L. FIEG.

RAILWAY TIE.

APPLICATION FILED MAY 27, 1921.

1,396,566.

Patented Nov. 8, 1921.

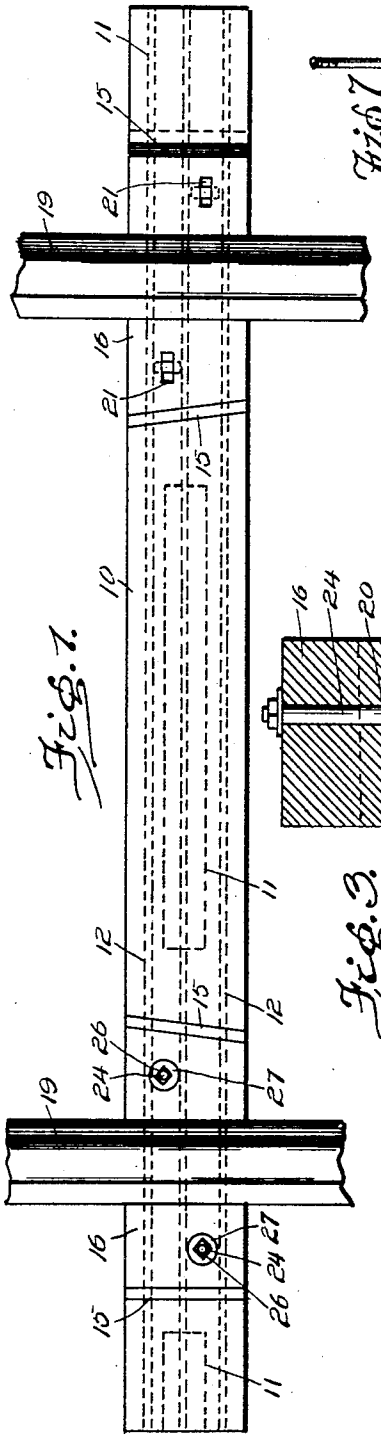


Fig. 1.

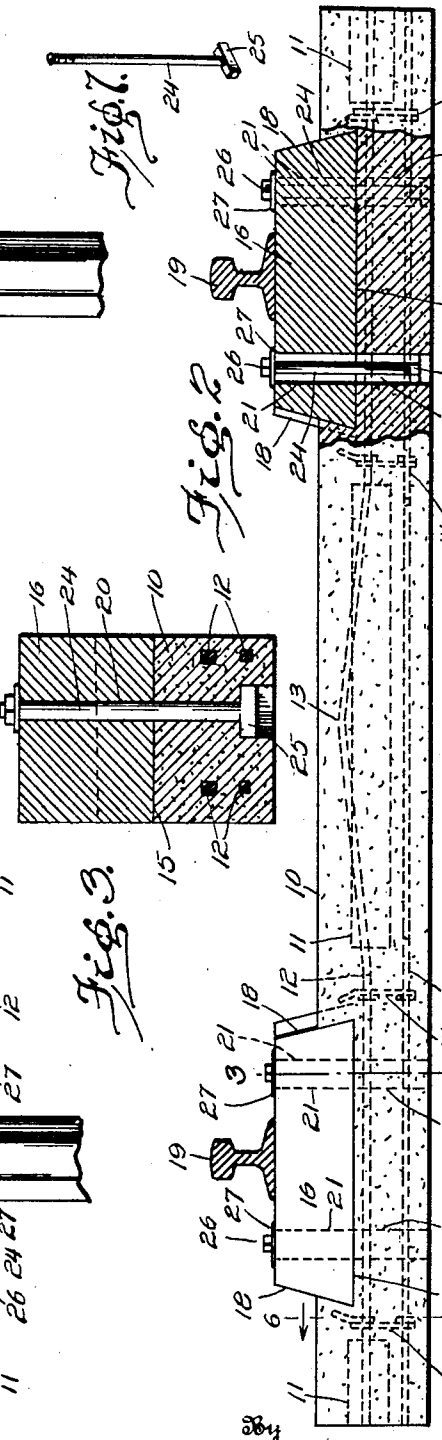


Fig. 2.

Fig. 3.

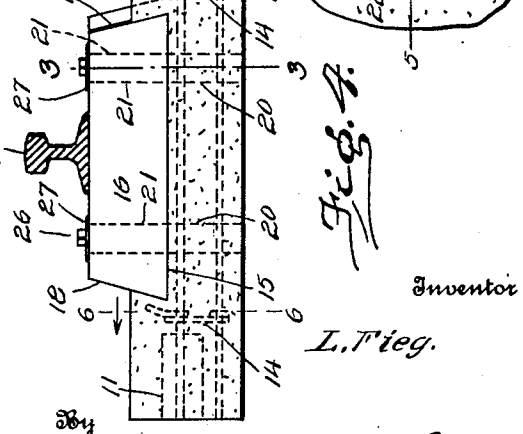


Fig. 4.

