

(No Model.)

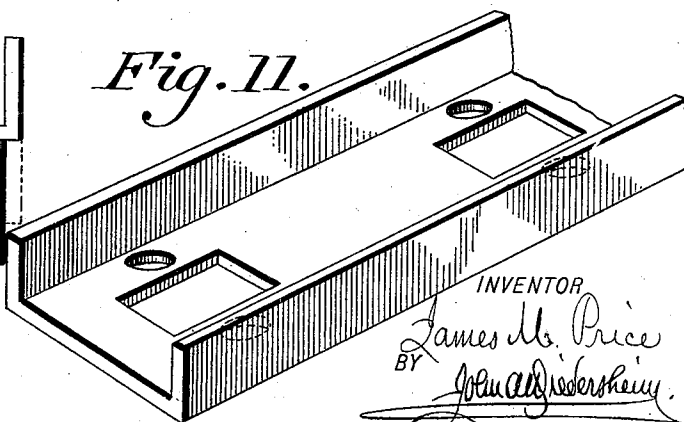
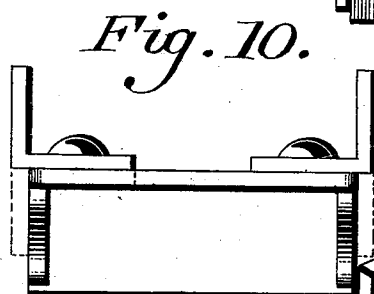
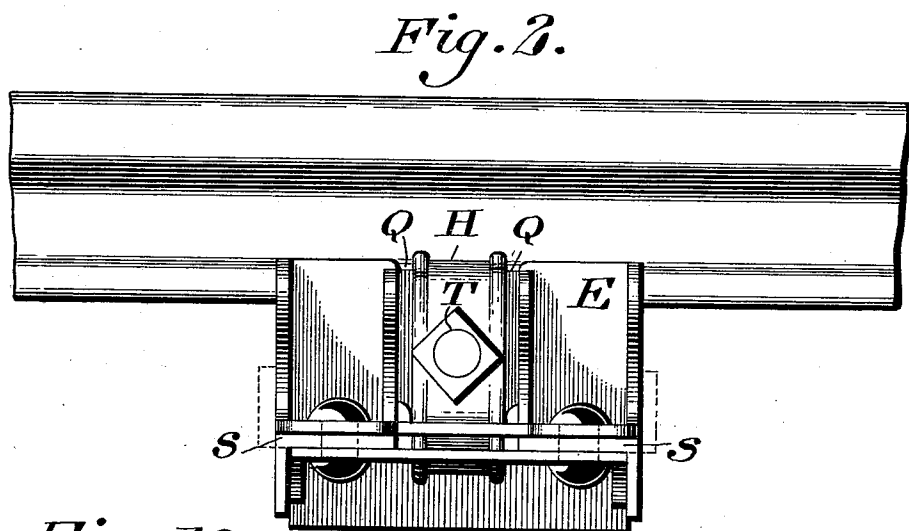
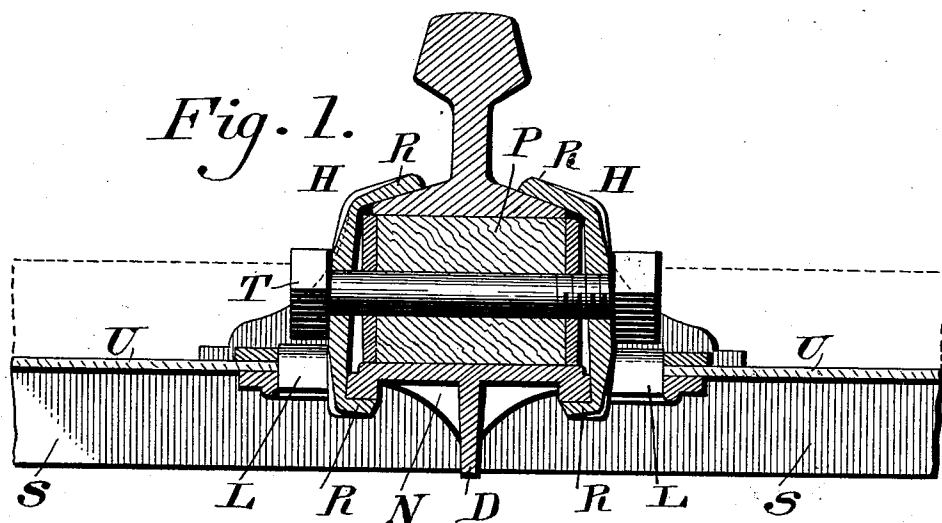
2 Sheets—Sheet 1.

