

A. H. STAUDT.
RAILWAY RAIL COUPLING.
APPLICATION FILED AUG. 8, 1911.

1,009,936.

Patented Nov. 28, 1911.

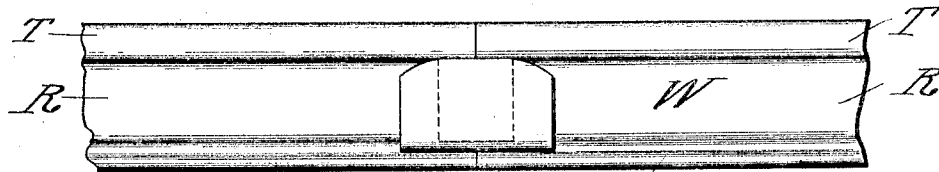


Fig. 1.

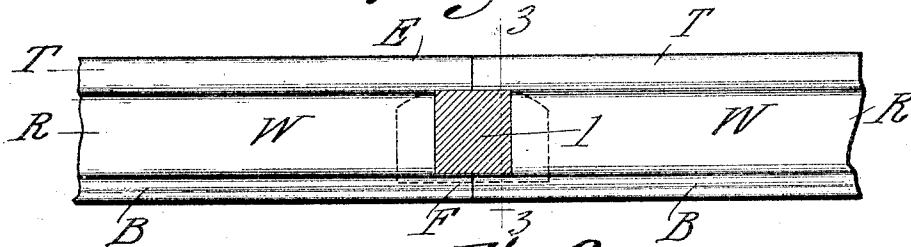


Fig. 2.

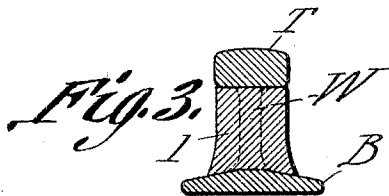


Fig. 3.

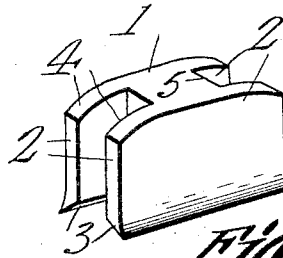


Fig. 4.

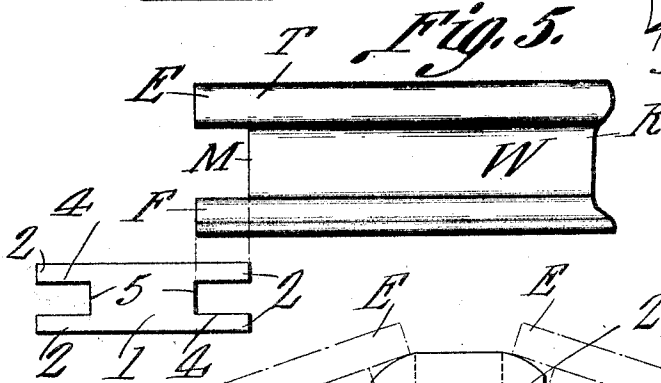


Fig. 5.

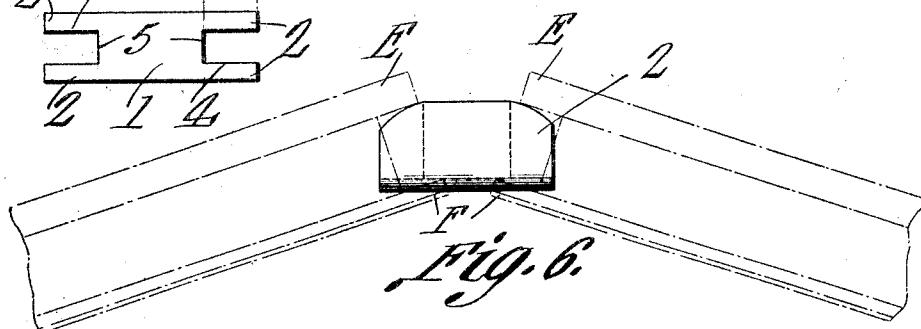


Fig. 6.

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UNITED STATES PATENT OFFICE.

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RAILWAY-RAIL COUPLING.

1,009,936.

Specification of Letters Patent.

Patented Nov. 28, 1911.

Application filed August 8, 1911. Serial No. 642,945.

To all whom it may concern:

Be it known that I, AMOS H. STAUDT, a citizen of the United States, residing at Hanton, in the county of Dauphin and State of Pennsylvania, have invented a new and useful Railway-Rail Coupling, of which the following is a specification.

This invention relates to railway rail couplings.

10 The object of the invention is, in a novel and practical manner, to secure together the abutting ends of railway rails, and without the employment of bolts or fish-plates for the purpose, the connection being such that
15 without removing the rail spikes, it will be impossible for the meeting ends of the rails to become deflected, so that accidents resulting from non-alining rails will be prevented.

