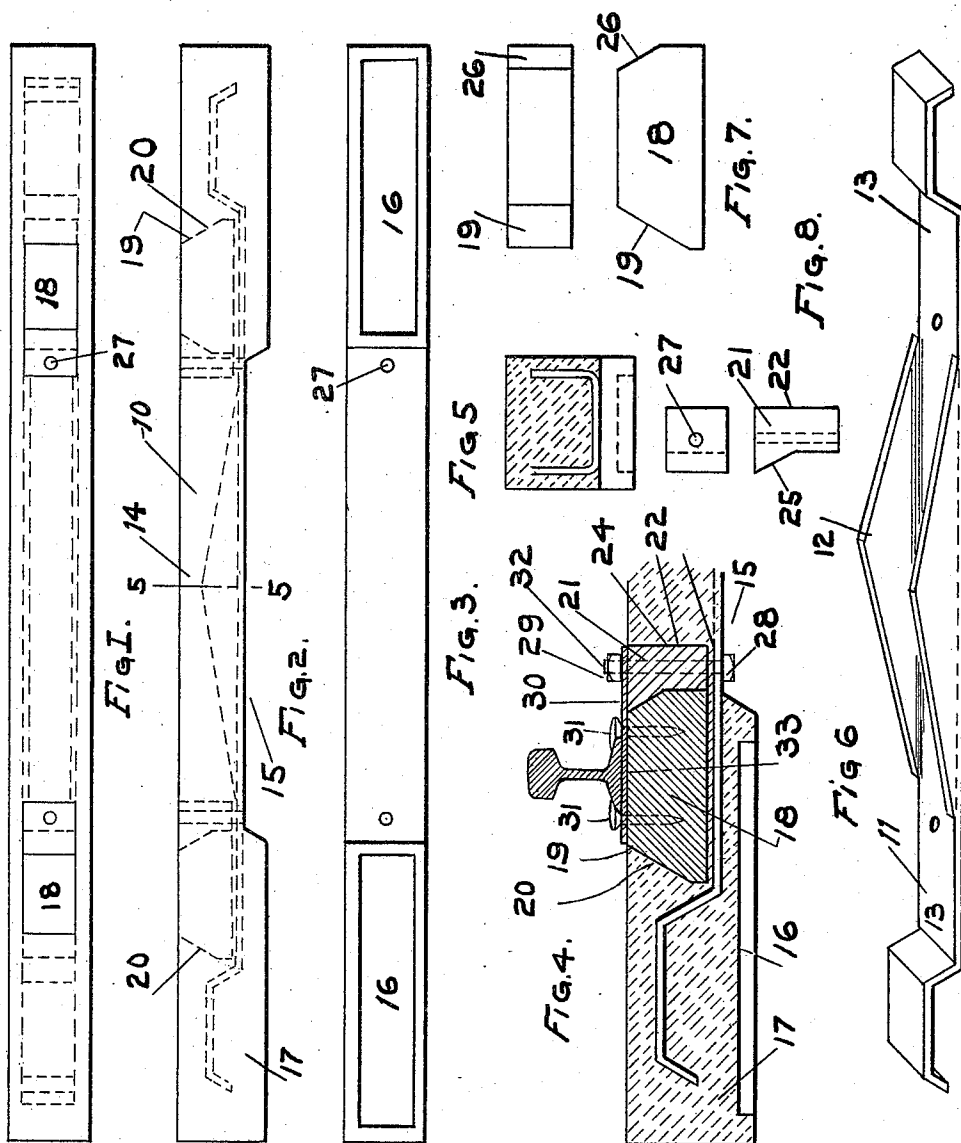


J. J. GALLAHER.
RAILWAY TIE.
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RAILWAY-TIE.

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To all whom it may concern:

Be it known that I, JOHN J. GALLAHER, a citizen of the United States, residing at Dysart, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification.

This invention relates to railway ties and rail fastening means, while the primary object of the invention is to provide a reinforced concrete tie, having a removable rail seat adapted to interlock with the body of the tie, and to be held in its interlocked position with an auxiliary locking element.

Another object of this invention is to provide a substantial truss member for the body of the tie, with the ends of the truss adapted to interlock with the tie, such, as to form a suspension support for the center of the tie.

A further object of this invention is to provide means whereby the rail supporting elements can readily be removed and replaced, thus facilitating the repairs to track in a very practical manner.

With these and many other objects in view, which will be more readily apparent, as the nature of the invention is better understood, the same consists of the novel construction, combination and arrangement of parts, as will be hereinafter fully illustrated, described and claimed.

