S. SHOEMAKER.

METALLIC RAILWAY TIE.

APPLICATION FILED JAN. 27, 1912.

1,053,885.

Patented Feb. 18, 1913.

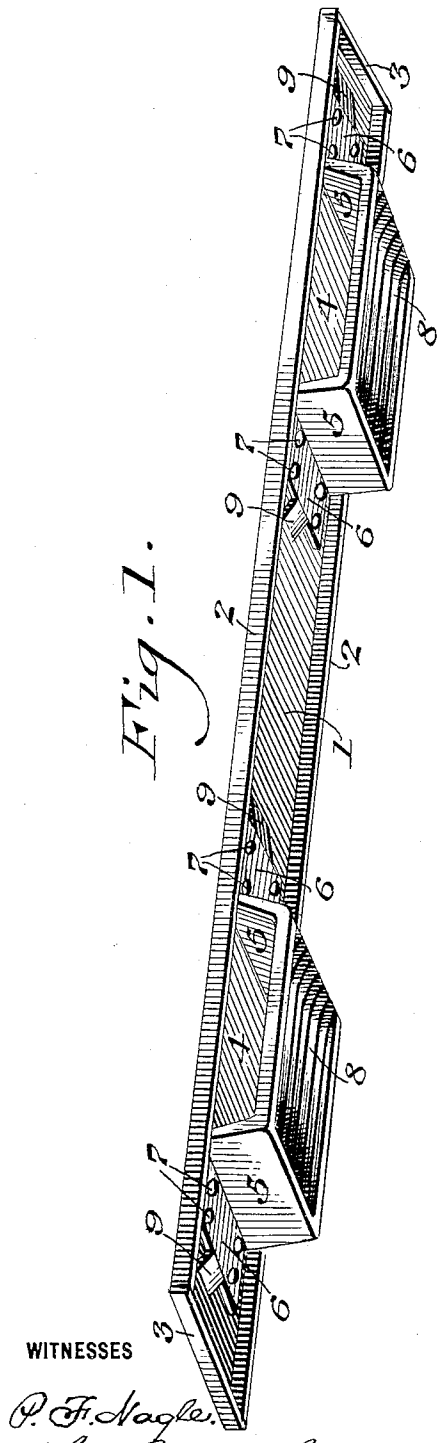

Fig. 1.

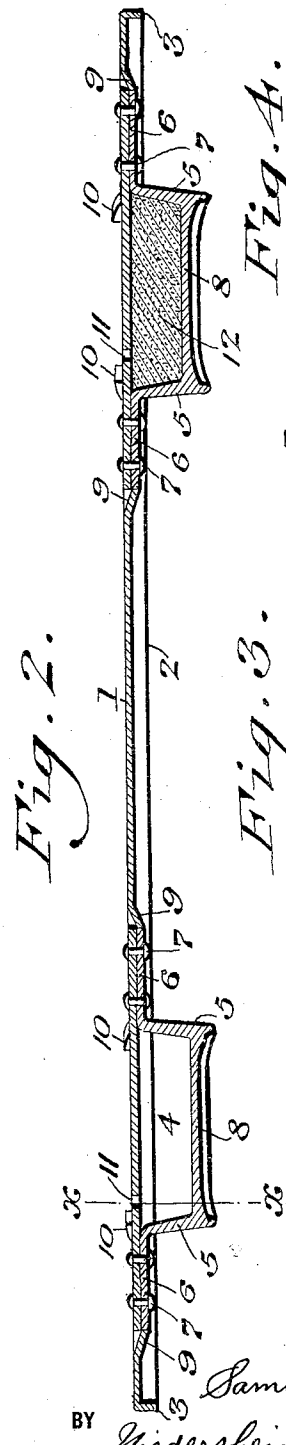

Fig. 2.

