J. M. CONWAY.

RAILWAY TIE PLATE.

APPLICATION FILED JAN. 2, 1912.

1,023,551. Patented Apr. 16, 1912.

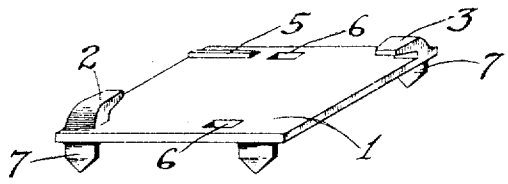

FIG. 1

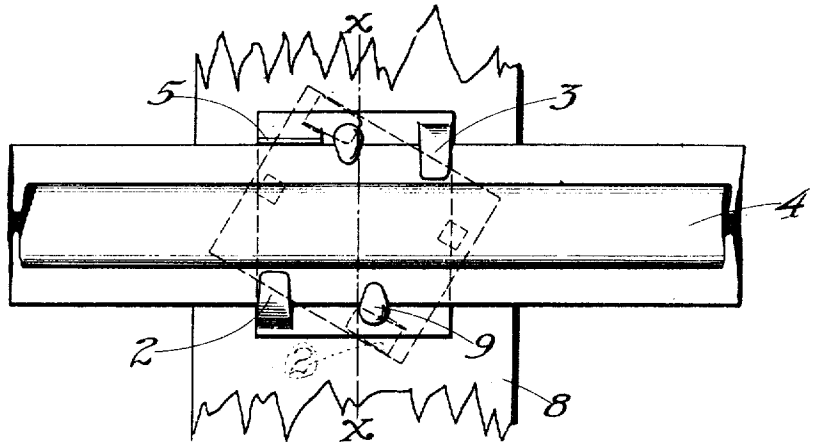

FIG. 2

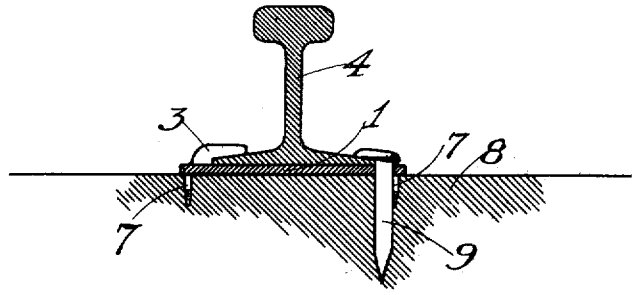

FIG. 3

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RAILWAY-TIE PLATE.

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To all whom it may concern:

Be it known that I, JAMES M. CONWAY, a citizen of the United States of America, residing at Bessemer, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Railway-Tie Plates, of which the following is a specification.

My invention relates to an improved railway track plate designed to provide a more perfect means to fasten the rails to the cross ties than the spikes which are now solely relied upon. My device also serves to maintain the track alinement and affords protection against the rails spreading or being turned over by the force of lateral strains from the trains.

My invention in its preferred embodiment comprises the details of construction and arrangement of parts hereinafter more particularly described and claimed, reference being had to the accompanying drawings, in which:—

Figure 1 is a detail perspective view of my improved plate. Fig. 2 is a plan view showing the plate in full lines operatively connected to a rail, and showing the plate in dotted lines in position in which it is first applied to the rail. Fig. 3 is a vertical cross-sectional view along the line x—x of Fig. 2.

Similar reference numerals refer to similar parts throughout the drawings.

My invention, as illustrated, comprises a base plate 1 formed of any suitable metal and in any practicable way, which plate carries at diagonally opposite corners hook members 2 and 3, which overhang toward the center of the plate and are spaced so as to receive between them the base flanges of a track rail 4 when laid along the longitudinal center line of the plate. The plate also has a shoulder 5 at one of its corners that is unoccupied by a hook 2 or 3, which shoulder is spaced from the shank of hook 2 the width of the rail base. The plate carries spike holes 6 on each side and has four depending sharpened points 7 which project from the bottom of the plate and are preferably disposed with their greatest width transverse to the length of the cross tie 8. The plate may have more or less of the points 7 or the latter may be dispensed with and the spikes 9 relied upon solely to hold the plate to the tie. Also it is not necessary to have holes 6 for the spikes, but I prefer same.

