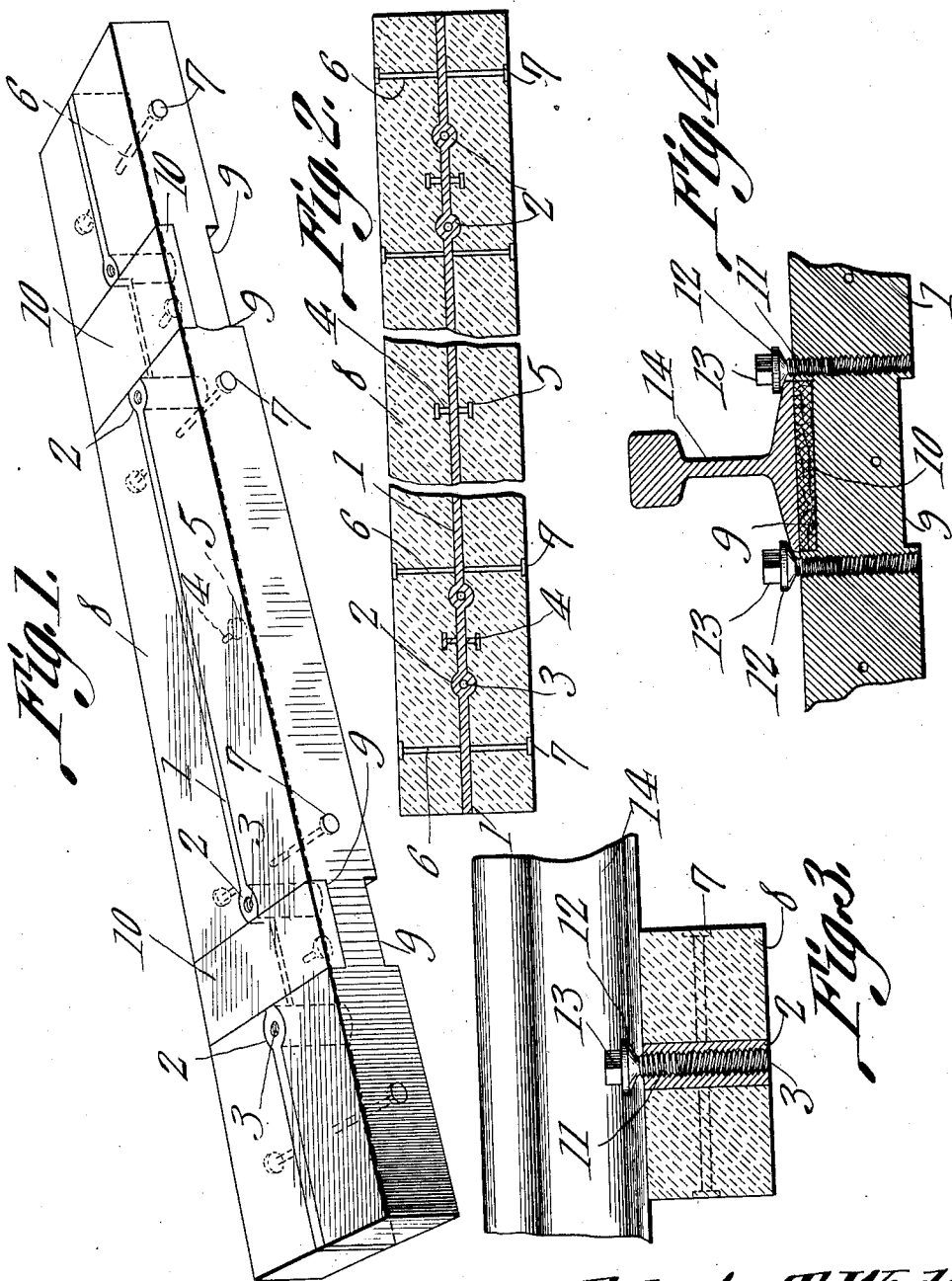


E. T. WADE.
RAILROAD TIE.
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1,003,553.

Patented Sept. 19, 1911.



Witnesses
J. D. G. G. G.
Herbert Lawson

Edwin T. Wade,
Inventor
by *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

EDWIN T. WADE, OF SEMINARY, MISSISSIPPI, ASSIGNOR OF ONE-THIRD TO WILLIAM E. BROGAN, OF SEMINARY, MISSISSIPPI.

RAILROAD-TIE.

1,003,553.

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To all whom it may concern:

Be it known that I, EDWIN T. WADE, a citizen of the United States, residing at Seminary, in the county of Covington and State of Mississippi, have invented a new and useful Railroad-Tie, of which the following is a specification.

This invention relates to railroad ties and has for its object the provision of a reinforced concrete tie having improved means for attaching a rail thereto, said attaching means coöperating with a metallic core which is anchored within the concrete body, said core being retained in a new and novel manner.

