

(No Model.)

B. J. JONES.
RAIL BOND FOR ELECTRIC RAILWAYS.

No. 552,477.

Patented Dec. 31, 1895.

Fig. 2.

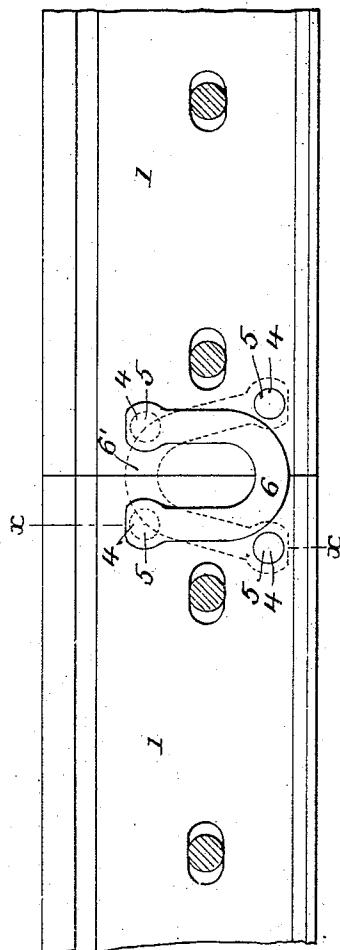


Fig. 3.

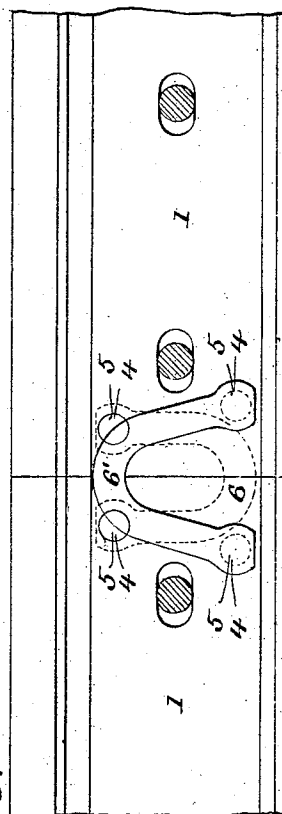
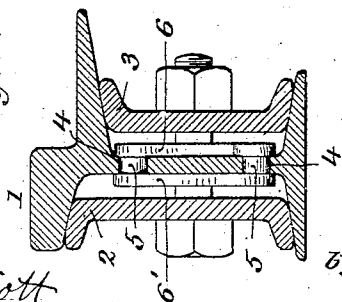


Fig. 1.



Attest.

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BUDD J. JONES, OF CHICAGO, ILLINOIS

RAIL-BOND FOR ELECTRIC RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 552,477, dated December 31, 1895.

Application filed March 20, 1895. Serial No. 648,721. (No model.)

To all whom it may concern:

Be it known that I, BUDD J. JONES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented a certain new and useful Improvement in Rail-Bonds for Electric Railways; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying
10 drawings, forming a part of this specification.

The present invention relates to that class of rail-bonds in which the adjacent ends of the rails are connected together by a connecting member of copper or other like metal, that
15 is riveted or otherwise secured to the respective ends of the rails, and the present improvement has for its object to provide a simple and compact bonding device for the rail ends, and which is of such lateral compact-
20 ness that it can be arranged between the fish-plate and the adjacent face of the rail-web, and within the space that is constantly left between the adjacent surfaces of the fish-plate and rail-web, and as so arranged is pro-
25 tected from any accidental or intentional damage in a very perfect manner, and to this end the present invention consists in the formation of such bond member with rivet-studs on its sides for passage through and riv-
30 eting within suitable orifices in the adjacent rail ends, and the additional formation of the body of such member of a flattened and looped nature, so as to be capable of flexure without affecting the attachment of the member to
35 the rails, as said rails shift or move independent of each other during continued use, all as will hereinafter more fully appear, and be more particularly pointed out in the claims. I attain such objects by the formation and
40 arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a transverse section at line *x x*, Fig. 2, of an ordinary street rail-joint to which my invention is applied; Fig. 2, a side elevation of the same with the fish-plate removed;
45 Fig. 3, a similar view of the opposite side of the same.

Similar numerals of reference indicate like parts in the several views.

50 Referring to the drawings, 1 represents a pair of adjacent rail ends, and 2 and 3 the or-

dinary fish-plates, by which such rail ends are jointed together.

In the present construction the rail ends are provided with the usual orifices 4, adapted
5 to receive the rivet-studs 5 on the respective ends or extremities of the body portion of the bond member 6, which in the present invention is of a thin and flattened shape in cross-
section, and has a looped U-shaped formation, 60 as shown in Figs. 2 and 3, so as to be capable of a ready spread along with the respective rail ends without affecting in the least the perfect electric connection between the respect-
ive rail ends, the extremities of the bond mem- 65 ber and the rivet-studs thereon.

The rivet-studs 5 may be secured in place by riveting to attain proper electrical contact between surfaces, and may also be brazed
70 or soldered therein if required.

With the usual electrical currents one bond member will usually be sufficient for each rail-joint. With large currents, however, I prefer to employ a pair of such bond members,
arranged at opposite sides of the webs of the 75 rails, and in a reversed position to each other, as shown. In this case the secondary bond member 6' will be spread apart more than the bond member 6, so that its rivet-studs 5 will be out of line with the body of the member 80 6, so as to admit of the riveting or other attaching operation.

In the application of the pair of bond members 6 and 6' to a rail-joint, the member 6 is first secured in place; and then the secondary 85 member 6', after which the fish-plates 2 and 3 are applied to complete the joint and cover and protect the present improved bond from accidental or intentional injury, and in order that the present bond may be employed, 90 in the manner described, it is very material that the flattened or plate formation of the bond member be used, so that the same may be fitted within the usual spaces, between the fish-plates and the rail-webs. 95

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

1. A rail bond for electric railways, comprising a loop shaped body portion of a thin 100 flattened formation in cross section, and rivet studs arranged to project laterally from the

respective ends of the body portion of the bond and adapted to fit orifices in the rail ends, and be secured therein; the construction being such that the loop shaped body portion will occupy a vertical plane, next to the rail web, and between the same, and the fish plate, substantially as herein described.

2. A rail bond for electric railways, comprising the rails 1, and fish plates 2, 3; in combination with a pair of looped U-shaped bond members 6 and 6', having lateral rivet studs 5 on their respective ends, the one bond member having a greater spread than the other

in order to bring the rivet studs thereof out of line with the other member, such bond members being arranged on opposite sides of the rail webs, and between the same and the fish plates, substantially as and for the purpose set forth.

In testimony whereof witness my hand this 25th day of March, 1895.

BUDD J. JONES.

In presence of—
ROBERT BURNS,
GEO. H. ARTHUR.