

(No Model.)

2 Sheets—Sheet 1.

W. H. CARR.
RAILROAD RAIL JOINT.

No. 478,920.

Patented July 12, 1892.

Fig 1.

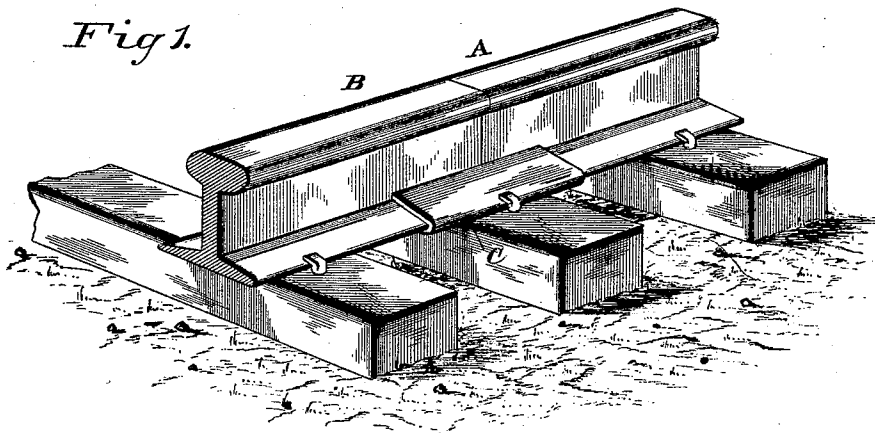


Fig 2.

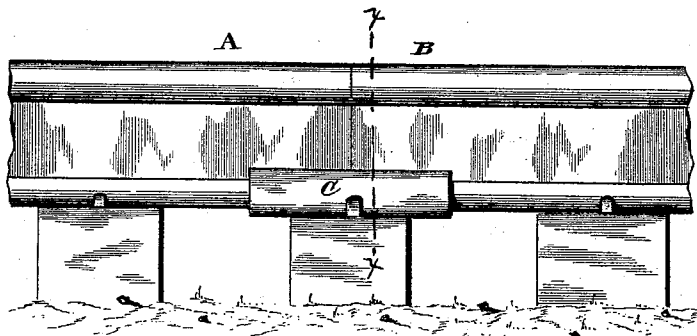


Fig 3.

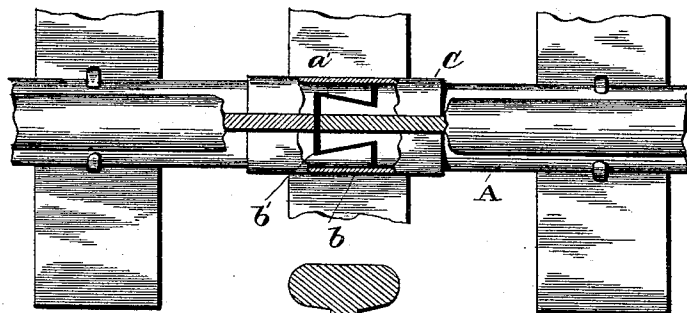
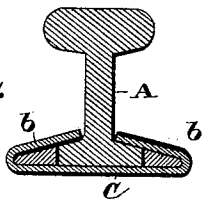


Fig 4.



Witnesses

Taul W. Stevens
Wm J. Little

Inventor

W. H. Carr

By his Attorney

J. R. Little

(No Model.)

2 Sheets—Sheet 2.

W. H. CARR.
RAILROAD RAIL JOINT.

No. 478,920.

Patented July 12, 1892.

Fig 5.

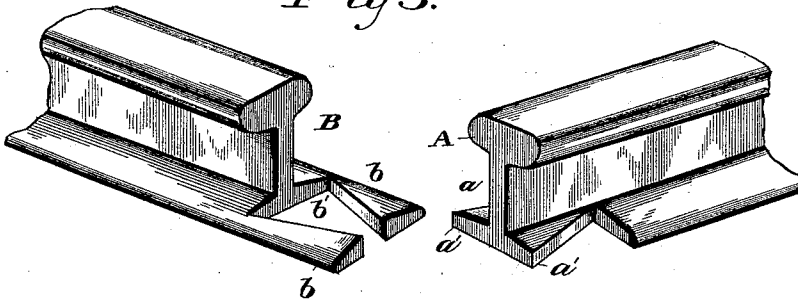


Fig 7.

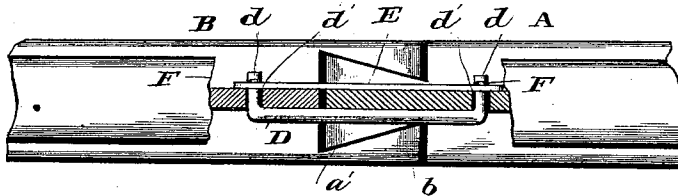


Fig 6.

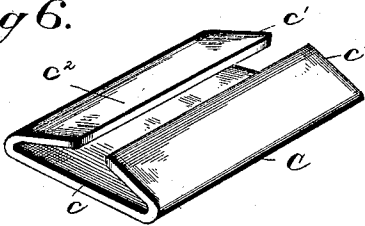
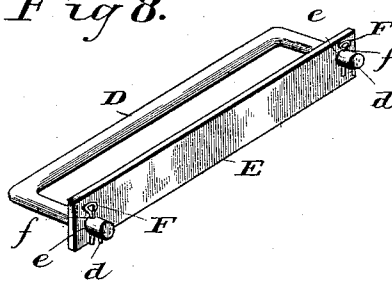


Fig 8.



