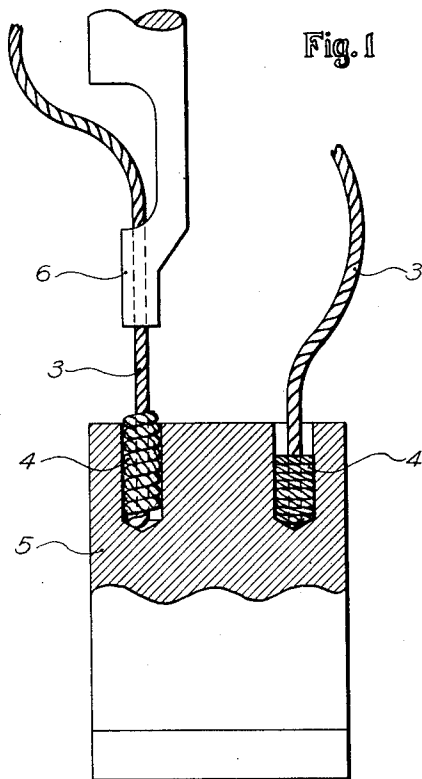
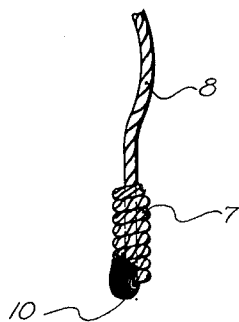


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F. F. DORSEY
PIGTAIL CONNECTION
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UNITED STATES PATENT OFFICE.

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PIGTAIL CONNECTION.

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To all whom it may concern:

Be it known that I, FARNUM F. DORSEY, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Pigtail 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.

This invention relates to the flexible connectors or "pig-tails" used in connection with brushes, for dynamo-electric machines, which are made of carbon or of compounds of carbon and metal. It is common to secure the pig-tails in holes drilled in such brushes, by tamping metallic material into the holes around the ends of the pig-tails.

The object of the present invention is to produce a pig-tail connection, in the manner referred to, which shall be inexpensive and secure, and in which a good conductive engagement between the pig-tail and the brush-material shall be assured. I have discovered that this can be accomplished by using, as the material for securing the pig-tail, stranded wire or cable either identical with or similar to that of which the pig-tail itself is composed, this material being coiled around the end of the pig-tail and being tamped into a firm mass in the hole which receives the pig-tail.

In the accompanying drawings, Fig. 1 is a partly sectional elevation showing a brush provided with two holes, in one of which is a pig-tail which has been secured in the manner described herein, while a pig-tail in process of attachment is shown in the other hole. Fig. 2 shows a pig-tail to which the bonding material has been applied in a different manner.

Pig-tails are usually made in the form of cables or stranded conductors, consisting of numerous fine wires of soft copper. I have found that this same material or a similar material of any soft metal, constitutes an excellent bonding-material for the pig-tail. As shown in Fig. 1 of the drawings, the mate-

rial of the pig-tail 3 has been merely bent back and wound around the body of the pig-tail, so as to produce a series of coils 4. The pig-tail is then introduced into the hole in the brush 5, and by means of a suitable tool 6 pressure is applied to the coils 4, sufficient to compress them into a compact mass which closely fills the lower part of the hole and presses tightly against its walls, as shown at the right of Fig. 1.

The strands of the wire used as bonding-material lie in the direction in which they present the maximum frictional resistance to withdrawal of the pig-tail. The arrangement has also increased effectiveness owing to the fact that the pig-tail, being continuous with the lowermost coil 4, cannot be withdrawn without withdrawing all of the compacted coils in a mass, so that the security of the pig-tail depends, not on friction between the pig-tail and the bonding-material, but upon the friction at the greater area of contact between the bonding-material and the brush.

In place of making the coils of bonding-material continuous with the pig-tail, they may be made separate as in Fig. 2, where the coils 7 are made of a separate piece of stranded conductor wrapped around the pig-tail 8, and the lower end 10 of the latter is bent back and spread-out against the outer surfaces of the coils, so as to anchor it securely.

The invention claimed is:

1. The combination, with a carbon brush or the like provided with a hole, of a stranded conductor extending into the hole, and bent back and coiled around itself, with the coils compacted together and compressed into frictional engagement with the walls of the hole to secure the conductor to the brush.

2. The method of attaching a pig-tail connector to a brush, which consists in winding coils of stranded wire conductor around the end of the pig-tail, introducing said end and the coiled material into a hole in the brush, and tamping the coiled material into a compact mass.

FARNUM F. DORSEY.