

E. G. TEICHART.
RAILROAD TIE PLATE.
APPLICATION FILED FEB. 15, 1917.

1,237,259.

Patented Aug. 14, 1917.

Fig. 1.

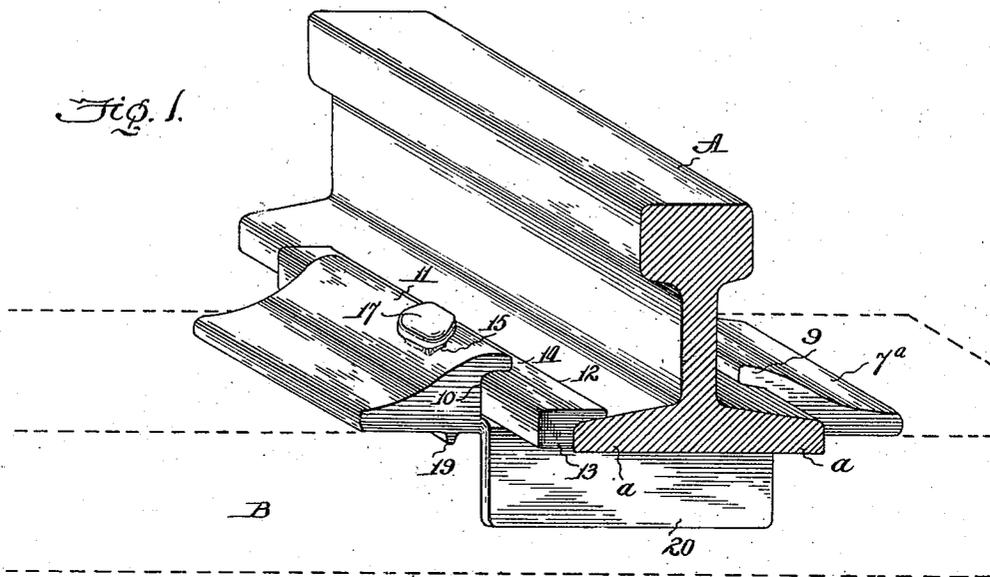


Fig. 2.

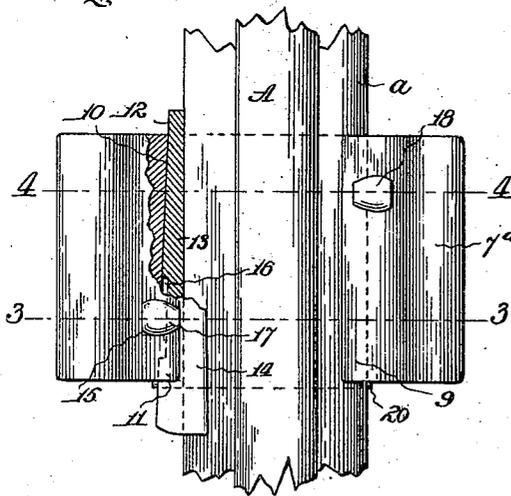


Fig. 3.

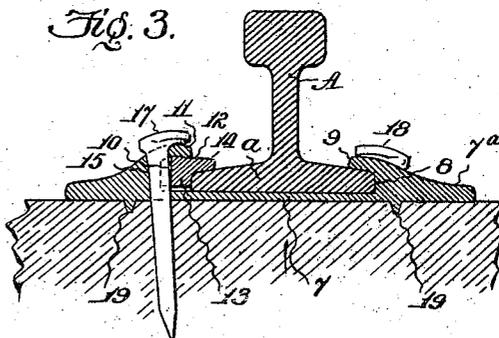


Fig. 4.

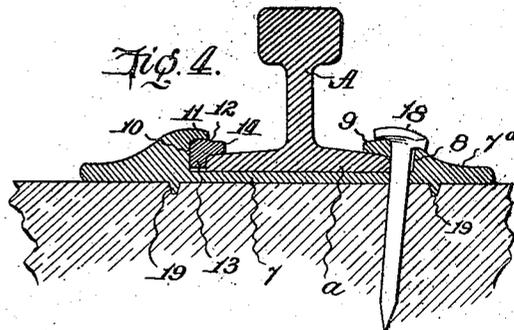


Fig. 5.

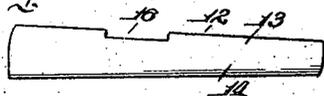
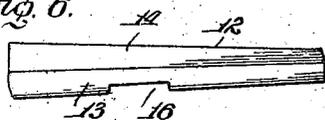


Fig. 6.



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RAILROAD-TIE PLATE.

1,237,259.

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To all whom it may concern:

Be it known that I, ERNST G. TEICHART, a citizen of the United States, residing at Duquesne, in the county of Allegheny and State of Pennsylvania, have invented a Railroad-Tie Plate, of which the following is a full and complete specification.

The primary object of my invention is to provide a tie-plate for railroad rails which will insure a strong and secure connection between the rail and tie, affording a firm supporting base upon which the rail rests, and while preventing the rail from giving or yielding laterally will permit the same to creep longitudinally under the influence of atmospheric changes without affecting the stability of its connection with the tie.

These principal objects and advantages are attained in the present instance in a simple and economical manner through the instrumentality of two cooperating parts of special construction; to wit, a rolled plate or tie-plate receiving the base portion of the rail and embracing the outer edge of one of the lateral flanges thereof, and a tapered locking member or creeper-wedge fitting within the tie-plate and embracing the other edge of the base-flange of the rail to form a firm and secure connection when the parts are attached to the tie by means of the ordinary spikes; all as hereinafter fully described and specifically set forth in the appended claims.

In the accompanying drawings, forming a part hereof—

Figure 1 is a perspective view illustrating the application of my invention.

