Nov. 24, 1931. A. D. HOTCHKISS 1,833,217

RAILROAD

Filed June 10, 1929

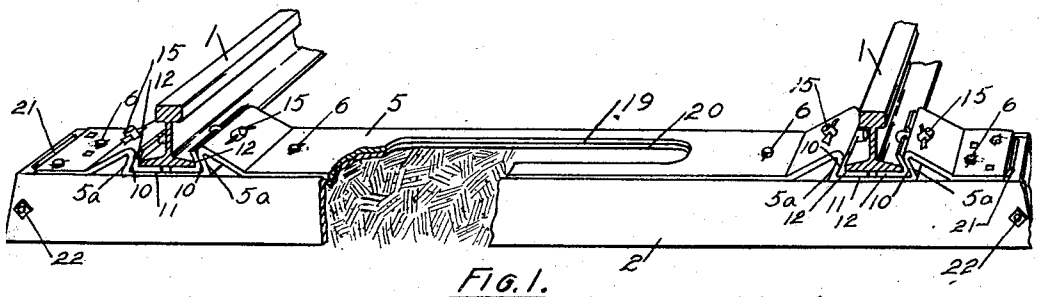


FIG. 1.

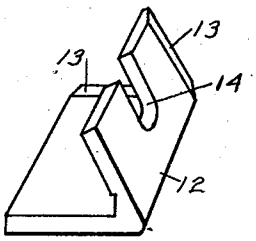


FIG. 3.

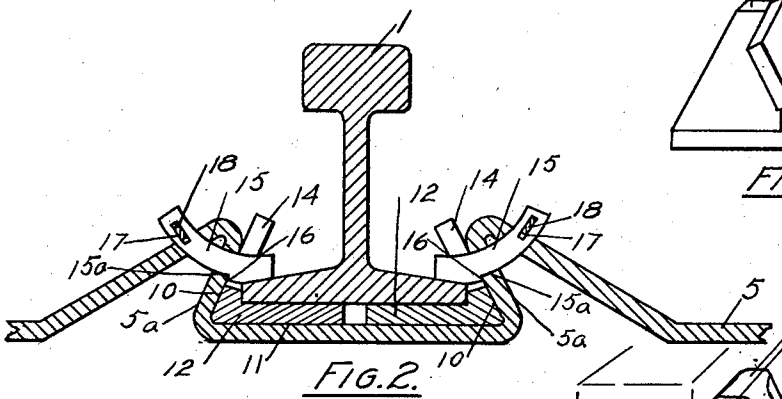


FIG. 2.

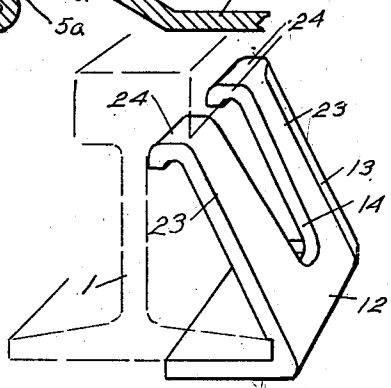


FIG. 4.

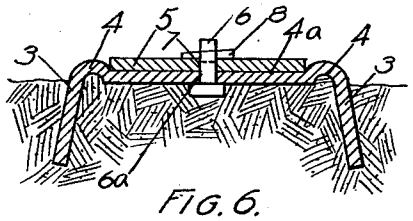


FIG. 6.

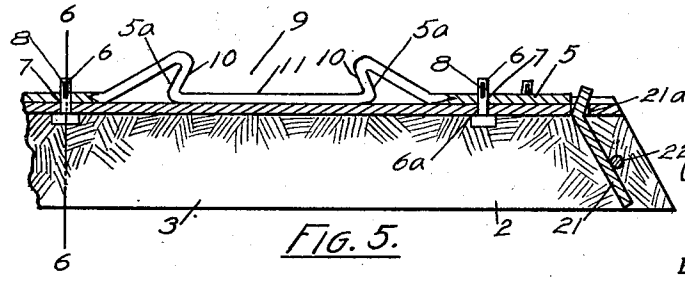


FIG. 5.

