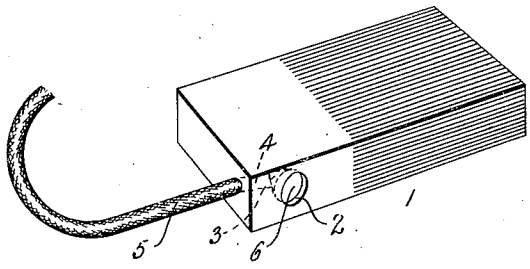
No. 847,303. PATENTED MAR. 12, 1907.

F. PLATT.

ELECTRICAL CONDUCTOR.

APPLICATION FILED AUG. 4, 1904.

Fig. 1.



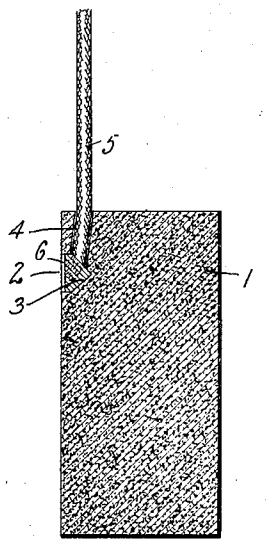


Fig. 2.

WITNESSES:

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Att'y.

UNITED STATES PATENT OFFICE.

FREDERICK PLATT, OF LYNN, MASSACHUSETTS, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

ELECTRICAL CONDUCTOR.

No. 847,303. Specification of Letters Patent. Patented March 12, 1907.

Application filed August 4, 1904. Serial No. 219,536.

To all whom it may concern:

Be it known that I, FREDERICK PLATT, a subject of the King of Great Britain, residing at Lynn, county of Essex, State of Massachusetts, have invented certain new and useful Improvements in Electrical Conductors, of which the following is a specification.

My present invention relates to the securing together of rigid and flexible conductors, and more particularly to securing flexible conductors or "pigtails" to carbon brushes.

The various features of novelty which characterize my invention are pointed out with particularity in the claims annexed to and forming a part of this specification. For a better understanding of my invention, however, reference may be had to the accompanying drawings and description, in which I have illustrated and described one embodiment of my invention.

Of the drawings, Figure 1 is a perspective view of a carbon brush having a flexible conductor secured thereto in accordance with my invention. Fig. 2 is a sectional elevation of the brush shown in Fig. 1.

In the drawings, 1 represents an ordinary prism-shaped carbon brush rectangular in cross-section. A channel, passage, or recess 2 is formed in one side of the brush by boring or otherwise. Preferably the bottom of the recess 2 is countersunk at 3, as shown. A channel or passage 4, starting in the upper end face of the brush, is bored to intersect the channel or opening 2 near its inner end. After the holes 2 and 4 are formed the upper end of the brush is copper-plated. After the end of the brush is copper-plated one end of the pigtail or flexible conductor 5, which may be formed of fine copper wires braided together in the usual manner, is inserted in the hole 4 with its tip engaging the lower wall of the opening or recess 2. A mass of solder 6, inserted in the hole or opening 2, is employed to secure the lower end of the flexible conductor 5 to the brush.

It will be observed that the channel 4 is substantially the same in diameter as the conductor 5, while the opening 2 is of considerably greater diameter and is quite shallow. The dimensions of the opening 2 conduce to the protection of a good coating of copper on the wall of the chamber 2, thereby insuring a good solder connection between the brush and the flexible conductor. As the solder is supplied through the passage 2 and as the channel or passage 4 is substantially the same in diameter as the conductor 5, there is no tendency for the solder to run up the conductor 5. In consequence the flexible conductor is soldered to the brush only at its extreme lower end. This insures that the flexibility of the conductor 5 is not decreased by the presence of solder at the point at which the flexible conductor leaves the upper end of the brush.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In combination, a carbon brush formed with intersecting passages or channels in it, said channels entering said brush from opposite sides, a flexible conductor inserted in one of said channels, and solder for securing said brush and said conductor together inserted through the other channel.

2. In combination, a carbon brush having a channel or opening formed in one side, a flexible conductor having a portion inserted therein, said carbon brush being formed with a second channel or opening intersecting the first channel or opening at an angle, and solder inserted through said second channel or opening for securing the flexible conductor to the brush at a point remote from the side of said brush entered by the flexible conductor.

3. In combination, a brush having a recess formed in it in which one end of a flexible conductor is inserted, and means for soldering the flexible conductor to the brush only at a point remote from that at which the conductor leaves the brush.

4. In combination, a brush having a hole or recess formed in it, and a flexible conductor extending into said hole or recess and soldered to the brush at the bottom only of said hole or recess.

5. In combination, a brush having a hole or recess formed in one side of said brush, and a flexible conductor entering said hole or recess and soldered to said brush only at a point remote from the surface of the brush penetrated by said hole or recess.

6. A carbon brush having intersecting holes or passages extending from different sides into but not through said brush, a flexible conductor having a portion inserted in one of said channels, and solder for securing said brush and said conductor together inserted through said other channel.

7. In combination, a carbon brush formed with a channel or passage in it into which a flexible conductor is inserted, and a second passage intersecting the first-named channel or passage through which second passage solder may be inserted to secure the flexible conductor to the brush.

8. In combination, a brush having a hole or recess formed in it and a flexible conductor extending into said hole or recess and secured to the brush at the bottom only of said hole or recess.

9. In combination, a brush having intersecting holes or passages extending from different sides into but not through said brush, a flexible conductor having a portion arranged in one of said channels, and means in the other of said channels for securing said conductor to the brush.

In witness whereof I have hereunto set my hand this 2d day of August, 1904.

FREDERICK PLATT.

Witnesses:
DUGALD McK. McKILLOP.
JOHN A. McMANUS.