(No Model.)

F. STITZEL & C. WEINEDEL.

ELECTRICAL CONNECTOR.

No. 385,215. Patented June 26, 1888.

Fig. 1.

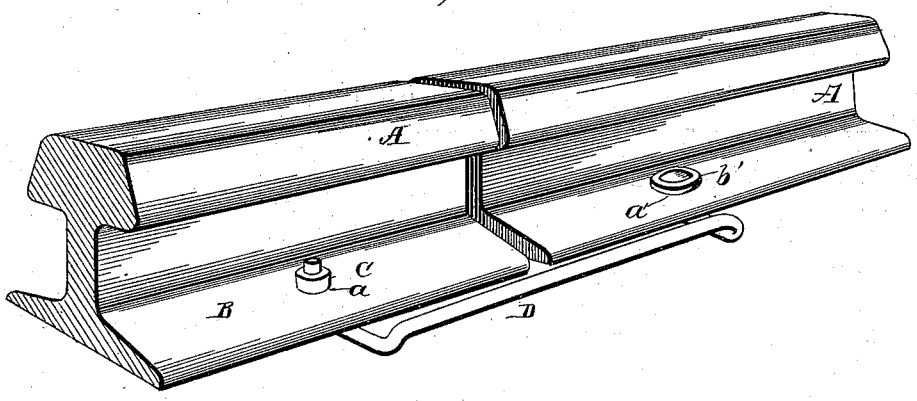


Fig. 2.

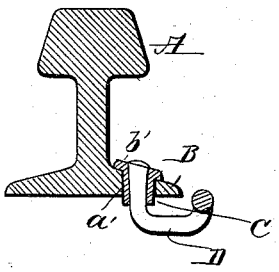
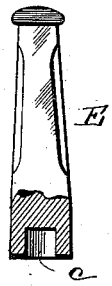


Fig. 3.



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UNITED STATES PATENT OFFICE.

FREDERICK STITZEL AND CHARLES WEINEDEL, OF LOUISVILLE, KENTUCKY, ASSIGNORS TO THE AMERICAN SEMAPHORE COMPANY, OF SAME PLACE.

ELECTRICAL CONNECTOR.

SPECIFICATION forming part of Letters Patent No. 385,215, dated June 26, 1888.

Application filed February 21, 1888. Serial No. 264,724. (No model.)

To all whom it may concern:

Be it known that we, FREDERICK STITZEL and CHARLES WEINEDEL, of Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Electric Connectors; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to an improvement in electrical connectors, and more particularly to such as are used in electrically connecting sections of a railroad-track.

The object of our present invention is to provide a simple and cheap means for insuring electrical connection between sections of railroad-rails.

A further object is to so construct the device that the wire which connects the two sections of the rail shall be secured tightly to the rail and insure perfect electrical connection between said sections.

With these objects in view our invention consists in certain novel features of construction and peculiar combinations and arrangements of parts, as will be hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of two sections of a railroad-rail having our improved connector applied thereto. Fig. 2 is a cross-section through a portion of the rail and the connecting device. Fig. 3 is a view of the tool used in securing the device to the rails.

A indicates an ordinary railroad-rail, and B the flange thereof. Perforations *a a'* are made through the base or flange B, preferably about one and a half feet at each side of the meeting-point of the rails, and may be conical or straight, as desired. Inserted into one of the perforations, *a*, of the flange is a conical collar or sleeve, C, of brass or other suitable material, a portion of which is allowed to project somewhat above the upper surface of the flange and extend below the bottom thereof. This collar may be made conical throughout its entire length, or only at one end thereof, as desired. A conducting-wire, D, (preferably of copper,) is passed through the collar or sleeve C from beneath the flange and allowed to project slightly above the collar, as shown at *a*, Fig. 1. A tool, E, having a recess, *c*, in one end, of a size to receive the protruding end of the wire D, is placed over said protruding end of the wire, so that that portion of the tool which surrounds the recess will bear upon the upper extremity of the collar. By striking the tool E with a hammer or similar implement the conical collar or sleeve C is forced farther through its perforation in the rail-flange and made to firmly bind the walls of said perforation and insure perfect contact therewith. This operation will also cause the collar or sleeve C to tightly hug or bind the wire passing through it, and not only prevent its accidental detachment, but make more positive and certain its electrical contact with said wire. The projecting portion of the collar and wire may now be struck with a suitable tool and flattened to produce a head, *b'*, as shown in Fig. 1, thus making the attachment of the wire to the rail still more certain. One end of the connecting-wire being secured to the rail-flange, as above explained, is preferably bent slightly outwardly therefrom and then parallel therewith until the perforation *a'* in the flange of the adjoining rail-section is reached, when it is bent under said flange and inserted through a collar, C, in this perforation and secured in the manner above set forth.

It is evident that the perforations in the rail-flange may be made conical and the collars C straight, so that when the collars are forced through the perforations they will adapt themselves to the shape of the perforations; or the perforations may be made straight and the collars conical; or, if desired, both collars and perforations may be made conical.

It is manifest that slight changes in the constructive details of our invention might be resorted to without limiting its scope; hence we do not wish to limit ourselves to the exact details of construction herein described; but,

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In an electrical connection, the combination, with two sections of railroad-rail, each of which is provided with a perforation, of col-

lars each having a central opening for the reception of one end of a wire and adapted to closely fit within the perforation in the track-section, and a wire passing through both collars and secured thereto, substantially as set forth.

2. In an electrical connector, the combination, with two sections of a railroad-rail, each of which is provided with a tapering opening, of the collars shaped externally to closely fit within said openings and a wire the ends of which are secured within openings formed in said collars, substantially as set forth.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

FREDERICK STITZEL.
CHARLES WEINEDEL.

Witnesses:
ALLAN S. BROWN,
GEO. V. LEBRE.