J. T. CLARK.

RAILWAY TIE AND FASTENER.

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1,010,589. Patented Dec. 5, 1911.

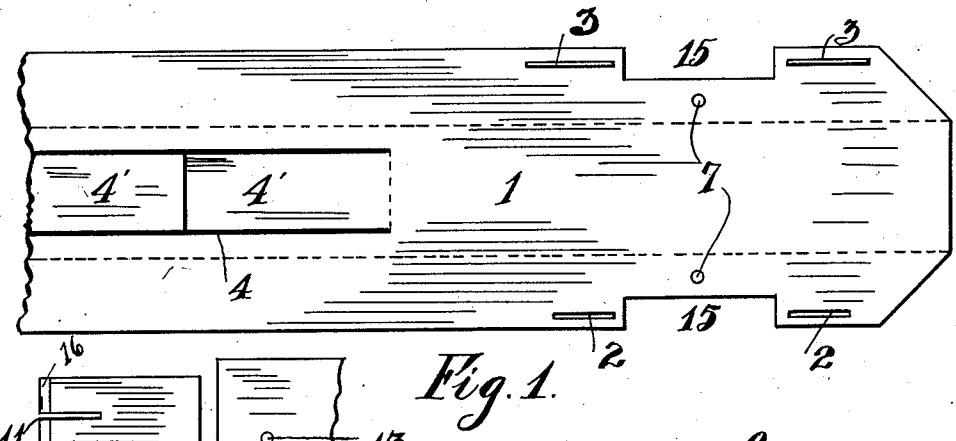


Fig. 1.

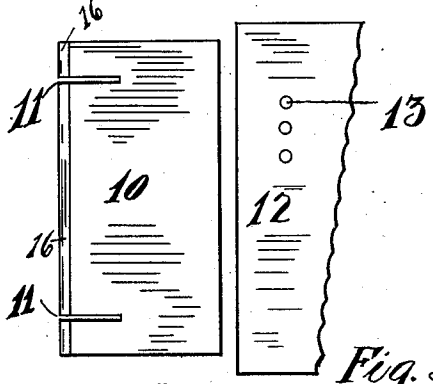


Fig. 2.

Fig. 3.

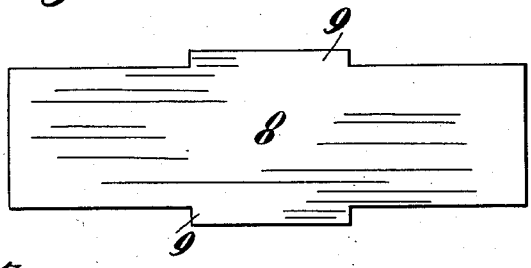


Fig. 4.

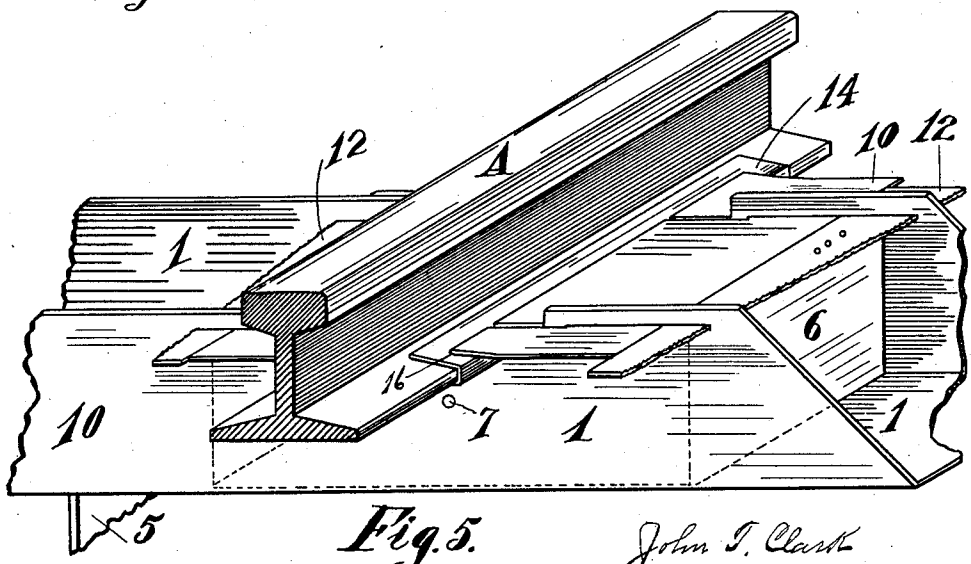


Fig. 5.

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RAILWAY-TIE AND FASTENER.

1,010,589. Specification of Letters Patent. Patented Dec. 5, 1911.

Application filed April 12, 1911. Serial No. 620,645.

To all whom it may concern:

Be it known that I, JOHN T. CLARK, a citizen of the United States, residing at Provo city, in the county of Utah and State of Utah, have invented certain new and useful Improvements in Railway-Ties and Fasteners, of which the following is a specification.

The purpose of my invention is to provide a metal railway tie and fastener which is economical in construction, light in weight, easily placed in position and has the cushion effect or resiliency, with large bearing surface, so much desired. These objects I accomplish with the device illustrated in the accompanying drawings in which similar letters of reference indicate like parts throughout the several figures, and which is hereinafter described in the specification forming a part of the application.

