S. SHOEMAKER.

METALLIC RAILWAY TIE.

APPLICATION FILED DEC. 30, 1911.

1,053,656. Patented Feb. 18, 1913.

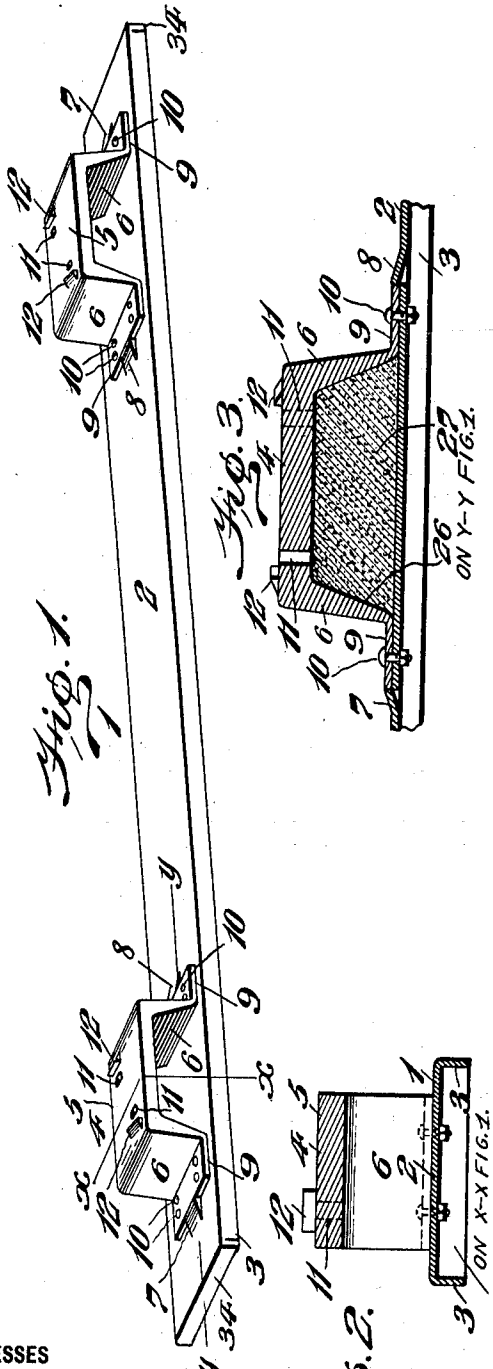

Fig. 1.

Fig. 3.

ON Y-Y FIG. 1.

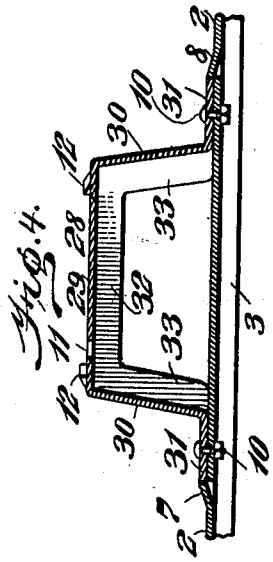

Fig. 4.

Fig. 2.

ON X-X FIG. 1.

WITNESSES

H. G. Dieterich

C. D. McVay.

INVENTOR

Samuel Shoemaker.

BY Middleton Fairbanks.

ATTORNEYS

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.

1,053,656. Specification of Letters Patent. **Patented Feb. 18, 1913.**

Application filed December 30, 1911. Serial No. 668,730.

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 Philadelpia, State of Pennsylvania, have invented a new and useful Metallic Railway-Tie, of which the following is a specification.

My invention consists of a novel construction of a metallic railway tie which is simple and economical in construction, positive in operation and which will be reliable and efficient and exceedingly durable under all conditions, my novel tie being constructed from a metallic channel-shaped beam having depending longitudinal flanges on the outer edges thereof and chairs of a novel construction riveted or otherwise secured to the tie body, the space between said chair and tie body being filled, if desired, with some suitable plastic material to prevent lodgment of water and to deaden the hollow sound in service, said plastic material also serving to protect the metal from deterioration.

