No. 712,320. Patented Oct. 28, 1902.

J. W. McBURNEY.

EXPANSION JOINT COUPLING FOR TRACK RAILS.

(Application filed June 27, 1902.)

(No Model.)

Fig. 1.

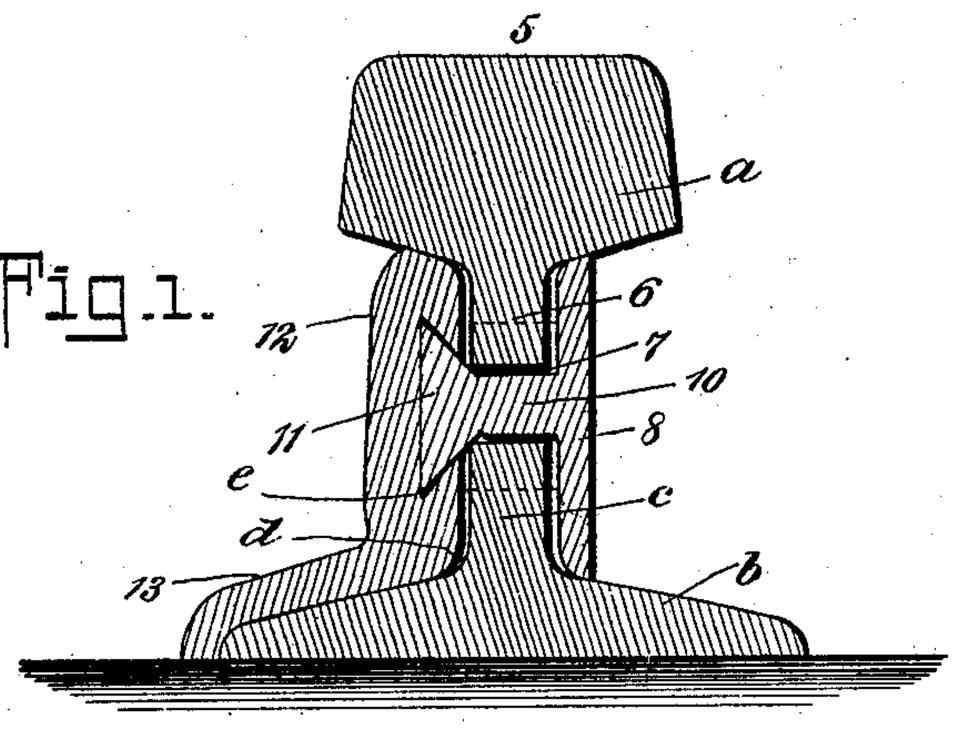


Fig. 2.

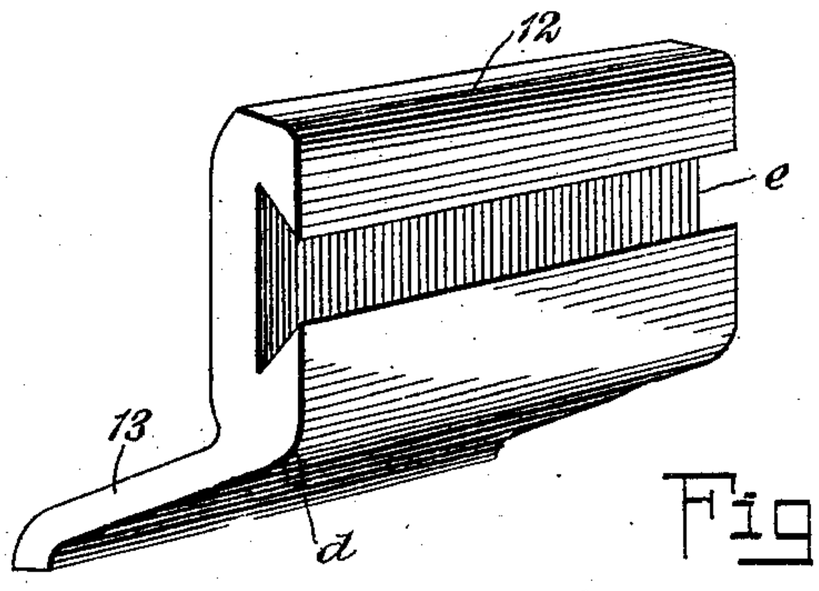


Fig. 3.

