

No. 609,252.

Patented Aug. 16, 1898.

J. S. TUCKER.
ELECTRIC RAIL BOND.

(Application filed Jan. 20, 1897.)

(No Model.)

Fig. 1.

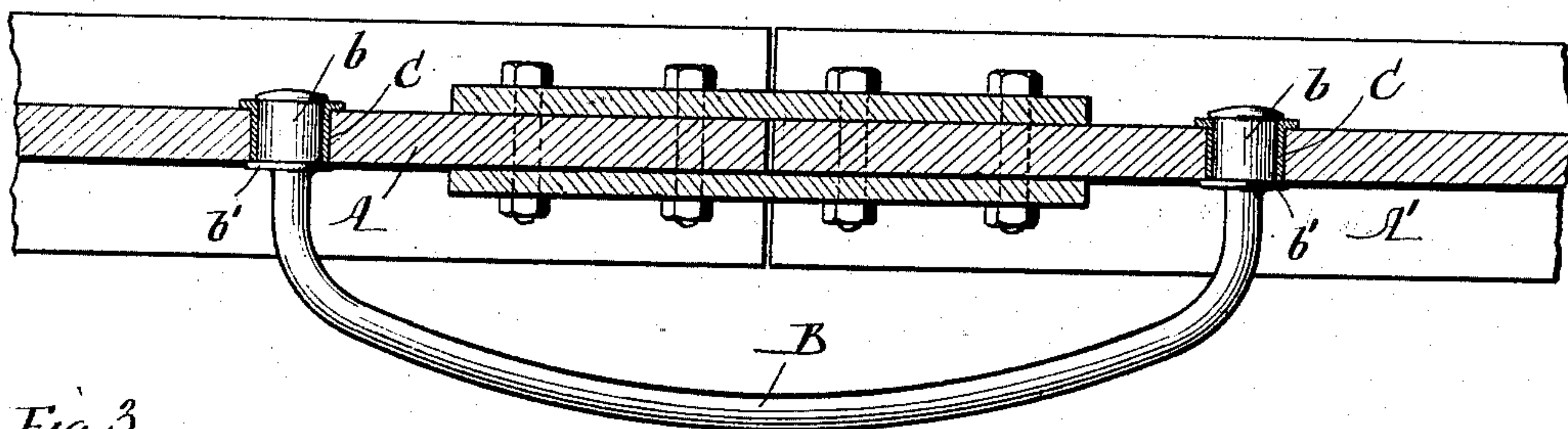
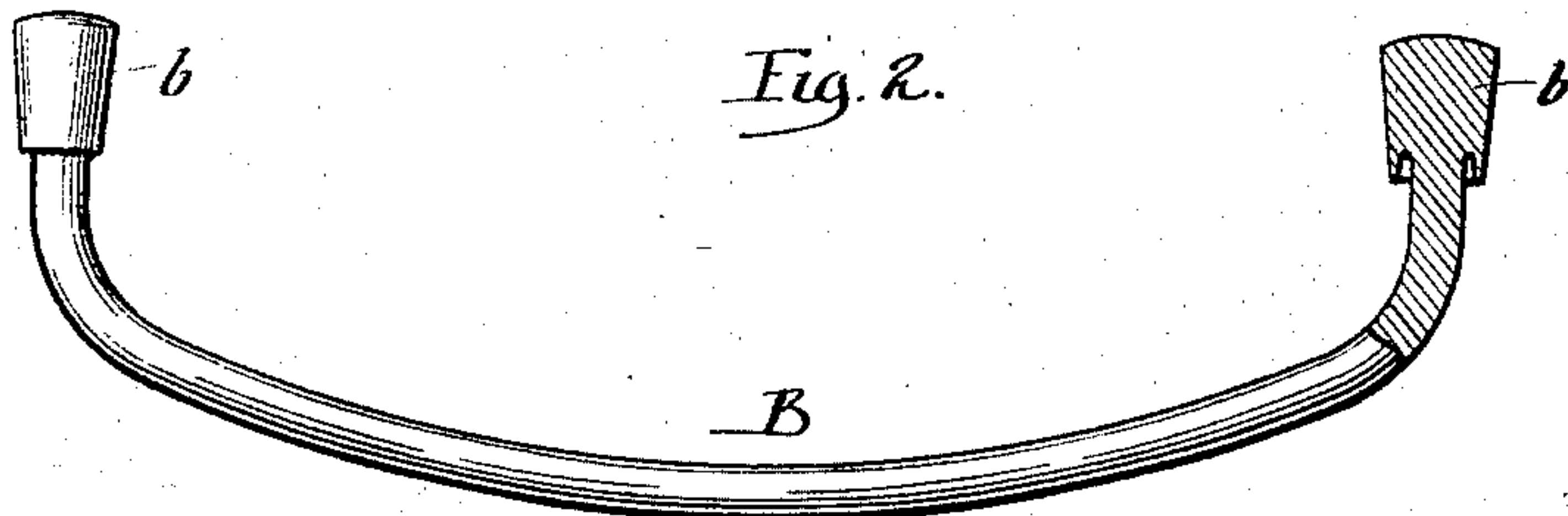


