(No Model.)

C. McINTIRE, Dec'd.

C. H McINTIRE, Administrator.

ELECTRIC CONNECTOR.

No. 422,058. Patented Feb. 25, 1890.

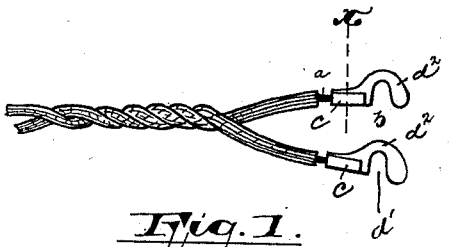

Fig. 1.

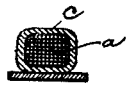

Fig. 2.

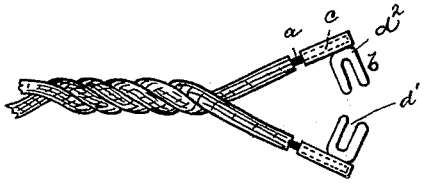

Fig. 3.

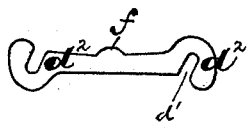

Fig. 4.

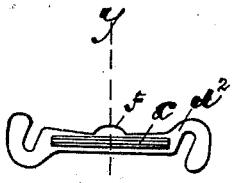

Fig. 5.

Fig. 6.

WITNESSES:

E. L. Sherman

Alfred Gartner

INVENTOR:

Charles Mc. Intire,

BY Dewey & Co ATTY'S.

UNITED STATES PATENT OFFICE.

CHARLES McINTIRE, OF NEWARK, NEW JERSEY; CHARLES H. McINTIRE ADMINISTRATOR OF SAID CHARLES McINTIRE, DECEASED.

ELECTRIC CONNECTOR.

SPECIFICATION forming part of Letters Patent No. 422,058, dated February 25, 1890.

Application filed February 27, 1889. Serial No. 301,333. (No model.)

To all whom it may concern:

Be it known that I, CHARLES McINTIRE, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Electric Connections; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to enable an electric-conducting cable or a collection of fine wire strands to be more perfectly and securely connected to an electrical instrument by the usual binding-screw than heretofore, and to prevent the said fine wires from being ruptured or severed by the pressure of said screw when making connection.

The invention consists in the arrangements and combinations of parts substantially as will be hereinafter set forth, and finally be embodied in the claim.

Referring to the accompanying drawings, in which like letters indicate corresponding parts in each of the several figures, Figure 1 is a plan of the improved terminals arranged on the ends of the conducting-wires. Fig. 2 is a section of the same, taken on line *x*. Fig. 3 illustrates a slight modification of construction. Fig. 4 illustrates a blank plate having hooks formed thereon, and Fig. 5 the said plate with a tube soldered or brazed thereon. Fig. 6 is a section taken on line *y*, Fig. 5.

In said drawings, *a a* indicate cables of fine wire strands, which may be covered by silk or other insulation in any ordinary manner.

b b are terminals consisting of hook-shaped plates *d*, to which tubes *c c* are fastened by solder or other metallic connection. The slots *d'* in said plates are disposed at right angles to the line of draft, so that the edges of the hooks serve to receive the draft and prevent withdrawal, as they would not were the edges parallel with the line of draft. The plates *d* are hooks, as distinguished from a mere slotted plate by virtue of having the bearing d^2 lie at right angles to the tube or receptacle for the conducting-wire. The said hooked plates *d*, having the slots *d'*, receive the binding posts or shanks of the binding-screws, and the nuts or heads of the said screws bear down against the flat face of said plates to hold the latter in proper connection with the instrument. The tube *c* forms a continuous band around the conducting-wires without any joints therein, such as would allow the tubes to spread and open when subjected to the action of the compressing-tool, and thus allow of the disconnection of the said conducting-wires. Said tubes are thus not mere grasping-arms adapted to be forced around the collection of wires. The construction of the hooks or the disposition of the slots therein serves to relieve the binding-screw of a certain proportion of the draft or to enable a firm connection to be obtained without great pressure of the binding-screw.

The ends of the wires are held within the tubular part of the terminal by solder or (and preferably) by compressing or indenting the tube by means of a suitable tool. By this mode of construction the small wires are protected, and are not in any danger of being disrupted by the binding-screws or devices by which they are connected to the electrical instrument. The compression of the tube by the tool more or less irregularly indents the same and forces the wires into very intimate contact with said tube and with one another, securing perfect conductivity and strength without the necessary use of solder.

In manufacturing the device the hooked plates are formed in pairs, as in Fig. 4, a central seat *f* being provided for solder or brazing metal. Upon the blank thus formed is laid a piece of metal of a tubular form or capable of forming a tube-like receptacle, together with a grain of solder on the seat *f*. The parts are then heated, and the solder be-

ing liquefied runs between the tube and plate and makes a firm union. The double structure is then sawed in two—say on line 7—and the terminals are then finished for the market.

Having thus described the invention, what I claim as new is—

The improved electric terminal herein described, combining a tube and hooked plate, said parts being arranged and adapted to operate substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of February, 1889.

C. McINTIRE.

Witnesses:
CHARLES H. PELL,
E. L. SHERMAN.