J. M. PRICE.

SUPPORT AND FASTENING FOR METALLIC TIES.

No. 507,080.

Patented Oct. 17, 1893.



WITNESSES:

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(No Model.)

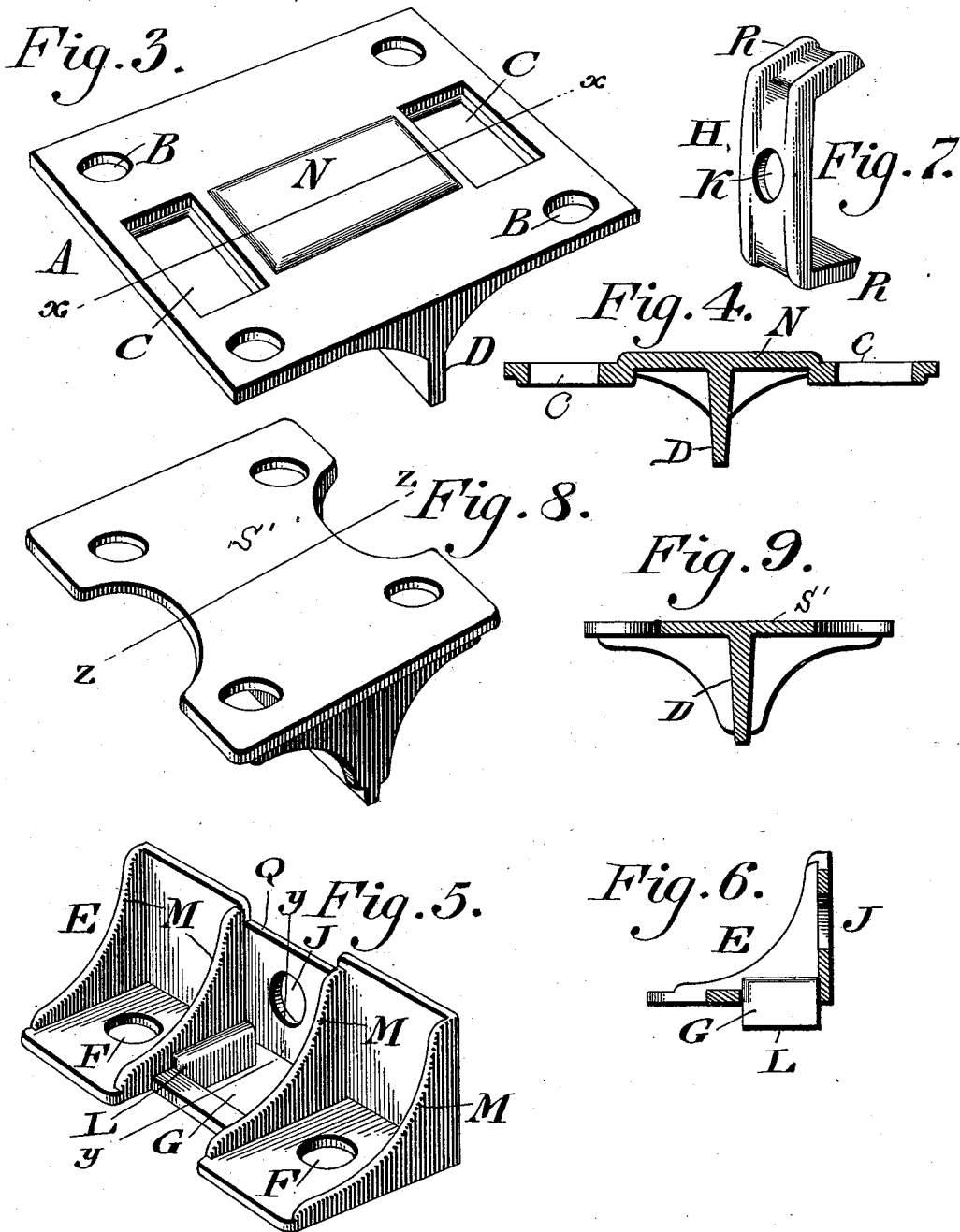
2 Sheets—Sheet 2.