20 A further object is to construct the coupling in such manner that its disconnection may readily be accomplished, merely by unspiking and raising the two opposed ends in unison, the arrangement of the parts of the
25 coupling that contact with the rail treads and bases being such that any tendency to binding is positively precluded.

With the above and other objects in view, as will appear as the nature of the invention
30 is better understood, the same consists, generally stated, in a railway rail coupling embodying a bridge block provided with web-engaging plates, the upper edges of which are curved on arcs whose centers lie within
5 the terminals of the plates. In practice, the channels defining the plates will be of a depth equal to rabbets formed in the opposed ends of the two rails to receive the web connecting the plates, so that in the act
40 of removing the coupling, it will only be necessary to elevate the rails a distance sufficient to bring the ends of the rail treads in alinement with the walls defining the bridge block web, whereupon, owing to the arcs
45 on which the curves of the outer ends of the web-engaging plates are struck, contact between these plates and the rail treads will cease, and upon further lifting of the rails, the coupling may readily be removed. It
50 is designed that the coupling will brace the ends of the rails in such manner as to preclude the possibility of the rail ends becoming non-alined, and further, to accomplish this result, without the employment of bolts,
55 such as are ordinarily used in connection

with fish-plates, whereby the weakening of the rails at their ends, caused by the provision of the fish-plate bolt holes is obviated, and the removal of the coupling, except by unspiking the rails, is rendered impossible, thus presenting a certain foil to the attempts of train wreckers.

The invention consists further in the various novel details of construction of a railway rail coupling, as will be hereinafter fully described and claimed.

In the accompanying drawing forming a part of this specification, and in which like characters of reference indicate corresponding parts: Figure 1 is a view in side elevation of two railway rails, showing the same connected with the coupling constituting the subject matter of the present invention. Fig. 2 is a view similar to Fig. 1, but with the coupling in section. Fig. 3 is a transverse sectional view taken on the line 3-3 of Fig. 2, and looking in the direction of the arrow thereon. Fig. 4 is a perspective detail view of the bridge block which constitutes the coupling. Fig. 5 is a diagrammatic view, partly in elevation and partly in plan, showing the relation between the rabbets and cheek plates of the rail and of the bridge block. Fig. 6 is a view in side elevation, showing the manner in which the bridge block is detached from the rails.

Referring to the drawings, R designates sections of two railway rails, of the usual or any preferred construction, and as they in no way vary from the standard rail in use, detailed description thereof is deemed unnecessary further than to state that T designates the tread, W the web, and B the base.

The gist of the present invention resides in the novel coupling shown in detail in Fig. 4. This coupling constitutes a bridge block whereof the web 1 is designed to fit within rabbets or mortises M in the abutting ends of the rails, and the cheek plates 2 to embrace each side of the webs of the rails. The lower edges 3 of the cheek plates and of the web are oppositely beveled in order to correspond to the contour of the upper faces of the bases, while the upper edges 4 of the cheek plates are curved on arcs struck within the terminals of the plates, thus to secure a short curve. The cheek plates from the walls 5 of the web outward are of a length corresponding approximately to the depth of the rabbets M, so that to dis-

nect the coupling from the rails, it will only be necessary to pry the latter to the position shown in Fig. 6, and as soon as the projecting ends E of the rail treads aline or slightly pass the walls 5, the curved portions will pass from engagement with the webs, the lower edges of the cheek plates riding as fulcrums upon the opposed ends of the rail bases F, thus to permit ready removal of the coupling upon the rails being elevated to a somewhat higher plane.

When the coupling is to be positioned, the reverse of the above described operation is observed, and as soon as the rails assume a horizontal position, or that shown in Figs. 1 and 2, the rails are spiked in the usual manner to the sleepers, and thus will result in the positive securing of the coupling in position.

While, as stated, it will not be necessary to employ spikes to secure the coupling to the sleepers, yet, if preferred, and as an extra precaution, spikes may be employed in the same manner as with the rails.

It will be seen from the foregoing description, that although the improvements of the present invention are simple in character, they will be found thoroughly efficient for the purpose designed, and will cooperate in the presentation of a highly durable and practical form of coupling.

What is claimed is:

1. As a new article of manufacture, a railway rail coupling embodying a bridge-block having a web the upper face of which is flat, and web-engaging plates the upper edges of which are curved outward and downward from the end walls of the web and on arcs whose centers lie within the terminals of the plates.

2. The combination with two rails, the opposed faces of which are rabbeted, of a coupling embodying a bridge-block to engage the rabbets and pairs of cheek-plates to receive the webs of the rails, the upper edges of the cheek-plates being curved downward from the walls of the bridge-block to their ends and on such arcs that when the rails are raised to a height to bring the opposed ends of the rail-treads in line with the block walls, the cheek-plates will pass out of engagement with the treads and bases of the rails and thus permit ready detachment of the coupling.

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

AMOS H. STAUDT.

Witnesses:

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S. R. SATTERTHWAITE.