

999,771.

FIG. 1.

WIRE FABRIC

4

5

6

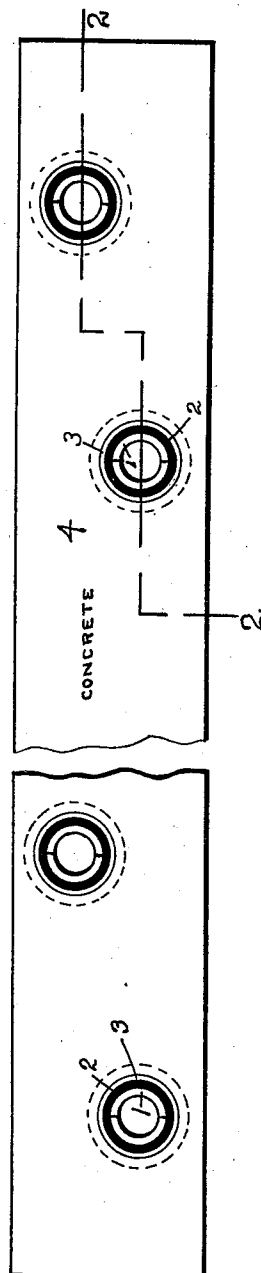
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UNITED STATES PATENT OFFICE.

WILLIAM D. FORSYTH, OF YOUNGSTOWN, OHIO.

REINFORCED RAILWAY-TIE.

999,771.

Specification of Letters Patent.

Patented Aug. 8, 1911.

Application filed October 31, 1910. Serial No. 589,968.

To all whom it may concern:

Be it known that I, WILLIAM D. FORSYTH, a citizen of the United States, and a resident of Youngstown, in the county of Mahoning and State of Ohio, have invented a new and Improved Reinforced Railway-Tie, of which the following is a specification.

This invention relates to reinforced concrete railway ties, having novel and effective means for the reception and retention of spikes or other rail fastening devices which may be driven down in the usual manner, and consists in a body of any desired form having embedded therein a trough-shaped net-work of wire to reinforce the concrete together with novel holding devices for the rail fasteners.

In the accompanying drawings, Figure 1 is an end view of the tie having part of the reinforcing rods shown in dotted lines. Fig. 2 is an elevation of the tie broken away on the line 2—2 of Fig. 3. Fig. 3 is a plan of the tie.

Similar reference characters refer to like parts throughout the several views.

The body 4 of the tie may be reinforced in any desirable manner. The metal strengthening members shown in the drawings consist of longitudinal rods 5 and stirrups 6 and 7, positioned to resist the tensional stresses.

Sleeves 3, preferably of cast iron or cast steel, are molded in the plastic material, and may be provided with circumferential flanges 8 to assist in holding them in position. These sleeves are preferably staggered as shown in Fig. 3. Within these sleeves are the bushings 2, preferably of indurated fiber or other elastic material. Within the bushings are the split sleeves 1, of any desired metal.

If desired a plate 9 of insulating material may be laid between the tie and the rail 10, after which the spikes 11 are driven down. The normal external diameter of the split sleeves 1 is that of the bore of the bushings, and the bore of the split sleeves such that the spikes will open the sleeves, when driven in. The result is that the bushings so firmly grip the split sleeves that the spikes are held in place. If, in releasing the rails, the heads of the spikes are pulled off, which sometimes happens, the shank of the spike can be driven out from the lower side of the tie with a proper tool.

Owing to the fact that the plate 9 separates the rail from the sleeves 3, and from the body, the rail will be insulated if this plate is of the proper material. If desired, the bushings 2 may be split, in which case the grip on the spikes by the two parts of the sleeve 1 will be maintained by reason of the resistance of the material of the fibrous bushing to being compressed. Where the bushing is entire, this resistance is added to by the resistance of this material to being stretched.

Having now explained my construction, what I claim as my invention and desire to secure by Letters Patent is:—

1. A concrete tie having a rail fastening device embedded therein, comprising a sleeve rigidly embedded in the concrete of the tie and adapted to receive and retain a non-metallic and resilient bushing, and a split sleeve within the resilient bushing.

2. A reinforced concrete tie, consisting of a body of concrete wherein are embedded a U-shaped metallic reinforcement and rail fastening devices, each of said rail fastening devices consisting of a flanged sleeve embedded in the concrete forming the body of said tie and adapted to receive and retain a non-metallic, resilient bushing which in turn is adapted to receive and retain an adjustable metallic sleeve.

3. A reinforced concrete tie consisting of a body of concrete wherein are embedded a metallic re-inforcement and rail fastening devices, each of said rail fastening devices consisting of a flanged sleeve embedded in the concrete forming the body of said tie and adapted to receive and retain a non-metallic, resilient bushing which in turn is adapted to receive and retain an adjustable metallic split sleeve.

4. A concrete tie having a rail fastening device embedded therein, comprising a resilient bushing and a split sleeve within the bushing.

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

WILLIAM D. FORSYTH.

Witnesses:

ELIZABETH M. BROWN,
GEORGE T. WILSON.