No. 812,417. PATENTED FEB. 13, 1906.

E. T. FORRESTER.

RAILWAY RAIL JOINT.

APPLICATION FILED DEC. 9, 1905.

Fig. 1.

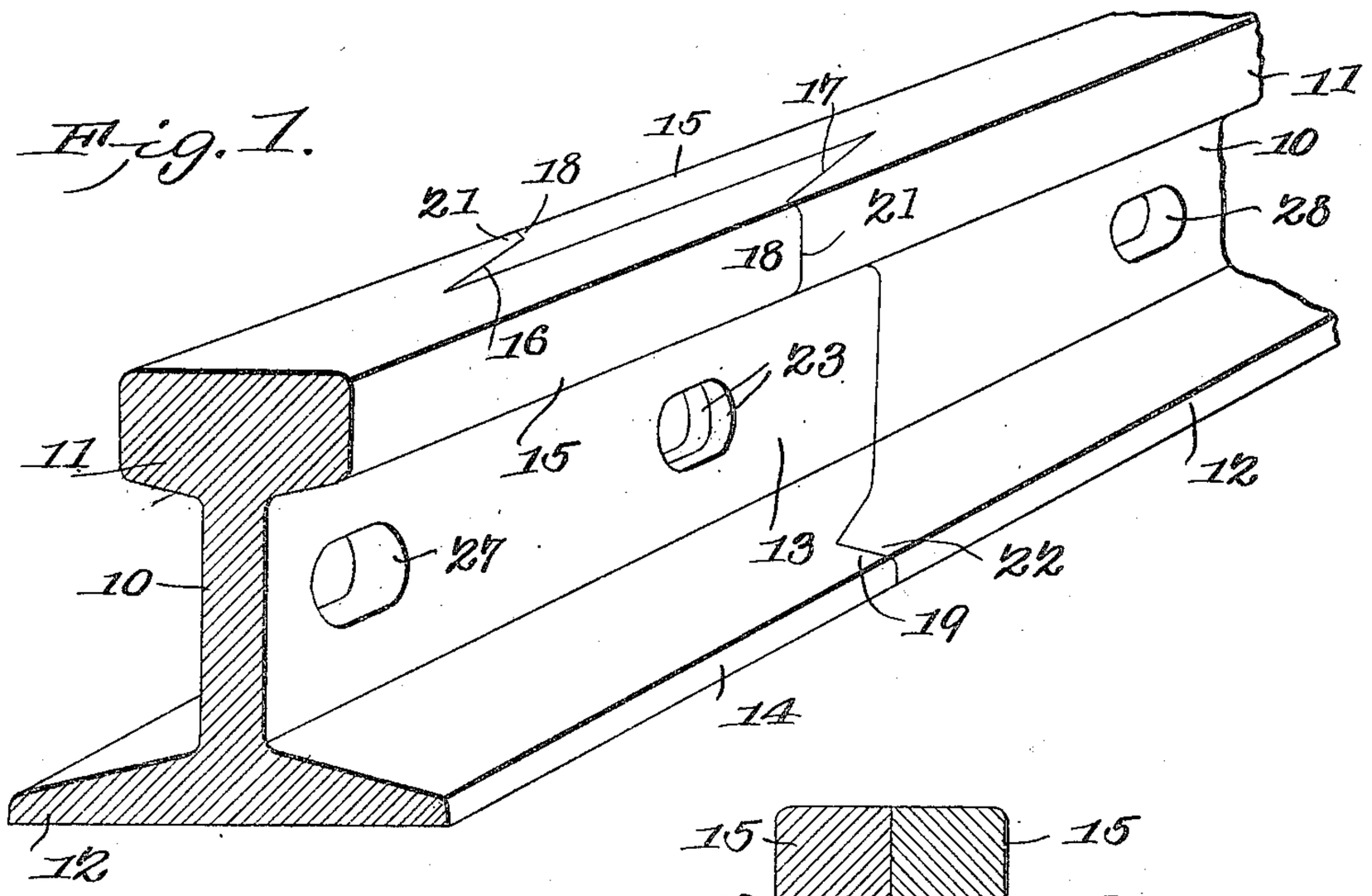


Fig. 2.

