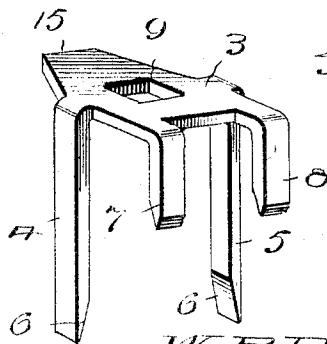
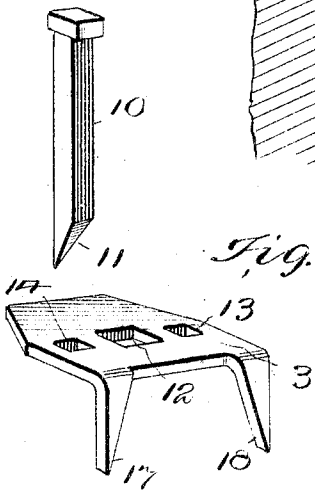
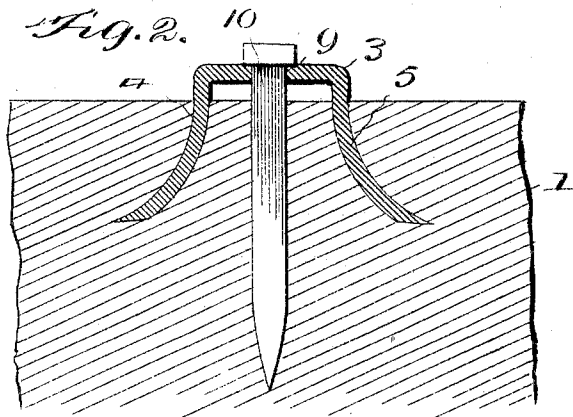
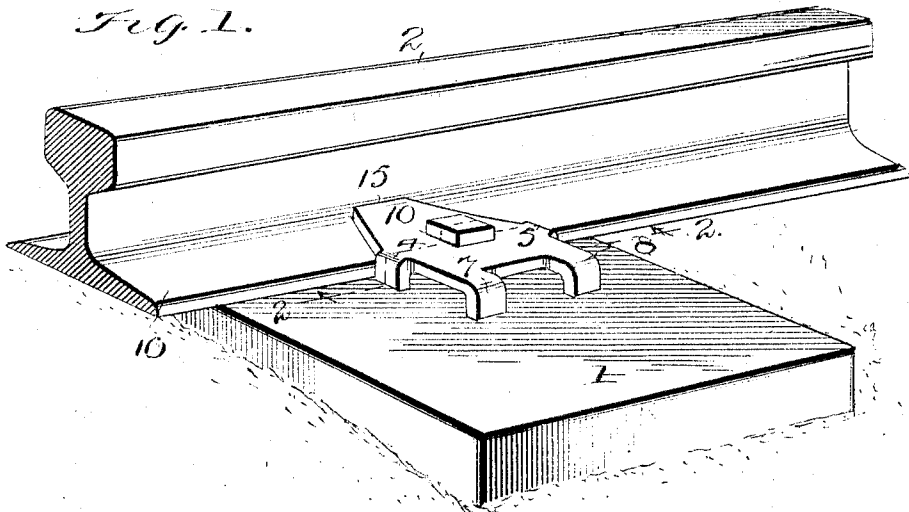


No. 777,136.

PATENTED DEC. 13, 1904.

W. P. PHENIX.
MEANS FOR SECURING TRACK RAILS TO CROSS TIES.
APPLICATION FILED MAY 28, 1904.

NO MODEL.



Inventor

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MEANS FOR SECURING TRACK-RAILS TO CROSS-TIES.

SPECIFICATION forming part of Letters Patent No. 777,136, dated December 13, 1904.

Application filed May 28, 1904. Serial No. 210,229. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM PRESTON PHENIX, a citizen of the United States, residing at Tahoka, in the county of Lynn and State of Texas, have invented certain new and useful Improvements in Means for Securing Track-Rails to Cross-Ties; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to means for securing the track-rail to the cross-tie; and it consists of certain novel features of combination and construction of parts, the preferred form whereof will be hereinafter clearly set forth, and pointed out in the claims.

The main object of my invention, among others, is to reliably secure a track-rail to the cross-tie whereby the rail cannot spread or move laterally, the securing means which I have provided being of such character as will cooperate with the cross-tie in the most thorough and efficient manner.

A further object of my invention is to reinforce the rail-spike proper and sustain the same in its driven position in the cross-tie, whereby it will be reinforced against lateral or outward movement.

Other objects and advantages will be hereinafter clearly set forth, and pointed out in the drawings, which are made a part of this application, and in which—

Figure 1 shows a perspective view of my invention complete as applied to use in connection with the cross-tie and track-rail of the usual construction. Fig. 2 is a sectional view of my invention, as indicated on line 2 2 of Fig. 1. Fig. 3 is a perspective view of my spike-cooperating plate, as shown in Fig. 1, while Fig. 4 shows a slightly-modified construction of said spike-cooperating plate.