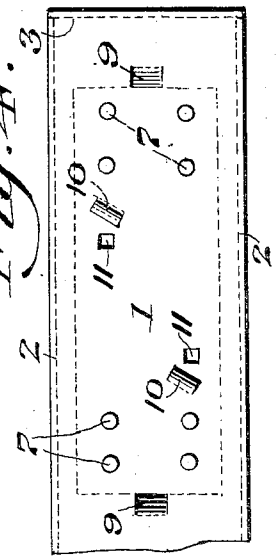

Fig. 4.

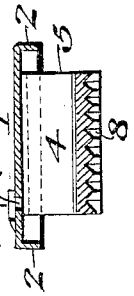

Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

SAMUEL SHOEMAKER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE PENNSYLVANIA STEEL RAILWAY TIE COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF DELAWARE.

METALLIC RAILWAY-TIE.

1,053,885. Specification of Letters Patent. **Patented Feb. 18, 1913.**

Original application filed December 30, 1911, Serial No. 668,730. Divided and this application filed January 27, 1912. Serial No. 673,808.

To all whom it may concern:

Be it known that I, SAMUEL SHOEMAKER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Metallic Railway-Tie, of which the following is a specification.

My invention consists of a metallic railway tie in which one surface is substantially plane and uninterrupted and the other side has hollow chairs secured to it, and this application is a division of my patent application, Serial No. 668,730, filed December 30, 1911, for metallic railway tie.

It further consists of such a tie in which longitudinal creeping of the tie is prevented.

It further consists of provision for perfect anchorage of such a tie.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

The annexed drawings and the following description set forth in detail one mechanical form embodying the invention, such detail construction being but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings—Figure 1 represents a perspective view of my improved metallic railway tie. Fig. 2 represents a longitudinal section of the tie. Fig. 3 represents a transverse section on the line *x*—*x* in Fig. 2. Fig. 4 represents a plan view of a portion of Fig. 2.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to said drawings, the reference numeral 1 indicates a rectangular sheet-metal plate, which constitutes the body of the tie. Said body-plate has flanges, 2, upon its side-edges and flanges, 3, upon its end-edges. Rectangular chairs, 4, formed with open sides and diverging end-flanges, 5, having foot-flanges, 6, are secured, preferably by rivets, 7, upon the under side of the body-plate, near the ends of the same. Said chairs may be cast, forged, pressed out of sheet-metal, or formed in any desired or convenient manner, and their body-portions, 8, are preferably concave and longitudinally corrugated. Tongues, 9, are struck out of the body-plate to form opposed abutments which bear against the edges of the foot-flanges of the chairs to prevent longitudinal movement of the latter. Tongues, 10, are struck out of the body-plate at diagonally opposite sides of the rail-seats of the tie to bear against the foot-flanges of the rails, and openings, 11, are formed adjacent to said tongues and serve for the insertion of screw-bolts or other fastenings for the rails. The chairs may have a filling, 12, of semi-plastic or partly yielding material, to cushion the rails, deaden noise and exclude moisture and ballast from entering the chairs.

The tie is simple and inexpensive of manufacture and forms a level road-bed. The side and end-flanges of the body-plate afford a hold upon the ballast, and cause the chairs, being sunk in the ballast, not only to brace those portions of the tie upon which the load of the rails and passing train falls, but to prevent longitudinal and transverse movement or creeping of the tie. The concavity and corrugation of the under side of the body-portions of the chairs give the latter a firm grip in the ballast.

Other modes of applying the principle of my invention may be employed for the mode herein explained. Change may therefore be made as regards the mechanism thus disclosed, provided the principles of construction set forth, respectively, in the following claims are employed.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A metallic railway tie, comprising a body-plate having flanged edges, and a chair having a concave and corrugated body-portion and diverging end-flanges formed with foot-flanges secured to the face of the body-plate.

2. A metallic railway tie, comprising a body-plate having flanged edges and tongues struck out to form opposed abutments, and

chairs having concave and corrugated body-portions and diverging end-flanges formed with foot-flanges secured to the face of the body-plate to have their edges bear against the abutments.

3. A metallic railway tie, comprising a body plate and a chair upon the underside thereof, having a concave and corrugated body portion adapted to contact with the road-bed.

SAMUEL SHOEMAKER.

Witnesses:
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