

No. 704,783.

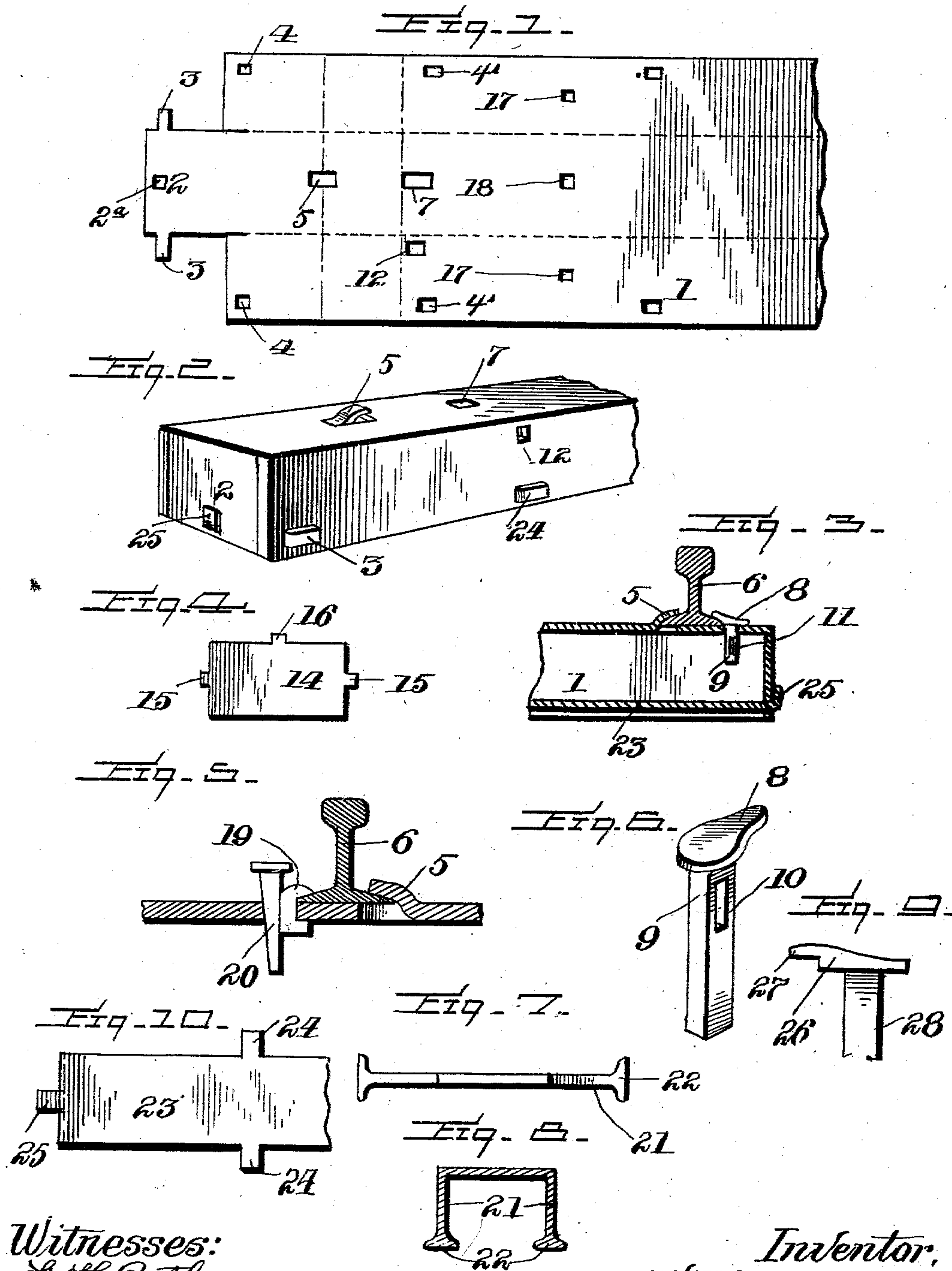
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W. S. DODD.

METALLIC RAILROAD TIE AND FASTENER.

(Application filed Dec. 8, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM S. DODD, OF WASHINGTON, PENNSYLVANIA.

METALLIC RAILROAD-TIE AND FASTENER.

SPECIFICATION forming part of Letters Patent No. 704,783, dated July 15, 1902.

Application filed December 3, 1901. Serial No. 84,511. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. DODD, a citizen of the United States of America, residing at Washington, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Railroad-Ties and Fasteners, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in steel ties and rail-fasteners, and has for its object the provision of novel means whereby a steel tie may be constructed in such a manner that the base of the rail may be easily attached thereto and readily removed therefrom when desired.

A still further object of my invention is to construct a steel tie and fastener that will be extremely simple in construction, strong, durable, and comparatively inexpensive to manufacture.

The invention contemplates to provide a steel tie that will cushion the rails and take up the jar that is incident to the rails when a heavy freight-train passes over same.