Fig. 3.



Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

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ELECTRIC RAIL-BOND.

SPECIFICATION forming part of Letters Patent No. 609,252, dated August 16, 1898.

Application filed January 20, 1897. Serial No. 619,939. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH S. TUCKER, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Electric Rail-Bonds, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

The present invention has for its object to provide an improved construction of rail-bond whereby the adjacent ends of the rails of electric railways may be connected together; and this object of invention is accomplished by the novel construction of rail-bond hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the claims at the end of this specification.

Figure 1 is a view in horizontal section of the adjacent portions of two railway-rails connected by my improved bond. Fig. 2 is a detail view of the bond seen in Fig. 1. Fig. 3 is a detail view of the sleeve or bushing for encircling one or both terminals of the bond.

A and A' designate the adjacent ends of two railway-rails, these rails being connected together by fish-plates in usual or suitable manner, as indicated clearly in Fig. 1 of the drawings. Each of the rails A and A' is formed with an opening therethrough to receive the terminal of my improved rail-bond, that consists of a body B, having expanded ends or terminals *b*. The body B of the bond is considerably smaller in cross-sectional area than the cross-sectional area of the terminals *b*, the usual proportion being as one to seven. By forming the bond with the enlarged terminals a large contact-surface is provided at the point of juncture between the bond-terminals and the web of each rail. The terminals *b* of the bond B are tapered or inclined, so that the terminals may be tightly wedged into the holes of the rails or into the bushings C, that encircle the terminals, and by preference the smaller end of each terminal is formed with a flange *b'*.

Preferably, although not necessarily, the bushings C are formed as split sleeves, one

end of each bushing being flanged to bear against the rail adjacent the hole therein. 50

In applying the bond illustrated in Figs. 1 and 2 of the drawings the enlarged terminals *b* will be passed through the holes of the rails and the split sleeves C will be slipped over the body of the bond and into the holes of the rails. The wedge-shaped terminals *b* of the bond will then be forced into the sleeves and by means of a suitable tool will be compressed lengthwise, and the ends of the terminals will be preferably upset or expanded, so as not only to cause the terminals to tightly wedge the sleeves within the holes of the rails, but also to secure the terminals of the sleeves against accidental displacement. 55

It will be understood, of course, that the bond B and its terminals and the bushings C are formed of copper or other suitable conducting metal and that the precise form and relative proportions of the bond and its terminals may be varied without departing from the spirit of the invention. 60

Instead of employing sleeves or bushings C for both terminals of the bond B the bushing or sleeve C may be used for one terminal only. In such case one terminal of the bond will be larger than the other, the smaller terminal being of such size as to pass through the hole of the rails. 65

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is— 80

1. A rail-bond comprising a conductor having its end portions provided with inwardly-tapering enlarged heads, said heads being provided at their inner or smaller ends with flanges. 85

2. A rail-bond comprising a conductor having its ends provided with enlarged tapered heads provided at their smaller ends with flanges, in combination with bushings adapted to encircle said heads. 90

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Witnesses:

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