Figure 1 is a plan view of the tie as cut from a sheet of metal before the same is bent into shape. Fig. 2 is a bottom plan of one of the holding wedges. Fig. 3 is a plan of one of the locking wedges. Fig. 4 is a plan of the rail-plate. Fig. 5 is a perspective view of one end of the tie and other parts in place.

My tie is made from a sheet of metal, cut in the form as shown in Fig. 1 and then bent on the dotted lines to form a channel 1. Said channel has slots 2 and 3 cut therethrough to receive the wedges, and open cuts 15 in the edges to receive the rails, and an H-shaped slit 4 cut in the central portion. When the inner or tongue parts 4′ of said slits 4 are bent downward, they form depending lugs 5, which are embedded in the road-bed when the tie is placed in position thereon. Short blocks of wood or other fibrous material 6, are placed within each end portion of said shannel 1, and are held therein by a nail or spike being driven through the holes 7 in the sides of said tie and into said wood. Superimposed on said wooden blocks 6 are the rail-plates 8, which have the intermediate portion of the edges extended to form lugs 9, and made to fit within the said cuts 15, when the rail-plates are in position, to prevent longitudinal displacement of the rail-plates. When the rails are placed in position within said cuts 15, the thickness of the said wooden blocks 6 and of the rail-plates 8, prevent the bottom of the rail from contacting with the edges of the said channel 1, and supply the cushion effect desired under the rail. Holding wedges 10, having open cuts 11 in one edge, which edge is also tapered, are inserted within the slots 2 and 3 in said channel 1, with the tapered edge 16 in contact with the upper sides of the flanges of the rail. Said wedges are made from a sheet of metal of the thickness of the width of the said slots 2 and 3, and when they are driven into position as shown in Fig. 5, the tapered edge 16 will firmly grip the flanges of the rail. The said open cuts 11 allow the said wedges to be so driven in. When the said holding wedges 10 are driven in, one on each side of the rail A, the locking wedges 12 are then inserted, the wider end filling the said slots 3, and having one edge serrated or roughened, to prevent their unintentional withdrawal. When they are firmly inserted within the said slots 2 and 3 a nail or small spike is driven through the holes 13 in said locking wedges into the said wooden blocks 6 to aid in preventing the unintentional withdrawal. If desired, strips of insulating material 14 may be placed between the rail and said rail-plates and holding wedges.

Having thus described my invention I desire to secure by Letters Patent and claim:—

1. The combination of a metal railway tie formed from a single sheet of metal and bent to form an upturned channel having horizontal slots in the sides of said channel and transverse open cuts in the upper edges thereof, elongated H-shaped slits in the bottom of said channel adapted when the inner parts are bent downward to form depending lugs, and locking wedges having open slots therein on the tapered side thereof adapted to slide within said horizontal slots and to grip the flanges of the rails, locking wedges also adapted to slide within said slots, and means to hold them in place, with short blocks of wood interposed between the said wedges and the bottom of said channel, as and for the purposes described.

2. The combination of a railway tie formed from a sheet of metal into an upturned channel having open cuts in the edges, horizontal slots in the sides and elongated H-shaped slits in the bottom the latter adapted to form depending lugs, with short blocks of wood in each end portion of said channel, and rail-plates superimposed thereon having their central portions extended and adapted to fit within said open cuts in said channel, and holding wedges adapted to slide within said

horizontal slots, and means to secure them therein, as and for the purposes described.

3. The combination of a railway tie formed from a sheet of metal into an open channel having open cuts in the sides, horizontally placed slots in the sides adapted to be locked by wedges into a box like form, wedges adapted to slide within said horizontal slots and to grip the flanges of rails placed within said open cuts and to hold the sides of said channel, rail-plates within said channel having their intermediate sides extended as lugs to fit within said open cuts, cushion blocks within each end portion of said channel, and locking wedges also adapted to slide within said slots in the sides of said channel.

4. The combination of a railway tie cut from a sheet of metal and bent to form an open channel having alined cuts in upper edges of said channel and horizontally placed slots in the sides of said channel adapted to hold wedges therein for locking said channel and wedges into a boxlike form, wedges adapted to slide transverse through said slots and laterally therein, with cushion blocks in the end portions of said channel and rail-plates superimposed on said cushion blocks having their central portions extended into said cuts in the edges of said channel.

5. The combination of a railway tie cut from a sheet of metal and bent to form an open channel having open cuts in the edges thereof horizontally placed slots in the sides, cushion blocks in the end portions thereof, and wedges having open slots in their edges adapted to slide laterally and grip the flanges of the rail and the sides of the channel.

6. The combination of a railway tie cut from a sheet of metal and bent to form an open channel having rail-receiving cuts in its upper edges and wedge-receiving slots in its sides, and cushion blocks in each end portion, with wedges within said slots adapted to grip the flanges of the rail and the sides of the said channel, as and for the purposes described.

7. The combination with a railway tie cut from a sheet of metal and bent to form an open channel having rail-receiving cuts in its edges and horizontally placed wedge-receiving slots in its sides, of cushion blocks fitted within the end portions of said channel, wedges within said slots adapted to grip the flanges of the rail and the sides of the said channel, and means to hold said wedges in said gripping contact.

In testimony whereof I have affixed my signature in presence of two witnesses.

JOHN T. CLARK.

Witnesses:
SAM RANEY,
A. H. CUTRIGHT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."