

(No Model.)

B. L. TOQUET.
ELECTRICAL CONNECTOR.

No. 563,695.

Patented July 7, 1896.

FIG. 1

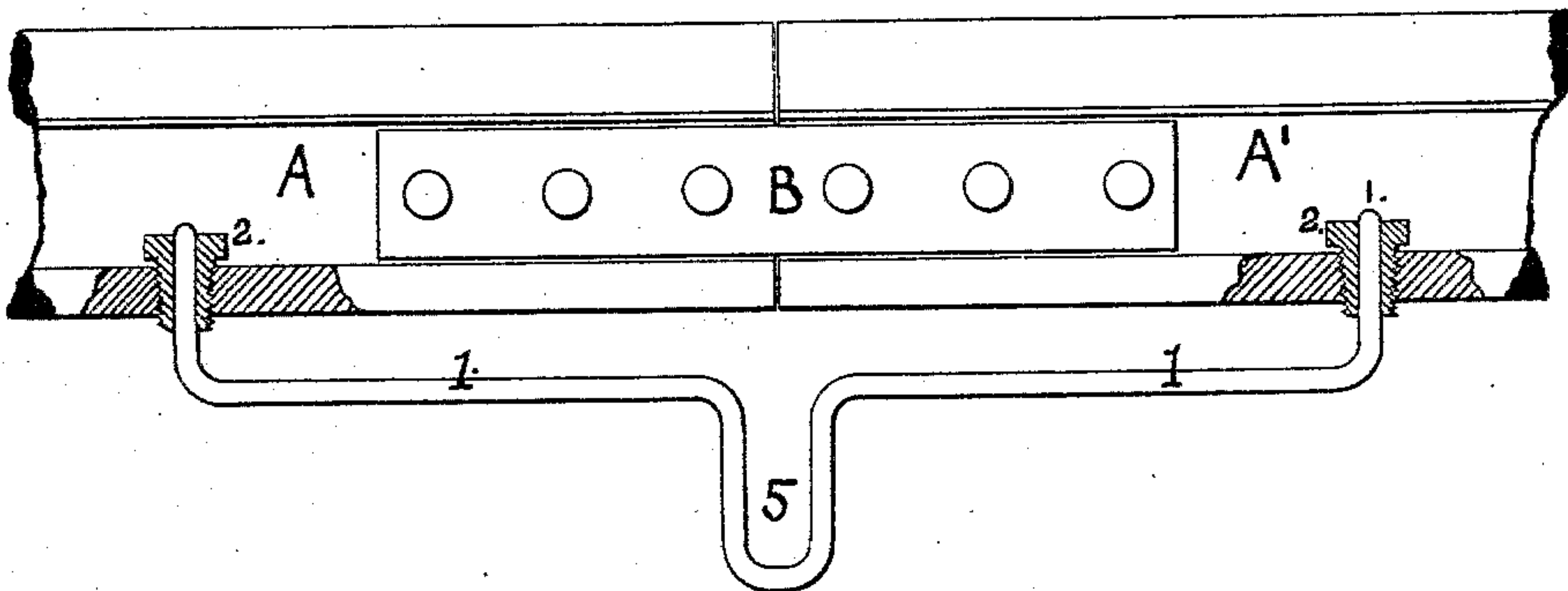


FIG. 2

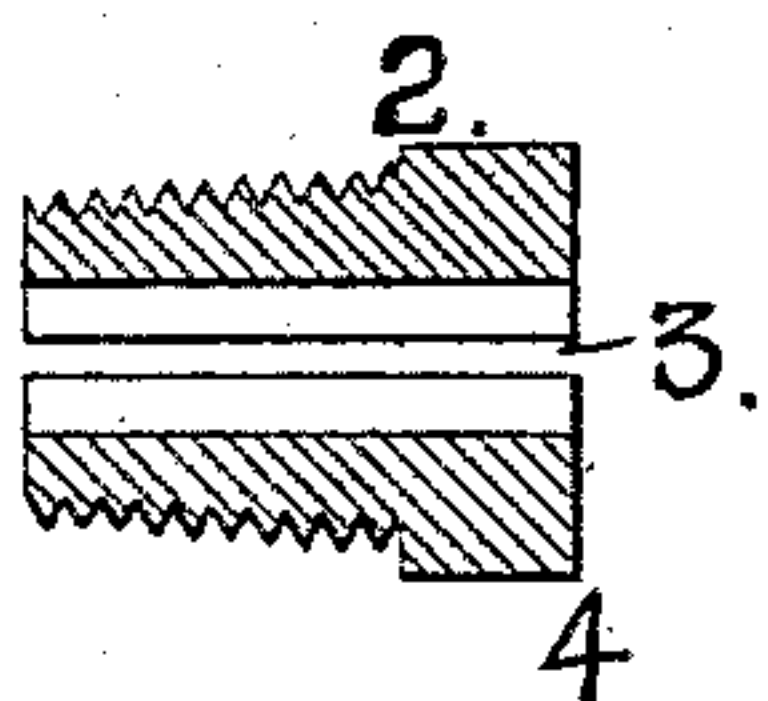
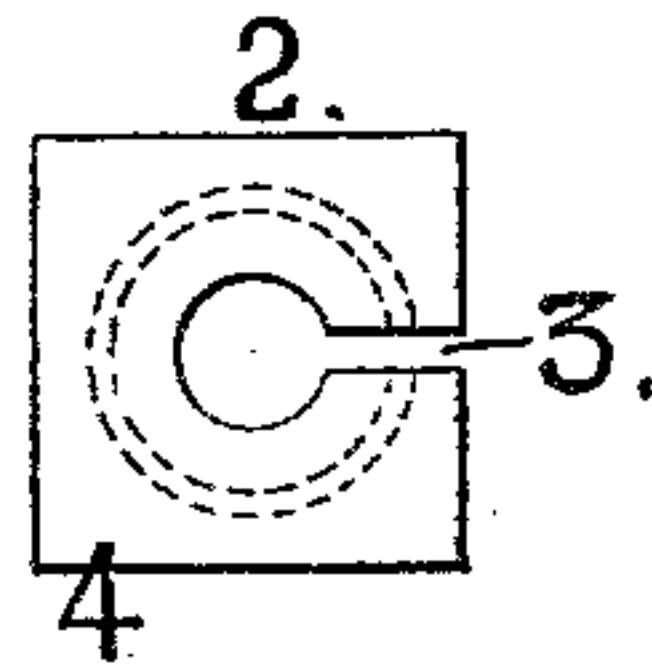


