No. 757,192.

PATENTED APR. 12, 1904.

S. C. HOUGHTON.

TIP OR TERMINAL FOR ELECTRIC WIRES.

APPLICATION FILED DEC. 30, 1903.

NO MODEL.

Fig. 1.

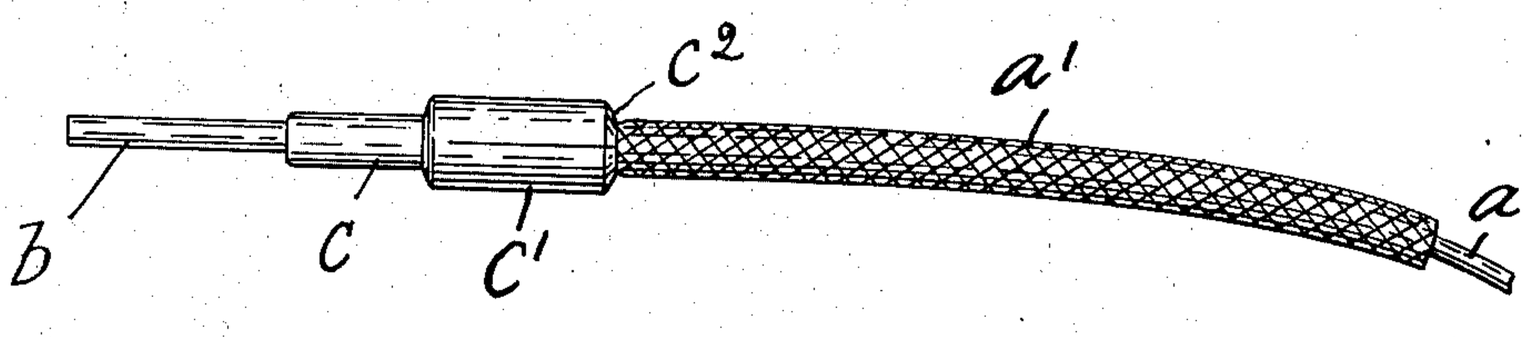
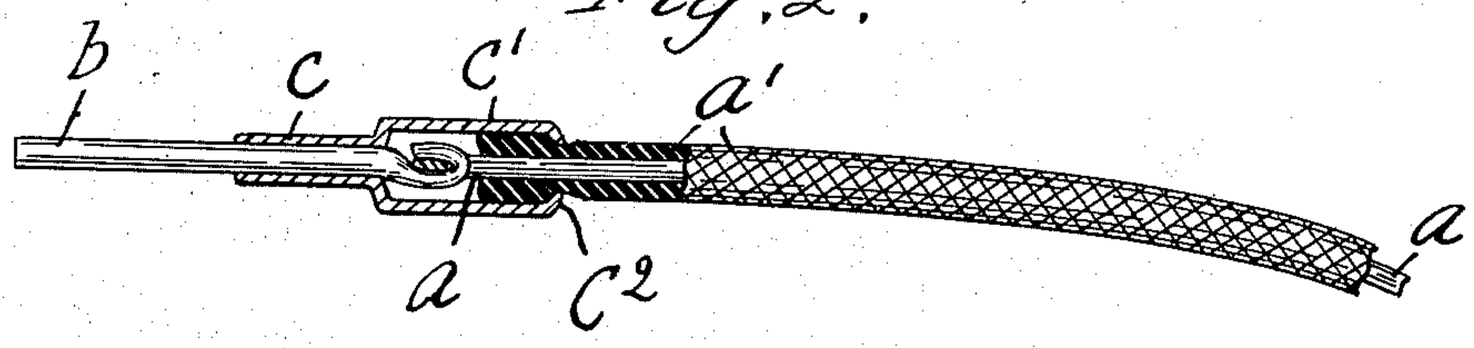


Fig. 2.



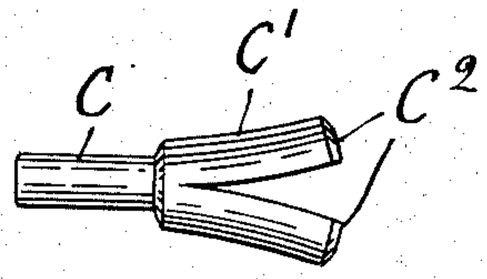


Fig. 3.

