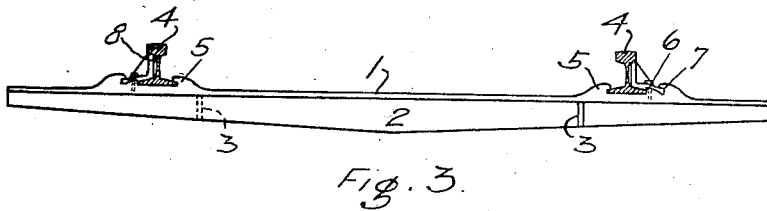
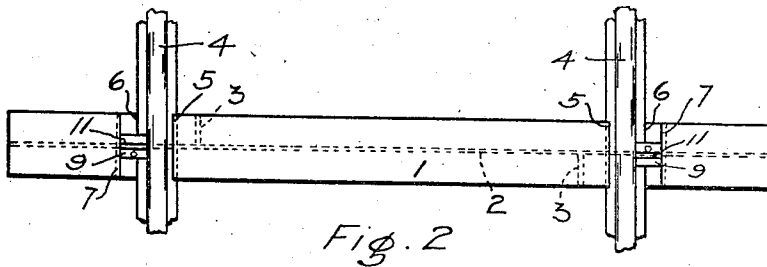
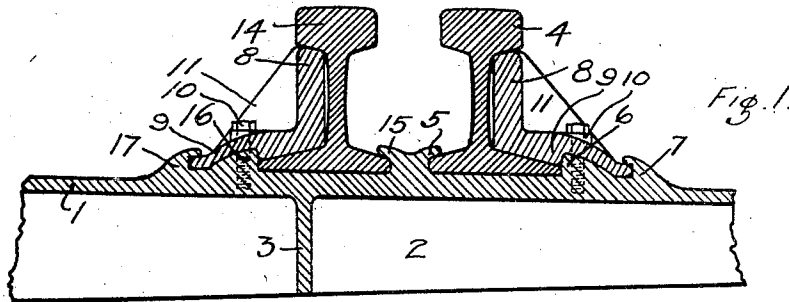


O. A. STORAASLI.
METALLIC TIE AND RAIL FASTENER.
APPLICATION FILED JUNE 3, 1909.

935,868.

Patented Oct. 5, 1909.

3 SHEETS—SHEET 1.



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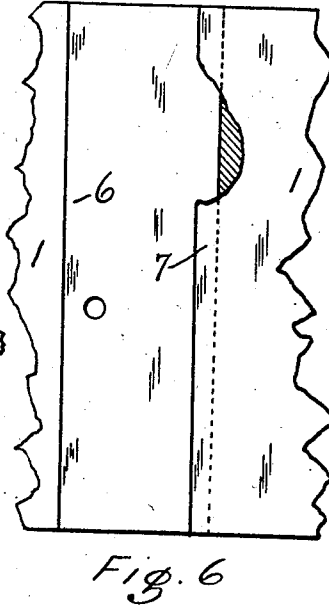
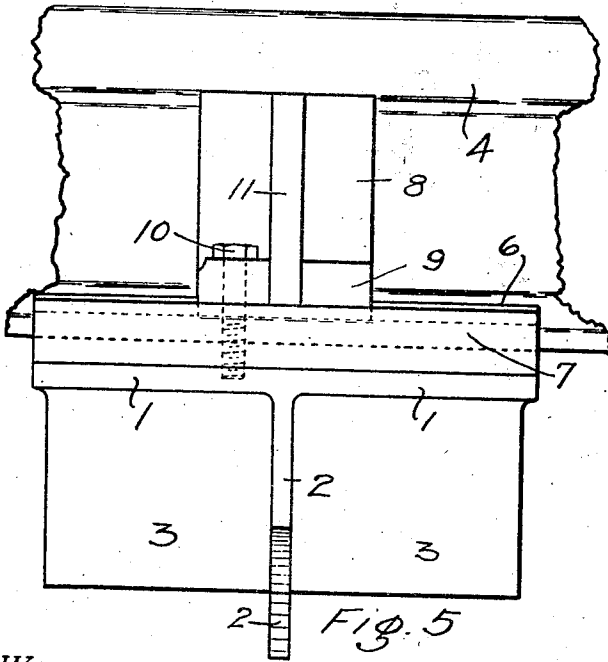
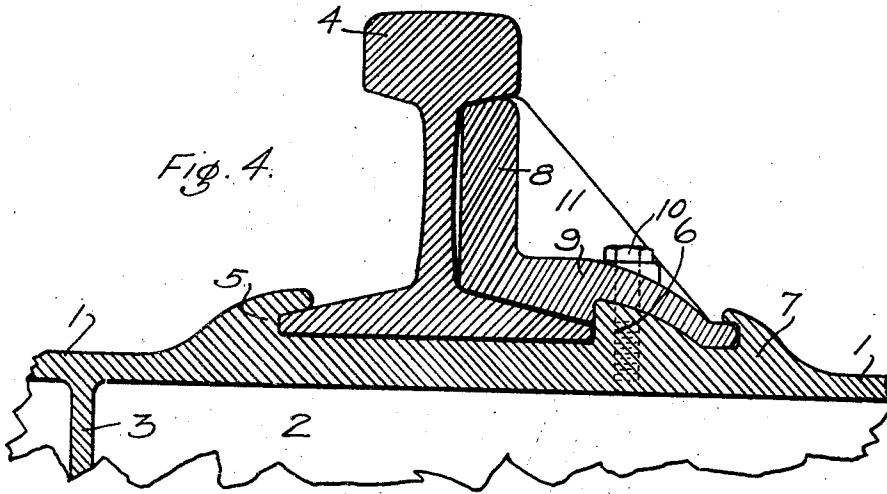
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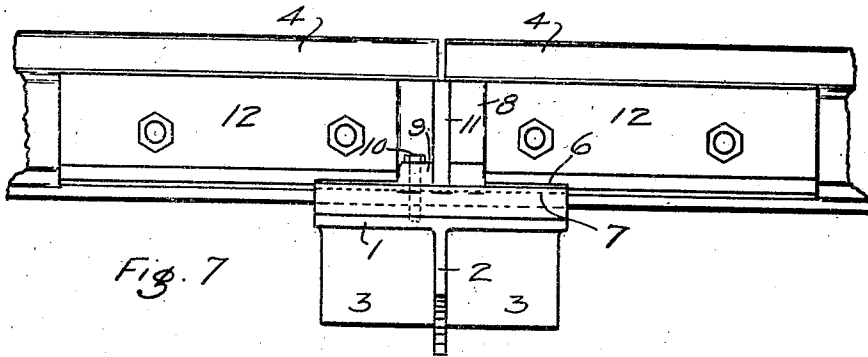


