C. F. AND F. S. YOUBERG.

RAILWAY TIE AND RAIL SECURING MEANS.

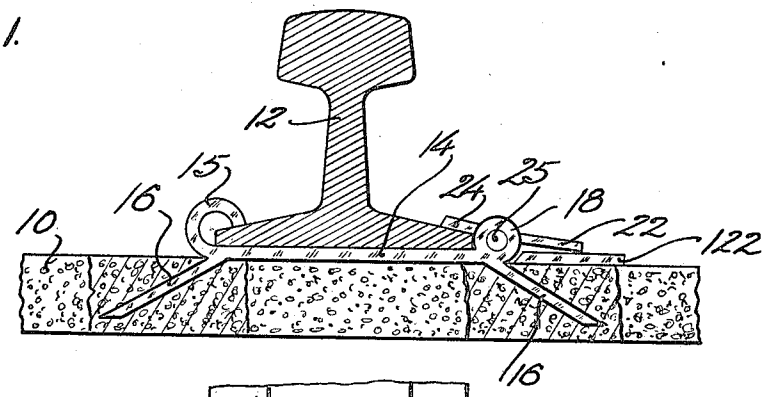
APPLICATION FILED JUNE 26, 1920.

1,386,750.

Patented Aug. 9, 1921.

2 SHEETS—SHEET 1.

Fig. 1.



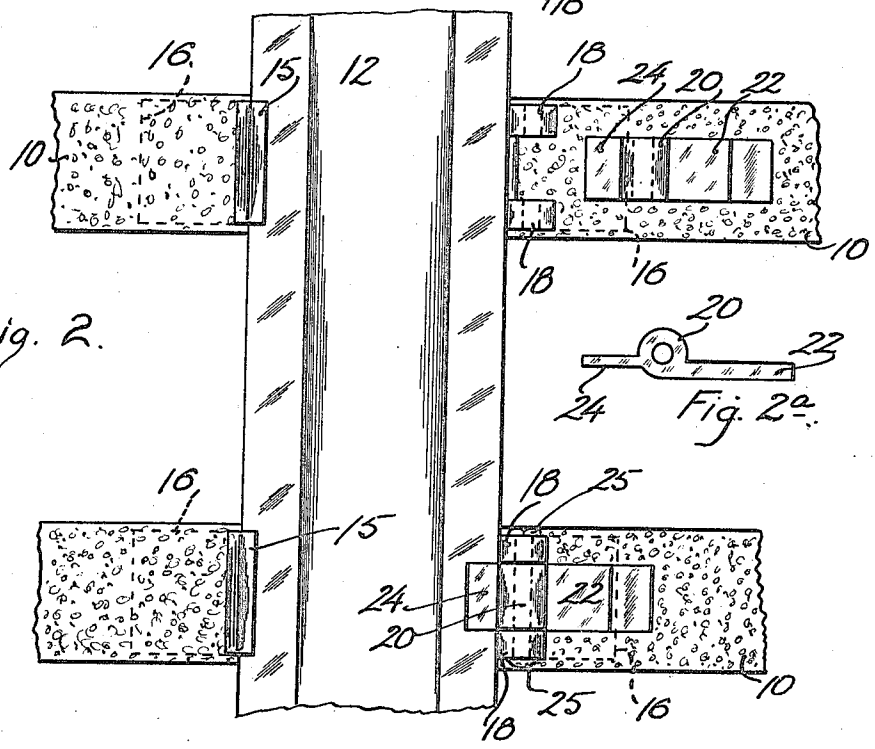


Fig. 2.

Fig. 2a.

Inventor

C. F. Youberg

F. S. Youberg

By A. J. [illegible]