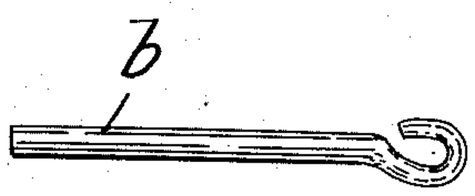


Fig. 4.

Witnesses
H. B. Davis.
Maud M. Piper

Inventor:
Stephen C. Houghton
by Howson & Hamman
Attys

No. 757,192. Patented April 12, 1904.

UNITED STATES PATENT OFFICE.

STEPHEN C. HOUGHTON, OF SAN FRANCISCO, CALIFORNIA.

TIP OR TERMINAL FOR ELECTRIC WIRES.

SPECIFICATION forming part of Letters Patent No. 757,192, dated April 12, 1904.

Application filed December 30, 1903. Serial No. 187,168. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN C. HOUGHTON, of San Francisco, county of San Francisco, State of California, have invented an Improvement in Tips or Terminals for Electric Wires, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention has for its object to improve the construction of tips or terminals for electric wires, being especially applicable to covered wires and adapted to be applied by a workman or lineman with a pair of pliers, if necessary, and a good and efficient electrical connection produced.

The invention consists, essentially, in a pin having a clamp at one end adapted to engage the wire and a short tube through which said pin is projected having a split ferrule designed to receive the clamped end of the wire and the end of the wire-covering, the parts of said ferrule being closed upon the wire-covering to engage it, and thereby entirely conceal the clamped end of the wire and the end of the wire-covering.

Figure 1 shows in side elevation a tip or terminal for electric wires embodying this invention. Fig. 2 is a longitudinal vertical section of the tip or terminal in position on the wire. Fig. 3 is a detail of the tube through which the pin is projected having a split ferrule, the parts thereof being shown separated, as they will be before applied to the wire. Fig. 4 is a detail of a pin having a clamp at the end adapted to engage the wire.

a represents the wire, and *a'* the covering thereof, both of which may be of any well-known or suitable description.

b represents a pin, one end of which has a clamp for engaging the wire *a*. As herein shown, the clamp is formed by flattening the end of the pin and overturning the flattened portion, and the wire will be passed beneath said overturned portion and firmly engaged by compressing the flattened end portion. A good and efficient electrical connection is thus produced.

c represents a short tube through which the pin is projected, and on one end of said tube a split ferrule *c'* is formed or provided, the parts of which are separated before applied to the wire-covering. The outer end of the split ferrule has an inwardly-extended flange c^2 to better engage the wire-covering when applied thereto.

After the pin has been connected to the wire it is projected through the tube *c*, and the clamp which engages the wire is drawn into the ferrule and the end of the wire-covering is also drawn into the ferrule. Then the parts of said ferrule are pressed together to thereby firmly engage the wire-covering and entirely conceal the clamped end of the wire and also the end of the wire-covering.

The tube and ferrule are preferably made integral, the diameter of the ferrule being greater than that of the tube.

This tip may be applied by a pair of pliers, if desired, and no solder is required.

The pin *b* may be made quite long and pliable, so as to be easily bent, if desired.

The completed tip or terminal presents three cylindrical portions of different diameters, either of which may be engaged.

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

1. A tip or terminal for electric wires consisting of a pin having a wire-engaging clamp at one end thereof, and a tube through which said pin is projected having a split ferrule, substantially as described.

2. A tip or terminal for electric wires consisting of a pin having a wire-engaging clamp at one end thereof, and a tube through which said pin is projected having a split ferrule provided with an inwardly-extended flange, substantially as described.

3. A tip or terminal for electric wires consisting of a pin having a flattened overturned end for engaging the wire, and a tube through which said pin is projected having a split ferrule which incloses the end of the pin and engages the wire-covering, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

STEPHEN C. HOUGHTON.

Witnesses:
B. J. NOYES,
H. B. DAVIS.