

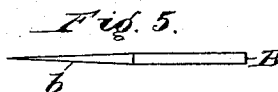
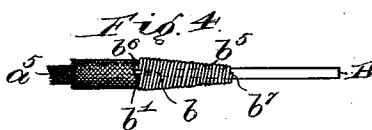
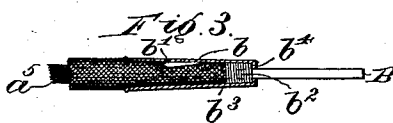
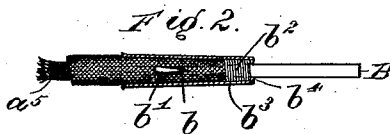
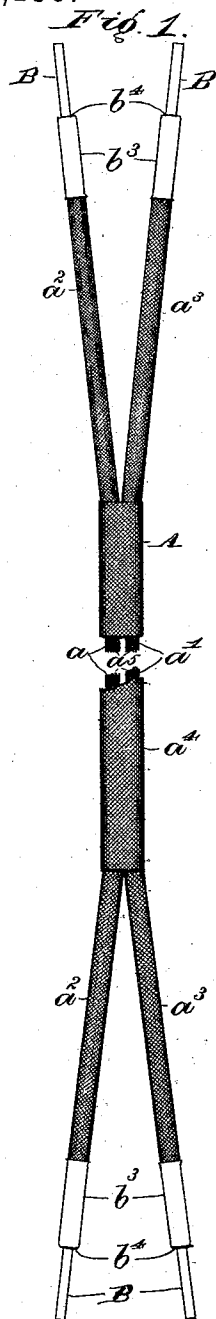
(No Model.)

C. H. McEVoy.

TIP FOR FLEXIBLE ELECTRIC CONDUCTORS.

No. 536,153.

Patented Mar. 19, 1895.



WITNESSES.

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TIP FOR FLEXIBLE ELECTRIC CONDUCTORS.

SPECIFICATION forming part of Letters Patent No. 536,153, dated March 19, 1895.

Application filed February 4, 1895. Serial No. 537,200. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. McEVOY, a citizen of the United States, residing at Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a certain new and useful Improvement in Tips for Flexible Electric Conductors, of which the following is a specification.

My invention relates to tips for flexible electric conductors, and consists in the devices and combinations hereinafter described and claimed. Such electric conductors are commonly provided with cores of tinsel-covered threads but may have spiral wire cores and the cores are covered with flexible braided coverings of textile material.

The object to be attained is to make a tip which is permanently secured to both the covering and the core in such a manner as in use to be inseparable from both or either without a rupture of the parts, in order that the covering may not fail to cover the core on the one hand and on the other hand that the tip may not be drawn out of electrical contact with the core by the stretching of the covering.

In the accompanying drawings, Figure 1 is a plan of a flexible conducting cord comprising two electric conductors, each provided with my improved tips, the non-conducting coverings of the cord and conductors being removed near the middle, to show the cores and the cores being broken apart; Fig. 2, a plan and Fig. 3, a side elevation of the end portion of a conductor provided with a tip, the shell of the tip in each figure, being in central section, to show the hook on the needle or wire portion of the tip; Fig. 4, a plan of a modified form of the shell of the tip and the adjacent portion of the conductors; Fig. 5, a plan of the needle or wire of the tip.

The electric conducting cord A consists of two flexible cores a a' , each having its separate tubular braided covering a^2 a^3 , the two conductors with their coverings being in practice inclosed for the greater portion of their length in a common tubular braided covering a^4 , leaving the end-portions of both of said conductors free, in a well known manner. The cores a a' are represented as consisting of tinsel-covered threads a^5 of textile material and these are usually braided into a tubular form, as shown in Fig. 2, in order that all

the threads of the core may be in electrical connection with each other.

I use a tip-wire or needle B which is first provided with a long conical point b , as shown in Fig. 5, to enable said point to be readily inserted in the tubular core a or a' for a considerable distance and then thrust through said core and its non-conducting covering, said core and covering being bent aside at the point b for that purpose and the projecting part of said point b is then bent into a hook b' , as shown in Figs. 2, 3, and 4, binding the core and covering firmly together and insuring a perfect contact between the core and needle. The outer ends of the covering and core are preferably wound, as with thread, at b^2 (Figs. 2 and 3) to enable them together to be easily introduced into the shell b^3 , which is a hollow cylinder of sheet metal, having a reduced or nearly closed outer end b^4 which fits the needle B. The outer end of the shell b^3 may be secured to the needle by a drop of solder or by being pinched into said needle or by other usual means. The shell prevents the fraying out of the covering and core, and has been heretofore used, is well known and is not of my invention.

Instead of the shell b^3 , the outer end of the cord may be covered by a close wound spiral b^5 of metallic wire, one end b^6 of which is placed in the hook b' , the wire being then wound over said hook, covering and core to the needle where the latter leaves said covering and the outer end b^7 of said spiral b^5 may be soldered to the needle B.

The covering may be turned back and the needle soldered to the core before the shell b^3 or spiral b^5 is applied, but this will not usually be necessary if the needle is passed through the core at a sufficient distance from the end of said core.

Obviously the tip may be applied as above described where the core is a spiral wire.

I claim as my invention—

1. A flexible electric conductor, comprising a conducting core, a non-conducting covering and a conducting needle, connected to said core and having a hook which passes through said covering, to retain said covering on said core, as and for the purpose specified.

2. A flexible electric conductor, comprising a tubular conducting core, a non-conducting

covering and a conducting needle, having a
tapering end arranged within said core and
projecting outwardly through the wall of said
core and covering and hooked on the outside
5 of said covering, as and for the purpose speci-
fied.

In witness whereof I have signed this speci-

fication, in the presence of two attesting wit-
nesses, this 30th day of January, A. D. 1895.

CHARLES H. McEVOY.

Witnesses:

ALBERT M. MOORE,
JOSEPH W. PIPER.