

No. 738,545.

PATENTED SEPT. 8, 1903.

W. KAISLING.

CORD TIP.

APPLICATION FILED JUNE 6, 1902.

NO MODEL.

Fig. 1.

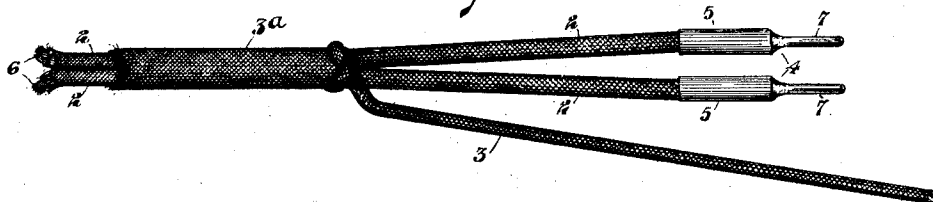


Fig. 2.

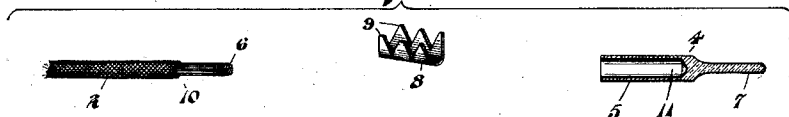


Fig. 3.

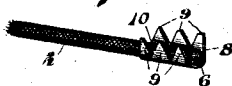
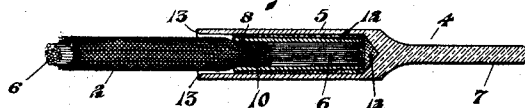


Fig. 4.



Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM KAISLING, OF CHICAGO, ILLINOIS, ASSIGNOR TO KELLOGG SWITCHBOARD AND SUPPLY COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CORD-TIP.

SPECIFICATION forming part of Letters Patent No. 738,545, dated September 8, 1903.

Application filed June 6, 1902. Serial No. 110,431. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM KAISLING, a citizen of the United States of America, and a resident of Chicago, county of Cook, and State of Illinois, have invented a certain new and useful Improvement in Cord-Tips, of which the following is a specification.

My invention relates to improvements in metallic tips for electric conductors, said tips being adapted more particularly for cloth-covered conductors intended for use with telephone-receivers and known as "receiver-cords," although said tips may be used in any desired relation.

The object of my invention is to provide a device of the kind described that is simple, convenient, and durable, that will effectually secure the end of the cloth covering of the conductor in place and within the sleeve of the tip and not cause undue wear upon the covering at the end of the tip-sleeve, that will not become loosened from the end of the conductor in the use of the device, and that will be convenient and inexpensive to manufacture.

In the accompanying drawings, which illustrate the invention, and in which the same reference characters are used throughout the several views for like parts, Figure 1 is a general view of the receiver-cord provided with my improved tips. Fig. 2 is a view showing the detached parts of the tip and the end of the conductor. Fig. 3 is a perspective view showing the clamping-clip in position, but before being clamped upon the end of the conductor. Fig. 4 shows the same after being clamped in position, and Fig. 5 is a longitudinal section showing the device upon an enlarged scale and secured in place.

The receiver-cord consists, as usual, of a pair of cloth-covered conductors 2 2, with a supporting-cord 3, formed from the reduced end of the inclosing sheath 3^a. The conductors or cords 2 2 are provided with metallic tips 4, each having the sleeve portion 5 adapted to be slipped over and to envelop the end of the conductor 2 and to be electrically connected with the plurality of fine wires 6, constituting the metallic core of the conductor.

The pin 7 of the tip 4 is formed integrally with the sleeve 5 and is reduced in diameter to enable it to enter the usual aperture in a common binding-post or other device with which the tip and cord are employed.

Fig. 2 shows the several parts of the device more in detail. The end 6 of the strand of fine wires is stripped of the cloth or other insulating or protecting covering for a short distance—that is, the cloth covering is cut away or otherwise removed—and the clamping-clip 8, consisting of a stamping of thin sheet metal tinned and having V-shaped notched interengaging edges, as shown, and formed into U shape, is placed upon the end of the conductor, as shown in Fig. 3, with the inner end thereof overlapping the forward end 10 of the cloth covering. The clip is then clamped tightly about the end of the conductor, as shown in Fig. 4, the notched and interengaging edges 9 of the clip being pressed together, as shown in said figure. This clip is clamped tightly in position, so that the bare ends of the wires are firmly gripped, as well as the end 10 of the cloth covering. The covering is thus prevented from slipping away from the end, and the fine wires are firmly clamped together. The V-shaped notches in the opposite edges of the clip insure the said edges coming squarely together edge to edge and without overlapping when being clamped in place. This clamping is preferably accomplished in a suitable press arranged for the purpose. When the end of the conductor has been so prepared, a drop of molten solder is placed within the bore 11 of the sleeve of the tip, and the end of the conductor is inserted therein. The solder (indicated by 12 in Fig. 5) will then serve to fill in at and about the end of the conductor and clip and about the sides of the clip, as shown in Fig. 5, and will serve to mechanically and electrically connect the tip with the cord. The bore of the sleeve is preferably slightly larger than the conductor, as shown in Fig. 5, and may be reamed out slightly at its outer end 13, so that the end of the tip-sleeve will not abrade the covering of the conductor. The amount of the solder placed