Attorney

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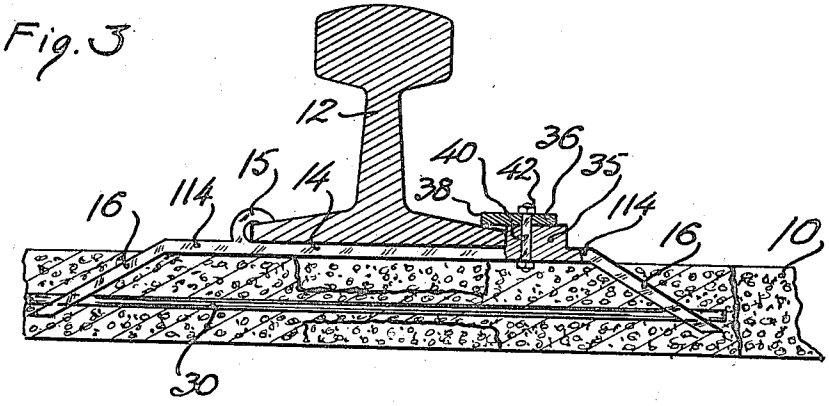
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2 SHEETS—SHEET 2.

Fig. 3



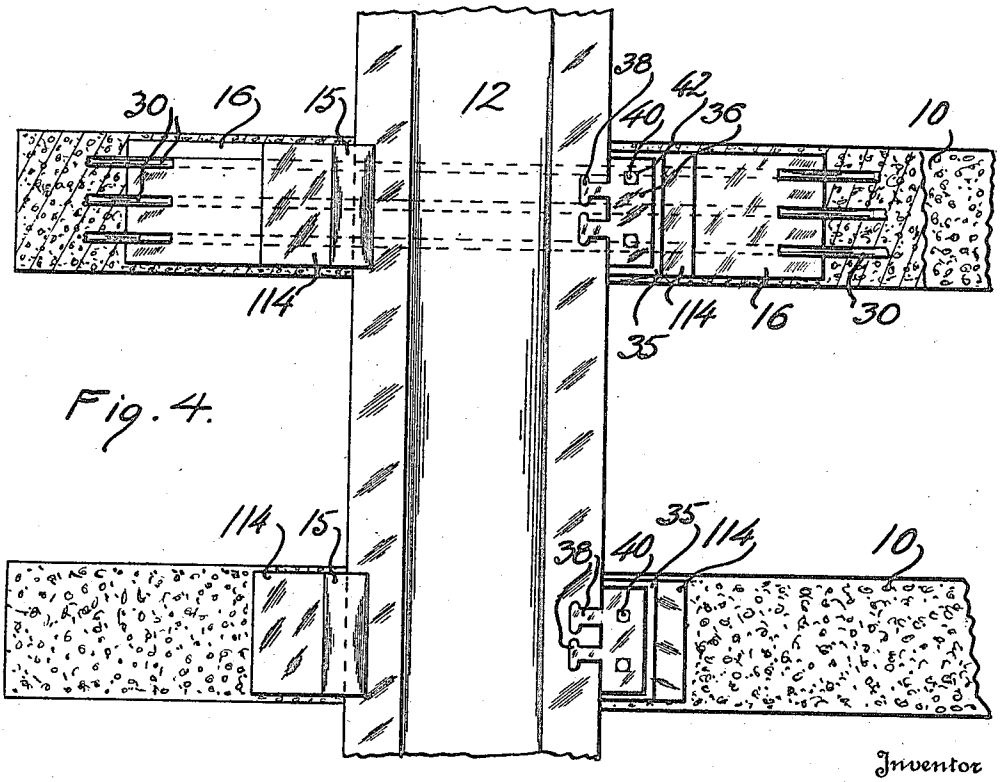


Fig. 4.

Inventor

C. F. Youberg

F. S. Youberg

By A. J. [illegible]

Attorney

UNITED STATES PATENT OFFICE.

CHARLES F. YOUBERG AND FRANCES S. YOUBERG, OF INDIANAPOLIS, INDIANA, ASSIGNORS OF ONE-HALF TO WILLIAM YOUBERG, OF HEGEWISCH, CHICAGO, ILLINOIS.

RAILWAY-TIE AND RAIL-SECURING MEANS.

1,386,750. Specification of Letters Patent. Patented Aug. 9, 1921.

Application filed June 26, 1920. Serial No. 392,133.

To all whom it may concern:

Be it known that we, CHARLES F. YOUBERG and FRANCES S. YOUBERG, citizens of the United States, residing at Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful Improvements in Railway-Ties and Rail-Securing Means: and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a railway tie which will have long life and which carries with it positive rail-securing means, whereby a firm, durable road bed may be produced.