With these and other objects in view, my invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to, without departing from the spirit or sacrificing any of the advantages of the invention.

Figure 1 represents a perspective view of a metallic railway tie embodying my invention. Fig. 2 represents a section on line *x*—*x* Fig. 1. Fig. 3 represents a longitudinal sectional view on line *y*—*y* Fig. 1. Fig. 4 represents a section of a modified form of chair.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, 1 designates my novel construction of metallic tie body, the same comprising the top portion 2 and the projecting or depending flanges 3, which extend longitudinally of each edge of the tie body.

4 designates a chair upon which the rails are adapted to be placed said chair comprising the top 5 having the walls 6, which latter terminate in the feet 9, which are secured to the top surface of the tie body 2 by means of the rivets 10, which are preferably four in number. The top surface of the chair 5 is provided with openings 11 which are preferably square or the same may be rounded, if desired, said openings being located out of alinement and in proximity to the abutments 12, which are also out of alinement, as will be understood from the perspective view seen in Fig. 1.

7 and 8 designate lugs or abutments pressed upwardly from the top 2 of the tie body and which retain in place the feet 9 of the chair 4. It will of course be understood that each end of the tie is provided with a chair 4 and as the construction and manner of securing the chair to each end of the tie body is the same at each end thereof, a description of one will suffice for both. It will of course be understood that the chair 4 may be formed of a forging, as seen in Figs. 1, 2 and 3, or it may be formed of pressed steel, as seen in Fig. 4, without departing from the spirit of my invention.

In Fig. 3, I have shown the space 26 between the tie body and the chair 4, as filled with a semi-plastic material 27, such material is shown in Fig. 3 but omitted from Fig. 1 for the sake of clearness of illustration, the object of this semi-plastic material, being to prevent lodgment of water, to protect the metal from deterioration and to also deaden the hollow sound in service, the use of this semi-plastic material being, however, dispensed with if desired. The tie body 1 may be an ordinary or special channel-shaped beam and the chair 4 may be riveted, bolted or welded to the top or bottom of the beam, as desired, as will be understood from Fig. 1.

Referring to Fig. 4, the chair 28 there employed is shown as being made from pressed steel or other metal, and can be formed from suitable dies, 29 designating the top of said chair, 30 the depending diverging legs, which terminate in the feet 31, said top and legs being provided at each of their edges with the inwardly projecting flanges 32 and 33 whereby a cup-shaped chair is formed, whose flanged top and sides will give a vertical and horizontal stiffness to the chair and the riveting of the feet of the chair of either construction to the tie

body in the manner described, will serve to stiffen and reinforce the ends of the tie body and to prevent any distortion thereof.

It will be apparent that by the employment of the flanges 32 and 33 on the sides of the chair in the construction seen in Fig. 4, wherein I employ the pressed steel chair, the latter will be stiffened both vertically and horizontally, as is evident, the flange 33 being provided for the purpose of vertical stiffness. In practice, I prefer to bend down the ends of the tie body 1, as indicated at 34, whereby lateral movement of the tie in the ballast will be prevented as is evident, although it will be apparent that I may omit the downwardly turned flanges or terminals 34 if desired.

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

1. In a metallic railway tie, a body portion, having a chair secured to the ends thereof, said chair comprising a horizontal portion, walls projecting therefrom and provided with feet secured to said body portion, and semi-plastic material, located in the space between said body portion and said chair.

2. A metallic railway tie, comprising a body portion, having longitudinally extending side flanges projecting therefrom, a chair secured to an end of said body portion, said chair being cup-shaped and provided with a flanged top and sides and feet, the latter being secured to said tie body, and abutments on said chair, the latter having openings in the top thereof, said openings and abutments being out of alinement with each other.

SAMUEL SHOEMAKER.

Witnesses:
E. HAYWARD FAIRBANKS,
C. D. MCVAY.