(No Model.)

G. A. TRUMBULL.

WIRE CONNECTOR.

No. 508,587. Patented Nov. 14, 1893.

FIG. 1.

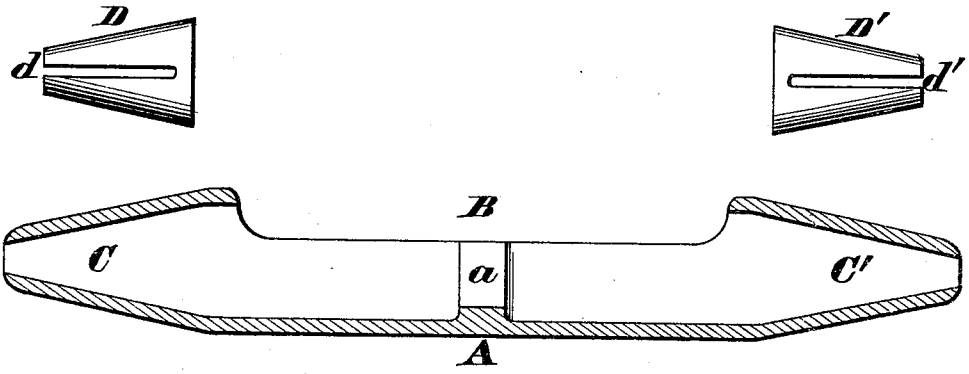


FIG. 2.

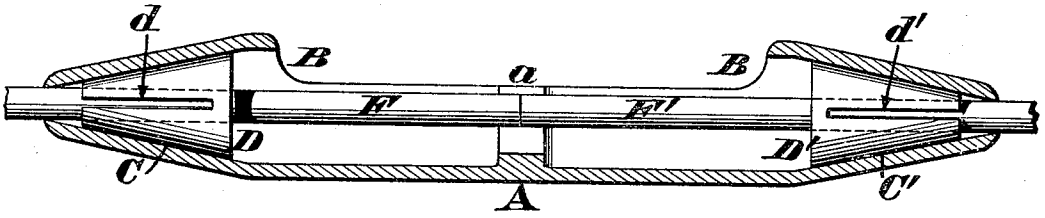


FIG. 3.

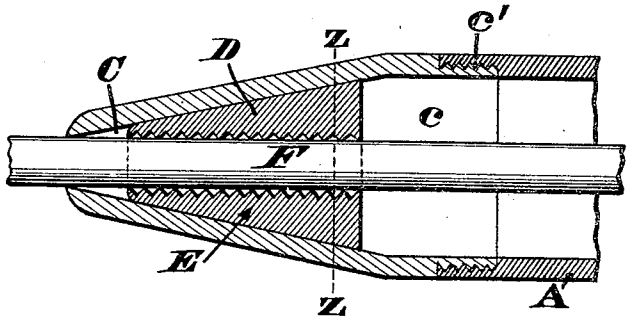
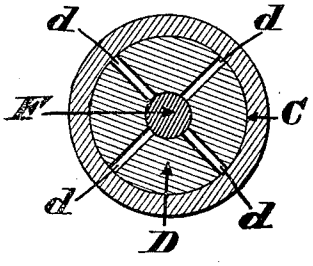


FIG. 4.



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WIRE-CONNECTOR.

SPECIFICATION forming part of Letters Patent No. 508,587, dated November 14, 1893.

Application filed July 18, 1893. Serial No. 480,821. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. TRUMBULL, a citizen of the United States, residing at Bellevue, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Wire-Connectors; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form part of this specification.

My invention comprises a wire-connector or coupling, which, in its preferred form, consists of but three parts that can be readily manufactured and very expeditiously applied; the principal member of the device being a metallic shell or tube with converging sockets at its ends. The other members of the connector are two tapering or conical sleeves, slotted longitudinally, to enable them to be compressed, and of a proper size to enable them to fit snugly within the converging shell-sockets. Consequently, when the ends of the wires are passed through these sleeves and the latter forced into their appropriate sockets, said sleeves are thereby compressed and grasp the wires very securely, which retention can be rendered still more effective by roughening or corrugating or screw-threading a sufficient portion of the bores of said clamping-devices, as hereinafter more fully described.

