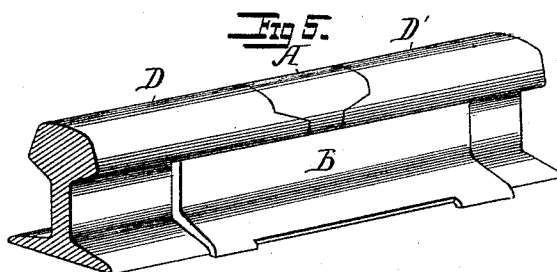
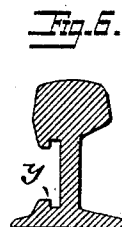
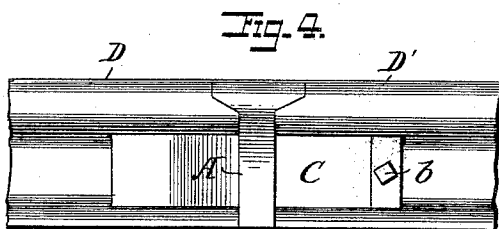
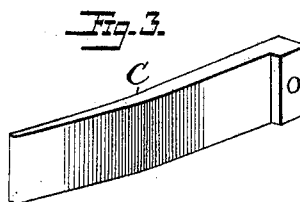
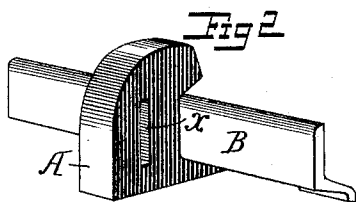
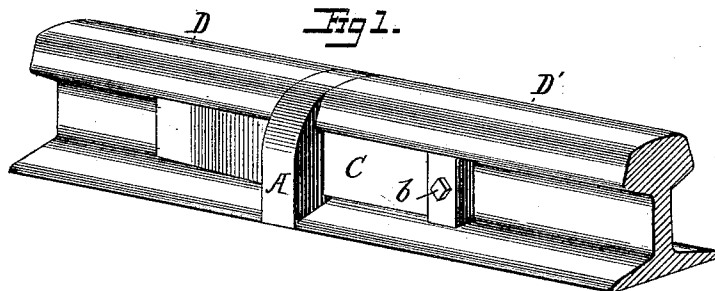


(No Model.)

L. WALLACE.  
RAIL COUPLER FOR RAILWAYS.

No. 460,273.

Patented Sept. 29, 1891.



WITNESSES

*Geo. G. Hinkel.*  
*H. S. McArthur*

INVENTOR

*Lewis Wallace.*  
*By Foster Freeman*  
Attorneys.

# UNITED STATES PATENT OFFICE.

LEWIS WALLACE, OF CRAWFORDSVILLE, INDIANA.

## RAIL-COUPLER FOR RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 460,273, dated September 29, 1891.

Application filed March 5, 1891. Serial No. 383,833. (No model.)

*To all whom it may concern:*

Be it known that I, LEWIS WALLACE, a citizen of the United States, residing at Crawfordsville, in the county of Montgomery and State of Indiana, have invented certain new and useful Improvements in Rail-Couplers for Railways, of which the following is a specification.

My invention relates to that class of rail-joints having blocks fitting between the ends of the rail-sections; and my invention consists in constructing the parts so as to avoid objections incident to ordinary constructions, as fully set forth hereinafter, and as illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view showing my improved rail-joint in connection with the adjacent ends of two rails. Fig. 2 is a perspective view showing the block and one plate of the union-piece. Fig. 3 is a perspective view of the key-plate. Fig. 4 is a side view illustrating another means of securing the key-plate; Fig. 5, a perspective view of the parts shown in Fig. 4, looking at the opposite side. Fig. 6 is a section showing a modification.

It has been common in coupling-rails to make use of an intermediate block conforming to the general outline of the rails, especially at the tread, and against which the ends of the opposite rails abut. As generally constructed, the adjuncts of said blocks, through the medium of which they are held in place, have been of such a character as to require a nicer fitting than is practicable in railway construction, or else to result in loose joints and rattling that defeat the object of the construction. Efforts have been made to secure tighter joints, but so far without success, for while the rattling may be prevented by constructions which have been devised none of said constructions are adapted for practical use upon railways.

To secure the advantages of the intermediate block without the objections to the constructions heretofore devised, I construct the parts as I will now describe.

D D' represent the adjacent ends of two rails of a track, which rails are of ordinary construction; but instead of being brought together in substantial contact at the ends they are separated sufficiently to receive be-

tween them a large block A, conforming in its general outline to the cross-section of the rails, the upper portion of said block being of the same contour as the treads of the rails so as to be uniform therewith when the block is placed in position with the ends of the rails abutting against its opposite faces. In order that said block may be properly secured in position and by the same means to hold the ends of the rails in line with the block and with each other, I connect to or form with the block a side plate B, adapted to fit against the webs of the two rails and bear snugly at its edges against the lower shoulders of the treads and upon the upper faces of the flanges, which plate when in place, as shown in Fig. 5, holds the block in line with the rails and absolutely prevents its displacement in one direction, or the movement of either rail independently of the other rail and the block in the opposite direction.

To prevent movements of the parts in opposite directions, the block A is provided with a socket *x* to receive a second plate C, which when it is passed through said socket, as shown in Figs. 1 and 4, also bears against the under shoulders of the treads and upper faces of the flanges and firmly against the sides of the webs. The absolute contact of the plates B C with the sides of the webs is most important, as thereby any possible loose motion of the parts is prevented, and as the webs of the rails are not of absolutely uniform thickness I make said plate C elastic by making it of steel and slightly curved or bent, so that it will be flattened in driving it into the socket, and also make it slightly tapering, so as to tighten it firmly against the sides of the webs whatever may be the variations in thickness.

Different means may be used for locking the key-plate in place. Thus the plate C may be driven into place and then secured by means of a set-screw *b*, passing through the thickened end of the plate and beams with its inner end against the rails. Whichever locking means may be provided it will be evident that by taking away the screw or bolts the plate is left free to be driven out of its socket by blows upon the end, after which the rails and the block A may be readily separated. When it is desired to lock the parts

more firmly, the head of the block A may be expanded, as shown in Figs. 4 and 5, to extend into corresponding recesses in the ends of the rails.

5 Instead of having a bearing in the form of a socket *x*, it may be formed by providing the block with retaining ribs or flanges *y*, adapted to receive the key between them, as shown in Fig. 6.

10 Without limiting myself to the precise construction and arrangement of parts shown and described, I claim—

In a union-piece for rail-joints, a block adapted to fit between and conforming to the

outline of the ends of the rails, and provided 15 with a side piece B and socket *x*, and a spring key-plate C, adapted to said socket, said side piece and key-plate having their bearings against the sides and between the heads and flanges of the rails, substantially as set forth. 20

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

LEWIS WALLACE.

Witnesses:

CHARLES E. FOSTER,

W. CLARENCE DUVALL.