J. M. PRICE.

SUPPORT AND FASTENING FOR METALLIC TIES.

No. 507,080.

Patented Oct. 17, 1893.



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JAMES M. PRICE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
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SUPPORT AND FASTENING FOR METALLIC TIES.

SPECIFICATION forming part of Letters Patent No. 507,080, dated October 17, 1893.

Application filed August 29, 1892. Serial No. 444,364. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. PRICE, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Supports and Fastenings for Metallic Ties, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a bed plate of peculiar shape as hereinafter set forth adapted to underlie angle bars, channels or plates constituting the body of a railroad tie, whereby each point crossed by the rail will be firmly supported thereby.

It also consists of a chair of novel construction, and a clamp for binding the flange of the rail to its support between the chair, as will be hereinafter fully set forth.

It also consists of a fastening support or anchor midway of the tie as hereinafter set forth.

Figure 1 represents a vertical section of a support and fastening for a metallic tie, embodying my invention. Fig. 2 represents an endwise elevation thereof. Fig. 3 represents a perspective view of a bed plate detached. Fig. 4 represents a vertical section on line *x, x*, Fig. 3. Fig. 5 represents a perspective view of the chair. Fig. 6 represents a section on line *y, y*, Fig. 5. Fig. 7 represents a perspective view of the clamp. Fig. 8 represents a perspective view of another part or my invention, the central inverted chair or anchor. Fig. 9 represents a section on line *z, z*, Fig. 8. Fig. 10 represents an end view of a construction to be hereinafter referred to. Fig. 11 represents a perspective view of a part to be hereinafter referred to.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings: A designates a bed plate formed of a suitably shaped plate of metal with openings B in the corners thereof, and rectangular or other shaped apertures C in the opposite sides thereof, said plate having a depending limb D forming a T.

E designates a chair in the base of which are openings F, F, and an aperture G for the passage therethrough of the lower portion or

foot of the clamp H to be hereinafter more particularly referred to.

In the vertical wall of the chair E is an opening J, which coincides in position with an opening K in the clamp H, for the passage of a bolt which secures the opposite clamps to each other in their embrace of the flange of the rail.

Depending from the side walls of the aperture G in the base of the chair E are legs L, which are adapted to enter the aperture C of the bed plate A, and rest against the walls thereof, so as to prevent the chair from sliding under excessive strain imposed upon the body of the tie. In order to strengthen the chair E, the same is formed with flanges or braces M, at present four in number, the same extending from the top of the chair to the edge of its base, as most plainly shown in Fig. 5.

The central portion of the bed A is raised, forming somewhat of a swell or projection N, and on the same and the adjacent angle bars or plates forming the body of the tie, is rested a cushion P of wood or other non-metallic substance, the same filling the space between the vertical walls of two chairs, and supporting the rail whose flange is placed thereon, said cushion being of such height that the upper surface of the rail flange is level with the upper edge of the vertical wall of the chair, or at least no higher, it being noticed that the central portion of said wall is depressed as at Q, to permit proper play of the clamp H in use, and it being noticed that said clamp is ribbed at each edge so as to attain great strength with a light section, and has on each end a lip R, the upper lip engaging with the flange of the rail, and the lower lip engaging with the under side of the bed plate after its passage through the aperture G in the chair and the aperture C in the bed plate. The chair rests upon angle bars, ties, channels or the horizontal limbs U of the plates S and the bed plate underlies said bars, ties, channels or plates, and bolts or rivets are inserted through the foot of the chair into the angle bar, channel or plate and then into the underlying bed plate, thus grasping or clutching all of said parts as one, and

thus any connection with the bolts T increases the security of the support of the railroad rail and fastening for the tie in an effective manner, while the weight of the parts is reduced and the cost of manufacture lessened.

