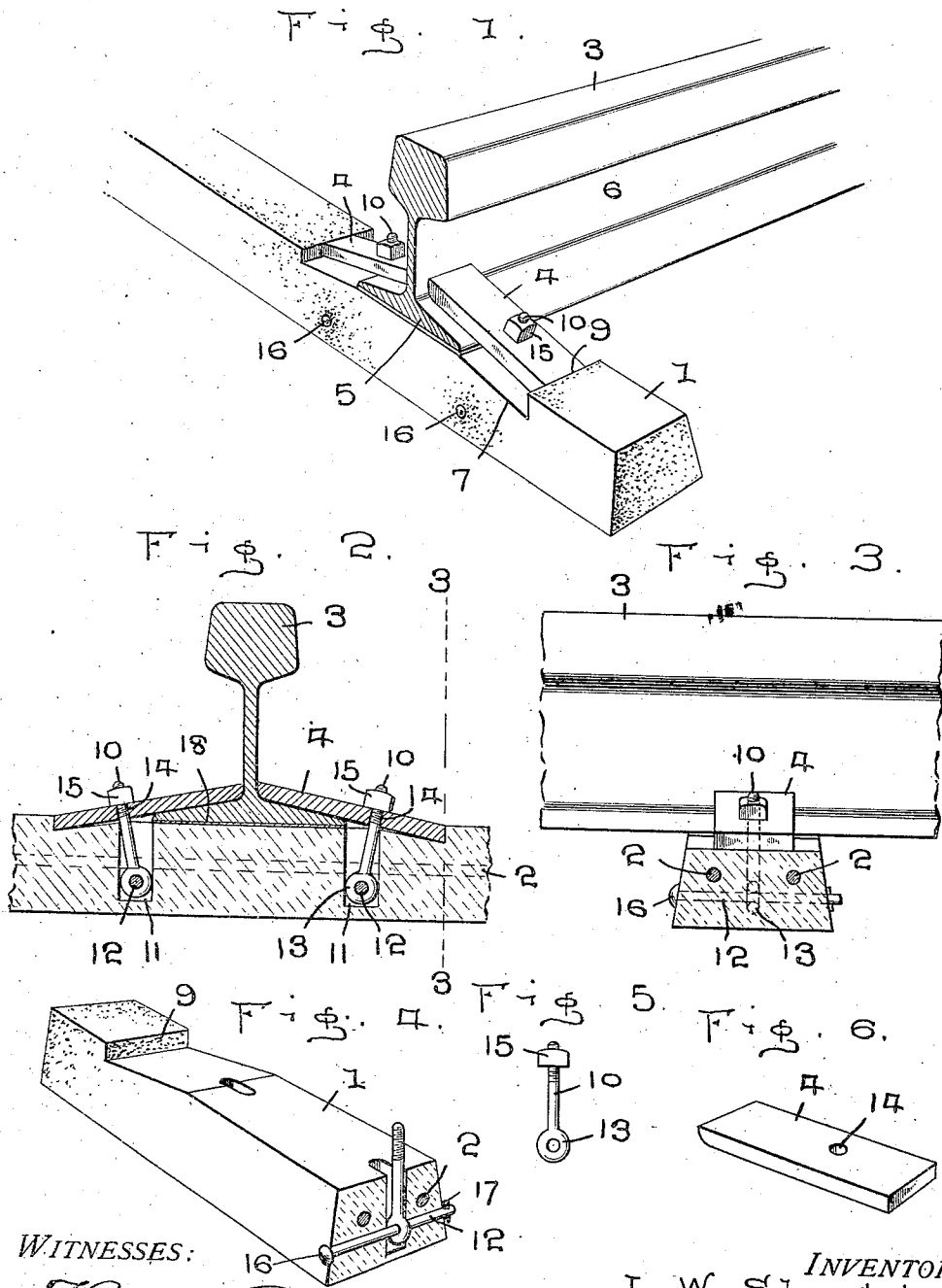


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RAILWAY TIE AND RAIL FASTENER.
APPLICATION FILED MAR. 16, 1909.

936,176.

Patented Oct. 5, 1909.
2 SHEETS—SHEET 1.



