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R. A. HAISLIP ET AL

CONNECTOR FOR ELECTRICAL CONDUCTORS

Filed May 7, 1920

*Fig. 1*

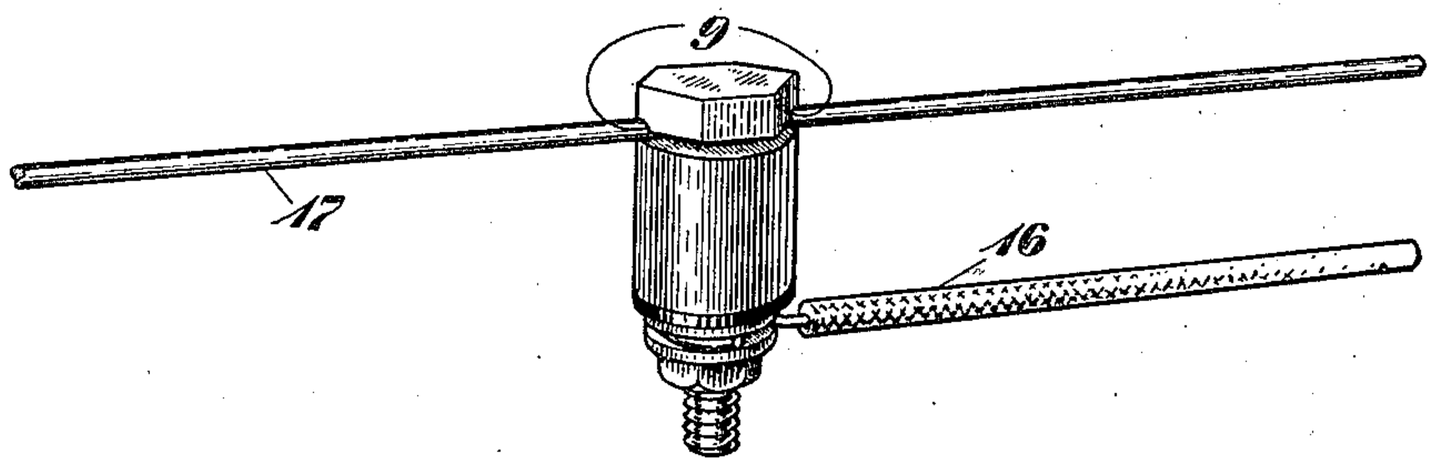
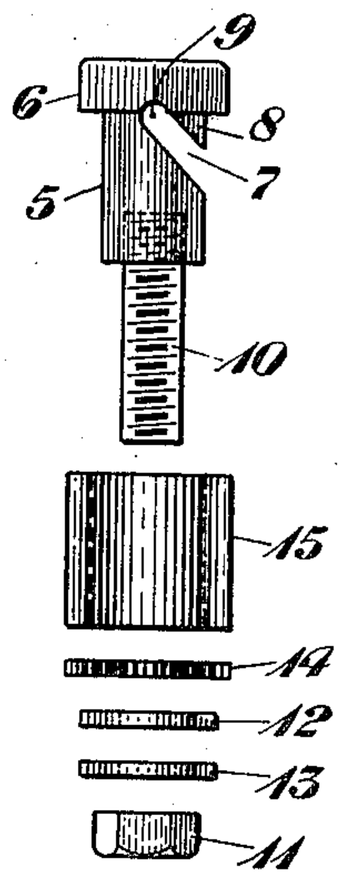



*Fig. 2*




INVENTORS

*R. A. Haislip and E. M. Matthews*

BY *J. E. York*

ATTORNEY

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# UNITED STATES PATENT OFFICE.

RICHARD A. HAISLIP, OF MONTCLAIR, NEW JERSEY, AND EDGAR M. MATTHEWS, OF JAMAICA, NEW YORK, ASSIGNORS TO AMERICAN TELEPHONE AND TELEGRAPH COMPANY, A CORPORATION OF NEW YORK.

## CONNECTOR FOR ELECTRICAL CONDUCTORS.

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*To all whom it may concern:*

Be it known that we, RICHARD A. HAISLIP and EDGAR M. MATTHEWS, residing at Montclair and Jamaica, in the counties of Essex and Queens and States of New Jersey and New York, respectively, have invented certain Improvements in Connectors for Electrical Conductors, of which the following is a specification.

This invention relates to connectors for attaching electrical conductors to each other, and more particularly to devices for bridging branch or drop wires to main line wires.

