

L. KELLNER.
CABLE TIP.
APPLICATION FILED NOV. 11, 1907.

902,235.

Patented Oct. 27, 1908.

Fig. 1.

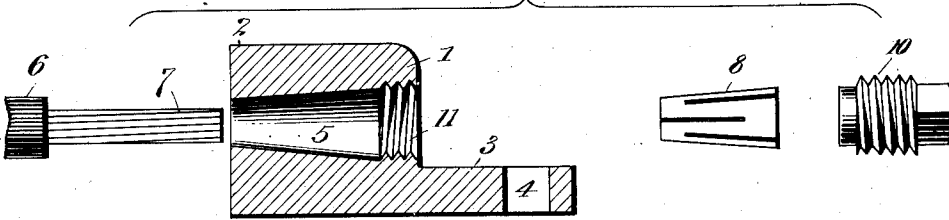


Fig. 2.

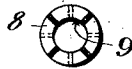
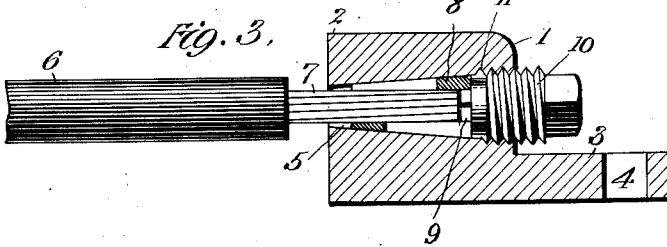


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

LOUIS KELLNER, OF NEW YORK, N. Y., ASSIGNOR TO METROPOLITAN SWITCHBOARD CO.,
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CABLE-TIP.

No. 902,235.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LOUIS KELLNER, a citizen of New York, in the borough of Brooklyn and State of New York, have invented certain new and useful Improvements in Cable-Tips, of which the following is a full, clear, and exact description.

My invention relates to a form of terminal fastening or connection for electric cables, particularly for cables of large current carrying capacity at switchboards, electric generators, bus bars and distribution centers, although the invention is not limited to these uses.

In ordinary practice cables are made stranded, and it is evident that an efficient terminal connection or cable tip must engage the largest possible number of strands, and with a high degree of pressure in order to obtain a conducting efficiency proportional to the rest of the circuit. Of course an efficient electrical connection can always be made by solder, but this renders the fastening absolutely permanent, which is frequently disadvantageous, and is a matter of considerable trouble and expense in any case.

It is the purpose of my present invention to provide a terminal connection or cable tip which is readily detachable or capable of disconnection whenever desired, and which secures an efficiency of both mechanical and electrical connection adequate to all purposes for any particular cable or conductor.

With these objects in view the invention consists in the features of construction and combination as hereinafter set forth and claimed.

In the drawings: Figure 1 is a sectional view of an electric cable and terminal connection therefor embodying the principles of my invention; the parts are shown detached or separated from one another; Fig. 2 is an end view of one of the parts; Fig. 3 is a sectional view of the device assembled in operative condition upon an electric conductor.

The essential principle employed in all cases with the present invention depends upon the contracting property of a slotted or split tapered sleeve when impelled endwise in a suitably shaped recess of the supporting body or member. The force of such contraction is a function of the degree of taper of the opening or recess, and it is evident that this may be made any value suited to par-

ticular needs. This wedging action may be still further multiplied to any extent by a screw threaded part or element cooperating with the conical sleeve to force it endwise.

Referring to the drawings in which like parts are designated by the same reference sign, 1 indicates a block or member forming the main body of the terminal or cable tip. This part may be of any desired form or outline, but is most conveniently made as shown with a rounded portion 2, to receive the cable or conductor, and a flat extended or otherwise formed part 3, which may be drilled with one or more holes or openings 4, to receive any desired fastening bolts or devices, or clamped in any other desired manner.

5 denotes the conical recess or cavity within the block or member 1, and having its contracted or reduced end toward the side or direction at which the cable or conductor enters. The cable or conductor is shown at 6, and has a bared portion 7, extending backward from its end for a certain distance. The diameter of the metallic or conducting portion 7 is somewhat less than the smallest diameter of the conical recess 5.

8 designates a split or slotted sleeve or bushing having an internal opening 9, corresponding to the diameter of the conductor 7, and having an exterior tapered or conical outline exactly corresponding to that of the recess 5. I have illustrated the sleeve or bushing 8 alternately slotted inward from its respective ends, the slots extending through two-thirds or three-quarters or more of the entire length of the sleeve, so that they overlap at the middle thereof, as clearly illustrated in the drawing. The sleeve may, however, be made in entirely separate sectors or sections.

10 designates a threaded plug or screw adapted to be received in the correspondingly threaded opening 11 of the block 1 at the large end of the conical recess 5 therein.

The parts are assembled in the manner particularly shown in Fig. 3. The split sleeve 8 is fitted into the recess 5, and the screw or plug 10 is then screwed into place so as to abut against the large end of the split sleeve. Until pressure is applied, the split sleeve lies toward the large end of this containing recess, and is expanded to the full limit of its resiliency. In this condition it is capable of loosely receiving the bared end 7 of the cable or conductor. The cable or con-

ductor being inserted, it is merely necessary to tighten the screw or plug 10 upon the large end of the sleeve 8, by which the sleeve is forced toward the reduced end of its containing recess and correspondingly contracted upon the conductor. The contraction is evidently inward from all sides or directions, so that the strands of the conductor are uniformly bound or engaged at all points. The power of the engagement is very great by virtue of the double mechanical advantage of the screw and wedge, as already mentioned.

What I claim, is:

1. A cable tip comprising a block having a flattened extension at one end and having a tapering hole extending inward and increasing in diameter from the other end, said hole extending clear through the block out of alignment with said flattened extremity, and threaded at its end adjacent to said flattened extremity, a split conical sleeve within

said tapered hole, and a screw-plug engaging said sleeve to force the same inward toward the reduced end of said tapered hole.

2. A cable tip comprising a block having a flattened extension at one end and having a tapered hole extending inward and increasing in diameter from the other end, said hole extending clear through the block out of alignment with said flattened extremity, and threaded at its end adjacent to said flattened extremity, a conical sleeve having slots extending alternately inward from its respective ends and inclosed within said tapered hole, and a screw plug engaging said sleeve to force the same inward toward the reduced end of said tapered hole.

In witness whereof, I subscribe my signature, in the presence of two witnesses.

LOUIS KELLNER.

Witnesses:

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PATRICK J. SHELLEY.