of the tie are adapted to cover the openings at the ends thereof, and they project at their lower ends under the ends of the flanges R, and so reinforce or strengthen the same. On the side of tie opposite the recess C, the base flanges R are folded on each other, so as to form a double wall for the tie at that place, thus reinforcing the same for the support of the rail and fastening. The cheek pieces E, may each have more than one tongue F, if desired.

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

1. The combination of a tie, a rail, a cheek piece, a strap encircling said tie and having flanges bearing on the cheek piece, and fas-

roc

tening means for said strap, substantially as described.

2. A rail fastening consisting of a cheek piece, a strap adapted to bear against said
5 cheek piece, and a fastening bolt and nut for said strap, said parts being combined, substantially as described.

3. The combination of a tie, a cheek piece adapted to embrace the upper and lower sides
10 of the base of a rail, a strap or clamp encircling said tie and cheek piece, and a fastening bolt and nut for said strap, substantially as described.

4. The combination of a support, a cheek
15 piece adapted to embrace the upper and lower sides of the base of a rail, and having in one side a recess, and a strap with one end fitted within said recess, and encircling said support and cheek piece, substantially as and for
20 the purpose set forth.

5. The combination of a tie, a cheek piece adapted to embrace the upper and lower sides of the base of a rail, and having a recess in one side, a strap with a flange adapted to bear
25 upon said cheek piece, and a fastening bolt

and nut for said straps, substantially as and for the purpose set forth.

6. A railroad tie consisting of a single piece of sheet metal having a top, sides and base flanges, and provided with a recess for the
30 seating of a rail, and a reinforce at said recess integral with the tie, said parts being combined substantially as described.

7. A railroad tie consisting of a single piece of sheet metal having flanges at the bases of
35 its sides, and provided with end pieces, the latter covering the end and projecting under the ends of the said flanges, said parts being combined, substantially as and for the purpose set forth.
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8. A railroad tie consisting of sheet metal, and having a recessed portion in its top, and a reinforced portion on the under side opposite said recessed portion, substantially as and for the purpose set forth.

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Witnesses:

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