Fig. 2 is a plan view thereof, partly in section.

Fig. 3 is a transverse sectional view, on the line 3—3 of Fig. 2.

Fig. 4 is a similar sectional view, on the line 4—4 of Fig. 2.

Figs. 5 and 6 are top and bottom plan views, respectively, of the locking member used in connection with the tie-plate.

Like numerals of reference indicate like parts in the several figures of the drawings.

In carrying out my invention the tie-plate, which is preferably made of steel, is rolled or otherwise specially shaped to provide an intermediate comparatively thin portion 7 upon which the railroad rail, A, is directly seated, and at one side said plate is thickened to form a vertical longitudinal

shoulder 8 rising from the rail-seat and having an inwardly-projecting flange 9 at its upper end engaging and overlapping the outer edge of one of the base flanges *a* of the rail. The other side of the tie-plate is also thickened to present a longitudinal shoulder 10 and inwardly-projecting flange 11, the shoulder in this instance rising above the rail-seat to a greater extent than the opposite shoulder 8, and the flange, 11, is correspondingly located a short distance above the plane of the base-flange of the rail, for the purpose hereinafter set forth. The shoulder 10 is located a short distance from the outer edge of the base-flange *a* and disposed at a slight angle with respect thereto forming a wedge-shaped opening or space between the flange and shoulder, adapted to receive the locking-member or creeper-wedge 12, and in order to increase the effectiveness of this locking member the underside of the cooperating flange 11 of the tie-plate is slightly undercut.

The locking-member or creeper-wedge 12 is L-shape in cross-section, with its depending member or body portion 13 tapered longitudinally to correspond with the shape of the wedge-shape opening or space between the rail-flange and shoulder 10, in which it is adapted to fit to securely bind the rail in the tie-plate, the upper inwardly-projecting member 14 of said creeper-wedge overlying the base-flange of the rail to hold the latter down on its seat. It will be noted that the outer portion of the upper face of the creeper-wedge is curved to correspond with the underside of the retaining-flange 11 of the tie-plate, and the cross-sectional shape of said creeper-wedge is such that when it is in place the stress of the rail upon the tie-plate will be distributed to effect a strong connection with the expenditure of a minimum amount of material, thus permitting the tie-plate or rail supporting structure to be made comparatively thin.

For the purpose of holding the creeper-wedge in place a spike-hole 15 passes down through the thickened portion of the tie-plate on a line with the shoulder 10, extending into the flange 11 and rail-seat 7 so that the spike may engage in a recess 16 at the edge of said creeper-wedge. In the present instance the recess 16 is very much wider than the spike so as to permit longitudinal movement of the wedge for proper adjust-

ment and to creep with the rail. When the spike, 17, is driven into place it serves to not only retain the creeper-wedge in locked engagement with the rail and tie-plate, but
 5 also secures the tie-plate to the tie at this side of the rail, said tie-plate being further secured to the tie by a spike 18 which passes down through an opening in the other thickened portion on a line with the shoulder 8;
 10 this last-mentioned spike opening being disposed so that the spike will engage the outer edge of the base-flange of the rail, as shown in Fig. 4.

By reference to Figs. 2, 3 and 4 it will be
 15 observed that the inner edge of the flange 11 is disposed slightly beyond the vertical plane of the outer edge of the base-flange *a* of the rail, whereby the tie-plate may be easily applied or slipped on to the base-flange later-
 20 ally.

To increase the hold of the tie-plate on the tie, as B, one end of said tie-plate is provided with a depending lip 20, which bears against one side of the tie, and the under-
 25 side of the plate is provided with ribs 19, 19, which become embedded in the tie when the spikes are driven in.

In applying the tie-plate it is slipped on to the base flange of the rail at one side of
 30 a tie and the rail slightly lifted so that said tie-plate may be slid along the same on to the adjoining tie, after which the creeper-wedge is slid into place from the wider end of the wedge-shaped opening between the
 35 rail and shoulder 10, and the spikes driven in to hold the parts securely locked and firmly attach the tie-plate to the tie. It will be readily seen that this operation may be accomplished quickly, and the device will
 40 effect a strong and durable connection of the rail to the tie.

This rail connection consists of only two parts, both of which may be rolled and therefore cheaply made, and by constructing
 45 said parts in the particular manner hereinbefore described a comparatively small

amount of material only is required, without sacrificing requisite strength.

Having thus described my invention, I claim:

1. In combination, a tie-plate for railroad rails having a seat for the rail, an engaging shoulder at one side of said seat embracing an edge of the base-flange of the rail, a vertical longitudinal shoulder at the opposite
 55 side of the tie-plate beyond the rail and extending at an angle with respect thereto and having an inwardly-projecting flange at its upper end, said tie-plate having spike-openings through the same vertically on a line
 60 with the opposite shoulders, and a creeper-wedge fitting in the tie plate between the aforesaid shoulder and rail and having an elongated recess at its outer side in alignment with the spike opening through said
 65 shoulder.

2. In combination, a tie-plate for railroad rails having a seat for the rail, an engaging shoulder and flange at one side of said seat engaging an edge of the base flange of the
 70 rail, a vertical longitudinal shoulder at the opposite side of the tie-plate beyond the rail and extending at an angle with respect thereto to provide a wedge-shape opening
 75 between the shoulder and rail, and an inwardly-projecting flange at the upper end of the shoulder, together with a wedge-shape key-plate fitting in the wedge-shaped opening in the tie-plate under the aforesaid flange and having a member overlying the
 80 base-flange of the rail, spikes passing down through the tie-plate to secure it to the tie, a recess in the key-plate in which one of the spikes engages, a downwardly-extending lip at one end of the tie-plate, and longitudinal
 85 ribs at the underside of said tie-plate near the outer edges thereof, substantially as herein shown and described.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."