(No Model.)

F. E. BUXTON.

RAIL BOND.

No. 564,968. Patented Aug. 4, 1896.

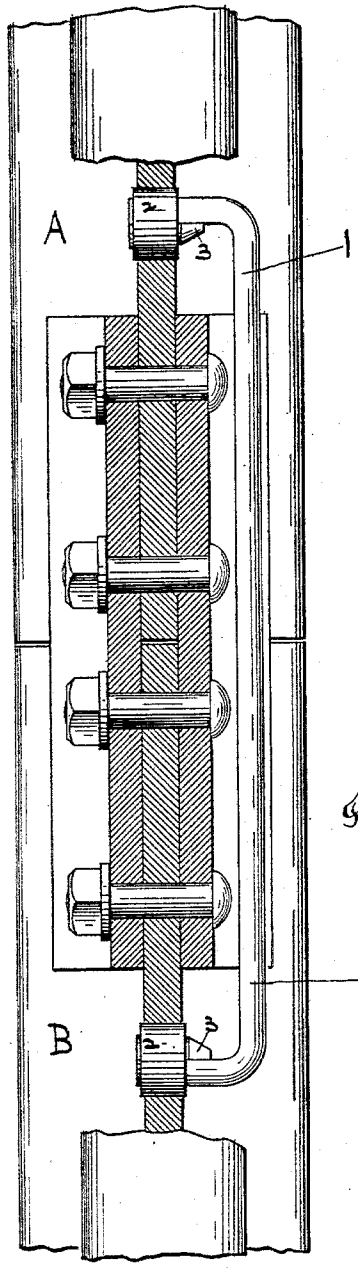

Fig. 1.

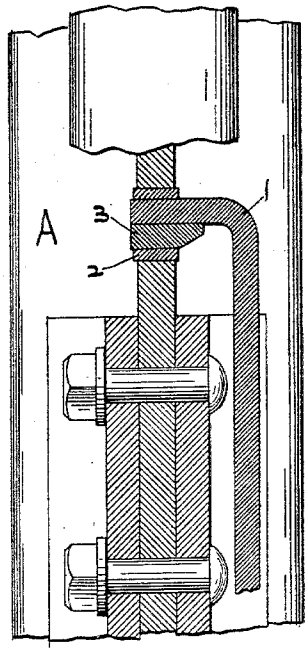

Fig. 2.

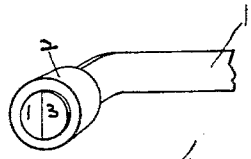

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

FRANK E. BUXTON, OF WORCESTER, MASSACHUSETTS.

RAIL-BOND.

SPECIFICATION forming part of Letters Patent No. 564,968, dated August 4, 1896.

Application filed November 29, 1895. Serial No. 570,401. (No model.)

To all whom it may concern:

Be it known that I, FRANK E. BUXTON, a citizen of the United States, residing in the city and county of Worcester and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Rail-Bonds, of which the following is a specification.

The object of my invention is to provide a bond for forming an electric connection between the rails of an electric railway which may be constructed at small cost, may be quickly and easily applied, and which will insure a good electric contact between the bond and the rails and a mechanical joint so perfect as to prevent corrosion. This object I secure by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of two rails with their tops partly broken away so as to show in partial section the fish-plates uniting the webs of two contiguous rails and the bond connecting the rails. Fig. 2 is a plan view of part of one rail, the top being broken away and part of the bond and the connection between the bond and the web of the rail being shown in section. Fig. 3 shows in perspective a view of one end of the bond with a bushing surrounding it and the wedge for securing contact between the bushings and the webs of the rails.

In the drawings, A B are two rails united by fish-plates in the usual manner.

1 is a bond, preferably of copper wire, connecting the two rails. The bond at its extremities is reduced in cross-section and is surrounded by bushings 2, adapted to fit within perforations in the webs of the rails.

3 indicates wedge-shaped pins adapted on their inner faces to have a suitable bearing upon the extremities of the bond-wire and upon their outer surfaces conforming in shape to the inner faces of the bushings 2.

The application of my bond-wire is very simple. Perforations of suitable size having been made in the webs of the rails, the bushings 2 are placed within the perforations and the extremities of the bond-wire are carried through the bushings sufficiently to project somewhat upon the opposite side of the web. The wedge-shaped pieces 3 are then inserted within the bushings 2 and driven home with sufficient force to expand the bushing into perfect contact with the surface of the perforations in the rails, thus making a perfect joint.

In practice I prefer to use a copper wire for the bond, copper bushings, and steel wedges.

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

1. An electric rail-bond comprising a bond-wire with terminals diminished in cross-section, bushings surrounding said terminals, and within perforations in the rails, and wedge-shaped pins adapted to be driven between the terminals and the bushings, whereby the latter may be expanded and a close contact secured between the bond and the rails, substantially as described.

2. The combination of rails having suitable perforations formed therein, bushings within said perforations, a bond-wire with terminals diminishing in cross-section, adapted to have bearings within said bushings, and wedges whereby the bushings may be expanded and the bond and rails firmly united, substantially as described.

3. The combination of rails having suitable perforations formed therein, bushings within said perforations, a bond-wire with terminals semicircular in cross-section, adapted to have bearings within said bushings, and wedge-shaped pins with interior surfaces corresponding in form to the interior faces of the terminals, and exterior surfaces corresponding in form to the interior faces of the bushings, whereby the bushings may be expanded and the bonds and rails firmly united, substantially as shown and described.

FRANK E. BUXTON.

Witnesses:
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