Witnesses

Paul W. Stevens
Cm. J. Little

Inventor

W. H. Carr

By his Attorney

J. R. Little

UNITED STATES PATENT OFFICE.

WARREN HENRY CARR, OF BATH, MAINE.

RAILROAD-RAIL JOINT.

SPECIFICATION forming part of Letters Patent No. 478,920, dated July 12, 1892.

Application filed December 8, 1891. Serial No. 414,363. (No model.)

To all whom it may concern:

Be it known that I, WARREN HENRY CARR, a citizen of the United States, residing at Bath, in the county of Sagadahoc and State of Maine, have invented certain new and useful Improvements in Railroad-Rail Joints; and I do hereby declare the following to be a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to railroad-rails, and has special relation to a simple and improved joint therefor.

The object of the invention is to provide a rail-joint of such construction whereby the rails are adapted to be connected together in such manner as to obviate any independent lateral or longitudinal displacement of the rails.

A further object of the invention is to provide simple and improved means for securely locking the coupled joints against vertical play.

To these ends the invention consists, substantially, in the construction, combination, and arrangement of parts, as will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view illustrating the meeting ends of two railroad-rails embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a top or plan view, parts being broken away to show the construction. Fig. 4 is a transverse sectional view on the line xx , Fig. 2. Fig. 5 is a detail perspective view of the meeting ends of the rails disconnected. Fig. 6 is a detail perspective view of the locking-plate. Fig. 7 is a similar view to Fig. 3, illustrating modified locking means. Fig. 8 is a detail perspective view of the latter.

Corresponding parts in all the figures are denoted by the same letters of reference.

Referring to the drawings, A B designate, respectively, two adjoining railroad-rails, which may be in the main of any well-known or approved pattern.

The rail A is provided at one end with an extension a , the latter being provided at each side of the web with an ear a' a' , extending at right angles to the web and in a plane with the base of the rail. The ears a' extend from

end to end of the extension a and have their vertical side edges inclined or beveled rearwardly, thus forming, conjunctively, a dovetail portion, the purpose of which will hereinafter appear.

The opposing end of the rail B has its base extended outwardly at each side and in a longitudinal plane with the rail, thus forming two corresponding tongues b b . The inner vertical edges of the latter are inclined from their outer ends inwardly to form an intermediate dovetail recess b' , corresponding to and adapted to receive the dovetail portion of the extension a of the meeting rail, but preferably of slightly-greater dimensions than said dovetail portion, as shown, to allow for expansion and contraction of the rails. When thus secured together, all independent longitudinal or side movement of the connected rails is entirely obviated.

To prevent vertical disengagement of the rails and to retain them securely locked in position, a plate C is provided. The latter consists of a horizontal base portion c , having its side edges c' c' bent upwardly and inwardly, a longitudinal opening c^2 being left between the opposing overturned side edges. In practice the plate C is adapted to receive and slide upon the base of one of the rails, the web of the latter being received within the opening c^2 . To connect two adjoining rails together, the dovetail extension of one rail is seated in the corresponding recess in the adjoining rail and the plate C then slid over the joint, thus locking the rail together. The plate C is held against displacement by spikes, securing the same to the ties. In lieu of the plate C, however, the modified locking device illustrated in Figs. 7 and 8 may be employed without departing from the spirit and scope of my invention. This device consists of a double pin or bolt D, having its end portions d d projecting at right angles therefrom and in the same direction. The web of the opposing rail ends is provided near the joint with a transverse bolt-hole d' d' , through which the ends d are passed. At the opposite side of the rails a fish-plate E, having apertures e e for the reception of the end d , is placed in engagement with the latter and the parts secured by split keys F F, passed through apertures f f , provided in the ends d . By the employment of

the coupling device just described the parts of the latter can be quickly and readily separated at will and the loss incident to the use of threaded bolts and nuts by breakage in removing thus entirely obviated.

The operation and advantages of my invention will be readily understood by those skilled in the art to which it appertains. In practice the rails are formed at their respective ends with the relative parts of the joint, so that the meeting ends of two rails coincide.

My invention is readily applicable to the rails in general use, it being simply necessary to cut away parts of the base of the rail at one end to form the extension a and to form the corresponding recess at the opposite end.

The above-described rail-joint is simple in construction, enabling the rails to be quickly and readily joined, durable in use, and is, furthermore, inexpensive, for the reason that the necessity for the usual securing-bolts is entirely dispensed with.

I claim as my invention—

1. In a railroad-rail joint, the combination, with the end of a rail having its base only extended and said extension provided with a dovetail recess, of the opposing end of a meeting rail having its base recessed at opposite sides to form a dovetail portion fitting within

said dovetail recess, but of less length than the latter, substantially as and for the purpose set forth.

2. In a railroad-rail joint, the combination, with a rail having an extension at one end provided at opposite sides with outwardly-flaring lugs, the latter forming, conjunctively, a dovetailed portion, of the opposing end of a meeting rail having its base extended to provide two ears diverging outwardly at their inner faces and forming an intermediate dovetailed recess adapted to receive said dovetail portion, and means for locking the latter in the recess therefor, substantially as and for the purpose set forth.

3. The herein-described railroad-rail, having its base only extended at one end and provided with a dovetail recess extending from top to bottom of said extension, said rail being formed at its opposite end with a dovetail portion of less length than the dovetail recess, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WARREN HENRY CARR.

Witnesses:

WM. MUSSENDEN,
F. S. SANG.