in the sleeve is preferably limited, so that it will not flow above or beyond the end of the clamping-clip 8, as shown in Fig. 5.

While the invention has been described with particular reference to the details of construction, it is apparent that various modifications may be made without departing from the principle thereof and I therefore do not wish to be limited to the precise embodiment herein shown; but,

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

1. The combination with a conductor having an insulating-covering stripped for a short distance back from the end thereof, of a sheet-metal clip clamped around the bared end of the conductor and overlapping the covering so as to bind it in position upon the conductor, and a metallic tip having a hollow sleeve to receive a small amount of solder into which the end of said conductor with the clip is inserted, whereby the said parts are all soldered together and electrically and mechanically connected, substantially as described.

2. The combination with a conductor having an insulating-covering stripped from the end thereof a short distance, a sheet-metal clip clamped about the same and having interengaging notches in its opposed meeting edges, said clip overlapping the end of the covering to bind it in place, a tip having a hollow sleeve slipped over said end of the conductor and the clip and soldered thereto, substantially as described.

3. The combination with a conductor having an insulating-covering, the bare conductor projecting beyond the end of the covering a short distance, of a sheet-metal clip clamped about the ends of the conductor and overlapping the covering so as to prevent it from slipping back upon the conductor, the opposed meeting edges of said clip being provided with interengaging V-shaped notches, and a metallic tip having a hollow sleeve slipped over the end of the conductor and the clip and soldered thereto, substantially as described.

4. The combination with a conductor having an insulated covering, of a sheet-metal clip clamped around the conductor and overlapping the covering to bind it in position, a rigid metallic tip provided with a hollow sleeve slipped over the end of the conductor and soldered thereto and with a pin formed integral with said sleeve and of reduced diameter to enable it to be readily connected to a suitable binding-post or other part, substantially as described.

5. The combination with an insulated conductor in which the covering is stripped from the extreme end of the wire, of a sheet-metal clip clamped around the end of the conductor, said clip being arranged to overlap the end

of the covering to grip the same and hold it in position when the clip is clamped in place, and a tip having a hollow sleeve placed over the end of the conductor and clip and soldered thereto, the inner edge of the sleeve-opening being rounded to prevent abrasion of the covering, substantially as described.

6. In a cord-terminal, the combination with a conductor consisting of a plurality of fine wires, of a sheet-metal clip clamped about the end of the conductor to bind said wires together, and a tip having a hollow sleeve slipped over the said clip and soldered thereto, said tip having also a portion adapted to be secured in the aperture of a suitable binding-post, substantially as described.

7. The combination with a flexible conductor consisting of a plurality of fine wires and having an insulating-covering, of a sheet-metal clip clamped about the bared end of the conductor to bind said fine wires together, said clip also overlapping the insulating-covering and serving to clamp the same in place to prevent its slipping back upon the conductor, a tip having a hollow sleeve into which the said conductor end and clip are inserted, and solder within the sleeve to electrically and mechanically connect the parts together, substantially as described.

8. In a cord-tip, the combination with a flexible conductor having an insulating-covering, of means to bind the covering in place upon the bared end of the conductor to prevent its slipping back, and a rigid tip having a hollow sleeve and a pin of reduced diameter formed integral with the sleeve, said sleeve being slipped over the said end of the conductor and soldered thereto and the said pin forming a ready means for connecting the conductor in the electric circuit, substantially as described.

9. The combination with a conductor having an insulated covering, of a sheet-metal clip clamped about the bared end of the conductor and overlapping the cloth covering to bind the same in place to prevent its slipping back, a tip having a hollow sleeve fitting over the clip and conductor end, solder within the sleeve to mechanically and electrically connect the said parts together, the inner edge of the sleeve being rounded to prevent abrasion of the covering of the conductor, the tip having a pin of reduced diameter formed integral with the sleeve and serving to permit the tip to be readily connected with a binding-post or other object, substantially as described.

Signed by me at Chicago, county of Cook, State of Illinois, this 16th day of May, 1902.

WILLIAM KAISLING.

Witnesses:

WILLIAM W. DEAN,
ROBERT LEWIS AMES.