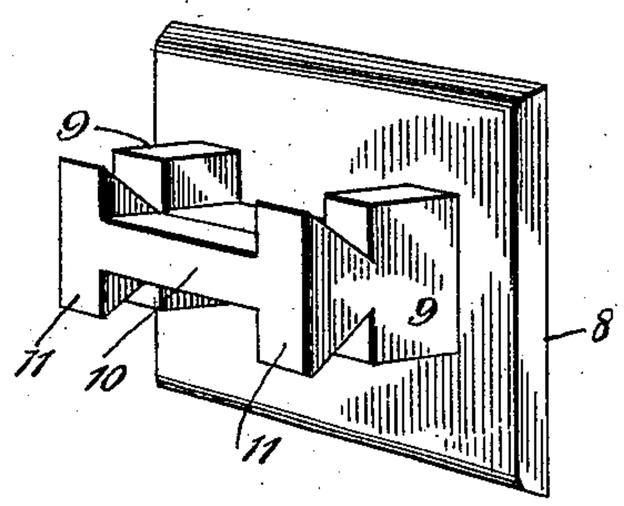
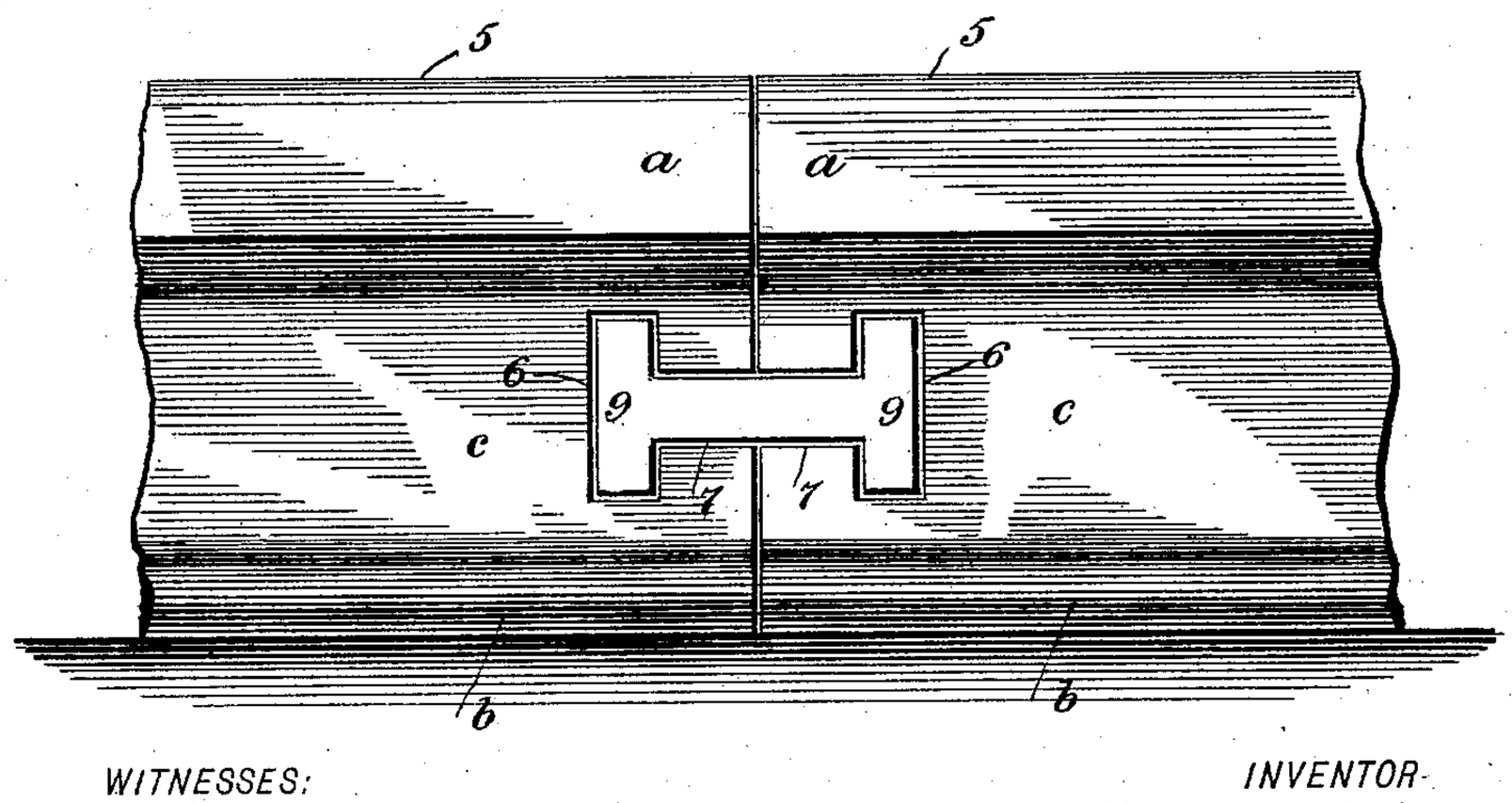


Fig. 4.



WITNESSES:

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EXPANSION JOINT-COUPLING FOR TRACK-RAILS.

SPECIFICATION forming part of Letters Patent No. 712,320, dated October 28, 1902.

