(No Model.)

F. W. KREINBERG.

BRUSH FOR DYNAMO ELECTRIC MACHINES AND MOTORS.

No. 555,381. Patented Feb. 25, 1896.

Fig. 1.

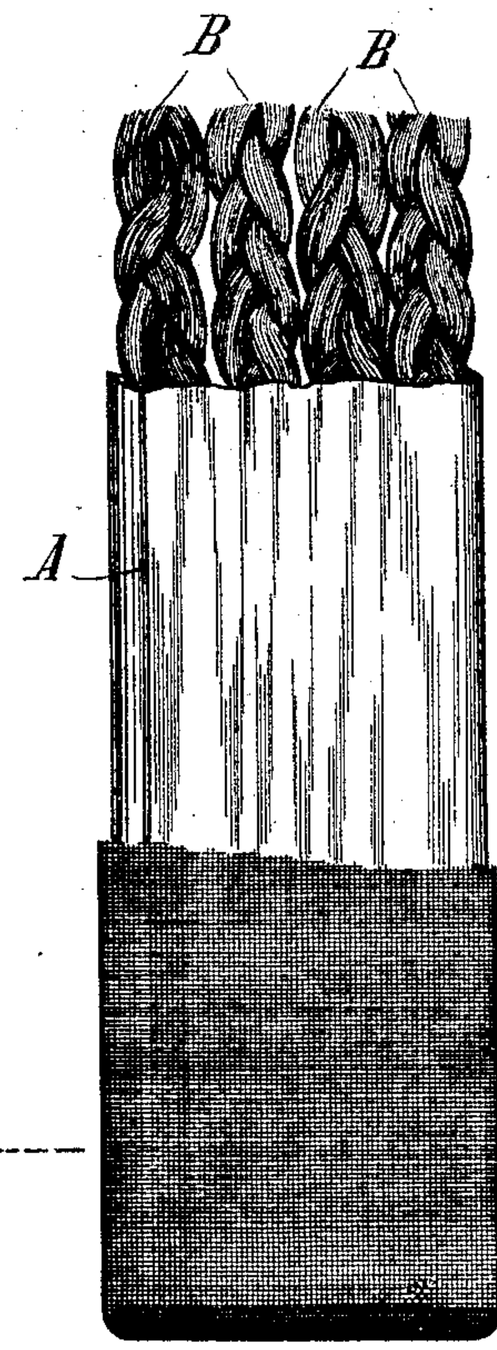


Fig. 2.