In order to conveniently refer to the various details of my invention and cooperating parts, numerals will be employed, and referring to the numerals on the drawings 1 designates the cross-tie of the usual or any preferred construction, while 2 designates the track-rail secured in place upon the tie by

means of my spike-reinforcing plate 3, which is provided with the side anchors or stems 4 and 5, each properly beveled, as designated by the numeral 6, whereby they will gradually curve outward when driven into the tie. The outer end of the spike-anchoring plate 3 is also provided with the anchoring-stems 7 and 8, also beveled on their inner edges, whereby they will curve slightly outward, and thus tend to more reliably anchor the same in position against casual withdrawal from the tie. The anchoring-plate 3 is provided with an aperture 9, designed to receive the spike 10, which corresponds substantially to the ordinary rail-spike and may have a wedge-like edge or point, or said edge may be beveled, as indicated by the numeral 11 in Fig. 4, whereby the spike may be caused to curve when it is driven into the cross-tie.

In Fig. 4 I have shown the plate 3 as provided with a central aperture 12, corresponding to the aperture 9 in Fig. 3, and have also provided two additional apertures of slightly smaller size and indicated by the numerals 13 and 14, adapted to receive a smaller spike than the aperture 12, and I therefore prefer to bevel the ends of the small spikes so that they will curve outward, thus, in effect, taking the places of the anchoring-stems 4 and 5, formed integral with the plate 3, as shown in Figs. 2 and 3. The body portion or plate 3 is also provided upon its inner edge with the inwardly-projecting lip 15, designed to rest upon and engage the base 16 of the track-rail, the outer edge of the base being therefore disposed directly against the inner edges of the anchoring-stems 4 and 5 and the inner side of the anchoring-spike 10, thus insuring that the rail will be reliably held against lateral movement and at the same time prevented from moving upward by reason of the overlapping lip 15.

The form of plate illustrated in Fig. 4 is provided upon its outer edge with the sharpened or pointed terminals 17 and 18, so beveled that they will curve slightly outward when driven into the cross-tie, and thus more reliably tend to hold the same against casual withdrawal. Inasmuch as the anchoring-plate 3, with its plurality of anchoring stem-sec-

tions, will thus cooperate with the rail-spike when entered through the aperture 9 or 12, as the case may be, and also cooperate with the smaller spikes driven through the apertures 13 and 14 in that form of construction illustrated in Fig. 4, it follows that my invention will be especially desirable for cooperation with cross-ties of less soundness or firmness of character than in cases where a single spike is relied upon to hold the rail, inasmuch as the several anchoring-stems will take into separate portions of the cross-tie and insure that the plate and the reinforced spike will be rigidly supported and held in an adjusted position by reason of the greater area or surface of cross-tie engaged by said parts. My attachment will therefore be especially desirable for use in connection with old cross-ties where decay has taken place around the single spike commonly relied upon to hold the track-rail in place.

It will be understood that the anchoring-plates 3 may be provided with any preferred number of anchoring members or sections, as indicated by the numerals 4, 5, 7, and 8, it being understood that any preferred number of said stems may be adopted which will engage the greatest area of the cross-tie to which it is applied, thereby bringing great reinforcement to bear upon the rail-spike entered in the central opening provided in said plate.

While I have therefore described the preferred construction and combination of parts deemed necessary in carrying out my invention, I wish to comprehend in this application all substantial equivalents and substitutes.

Having thus fully described the construction and manner of using my improved anchoring device for track-rails and holding the rails in union with the cross-tie further description is deemed unnecessary.

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

1. The herein-described means for holding the track-rail in union with the cross-tie, comprising the anchoring member or plate-section 3 having a plurality of integral anchoring

members, said members having their lower ends cut at an oblique angle whereby, when they are driven into the cross-tie, the lower ends of said members will take laterally therein, said plate having apertures to receive spikes and also having a rail-engaging extension or lip to hold the rail in position, substantially as set forth.

2. The herein-described means for holding a track-rail in union with a cross-tie, comprising an anchoring member or plate-section 3 having a plurality of integral anchoring members, said members having their lower ends so constructed whereby, when they are driven into the cross-tie, said anchoring members will be directed out of their vertical plane, said plate having apertures to receive spikes and also having a rail-engaging extension to hold the rail in position, as and for the purpose set forth.

3. The herein-described means for holding a track-rail in union with a cross-tie, comprising the anchoring member or plate 3 having a plurality of anchoring members, said anchoring members being so shaped at their lower ends that said lower ends will be directed out of their vertical plane, whereby said anchoring members will rest in a semicircular plane when driven home, said plate also having a rail-engaging extension to hold the rail in position, substantially as set forth.

4. A device for holding track-rails in union with cross-ties, comprising a plate-section 3, anchoring members springing from the edges of said plate whereby, when said anchoring members are driven into the tie, they will rest edgewise against the track-rail and thus present a maximum degree of resistance to the lateral movement of said rail, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM PRESTON PHENIX.

Witnesses:

J. S. WELCHER,

W. C. WELLS.