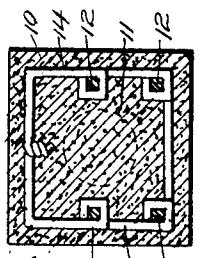


Fig. 6.

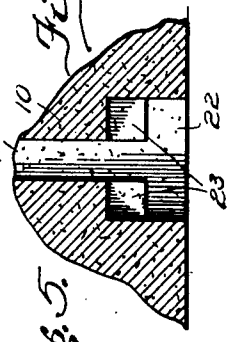


Fig. 5.

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UNITED STATES PATENT OFFICE.

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RAILWAY-TIE.

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To all whom it may concern:

Be it known that I, LOTHAR FIEG, a citizen of the United States, residing at Oneonta, in the county of Otsego, in the State of New York, have invented certain new and useful Improvements in a Railway-Tie, of which the following is a specification.

This invention relates to concrete railway ties and has for one of its objects to increase the efficiency and utility of devices of this character.

Another object of this invention is to provide a device of this character comprising a body portion of concrete having longitudinally directed reinforcing rods, and transversely directed wire loops attached to the rods and embedded in the concrete.

With these and other objects in view, the invention consists in certain novel features of construction as hereinafter described and then specifically pointed out in the claims, and shown in the drawings illustrative of the preferred embodiment of the invention.

Figure 1 is a plan view of one of the improved ties with portions of rails mounted thereon.

Fig. 2 is a side elevation partly in section at one end with the rails in transverse section.

Fig. 3 is a transverse section enlarged on the line 3—3 of Fig. 2.

Fig. 4 is an enlarged bottom plan view of the portion of the body illustrating the construction where the tie bolts are applied.

Fig. 5 is a section on the line 5—5 of Fig. 4.

Fig. 6 is a transverse section enlarged on the line 6—6 of Fig. 2.

Fig. 7 is a detached perspective view of one of the tie bolts.

The improved device comprises a body portion 10 of concrete material and having a plurality of longitudinally directed cavities 11 to lighten the structure and likewise to prevent distortion during the "setting" period. The cavities 11 are produced by supporting core devices within the molds when the ties are constructed, and removing the cores as the tie is built up in a well known manner.

Embedded in the concrete material at the side of the cavities 11 are metal reinforcing rods 12, certain of the rods being curved upwardly intermediate the ends of the body as illustrated at 13 in Fig. 2.

The rods 12 are reinforced and supported at spaced intervals by tie members 14 of wire coiled around the rods transversely of the body and likewise embedded in the concrete material of the body.

Formed in the upper sides of the body 10 are seats 15 for rail supporting blocks 16, preferably of wood.

The ends of the seats 15 are formed dovetailed or undercut as shown in Fig. 2, and the ends of the blocks are beveled to correspond to and closely engage the undercut ends of the seats.

One end of each seat and the corresponding ends of the seats are inclined transversely of the body as illustrated in Fig. 1 so that the blocks may be locked in the seats and tightened therein if they work loose, as will be obvious.

The rails, portions of which are illustrated at 19 in Figs. 1 and 2, are spiked to the blocks.

Formed through the body 10 and communicating with the bottom of each seat, are bolt receiving apertures 20 elongated or slotted longitudinally of the body, and formed through blocks 16 are corresponding apertures 21 correspondingly slotted or elongated and registering with the apertures of the body.

Any number of slots may be provided but generally two for each block will be sufficient as shown.

At their lower ends the slots are enlarged laterally as at 22 and with lateral sockets 23 communicating with the slots 20.

The registering apertures 20 and 21 are designed to receive clamp bolts 24, one of which is shown detached in Fig. 7, and each formed with laterally directed projections 25 at the lower ends and threaded to receive clamp nuts 26 and washers 27 at their upper ends.

By this arrangement the bolts 24 may be inserted with their elongated ends 25 downwardly through the elongated apertures 20 and 21 until the portion 25 is below the lines of the sockets 23 and wholly within the enlargement 22, when the bolt can be rotated one fourth of a revolution and drawn upwardly to cause the projections 25 to enter the sockets 23 and thus lock the bolts from rotation when the clamp nuts 26 and washers 27 are applied.

By this simple means a very simple dur-

able and efficient railway tie is constructed, whereby the rails are effectually supported and removable and attachable without disturbing ties or road bed.

The improved device is simple in construction can be inexpensively manufactured and of any size or length.

The preferred embodiment of the invention is disclosed in the drawings and set forth in the specification, but it will be understood that any modifications within the scope of the claimed invention may be made in the construction without departing from the principle of the invention or sacrificing any of its advantages.

What I claim is:—

A railway tie comprising a body of concrete material having longitudinally directed outwardly opening cavities at the ends and an intermediate cavity spaced at the ends from the terminal cavities, a plurality of longitudinally directed reinforcing rods embedded in the tie between the cavities and the sides of the same, and a plurality of members of wires looped around the rods and embedded in the concrete material between the confronting ends of the cavities.

In testimony whereof I affix my signature hereto.

LOTHAR FIEG.