(No Model.)

A. SCHMID.

BRUSH HOLDER FOR ELECTRIC GENERATORS.

No. 383,658. Patented May 29, 1888.

Fig. 1.

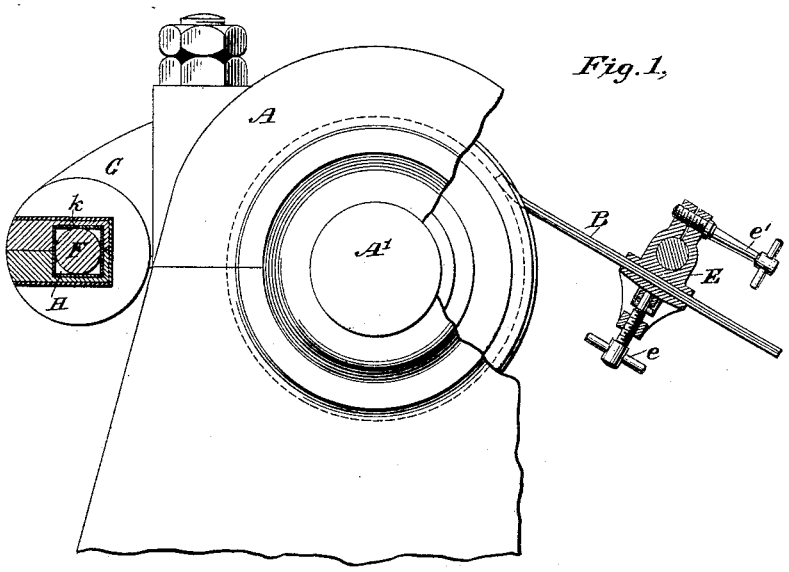
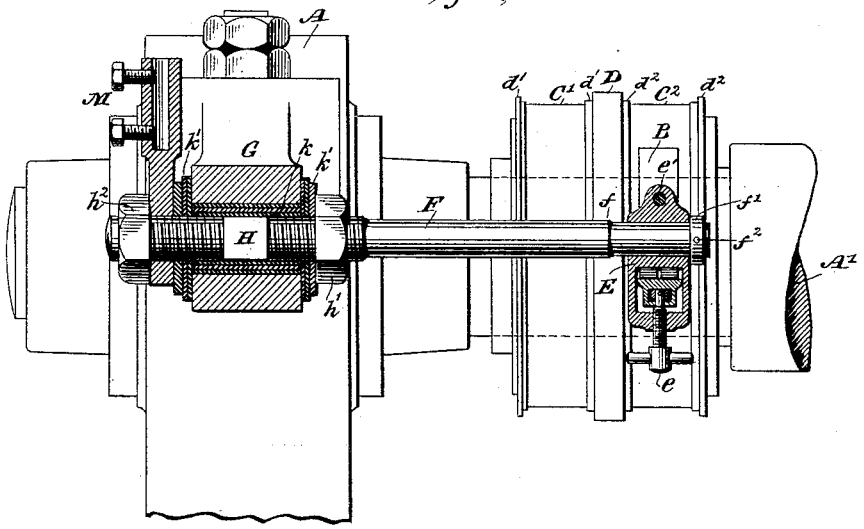


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

ALBERT SCHMID, OF ALLEGHENY, ASSIGNOR TO THE WESTINGHOUSE ELECTRIC COMPANY, OF PITTSBURG, PENNSYLVANIA.

BRUSH-HOLDER FOR ELECTRIC GENERATORS.

SPECIFICATION forming part of Letters Patent No. 383,658, dated May 29, 1888.

Application filed September 1, 1887. Serial No. 248,479. (No model.)

To all whom it may concern:

Be it known that I, ALBERT SCHMID, a citizen of the Republic of Switzerland, residing in Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Brush-Holders for Electric Machines, of which the following is a specification.

The invention relates to the construction of holders for the brushes of electric generators and motors.

The object of the invention is to provide convenient means for supporting the brushes so that they may be held in their required positions and easily adjusted with reference to the surface of the commutator or collector plates.

The invention will be described in connection with the accompanying drawings, in which—

Figure 1 is an end view, partly in section; and Fig. 2, a longitudinal view of such portions of the armature-shaft and commutator as are necessary to illustrate the invention.

Referring to the figures, A represents a support for the armature-shaft A'. This shaft carries commutator or collecting rings C' and C^2. The rings are separated from each other by an intervening ring, D, of non-conducting material, and they have flanges d' d' and d^2 d^2 at their edges, leaving intervening flat surfaces for receiving the brushes. The brush B, bearing upon the ring C^2, is of less width than the plain surface between the flanges of this ring, and it is desirable thus that it should be capable of being adjusted slightly in a longitudinal direction with reference to the armature-shaft, so as to insure an even wear upon the commutator. The brush is supported in a suitable clamp, E, by means of a clamping-screw, *e*, and this clamp is bound by a screw, *e'*, upon a supporting bar or rod, F. This rod is of such size at the end as to receive the block E, and it is provided with a shoulder, *f*, for preventing the block from being moved too far toward the ring C', for instance. The end of the rod is provided with a collar, *f'*, secured by a pin, f^2, for preventing the clamp E from being accidentally removed. The part receiving the screw *e* and the brush holder or clamp E may be easily turned upon its axis for adjusting the pressure of the brush E upon the commutator, and also, in the same manner, the block E may be moved longitudinally a slight distance, so as to adjust the longitudinal position of the brush B with reference to the commutator-ring C^2, thus insuring an even wear upon its surface. The width of the clamp itself is preferably somewhat greater than that of the brush B, so that the latter may be adjusted in the clamp.

The rod F is carried in a suitable lug, G, extending from the support A, and for this purpose it is formed with a square bearing-surface, H, which fits within a square opening formed in the lug G, and it is further provided with two set-nuts, *h'* and h^2, which turn upon corresponding screw-threads formed upon the rod. These nuts serve to adjust the longitudinal position of the rod, and thus allow the rod to be placed in any desired position with reference to the commutator. The square portion of the rod prevents it from turning in its support, and thus relieving the brush from its tension.

The interior of the opening in the lug G, through which the rod extends, is bushed with non-conducting material—such, for instance, as vulcanized fiber—as shown at K, and the two ends are covered, as shown at *k' k'*, to prevent metallic contact therewith.

For the purpose of securing electric connection with the rod F, and thus with the commutator-brush, a clamp, M, is bound between the end h^2 and the corresponding side of the lug G, although separated from the latter by the insulating material *k'*.

I claim as my invention—

1. The combination, with the commutator or collecting rings of an electric generator, of a contact-brush, a clamp for the same, a rod for supporting the clamp, means for adjusting the brush-clamp longitudinally upon said rod, and means for adjusting the rod longitudinally, substantially as described.

2. The combination, with an electric generator and its commutator or collecting ring,

of a commutator-brush of less width than the commutator-ring to which it is applied, a clamp for the same, a rod for receiving the clamp, a square block upon said rod preventing it from turning, a support for receiving said rod, and means for adjusting the rod in said support.

In testimony whereof I have hereunto subscribed my name this 15th day of July, A. D. 1887.

ALBERT SCHMID.

Witnesses:
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