Fig. 7

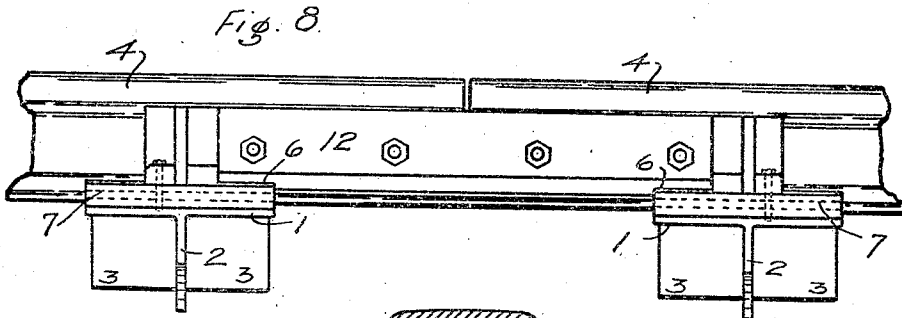


Fig. 8

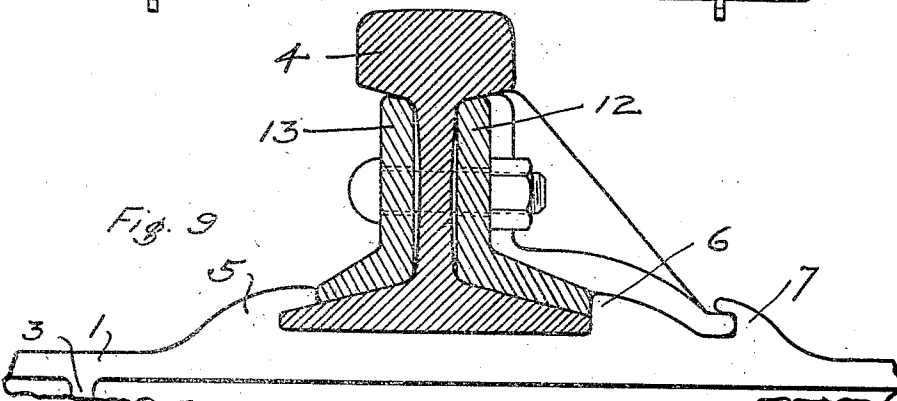


Fig. 9

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UNITED STATES PATENT OFFICE.

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METALLIC TIE AND RAIL-FASTENER.

935,868.

Specification of Letters Patent.

Patented Oct. 5, 1909.

Application filed June 3, 1908. Serial No. 499,905.