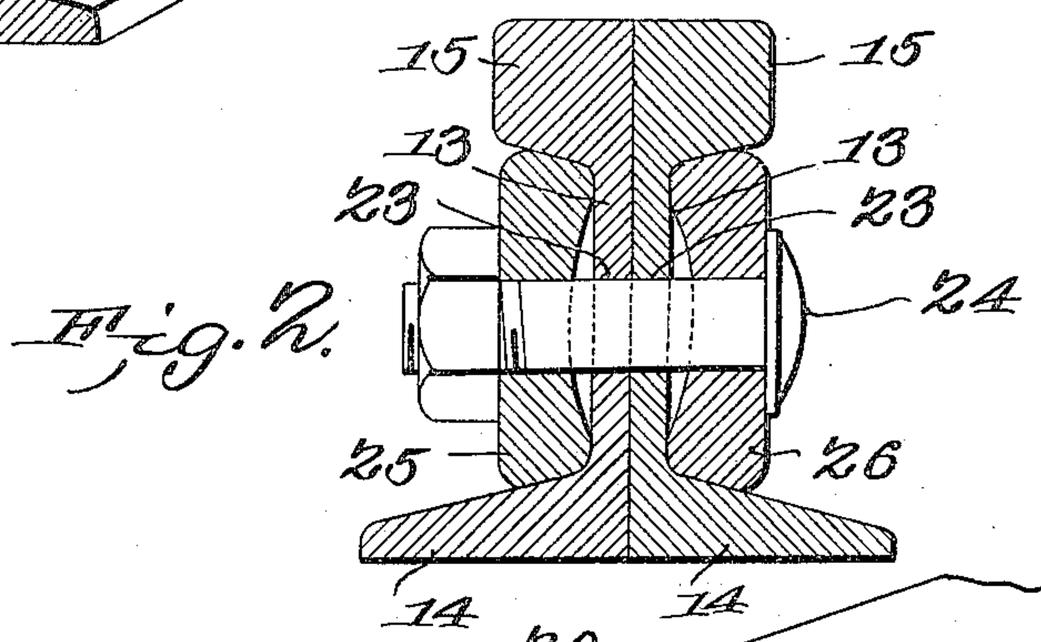
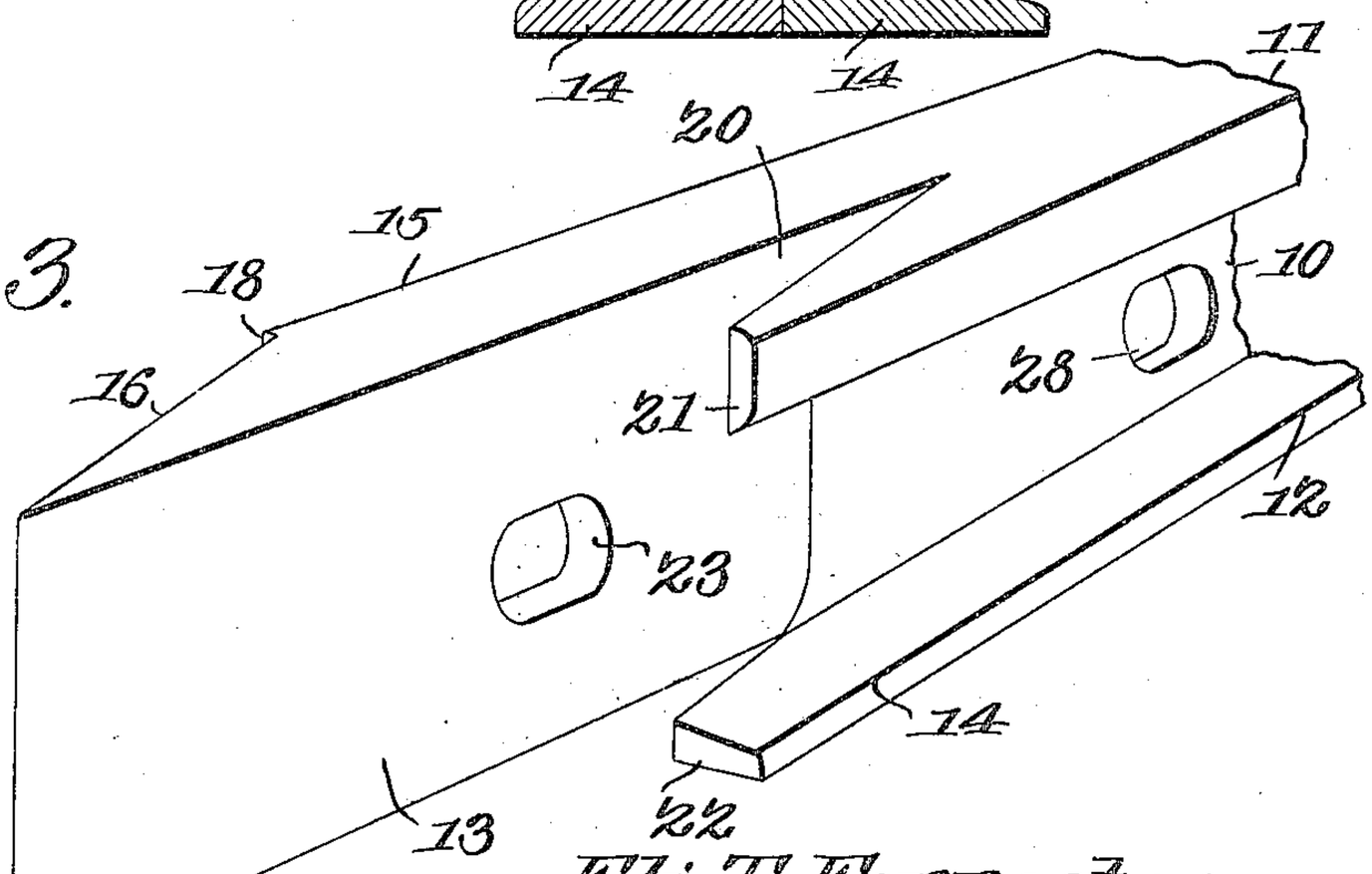