In the construction of telephone, telegraph or other electrical transmission lines, galvanized iron wires are frequently employed as main conductors therefor. At various points along the main conductors, connectors are attached to said lines for the purpose of bridging branch line conductors thereto. These branch conductors may be of galvanized iron or copper. When both main and branch conductors are composed of similar metals, no difficulty due to electrolytic action has been experienced between the conductors. When, however, said wires are composed of dissimilar metals, considerable trouble has been caused by electrolytic corrosion between the wires and connectors. Accordingly, one of the principal objects of this invention consists in the provision of a connector having dissimilar metal components with interposed means so related that electrolytic corrosion arising from the joining of wires of dissimilar metals will not cause serious deterioration of the electrical connections or mechanical properties of the connector or wires. Another object consists in providing a connector for clamping wires in electrical contact in an expeditious manner and without dissembling said connector. Other and further objects of the invention will hereinafter appear.

The invention will now be more fully understood when considered in connection with the accompanying drawing, in which Figure 1 is a perspective view of the improved connector shown as having a main conductor and a branch conductor attached thereto; and Fig. 2 is an exploded view of the elements of said connector.

Referring to the drawing, 5 is a cylindrical portion of a stud, preferably made of galvanized iron, provided with a head 6, shown in the present instance as of hexagonal form. A diagonal groove 7 is cut at one side of the cylindrical portion 5 and forms a hook-shaped jaw 8. The groove 7 terminates in a transverse slot 9 formed in the head 6, in which the main conductor may be seated. Suitably secured to the portion 5 is a threaded spindle 10, preferably composed of brass. Carried on the spindle 10 is a nut 11, and said spindle may have its end spun over to prevent the removal of the nut. The spindle also carries a pair of washers, 12 and 13, and an insulating washer 14. The washers 12 and 13 are preferably made of brass and the washer 14 of some such material as hard rubber or the like. Movable longitudinally on the portion 5 is a hollow cylindrical collar or bushing 15 which is controlled in its movement by the adjustment of nut 11. The collar or bushing 15 serves as a housing for the member 5 and spindle 10 at their connecting point and the washer 14 cooperates with said collar in affording protection from the elements, thereby alleviating corrosion between the dissimilar components of said connector. The washer 14 further retards corrosion by keeping said components in separated relation. When the nut is tightened, it serves to clamp the pair of washers 12 and 13 together, thereby securely retaining a drop or other branch conductor 16 therebetween. The tightening of said nut also forces one end of the collar against the lower portion of the head 6, thereby keeping the main conductor securely seated in the slot 9.

To attach the connector, the nut 11 is unscrewed on the spindle 10 and the sleeve and washers become loosened. The main conductor is then inserted in the groove 7, and the branch or drop conductor is inserted between the brass washers 12 and 13 and looped about the spindle 10. When the conductors are in position, the nut 11 is tightened and the conductors 16 and 17 are retained in place as previously outlined.

This compact and readily attachable or removable connector will provide means for connecting a main line conductor and a branch line conductor in a simple manner and will alleviate electrolytic corrosion between the parts of the connector and attached conductors, thus minimizing the breaking of the conductors at points where

the branch conductor is associated with the main conductor.

While the elements of this connector have been specified as being preferably composed of certain materials, it will be understood that other materials may be employed, and that this invention is adapted for use with wires of similar or dissimilar metals.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described and outlined invention will be apparent to those skilled in the art without further description and it will be understood that various changes in size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What is claimed is:

1. A coupling for connecting electrical conductors, comprising a main member of one kind of metal provided with a slot for receiving one of the conductors, a collar of the same kind of metal for clamping the conductor in said slot, a spindle of a dissimilar metal attached to the main member in conductive relation therewith, means associated with said spindle and adapted to cooperate therewith for providing a connection for a second conductor said means also being of dissimilar metal, means for holding said collar and last mentioned means in clamped position, and means interposed between said collar and said means for connecting the second conductor for alleviating electrolytic corrosion of the components of said coupling and said wires.

2. A coupling for connecting electrical conductors, comprising a main member having a head portion and a cylindrical portion of one kind of metal, a slot in said head portion for receiving one of the conductors, a collar of the same kind of metal movable longitudinally on said cylindrical portion for clamping the conductor in said slot, a spindle of a dissimilar metal attached to the cylindrical portion, means movable on said spindle and adapted to cooperate therewith for providing a connection for the second conductor, said means being also of dissimilar metal means movable on said spindle for holding said collar and last mentioned means in clamped position, and means on said spindle interposed between said collar and said means for connecting the second conductor for alleviating electrolytic corrosion of the components of said coupling and said wires.

In testimony whereof, we have signed our names to this specification this 5th day of May, 1920.

RICHARD A. HAISLIP.

EDGAR M. MATTHEWS.