To all whom it may concern:

Be it known that I, OSCAR A. STORAASLI, a citizen of the United States of America, residing at Tacoma, in the county of Pierce and State of Washington, have invented certain new and useful Improvements in Metallic Ties and Rail-Fasteners, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to railway rail fasteners and ties and has for its objects to produce a tie which will be practically permanent; which will not shift either longitudinally or transversely of the track; to which the rail may be quickly and effectively fastened; and further to so improve the fastenings that when they are once in place they will not need to be removed except when the rail is taken up for renewal; and to provide a combined rail fastener and splice which will save time in applying the parts to the rail joint and will make the rail joint much more steady than is the case at present. I attain these and other objects by the devices illustrated in the accompanying drawings in which—

Figure 1 is a vertical section of a portion of one form of my improved tie and fastening in which a rail and guard rail are shown mounted therein; Fig. 2 is a plan view of the standard form of my improved tie; Fig. 3 is an elevation thereof; Fig. 4 is a section showing my improved rail fastener; Fig. 5 is an end elevation of a tie and rail fastener; Fig. 6 is a partial plan of a portion of the tie, a part thereof being broken away to show the wedge formed thereon; Fig. 7 is an elevation of a rail splice showing the rail joint coming over a tie; Fig. 8 is a similar view showing the rail joint between two ties; and Fig. 9 is a vertical section of such a splice.

Similar numerals of reference refer to similar parts throughout the several views.

This railroad tie consists of a flat plate 1, having a vertical web 2 along its center line, and a pair of anchors 3 extending out from the vertical web 2 on opposite sides thereof, and each located nearly under one of the rails 4 of the track. The plate 1 of the tie is preferably made thicker under the rails 4 than at its other parts, as seen in Figs. 1, 4 and 9. The web 2 is deeper at the center than at the ends.

The rail 4 is secured to the tie, on the inner

side, by means of the lip 5 formed on the upper surface of the tie and bent over the inner edge of the base of the rail. The outer edge of the rail 4 fits against a shoulder 6 formed across the tie parallel with and spaced from the lip 5 to receive the rail base therebetween. The shoulder 6 extends above the edge of the rail base. Another lip 7 is formed farther out on the tie in such a manner that its under edge is not parallel with the rail but is inclined thereto. The inclines of the two lips 7 near the two ends of the tie are in opposite directions so that one wedge is inserted in one direction while the other wedge is inserted in the other direction. The rail fastener consists of an under-brace 8, fitting between the rail head and rail base; a foot 9, butting against the upper part of the shoulder 6 and under the wedge lip 7, and having a boss formed thereon through which the holding screw 10, which screws into the plate 1, passes; and a brace web 11 joining the parts 8 and 9 along the centers thereof.

The outer rail splice bar 12 consists of a continuous bar of metal corresponding in cross-section with the under brace 8 and a part of the foot 9 of the rail fastener just described, and has one or two such fasteners formed integral therewith so that the splice may be made either over a tie (Fig. 7) or between two ties (Fig. 8). The foot part of the splice bar extends only as far as the shoulder 6. The inner rail splice bar 13 is formed similar to the outer splice bar except that the rail fasteners are not formed thereon. The inner splice bar has an under brace fitting under the head of the rail, and a foot butting against the edge of the lip 5. The splice bars 12 and 13 are secured together by bolts in the usual manner.

In Fig. 1 is shown the form of tie in which a guard rail 14 is fastened inside of the main rail 4. In this case the adjacent edges of the two rail bases are cut and the lip 5 is moved nearer to the center line of the rail 4. The lip 5 is formed double having another overhanging part 15 engaging the cut outer edge of the rail base 14. The shoulder 16 is formed to engage the inner edge of the rail base 14 in similar manner to the shoulder 6; and the wedge lip 17 is adjacent thereto and corresponds with the wedge lip 7. The rail fastener is exactly similar to that used under the rail 4.

Having described my invention, what I claim is:

5 In a metallic railway tie and rail fastener, the combination of a flat metal plate; a central web formed thereunder; anchor webs
branching from said central web; a lip
10 formed on the plate and adapted to engage over and against the inner edge of the rail base; a shoulder formed on the plate and adapted to engage against the outer edge of
the rail base and extending thereabove; a
wedge lip formed on the plate and adjacent
to but not parallel with the shoulder; a
fastener engaging under the outer side of

the rail head and under the wedge lip and
15 held in place by a screw therethrough to the tie; an inside splice bar engaging the edge of the first lip and under the inner head of the rail; and an outside splice bar formed on
and extending from said fastener along the
20 rail and secured through the rail to the first splice bar.

In testimony whereof I affix my signature in presence of two witnesses.

OSCAR A. STORAASLI.

Witnesses:

M. F. McNEIL,
B. V. PIERCY.