My invention still further aims to construct a fastener in such a manner that it may be easily accessible and can be readily removed when it is desired to remove the rails or make repairs, obviating the necessity of tearing up considerable track to repair one rail.

With the above and other objects in view the invention consists in the novel combination and arrangement of parts to be hereinafter more fully described, and specifically pointed out in the claim.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate corresponding parts throughout the several views, in which—

Figure 1 is a plan view of my improved steel tie, showing a portion of the blank from which the tie is formed. Fig. 2 is a perspective view showing the end of the steel tie when formed from the blank, as shown in Fig. 1. Fig. 3 is a vertical sectional view of the steel tie, showing the rail and fastener secured in position thereto. Fig. 4 is a view of the brace which is secured in the steel tie at suitable

intervals. Fig. 5 is a vertical sectional view of a modified form of fastener. Fig. 6 is an enlarged perspective view of a portion of the fastener. Fig. 7 is an end view of a modified form of blank from which the steel tie is constructed. Fig. 8 is a vertical sectional view thereof, showing the same when the tie has been formed. Fig. 9 is a side elevation of a modified form of fastener that may be employed in connection with my metallic tie. Fig. 10 is a plan view of a portion of the bottom plate for forming the metallic tie.

In the drawings the reference-numeral 1 represents a blank having end extensions 2, carrying lugs 3 3. The tie is formed as indicated in dotted lines and illustrated in Fig. 2 of the drawings, forming a channel-bar.

The reference-numeral 4 represents openings formed in the end blank to receive the lugs 3 3, which are bent at right angles, forming fastening means for the extensions 2, which form and close the end of the tie.

The reference-numeral 2^a indicates openings formed in the extensions 2.

The reference-numeral 5 represents a lip struck up from the upper face of the tie to form a bearing or clamp for one side of the base of the rail 6. This lip may be used as shown in figures of the drawings or the same may be dispensed with and other fastening means employed in lieu thereof.

The reference-numeral 7 represents an opening formed in the upper face of the tie to receive the fastening-plate 8, carrying the square shank 9, having a slot 10 formed therein, said shank 9 extending through the square opening 7 and the plate engaging the opposite side of the base of the rail from the lip 5. A locking-wedge 11 extends through the opening 12, formed in the side wall of the tie, said locking-wedge 11 extending through the opening 10 in the square shank and preventing the displacement of the fastening-plate 8 and also serving to produce a wedging action of the plate 8 against the upper face of the base of the rail.

The reference-numeral 14 represents cross-braces carrying lugs 15 on its sides and an upwardly-extending lug 16, these lugs 15 being secured in the openings 17, formed in the side walls of the tie, and the lug 16 engaging in the opening 18, formed through the upper

face of the tie. These braces are arranged at suitable intervals in the tie and give rigidity and strength to the device.

5 The reference-numeral 21 represents a modified form of blank carrying on its sides enlarged portions 22, which when the blank is formed into a tie will constitute the base of the same.

10 The reference-numeral 23 represents the base of the tie, carrying lugs 24 24 and end lugs 25, the latter engaging in the openings 2^a and the former engaging in the openings 4 of the tie. These lugs are then bent upwardly, clamping the outer walls of the tie
15 and forming a substantial base for the same. This base-plate of the tie may be used or it may be dispensed with, filling the tie with suitable ballast.

20 Fig. 5 illustrates a modification wherein the fastener 19 has a notched face, the walls formed by the notch engaging the upper face of the rail-base and the lower face of the upper portion of the tie, the fastener being engaged by wedge 20.

25 The particular advantage obtained by the use of the base-plate of the steel tie may be readily apparent when it is considered that a more resilient tie is formed and the jarring incident to the rails will be cushioned thereby.

30 The reference-numeral 26 indicates a modified form of fastening-plate carrying extensions 27 to engage the upper face of the base of the rail. This plate 26 may be employed in lieu of the fastening-plate 8, said fastening-plate 26 carrying a square shank 28, similar to the shank 9, and the same is fastened
35 in like manner, but engaging in the notches of the base of the rail for forming a rail-joint.

The operation of my improved device and the many advantages obtained by the use of 40 the same will be readily apparent from the foregoing description, taken in connection with the accompanying drawings.

It will be noted that various changes may be made in the details of construction with- 45 out departing from the general spirit of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is— 50

In a steel tie and fastener, a tie formed of a channel-bar, the upper portion of said tie having its ends extended and carrying lugs, said ends being turned up at right angles to the upper portion and having the lugs ex- 55 tending through openings provided therefor in the sides of the said channel-bar, a base for said channel-bar carrying lugs on its ends and sides, said lugs adapted to be passed through openings provided therefor in the 60 sides and ends of the channel-bars and secured to the latter, braces located within said channel-bar and carrying lugs extending through the upper portion and the sides thereof, said upper portion having a struck-up por- 65 tion for engagement with the rail-base, and fastening means extending through the upper portion of the tie and secured thereto for engagement with the opposite side of the rail-base, substantially as described. 70

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM S. DODD.

Witnesses:

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E. E. POTTER.