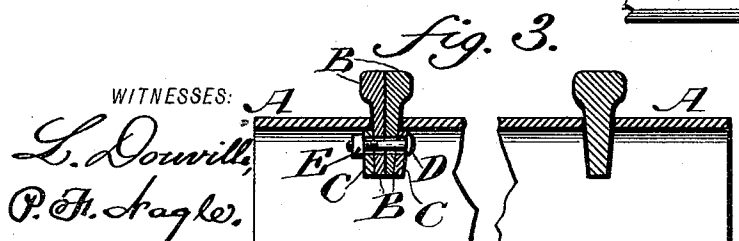
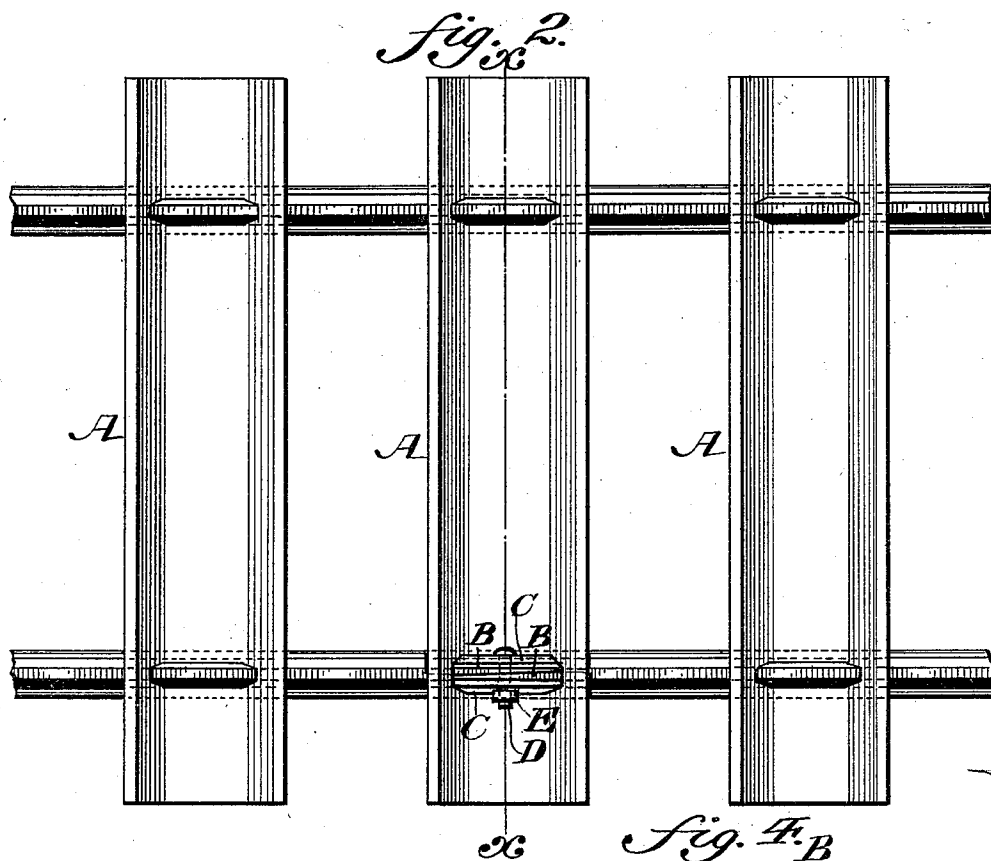
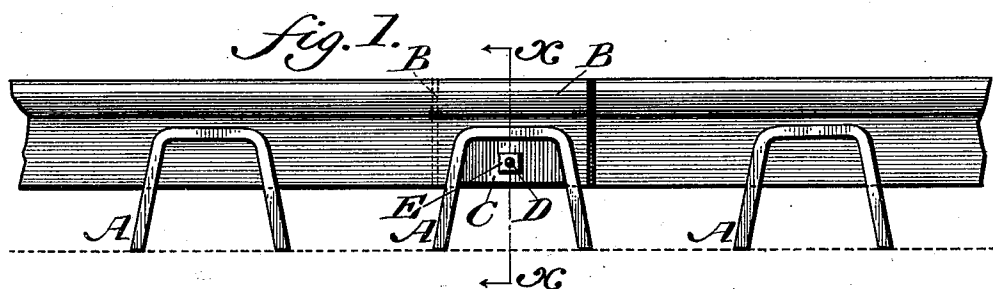


(No Model.)

W. S. WARD.
FASTENING FOR RAILROAD RAILS.

No. 532,929.

Patented Jan. 22, 1895.



WITNESSES:
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WILLIAM S. WARD, OF PHILADELPHIA, PENNSYLVANIA.

FASTENING FOR RAILROAD-RAILS.

SPECIFICATION forming part of Letters Patent No. 532,929, dated January 22, 1895.

Application filed March 16, 1894. Serial No. 503,844. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. WARD, 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 Fastenings for Railroad-Rails, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of means for fastening railroad rails to metallic ties, the same embodying a plate which is placed within the tie aside of the ends of adjacent rails, and bolted thereto, thus firmly connecting the rails and preventing them from rising from the tie, as also preventing traveling of the rails in either direction.

Figure 1 represents an end elevation of a rail fastening embodying my invention. Fig. 2 represents a bottom plan view thereof. Fig. 3 represents a vertical section thereof, on line x, x , Fig. 1. Fig. 4 represents a top view of the ends of adjacent rails.

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

Referring to the drawings: A designates a metallic cross tie which is of channeled form, and has openings in the top and sides thereof to seat and support a rail therein. The ends of the rails are lap-jointed as at B, and at either side of the same is placed the plate C, which is fitted within the tie A, and is adapted to engage with the walls thereof, so as to be prevented from rotation.

D designates a bolt which is passed through the ends of the rail and the plate C, and has on its threaded end the nut E, it being seen that when said nut is tightened, the ends of

the rail and plate C are connected, whereby rails are prevented from disconnection from the tie, and as the plate C is controlled by the walls of the tie, said rails are prevented from rising from the tie, especially in the case of washouts, when water flowing under the rails exerts an upward pressure on the same, this however being resisted by the plate C, and thus the rails maintain their connection with the ties, traveling of the rails being also prevented. When the nut is unscrewed, and the bolt withdrawn, the plate C may be removed, thus disconnecting the rails and permitting displacement of the same from the tie.

While I have described a single plate C as being secured to the ends of the rail within the tie, I have shown two plates in the drawings, the same being on opposite sides of the ends of the rails, but it is evident that one of the same may be dispensed with.

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

1. A channel tie having openings in its top and sides in combination with rails having ends occupying said openings, a plate fitted in said tie against said rails, and a bolt joining said plate and rails, substantially as described.

2. A plate connecting the ends of adjacent rails, and occupying the channeled tie, in combination with a bolt which is passed through said plate and the ends of rails, and a nut on said bolt, substantially as described.

WILLIAM S. WARD.

Witnesses:

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