Application filed June 27, 1902. Serial No. 113,500. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. McBURNEY, a citizen of the United States, and a resident of Fort Palmer, in the county of Westmoreland and State of Pennsylvania, have invented a new and Improved Expansion Joint-Coupling for Track-Rails, of which the following is a full, clear, and exact description.

This invention has for its object to provide a novel simple coupling device for holding railroad track-rails connected at their joints in a reliable manner and afford compensation for expansion of the rails during hot weather.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a transverse sectional view of a track-rail and of the improved coupling device mounted thereon, showing the construction of details thereof. Fig. 2 is a perspective view of a longitudinally-recessed locking-plate that is a novel detail of the invention. Fig. 3 is a perspective view of a coupling tongue-plate which is complementary to the locking-plate shown in Fig. 2, and Fig. 4 is a side view of two track-rail portions at their joint and an end view of the tongue on the coupling-plate exposed in slots formed in the webs of the meeting track-rails and occupied by said tongue.

Each of the track-rails 5 5 of similar dimensions and form has the usual head portion *a*, spaced from the base-flange *b* by the upright web *c*. As clearly shown in Fig. 4, a T-shaped slot is cut in the web of each track-rail at and near the end thereof. The vertical portions 6 of the T-slots are suitably spaced from the ends of the rail-webs by the horizontal portions 7 thereof, that in service are alined, the ends of said portions 7 of the T-slots cutting through the ends of the rail-webs, so as to render these alined slot portions practically continuous.

The coupling tongue-plate, that is an essential detail of the invention, consists of a rectangular flat bar 8, having sufficient length to properly lap upon adjacent end portions of the webs *c* of the track-rails 5 that are to be connected together by the improvement, said bar or plate 8 having such width that the parallel top and bottom edges thereof have contact with the track-rail heads *a* and base-flanges *b* when the coupling device is applied thereto, as indicated in Fig. 1.

Upon one side of the bar 8 and near its center a tongue projection is formed or secured, comprising two similar end blocks 9, that are rectangular in form and are connected by the elongated web-flange 10, that extends between the end blocks, joining them at their center of width. The upper and lower sides of the tongue projection are undercut at and near the free face of the same, which is parallel with the bar 8, thus producing a dovetail formation 11 on the tongue. The contour and relative proportions of the tongue projection permit its free insertion within the mating and adjacent T-slots formed in the ends of the track-rails 5 and also allow a suitable end play of the tongue in the slots, for a purpose that will hereinafter be explained.

As shown in Fig. 1, the dovetail formation 11 is disposed exterior of the rail-webs *c* when the coupling plate or bar 8 is seated upon the opposite side of the rail-webs.

The locking-plate, that is a completing detail of the novel rail connection, is shown best in Fig. 2, and comprises an elongated metal billet, bent laterally at *d*, thus providing an upright bar member 12 and a lateral cap-flange 13. The portion 12 is parallel on its side walls and also on the top and bottom edges thereof, the width between said edges adapting the member 12 to loosely fit between the head portions and base-flange portions of the alined rails 5 when applied thereto. A dovetail channel *e* is formed longitudinally in the locking-plate member 12, cutting through the side surface of the same, that contacts with the rail-webs *c* when in position thereon, said channel corresponding in form and dimensions with that of the dovetail-tongue formation 11.

When the improved track-rail connection is to be applied for service, the tongue for-

mation on the coupling-bar 8 is inserted through the adjacent alined T-slots in the webs of the abutting rails 5, as shown in Figs. 1 and 4, so that the dovetail member 11 projects outside of the rail-webs *c*. The part 11 is now introduced into an appropriate end of the dovetail channel *e* by placing the locking-plate in position on the rails 5, near the tongue member 11, and then sliding the locking-plate in the direction of said tongue member for its complete insertion within the channel *e*.

The degree of outward projection of the tongue on the coupling plate or bar 8 is such as will require some force to slide the locking-plate over the tongue member, which will render the connection of parts reliable and prevent looseness laterally.

As a proper degree of end motion is afforded for the tongue member of the coupling plate or bar in the T-shaped slots in the rail-webs *c*, it will be seen that this provision compensates for expansion in length of the rails 5 due to climatic changes and prevents injury to the rail connections.

It is to be understood that the locking device may be applied to either side of the webs of the rails 5, as may be found desirable.

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

A track-rail connection, comprising a flat bar, a dovetail tongue on one side of said bar, lateral enlargements on the ends of the tongue to engage T-slots in track-rail webs, and a laterally-flanged locking-plate having a laterally-open channel dovetailed in cross-section that is adapted to receive the dovetail member of the tongue.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN W. McBURNEY.

Witnesses:

JOSEPH BASSETT,

JAMES N. McBURNEY.