Where the ties are used under excessive strain or extraordinary traffic, short pieces or plates of angle bars S with openings to correspond to the body bars as shown in Figs. 8 and 10, or as in Fig. 11, may be placed, where the weight of the trains is to come, the same being firmly bound in one structure with them by the traversing bolts or rivets, and placed between the horizontal limb or plate of the angle bar S, and the subjacent bed plate A, and in contact with each.

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

1. A bed plate with center projecting from the surface in a manner similar to that of the web of a T bar, on its under side, while a central elevation runs midway of the oblong square of its shape, with an aperture at each end of this elevation, and a hole at each corner for a bolt or rivet, as the base or underlying support of a railway rail, in making up metallic ties, substantially as described.

2. A rectangular bed plate of metal with a central projection crossing it, like the web of a T, thickened or raised on the opposite side to this projecting web, at the center, with a rectangular hole near each end around which runs a thickened rim, and four holes near the corners for bolts or rivets, as the base of a metallic rail seat for carrying a railway rail upon a cushion of wood, or its equivalent, substantially as described.

3. A metallic chair with base at right angles to its back or upright part, the base being pierced with an aperture, between two central braces of which the lower edge is extended down, like a foot alongside this hole, and provided with two other braces at the ends of the chair, the base also having holes for bolts or rivets, while the back of the chair, besides a depression in its center, has a hole nearly central to permit the passage of a bolt for a clamp to be used therewith, as part of the fittings or fastenings of a metallic tie, substantially as described.

4. A rectangular metallic chair, with braces from its upper to its outer edge, and pierced by holes and apertures in its base and upright part or back, the adjacent braces extending downward into projecting feet of such length

as to extend through an opening in the angle bar under the base of the chair, and through a corresponding hole in an underlying bed plate to which chair and angle bar are attached by the same bolts or rivets, as part of the fittings or fastenings of metallic ties, substantially as described.

5. In a fastening for metallic ties, chairs E with feet projecting from their bases to and into apertures in two underlying bed plates, A which are under intervening angle bars, channel bars or plates S firmly attached by rivets or bolts to the chairs, and bed plates, as supports or fastenings of metal for a metallic tie to carry railroad rails, substantially as described.

6. Chairs with feet projecting below their bases, seated upon and secured by bolts to the angle or channel bars S in which apertures take and receive these feet of the chairs, securing them thus in addition to the bolts or rivets, attaching all together and thus constituting metallic supports or fastenings for a metallic tie, substantially as described.

7. Two pairs of metallic chairs with feet projecting below, embracing a block of wood or other non-metallic cushion to carry a railroad rail, these chairs being seated upon pieces of angle or channel bars constituting the body of a metallic tie, under which bed plates with a central web or projection as of a T are placed and the whole bolted or riveted together, the feet of the chair, fitting into apertures in the bed plate, in combination with a central anchor, and with clamps and bolts to attach the rail thereto, as the fastenings and supports of a metallic tie, substantially as described.

8. A bed plate fitted with a central T and two apertures to take and receive the feet of two chairs seated over them, upon intervening angle or channel bars, to which the bed plates are attached by bolts or rivets, in combination with anchors central to the tie and with clamps passing through the said apertures and grasping equally the base of the bed plate and flange of the railway rail seated upon wooden blocks or their equivalent between the chairs, and with bolts traversing clamps, chairs and blocks to bind all together as a set of supports for metallic ties, substantially as described.

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Witnesses:

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