The essential features of the invention involved in carrying out the above indicated objects are, necessarily, susceptible to a wide range of structural modifications without departing from the spirit or scope of the invention; but a preferred and practical embodiment thereof is shown in the accompanying drawings, in which;—

Figure 1, is a top plan view of my improved railway tie. Fig. 2, is a side elevation of the parts shown in Fig. 1. Fig. 3, is an inverted plan view of the tie shown in Figs. 1 and 2. Fig. 4, is an enlarged cross sectional view of the end of tie showing the rail supporting means, and the manner of interlocking the said means with the body of the tie. Fig. 5 is a cross sectional view of the tie taken on the line 5—5 of Fig. 2. This view clearly shows the manner of placing the truss in the tie. Fig. 6 is a detail in perspective of the tie truss plank. Fig. 7 shows plan and elevation views of the rail

block. Fig. 8 shows plan and elevation views of the auxiliary locking element.

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

In carrying out this invention no change is contemplated in the rail, and no special preparation of the roadbed is required to receive the tie, and to this end the invention contemplates a concrete tie, designated in its entirety by the numeral 10, having a longitudinal truss member 11, which is preferably provided with up-standing center flanges 12, that serve to hold the concrete in the body of the tie, as clearly shown in Fig. 5 of the drawings. The ends 13, of the truss plank 11, are preferably flanged upward, outward and downward, as shown in Fig. 6 of the drawings. This construction facilitates its interlocking function with the concrete portion of the tie, and provides a suspension support for the center 14, of the tie body. To further eliminate the breakage of ties, through the center and at the same time furnish additional facilities for tamping the ballast of the road-bed under and around the tie, the same is provided with a recessed under surface 15 which not only readily admits the tamping of the ballast, but prevents the ties from rocking on the road-bed, which feature it is very desirable to entirely eliminate.

For the purpose of providing the under surface of the tie with a ballast gripping surface, there is shown a recess 16, at the ends 17 of the tie. This recess 16 serves in a very practical manner to keep the tie from longitudinal or transverse slipping on the surface of the road-bed, and aids materially to keep the rails in perfect alinement.

For the purpose of securing the rails to the tie, there is provided a primary rail block 18, which is constructed with a tie interlocking surface 19, such, that when the block is in place it readily interlocks with the surface 20 of the tie body. Since the rail block 18 must obviously be placed into a recess in the tie and moved back into position, it follows that some means must be provided to keep the block engaged in its interlocked position with the tie, and to this end the auxiliary locking block 21 is provided, and consists essentially of a locking element being provided with a straight face 22 and beveled face 25; the face 22 being

adapted to abut firmly against the face 24 of the tie body, while the beveled face 25 is designed to interlock with the face 26 of the rail block 18. The auxiliary locking element 21 is further provided with an opening 27, through which the locking bolt 28 passes, being preferably placed in position from the bottom, while at the top it is fitted with the usual tightening means 29.

Fig. 4 shows a rail plate 30, adapted to be positioned between the rail and the rail plate. This rail plate can be of any desired thickness, and if the occasion demands, suitable insulation can be interposed without detracting from the efficiency of the rail support.

In order to remove the rail block 18 it is obviously necessary to withdraw the rail spikes 31 from both ends, the threaded nut 29 is then removed and the bolt 28 driven down in the ballast, such, that the end 32 will pass beneath the rail flange 33. This readily allows the tie to shift beneath the rails, after which the auxiliary locking element 21 is first removed; the interlocking faces of the tie and block are then separated by pushing the block back after which it is readily and easily removed. These blocks are preferably dipped in a preservative solution of some approved mixture, in order that their utility may be prolonged and the tie and road-bed left undisturbed.

Without further description or elaboration, it is believed that the many advantages of this improved railway tie will be readily apparent, and

What I claim and desire to be secured by Letters Patent is;—

1. In a tie of the class described, a concrete body having ballast engaging end portions, an undercut intermediate portion, and

rail block receiving sockets whose outer side walls slant toward the extremities of the tie, a reinforcing member embedded in the tie body provided with upstanding central truss flanges and angular end portions, rail blocks having beveled sides seated in the said sockets with one of their beveled sides engaging one of the slanting side walls thereof, locking blocks having wedge faces also adapted to seat in the block receiving sockets so that their wedge faces will bear against the exposed beveled faces of the rail blocks, and a removable bolt for securing the locking block to the tie body.

2. In a tie of the class described a concrete body having ballast engaging end portions which project below the plane of the intermediate portion of the tie, and also rail block receiving sockets whose outer side walls slant toward the extremities of the tie, a reinforcing member embedded in the said body having upstanding flanges and upwardly, outwardly and downwardly extending end portions, removable rail blocks whose opposite sides are convergently beveled seated in said sockets, one of said beveled sides of the blocks engaging the slanting wall of each rail block receiving sockets, locking elements having wedge faces that are adapted to bear against the other beveled side of the block, and bolts penetrating the locking elements and tie body to lock the same together and hold the rail block in the tie.

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

JOHN J. GALLAHER.

Witnesses:

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DEMETRUS BORTMAN.