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UNITED STATES PATENT OFFICE

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RAILROAD

Application filed June 10, 1929. Serial No. 369,619.

In the operation of railroads difficulty is experienced in maintaining the rails against spreading and in the attaching of such rails firmly to the ties. The present invention is designed to obviate this difficulty and also involves an improved tie formed of sheet metal. Features and details of the invention will appear from the specification and claims.

A preferred embodiment of the invention is illustrated in the accompanying drawings as follows:—

Fig. 1 shows a perspective view of the rails in place on the tie, the rails being in section.

Fig. 2 an enlarged sectional view showing the fastening means of one of the rails.

Fig. 3 a perspective view of the locking plate.

Fig. 4 a perspective view of a locking plate with brace extensions.

Fig. 5 an enlarged longitudinal section of the tie with the rail plate in place.

Fig. 6 a section on the line 6—6 in Fig. 5.

1—1 mark the rails, 2 the tie. The tie is preferably formed of a channel having sides 3, the folds 4 at the top forming a central groove 4*a*. A rail plate 5 extends from rail to rail. This is secured to the channel plate by bolts 6. Each bolt extends through a perforation 6*a* in the top of the tie and a perforation 7 in the rail plate. The bolt is slotted and is secured in place by a pin 8.

The rail plate is struck up at 5*a*—5*a* forming a dove-tailed rail-receiving seat 9 with beveled side walls 10 and a bottom wall 11.

Locking plates 12 of angle form and conforming to the angle between the walls 10 and 11 of the seat are interposed between the rail and the walls of the seat. The locking plates 12 are beveled at 13 and the angle at the sides is continued upwardly above the flange of an inserted rail. This beveled portion is inserted between the walls of the seat and the rail and driven into place, thus securing the rail in the dove-tailed seat. The locking plate has a key slot 14 and a key bolt 15 extends through this slot and perforations 15*a* in the walls 5*a* at the sides of the seat. The key bolt has a shoulder 16 locking it against outward displacement and has a key slot 17 in which a key 18 is placed locking it against inward displacement.

The connecting plate has a longitudinal opening, or slot 19 and the top of the tie has a similar slot 20. This makes it possible to fill the space at the center of the tie and to tamp the same through this opening. The end portions of the tie are filled and tamped from the end of the tie and after being filled and tamped the end of the tie is closed by a plate 21. This plate extends through a cross slot 21*a* in the top of the tie and is held in place by a bolt 22.

Where it is desired to brace the rail, as on curves, the locking plates have extensions 23 with the turned-in ends 24 engaging the under shoulder of the top of the rail, thus bracing the rail against outward thrust.

It will be seen from this construction that the rails are definitely connected together so as to prevent spreading and that the connecting plate forms a simple and certain means for securing the rail to the tie and that the tie affords a cheap construction which may be readily tamped and put in place.

What I claim as new is:—

1. In a railroad, the combination of spaced rails; a tie on which the rails are mounted; a sheet metal rail plate having rail securing seats formed therein; means securing the rail plate to the tie; devices securing the rails in the seats comprising locking plates of angle form at each side of the bases of the rails and engaging the bottom and side walls of the seats; and means keying the locking plates in the seats comprising key bolts extending through the sides of the locking plates and the side walls of the seats.

2. In a railroad structure, the combination of a sheet metal rail plate having two folds extending across the plate, the inner walls of the folds being upwardly inclined forming a dove-tailed seat for a rail base; and means securing a rail on the plate comprising locking plates between the rails and the walls of the folds at both edges of the rail.

3. In a railroad structure, the combination of a base plate having a dove-tailed channel therein; and sheet metal angle plates arranged in the dove-tailed channel having a

base for receiving a rail and an inwardly inclined wall engaging the wall of the channel adapted to engage the edge of an inserted rail, the upwardly inclined walls of the angle plates continuing above the edge of an inserted rail and spaced from the upper surface of the flange of such inserted rail.

In testimony whereof I have hereunto set my hand.

AVERILL D. HOTCHKISS.