In the annexed drawings, Figure 1 represents the three members of my wire-connector detached from each other, the shell of the same being sectioned, and the sleeves shown in elevation. Fig. 2 is a longitudinal section of the complete device with two wires coupled thereto. Fig. 3 is an enlarged vertical section of a modification of my invention. Fig. 4 is a transverse section of the same taken at the line Z—Z.

The principal member of my connector is a tube or shell A, of metal or other conductor of electricity, and of such length and diameter as circumstances may suggest, a longitudinal slot B being provided in the upper side of said shell to permit the ready insertion therein of the compressible sleeves. *a* is a stop or shoulder at the midlength of this tube, for a purpose that will presently appear. Furthermore, the opposite ends of this shell converge at C, C′, which tapering portions constitute the "sockets" of the device.

D, D′, are the conical-sleeves, the central passages or bores of which are cylindrical and slightly larger in diameter than the wires to be attached to the coupling, while the exteriors of said sleeves slope at practically the same angles as the sockets C, C′. In order to render these sleeves somewhat compressible, they are provided with a number of longitudinal slots *d*, *d′*, four of such openings being seen in Fig. 4, although my invention is not limited in this respect. These slots extend from the smaller ends of the sleeves almost, but not quite, to the larger ends thereof, as it is not desirable to divide said sleeves into a number of independent, distinct sections or parts.

E, in Fig. 3, represents corrugations, or teeth, or screw threads in the bore of sleeve D, to afford a very secure hold on a wire, the bore of the other sleeve D′, being similarly roughened.

F, F′, are wires to be coupled together by the connector, which act is accomplished as follows: Shell A is held horizontally, and the sleeves D, D′, are inserted through the slot B, and their larger ends brought to bear against the abutment or stop *a*. The wires F, F′, are then passed through the open ends of the shell and caused to traverse the bores of the sleeves, which is readily done because said sleeves are now in their normal or expanded condition. The advancing ends of the wires are brought as near together as convenient, and then the sleeves are slid along said wires, in opposite directions and caused to enter their appropriate sockets C, C′, a slight tap being given to the larger ends of said sleeves. This simple precaution wedges the sleeves within the sockets, and thereby compresses said sleeves, the result being that the wires are immovably coupled to the connector, and incapable of being detached from it until said sleeves are intentionally driven back to the stop *a*. It is also evident that the weight of the wires exerts a constant pull against the sleeves, and draws them toward

the opposite ends of the shell, thus compressing said sleeves more and more, and causing them to grip the wires with a firmer hold.

In the modification of my invention, seen in Fig. 3, the converging socket C is part of a short tube *c*, screwed at *c'* to a shell A', thus rendering the socket piece detachable from the main member of the connector, and dispensing with the slot in the upper side of the same, the device shown in this illustration being, like the one previously described, especially useful for readily uniting the broken ends of service wires for electric roads, &c. Finally, in Fig. 3, the metal of sleeve D is shown unusually thick, for the purpose of rendering the slope of its sides more apparent, but in actual practice, said sleeve is comparatively thin and it tapers quite gradually.

I claim as my invention—

1. A connector for wires &c., consisting of a shell having converging sockets, in combination with a pair of compressible sleeves that enter said sockets, and grasp wires in the manner herein described, and for the purpose stated.

2. A connector for wires &c., consisting of the shell A, having a longitudinal slot B, and converging sockets C, C', in combination with a pair of conical sleeves D, D', slotted at *d*, *d'*, for the purpose described.

3. A connector for wires &c., consisting of the shell A, having the stop *a*, longitudinal slot B and converging sockets C, C', in combination with a pair of conical sleeves D, D', slotted at *d*, *d'*, and roughened or toothed at E, for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE A. TRUMBULL.

Witnesses:

JAMES H. LAYMAN,

NORMAN R. BRICE.