FIG. 3



WITNESSES:

Louis Menke
L. C. Connor

INVENTOR

Benjamin Louis Toquet
BY
Howson and Howson
his ATTORNEYS

UNITED STATES PATENT OFFICE.

BENJAMIN LOUIS TOQUET, OF WESTPORT, CONNECTICUT.

ELECTRICAL CONNECTOR.

SPECIFICATION forming part of Letters Patent No. 563,695, dated July 7, 1896.

Application filed May 13, 1896. Serial No. 591,417. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN LOUIS TOQUET, a citizen of the United States of America, and a resident of Westport, Fairfield county, State of Connecticut, have invented an Improved Electrical Connector, of which the following is a specification.

My invention relates to electric connectors, more especially such as are adapted for use as rail-bonds to electrically connect together sections of rails on electric railways; and the object of my invention is to provide the most simple, strong, and easily-applied connection of this character which will insure a perfect electrical contact between the connected parts by reason of the very act of making the mechanical joint.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, showing the application of my invention to a rail-bond. Fig. 2 is a sectional view, and Fig. 3 is an end view, of a simple form of my bushing whereby my invention is carried into effect.

While my electrical connector is applicable to various purposes, as, for instance, terminal connections, it is particularly applicable as a rail-bond to electrically connect together sections of railway-rails, and I have so illustrated it in the drawings, A and A' being the adjoining ends of rails mechanically connected together in any usual way by fish-plates B.

My electrical connection consists, essentially, of a copper or other suitable conductor 1 and a hollow bushing 2 to receive the conductor end, and with a tapering screw-thread on the outside and split at 3 and adapted to be screwed into a correspondingly-tapered threaded hole in the rail or other part to be connected. This threaded opening may be in the web or flange of the rail or other convenient part. In the drawings I have shown it as in the flange.

While I do not wish to restrict myself to any particular manner of splitting the bushing, the latter should remain in one piece, and I prefer to make a single split or slot 3 on one side of the bushing throughout its length, as shown. The bushing should be provided with a square or other polygonal form of head 4 for the application of a wrench or other tool by which it may be screwed home into the

threaded opening in the rail or other part to be connected.

In applying the described connection, the end of the conductor is placed in the central opening in the bushing, this opening being of the proper size to receive it, and the bushing is then screwed into the correspondingly-threaded hole which has been tapped into the rail or other part to receive it. The taper causes the split part of the bushing to clamp the wire firmly. Since during this screwing up of the bushing the internal conductor on the one hand and the external rail or other similar part on the other hand are both stationary, all the surfaces through which there is to be electrical connection are by the turning of the bushing caused to grind over each other with a combined twisting and crushing action, thus effectually cleaning themselves as they tighten and forming a perfect metallic contact. Again, as the split bushings are threaded into the rail or other fixed part itself, the bushings by their own elasticity create sufficient friction to prevent their unscrewing, and it is practically impossible for them to work loose. Further advantages of my invention are that the joint is made of the fewest possible number of parts, but one tool is needed to apply it, and it requires but little labor either to make or apply it.

In applying my invention to a rail-bond, in which the described joint is used at each end of the conductor 1, I prefer to form in the latter a U-shaped loop 5, which leaves the conductor free to be adjusted in any direction to fit the bent ends of the conductor to variously-located holes for the bushings, and also allows for expansion and contraction.

I am aware that bushings have been used before to connect conductors to rails, and that in one instance a tapered bushing has been used with a threaded end to receive a nut, but in such construction there could be no such perfect electrical connection gained as is necessarily insured in my simpler construction by the screwing of the bushing into the threaded opening in the rail and by that action rotating the bushing over the wire end as it grips the latter.

I claim as my invention—

1. An electrical connector consisting of a rail or other part to be connected having a

threaded opening, with a hollow split bush-
ing adapted to receive the conductor end and
having a tapering threaded exterior, to be
screwed into the said threaded opening, sub-
stantially as described.

5 2. A rail-bond consisting of a conductor
with hollow split bushings to receive the ends
of the conductor, said bushings having ta-
pering threaded exteriors and rails having

threaded openings to receive the bushings, so
substantially as described.

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

BENJAMIN LOUIS TOQUET.

Witnesses:

WM. EDGAR NASH,
NELLIE B. TOQUET.