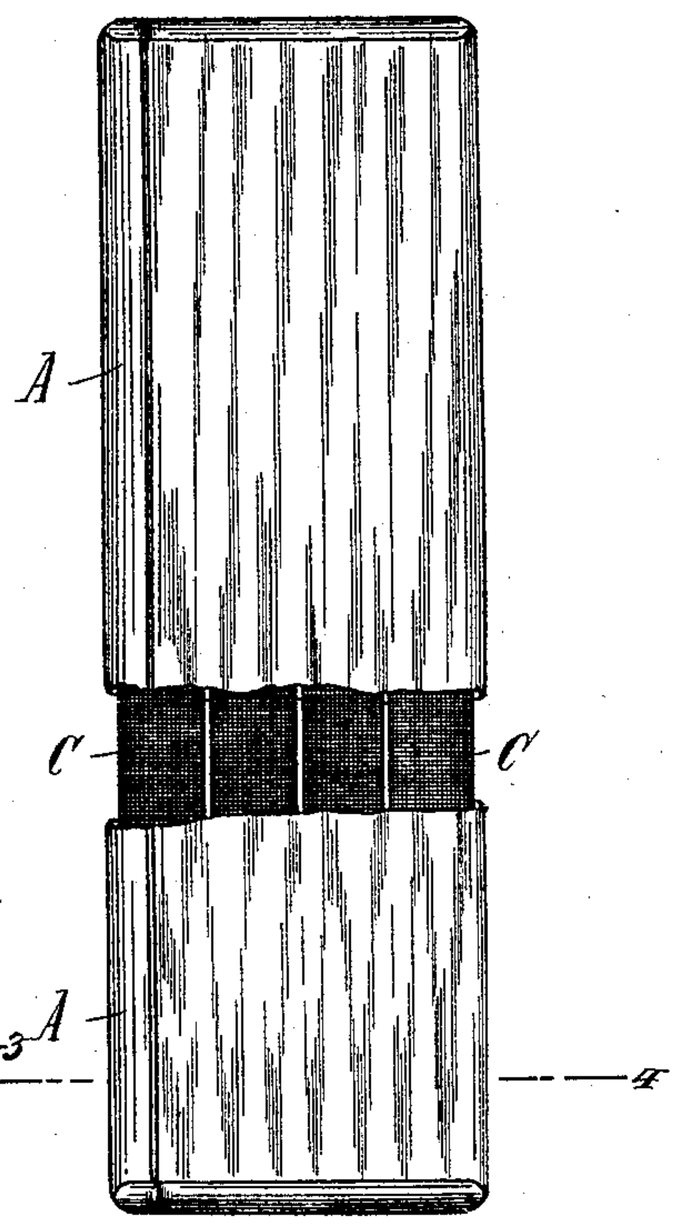


Fig. 3.

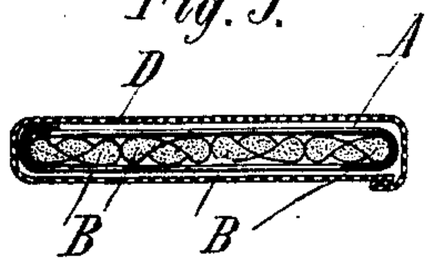
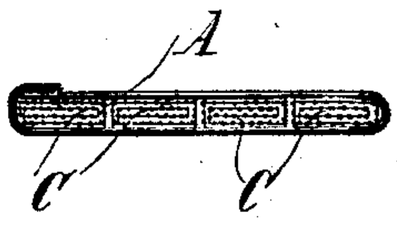


Fig. 4.



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BRUSH FOR DYNAMO-ELECTRIC MACHINES AND MOTORS.

SPECIFICATION forming part of Letters Patent No. 555,381, dated February 25, 1896.

Application filed February 17, 1894. Serial No. 500,496. (No model.)

To all whom it may concern:

Be it known that I, FRIEDRICH WILHELM KREINBERG, a subject of the King of Prussia, German Emperor, residing at Elsey, near Hohenlimburg, in the Kingdom of Prussia, Germany, have invented new and useful Improvements in Brushes for Taking Current from the Commutators of Dynamos and Electric Motors, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a side elevation of one form of brush with parts removed showing the internal construction. Fig. 2 is a side elevation of a modified form with parts of the casing broken away. Fig. 3 is a transverse section taken on line 3 3 in Fig. 1, and Fig. 4 is a transverse section taken on line 4 4 in Fig. 2.

Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to provide a brush for taking current from the commutators of dynamos and electric motors, which will not injure or wear the commutators.

My invention consists in the combination, with a suitable casing, of a filling formed of bent wires; also in the combination, with the casing, of an external covering of wire-cloth, all as will be hereinafter more fully described.

The metallic casing A, which is of a width and thickness adapted to the brush-holder of the dynamo or motor, is preferably formed of aluminum on account of the lubricating qualities of that metal, or it may be formed of a soft alloy. In the metallic casing A are inserted bundles B of fine wire, which are twisted or braided, as shown in Fig. 1, or woven, forming a wire fabric, as shown in Fig. 2, several pieces of the fabric being folded upon themselves to form separate rolls C, as shown in Figs. 2 and 4. The casing A may be inserted in the brush-holder, but I preferably provide an outer covering D of wire-cloth, as shown in Fig. 1.

The braids, twists, or folds of fabric forming the inner part of the brush may be filled with a lubricant, which serves to lubricate the surface of the commutator. To prevent the lubricant from becoming rancid when the brushes are stored, I extend the casing A in over the ends of the filling and seal it hermetically so as to exclude the air.

By the use of a brush of this construction sparking is avoided at the commutator, and the current is given off constantly without intervals or injury to the brush or commutator.

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

1. A brush for taking off the electric current formed of a conducting-wire bundle, and a casing of aluminum or a similar soft metal or alloy, said casing inclosing the wire bundle and being hermetically closed until it is used, substantially as described.

2. A brush formed of a bundle of fine wires braided together and saturated with a lubricant, and a casing inclosing the wires and lubricant, substantially as specified.

3. A brush formed of a bundle of fine wires, a casing inclosing the brush, and a wrapping of wire-cloth surrounding the casing, substantially as specified.

4. A brush, formed of a bundle of fine wires, saturated with a lubricant and hermetically sealed in a metallic case, substantially as specified.

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

FRIEDRICH WILHELM KREINBERG.

Witnesses:

CARL MÜLLER,

GUSTAV HÜLSMANN.