WITNESSES:

Thos. W. Riley
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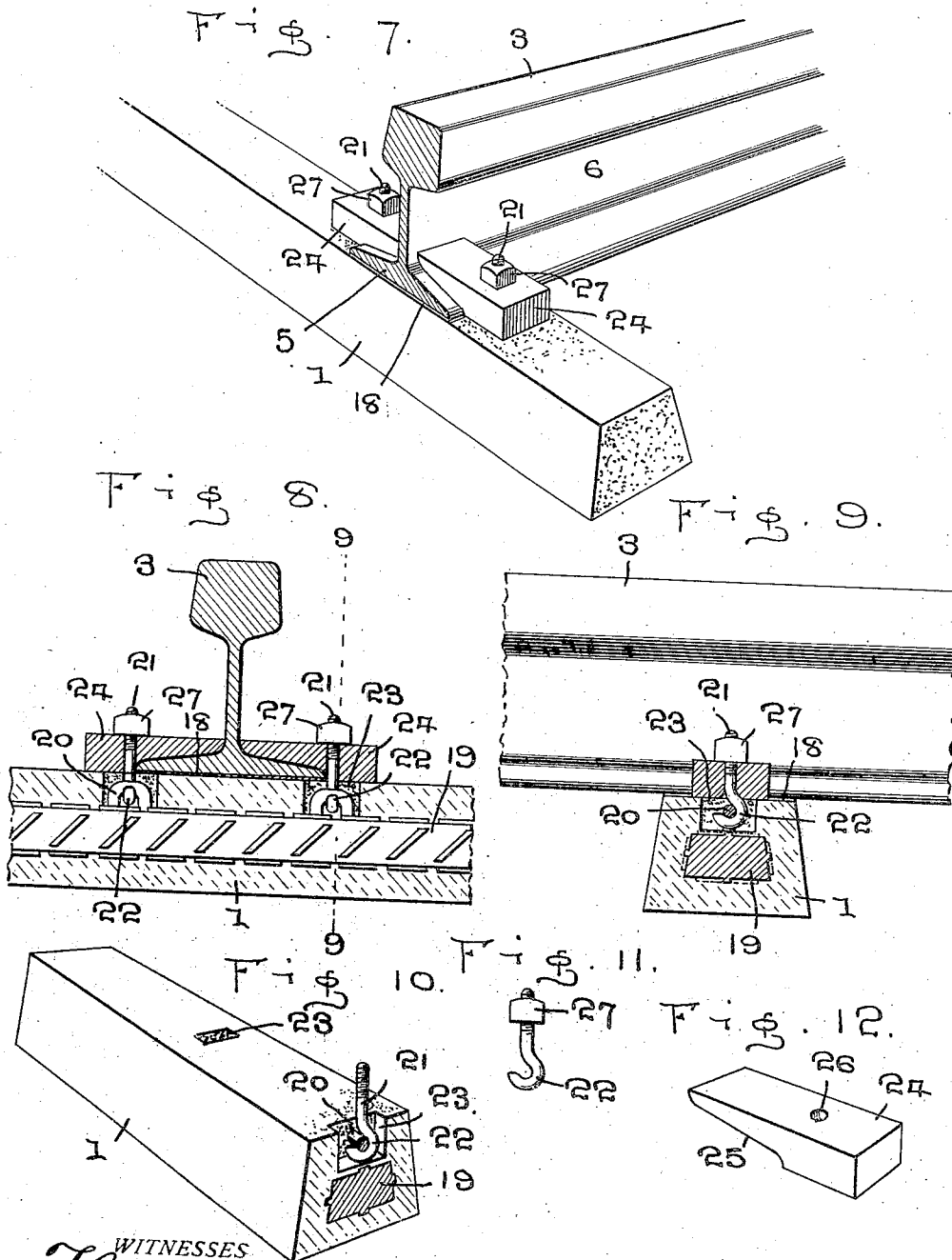
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UNITED STATES PATENT OFFICE.

JOHN WEBSTER SHEATZLEY AND WILLIAM FRED HOEFS, OF MILWAUKEE, WISCONSIN.

RAILWAY-TIE AND RAIL-FASTENER.

936,176.

Specification of Letters Patent.

Patented Oct. 5, 1909.

Application filed March 16, 1909. Serial No. 483,788.

To all whom it may concern:

Be it known that we, JOHN WEBSTER SHEATZLEY and WILLIAM FRED HOEFS, citizens of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Railway-Ties and Rail-Fasteners; and we do hereby 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.

Our invention relates to new and useful improvements in combined railway ties and rail fasteners and our object is to provide a tie formed of plastic material.

A further object is to provide means for reinforcing the tie.

A still further object is to provide suitable clamping plates to secure the rails to the tie and a still further object is to provide bolts for holding the clamping plates in position on the tie, said bolts being removably secured to the tie.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claim.