Briefly, the invention comprises a concrete tie having embedded therein at each end a rail supporting plate equipped with rail securing means. The plate has extensions which extend downwardly into the tie preferably at an angle. The rail securing means comprise preferably an integral overhanging member to engage one side of the rail base and an integral upstanding part to engage the edge of the other side of the base and adapted to carry a device to overhang and engage the upper face of said other side.

In the drawings which form a part hereof—

Figure 1 is a view partially in cross section and partly in elevation showing the invention in use.

Fig. 2 is a plan showing two devices, one being in operative relation and the other partly disassembled.

Fig. 2ª is an elevation of the locking plate or "nipper."

Fig. 3 is a sectional and elevational view of a modification.

Fig. 4 is a plan of said modification.

The concrete tie 10 supports the ordinary rail 12 through the medium of the base or supporting plate 14 which rests upon the tie and has at one side an upturned overhanging hook 15 to engage the upper face of one side of the base of rail 12, said hook being integral with the plate. Also integral with the plate 14 at each end thereof is an arm 16 extending downwardly and outwardly and embedded in the concrete tie for the purpose of anchoring the plate 14. The arms 16 are preferably of the same width of the plate which is somewhat narrower than the tie in order to obtain firm anchorage. The plate may be flush with the top of the tie, in which it is embedded, or it may rest on the top of the tie as shown, according to requirements.

In the form of Figs. 1 and 2 the end of the plate 14 is provided with integral upstanding ears 18 against which the adjacent edge of the rail base rests when in position, said ears being apertured. A locking strip or "nipper" 22 having an eye 20 and a projecting retaining finger 24 is adapted to be retained in position between the ears 18 by means of a pivoting bolt 25, the finger 24 resting upon the upper face of the adjacent side of the rail base. In order to maintain firm engagement of the finger 24 with the rail base a wedge 122 of suitable material such as steel may be driven under the body portion of the strip 22 as seen in Fig. 1.

As shown in Figs. 3 and 4, the base plate 14 may be extended to provide webs 114 between the plate and the flat arms 16. The retaining hook 15 is also employed in this form, but on the opposite side the web 114 is provided with an integral upstanding boss 35 which is adapted to have secured thereto a bar 36, having projecting rail base engaging fingers 38, which bar is retained by means of square bolts 40 projecting through the bar 36 and the boss 35 and provided on both ends with nuts 42 threaded thereon. In this manner the fingers 38 are caused to engage the rail base securely.

To reinforce the device further reinforcing rods 30, as shown in Figs. 3 and 4, may be passed through apertures in the inclined arms 16 and embedded in the tie.

The ties may be molded in suitable forms, the plates 14 being positioned in the forms before pouring the concrete, and then dried or hardened artificially in drying rooms or vats if required. In this way the ties may be produced in large quantities to meet the demand as it may arise.

It will be seen from the foregoing that we have invented an article which will have long life and will produce a solid durable road bed. Thus the tie will result in a saving of at least 75% of the present road bed

labor and cost. At the same time it will mean a saving of at least 50% of the wear and tear on rails due to the solidity of the bed, with a resultant saving of large proportions on rolling stock and other equipment. In addition to this there will be a great reduction in the number of accidents and the loss of lives and property incident thereto. This means greater efficiency, greater safety and faster schedules.

We claim:

1. In combination, a concrete tie, a base plate thereon having depending members embedded in the tie, and means on the plate to secure a rail thereto, said securing means comprising an overhanging part at one side of the plate, integral ears at the other side, said part being adapted to engage one side of the base of the rail, the base of the rail fitting between said overhanging part and said ears and engaged by both, and a nipper secured to said ears and overhanging and engaging the adjacent side of the rail base.

2. In combination, a concrete tie, a base plate thereon having depending members embedded in the top, means on the plate to secure a rail thereto, said securing means comprising an overhanging part at one side of the plate, integral ears at the other side of the plate, said part being adapted to engage one side of the base of the rail, the base of the rail fitting between said overhanging part and said ears, and a nipper secured to said ears and engaging the other side of said rail base, and a wedge under the outer end of said nipper to cause the same to bind the rail.

In testimony whereof we affix our signatures.

CHARLES F. YOUBERG.
FRANCES S. YOUBERG.