In practice, the plate is applied to the base flange of the rail by turning the plate at an angle to the rail with the shoulder 5 under the rail and the hooks 2 and 3 straddling the base. The plate is then turned until the shoulder 5 clears the base which is then engaged by hooks 2, 3 and shoulder 5, whereupon the rail and plate are lowered upon the cross tie. Since the hooks 2 and 3 overhang and grip the rail base, it follows that until the rail is lifted so that the plate 1 can be turned down and twisted to cause shoulder 5 to clear the rail base, is not possible to disengage the rail from the plate 1. To prevent such disengagement the plate is securely fastened to the cross tie by any suitable means, such as the spikes shown or the points 7. When the latter two means are used, the points will become embedded in the tie and will present so large an engagement therewith that the spreading of the rails is effectively prevented. Naturally, the spikes will coöperate to that end to the same extent that they now do as they directly engage the rail flanges. Further, it will be noted from the manner in which the hooks 2 and 3 positively lock with the rail base, the rail cannot turn over without carrying with it the plate with its wider base, and to do that requires the up-rooting of all the spikes and points 7, thus making it highly improbable that a rail will be spread or turned over so long as there remains any stability to the supporting cross ties.

My plate can be cheaply manufactured and by giving the rails a wider bearing on the ties, the latter will withstand better the tendency of the rail bases to cut into the ties until they stand at an angle tilting toward the track centers, which tendency is particularly pronounced on curves and is to blame for many accidents caused by the condition of the tracks.

Having thus described my invention, what I desire to secure by Letters Patent, is:—

1. A railway track device comprising a plate having projections adapted to engage the base of a rail, which projections are disposed in a line oblique to a longitudinal plane through the plate and spaced equidistantly from said plane, and a shoulder opposite one of said projections and spaced

therefrom sufficiently to receive the rail base between it and the opposite projection and while in engagement with the edge of the base to hold the plate and rail interlocked by means of said projections, substantially as described.

2. A plate upon which a railway track rail is adapted to rest, projections disposed in staggered relation on said plate and adapted each to overhang the rail base when the latter is in position on the plate, and a shoulder opposite one of said projections which is adapted to engage the rail base when seated on the plate between said shoulder and its opposite projection and hold the rail in interlocked engagement with said plate, substantially as described.

3. A plate upon which a railway track rail is adapted to rest, projections disposed in staggered relation to said plate and adapted each to overhang the rail base when the latter is in position thereon, a shoulder opposite one of said projections which is adapted to engage the rail base when seated on the plate and hold the latter in interlocked engagement therewith, and means to attach said plate to a cross tie which engage the rail base and pass down through the plate.

4. A railway track plate comprising a base plate having a number of depending pointed projections adapted to engage in a tie, top hook members disposed at diagonally opposite portions of the plate and spaced to receive between them and to overhang the base of a rail, and a shoulder adapted to engage the edge of the rail base when the latter has been interposed between the hook members and the plate moved until the shanks of said hook members engage the rail base, said shoulder holding the plate and rail interlocked, as and for the purposes described.

5. A railway track plate comprising a metal base adapted to receive and support a track rail, said base having inturned hook members so spaced that in one position of the plate the overhanging tops of the members will receive between them the rail base and in a second position said tops will both overhang the rail base with their shanks abutting against the side edges of the base, a shoulder on said plate adapted to engage a side edge of the base substantially opposite one of said shanks, and means to attach the rail and plate in assembled position to the track supports.

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

JAMES M. CONWAY.

Witnesses:
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R. D. JOHNSTON.