In the accompanying drawings forming part of this application, Figure 1 is a perspective view of a portion of a tie showing the manner of clamping the rails in position thereon. Fig. 2 is a longitudinal sectional view through a portion of the tie, and parts attached thereto. Fig. 3 is a sectional view as seen on line 3—3, Fig. 2. Fig. 4 is a perspective view of one end of the tie showing the manner of attaching the bolts for the clamping plates thereto. Fig. 5 is an elevation of the bolt removed from the tie. Fig. 6 is a perspective view of the clamping plate. Fig. 7 is a perspective view of a portion of the tie and rail showing a modified form of clamping plate and securing mechanism. Fig. 8 is a longitudinal sectional view through a portion of the tie and parts attached thereto. Fig. 9 is a sectional view as seen on line 9—9, Fig. 8. Fig. 10 is a detail perspective view showing the manner of attaching the bolts to that form of clamping plate shown in Fig. 7. Fig. 11 is an elevation of the clamping bolt removed, and, Fig. 12 is a perspective view of the clamping plate.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1

indicates my improved form of tie, which is preferably constructed of cement or like plastic material and is reinforced by extending longitudinally of the tie, rods 2, said rods being entirely inclosed by the plastic material and will prevent casual breakage or disintegration of the ties and will also prevent the parts thereof from separating should the composition crack or separate into sections.

The ties 1 are adapted to receive the usual form of track rails 3, said rails being secured in position on the ties by means of clamping plates 4, one end of the clamping plates extending over the faces of the base 5 of the rail and abutting against the web 6 of the rail, while the opposite ends of the clamping plates are extended beyond the edges of the base 5 and enter inclined recesses 7 formed in the upper face of the tie, the angle of the floor of said recesses being substantially in alinement with the plane of the upper face of the base 5, the outer ends of the clamping plates abutting against shoulders 9 at the ends of the recesses 7, thereby holding the clamping plates against longitudinal movement and the rails against lateral movement. The plates 4 are securely clamped in position on the base 5 and the base of the recesses 7 by means of bolts 10, the lower ends of the bolts being entered in sockets 11 extending downwardly from the upper edge of the tie and are held in the sockets by means of pins 12, which pins extend laterally through the tie and through the lower portions of the sockets 11, the lower ends of the bolts 10 having eyes 13 formed thereon, through which the pins 12 extend. The upper ends of the bolts 10 are threaded and adapted to extend through openings 14 in the clamping plates 4 and receive a nut 15, the openings 14 being so positioned as to cause the bolts to rest out of vertical and substantially at right angles to the trend of the plates 4, whereby when the nuts are turned onto the bolts, the clamping pressure of the plates will be substantially equal throughout their length. The pins 12 are provided at one end with a head 16, while the opposite end thereof extends beyond the opposite face of the tie 1 and is held against casual leaving its position through the tie by means of a cotter pin 17 or it may be secured in any other manner which will permit the pin being removed from the tie when occasion may require.

The constant pounding of the car wheels in passing over the rails will cause the plastic material to wear or crumble and to obviate this objectionable feature, a cushioning plate 18 of any suitable form of yielding material is placed between the base of the rail and the face of the tie upon which the rail rests, the pressure of the clamping plates securely holding the cushioning plates in position.

10 In Figs. 7 to 12, inclusive, we have shown a slightly modified form of construction in which a metal bar 19 is extended through the tie to reinforce the same, said bars having staples 20 thereon to receive the bolts 21, 15 the lower ends of the bolts having hooked terminals which are adapted to engage the staples and hold the bolts in engagement with the tie, the upper face of the tie being provided with sockets 23, into which the 20 staples 20 extend and by which means access may be had to the staples for attaching or removing the bolts. The clamping plates 24 in this instance are provided with an undercut portion 25, which is adapted to fit the 25 contour of the base 5 of the rail, the remainder of the plate 24 resting on the upper face of the tie, the plates having openings 26 therein, through which the bolts 21 extend, the plates being clamped in position by 30 means of nuts 27.

By providing this form of tie and securing

means it will be readily seen that the tie can be very cheaply and durably constructed and that the rails can be readily secured thereon and it will likewise be seen that the rails can 35 be renewed as occasion may require and likewise the clamping plates and bolts for holding the same and it will further be seen that the rails will be securely locked to the tie, when the various parts of the clamping 40 mechanism are properly adjusted.

What we claim is:

A device of the character described, comprising a tie, a metal reinforce embedded in said tie, a hook ended bolt adapted to en- 45 gage an eye arranged in connection with said reinforce and extending upwardly through said tie, a clamp plate applied to the upper surface of said tie and engaging the base of the rail, said upwardly extending 50 bolt passing through said clamp plate and means to effect the locking of said bolt in place.

In testimony whereof we have signed our names to this specification in the presence of 55 two subscribing witnesses.

JOHN WEBSTER SHEATZLEY.
WILLIAM FRED HOEFS.

Witnesses:

JAMES McIVER,
DAISY SHEATZLEY.