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ELI T. FORRESTER, OF DENVER, COLORADO.

RAILWAY-RAIL JOINT.

No. 812,417. Specification of Letters Patent. Patented Feb. 13, 1906.

Application filed December 9, 1905. Serial No. 291,123.

To all whom it may concern:

Be it known that I, ELI T. FORRESTER, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented a new and useful Railway-Rail Joint, of which the following is a specification.

This invention relates to improvements in the joints of railway-rails for uniting them and "bridging" the gaps at the ends, and has for its object to improve the construction and increase the efficiency of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the invention consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation, it being understood that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention within the scope of the appended claims.

In the drawings, Figure 1 is a perspective view of the adjacent portions of two rails, with the improved "joint" embodied therein, with the clamp-bars detached. Fig. 2 is a transverse section of the improved joint complete. Fig. 3 is a perspective view of one of the rail ends.

The vertical web portions of the rails are indicated at 10, the treads at 11, and the tie-flanges at 12, of the usual construction. Extending from the rails at the ends are tongues formed by prolonging one-half of the vertical webs, as at 13, one-half the tie-flanges, as at 14, and one-half the treads or heads, as at 15, the tongues thus formed being arranged rights and lefts, so that when the rails are disposed end to end the tongues will overlap and the treads, webs, and tie-flanges coincide and produce a continuous rail. The terminals of the tongues are "scarfed," as at 16 17, the scarfing extending over the portions 13, 14, and 15, constituting the tongue structure, as shown, and with lateral shoulders 18 19 at the terminals of the scarfed portions. Recesses 20 are formed at the "roots" or inner ends of the tongues, the recesses corresponding to and adapted to receive the scarfed portions of the tongues, and with lateral shoulders 21 22 at the free ends of the tread portions 11 and tie-flange portions 14 of the rails coincident with the outer terminals of the recesses.

By this arrangement when the rails are disposed end to end, as shown in Figs. 1 and 2, the inner faces of the overlapping tongues will engage in longitudinal alinement with the center line of the vertical webs of the rails, and the scarfed portions of one rail will enter the recess of the other rail, with the lateral shoulders abutting, as shown. By this means the rails are firmly supported from both lateral and endwise movement, while at the same time the laterally-disposed abutting shoulders receive the end thrust and prevent undue strains upon the relatively thin scarfed portions of the tongues.

The tongues are provided with transverse apertures 23 to receive a clamp-bolt 24, whereby the parts are firmly bound together, the apertures being elongated to provide for expansion and contraction. Clamp-plates of the usual form, as at 25 26, may be employed upon opposite sides of the joint and secured in place by the clamp-bolt 24 and spaced clamp-bolts operating through spaced apertures 27 28.

Having thus described the invention, what is claimed is—

1. In a rail-joint, the rails having overlapping vertical tongues extending from their adjacent ends, each tongue being an extension of one-half of the vertical web one-half of the tread and one-half of the tie-flange of the respective rails, with the terminals of the tongues scarfed for a distance and with recesses at the inner ends of the tongues corresponding to and adapted to respectively receive the scarfed terminals of the tongues when the rails are disposed end to end, the outer ends of the recesses and the inner ends of the scarfed portions having lateral inter-bearing shoulders.

2. In a rail-joint, the rails having overlapping vertical tongues extending from their adjacent ends, each tongue being an extension of one-half of the vertical web one-half of the tread and one-half of the tie-flange of the respective rails with the terminals of the tongues scarfed for a distance and with recesses at the inner ends of the tongues corresponding to and adapted to respectively re-

ceive the scarfed terminals of the tongues when the rails are disposed end to end, the outer ends of the recesses and the inner ends of the scarfed portions having lateral inter-bearing shoulders and clamp-bolts uniting the overlapping tongues.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ELI T. FORRESTER.

Witnesses:
EDWIN VANCISE,
PATTIE DENNE.