A further object is to provide a tie of this character which is reversible so that, should the upper face thereof become unduly worn or otherwise rendered unfit for use, the tie can be inverted and again used.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of the claims without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings: Figure 1 is a perspective view of a tie constructed in accordance with the present invention. Fig. 2 is a horizontal section through the tie. Fig. 3 is a transverse section through the tie, and showing a fastener in engagement with a rail. Fig. 4 is a longitudinal section through a portion of a tie and showing a rail engaged by fasteners.

Referring to the figures by characters of reference 1 designates the core of the tie, the same being formed of a flat strip of metal of the same length and height as the tie and provided, adjacent its ends, with enlargements 2 in which are formed threaded bores 3 extending throughout the height of the core, as clearly indicated in Figs. 3 and 4. These enlargements are arranged in pairs, the enlargements of each pair being spaced apart a distance slightly greater than the width of the base of a rail and the two pairs being spaced apart a distance substan-

tially equal to the distance between the rails. Anchoring studs 4 extend from the side faces of the core 1 at points between the enlargements of each pair and also between the two pairs of enlargements, each of these studs being formed with a head 5. Retaining arms 6 also extend from the side faces of the core 1 and are provided with heads 7. The body 8 of the tie is formed of plastic material molded upon the two faces of the core, the heads 7 being seated within the side faces of the body and the upper and lower faces of said body being flush with the corresponding edges of the core, as indicated in Figs. 1, 3 and 4. Transverse recesses 9 are preferably formed in the upper and lower faces of the tie body 8 and within the upper and lower edges of the core, these recesses constituting seats for cushions 10 of wood or the like and on which the rails are adapted to rest.

In using the tie, the cushions 10 are placed within the uppermost recesses 9 and the rails arranged upon them. Fastening devices are then inserted into the upper ends of the openings 3. Each of these fastening devices consists of a threaded stem 11 having a substantially conical rail engaging head 12 from which extends an angular stud 13. By screwing the fasteners into the core, the heads 12 bind upon the side portions of the base flanges of the rail 14, this adjustment of the fasteners being effected by means of a wrench or the like engaging the stud 13.

Should the upper surface of the tie become worn to an undesirable extent or be otherwise rendered unfit for use, the tie may be inverted, cushioning blocks placed in the uppermost recesses 9, and rails secured thereon by inserting fasteners into the upper ends of the openings.

By arranging the core in the manner described and providing it with the anchoring studs 4 and arms 6, the plastic material is firmly tied to the metal under all conditions.

What is claimed is:—

1. A railroad tie including a plastic body, a metallic core arranged centrally therein and extending longitudinally thereof, said core consisting of a plate mounted on edge and of the same height as the body, said core having enlarged portions formed with threaded apertures.

2. A railroad tie including a plastic body, 110

a centrally disposed longitudinal core arranged on edge within the body and flush with the upper and lower faces of said body, said core having enlargements formed with threaded apertures, and anchoring devices extending laterally from the core and into the body.

3. A railroad tie including a plastic body, a core arranged on edge within the body and extending longitudinally thereof, the edges of said core being flush with the corresponding faces of the body, said core having fastener receiving openings, and headed anchoring projections extending from the core and embedded within the body.

4. A railroad tie including a plastic body, a core arranged on edge therein and extending longitudinally thereof, the edges of the core being flush with the corresponding faces of the body, said core having enlargements formed with threaded fastener receiving openings, there being cushion receiving recesses in the body and core and adjacent the enlargements.

5. A railroad tie including a plastic body, a core arranged on edge within the body and extending longitudinally thereof, said core having enlargements formed with threaded openings extending through the core, the edges of the core being flush with the corresponding faces of the body, and rail fasteners including threaded stems insertible into the openings, and rail engaging heads upon the stems.

6. A railroad tie including a plastic body,

a metallic core arranged on edge therein and extending longitudinally thereof, anchoring devices extending from the sides of the core and embedded within the body, said core having enlargements arranged in pairs and each enlargement being provided with a threaded opening extending therethrough, and a rail fastener insertible into either end of each opening, said fasteners including a threaded stem and a rail engaging head.

7. A railroad tie including a reversible body of plastic material and a metallic core arranged on edge within the body and extending longitudinally therein, the edges of said core being flush with the corresponding faces of the body, anchoring devices extending laterally from the core and embedded within the body, said core having enlargements extending from the top to the bottom thereof and provided with threaded openings extending therethrough, there being cushion receiving recesses within the upper and lower faces of the body and core, cushions removably mounted within the upper recesses, and rail fastening devices insertible into the upper ends of the openings, each of said devices including a threaded stem and a rail engaging head.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

EDWIN T. WADE.

Witnesses:

J. A. YEAGER,

M. U. MAUNGER.