(No Model.)

A. EKSTRÖM.

BRUSH SUPPORTER FOR DYNAMO ELECTRIC MACHINES.

No. 494,739. Patented Apr. 4, 1893.

FIG. 1.

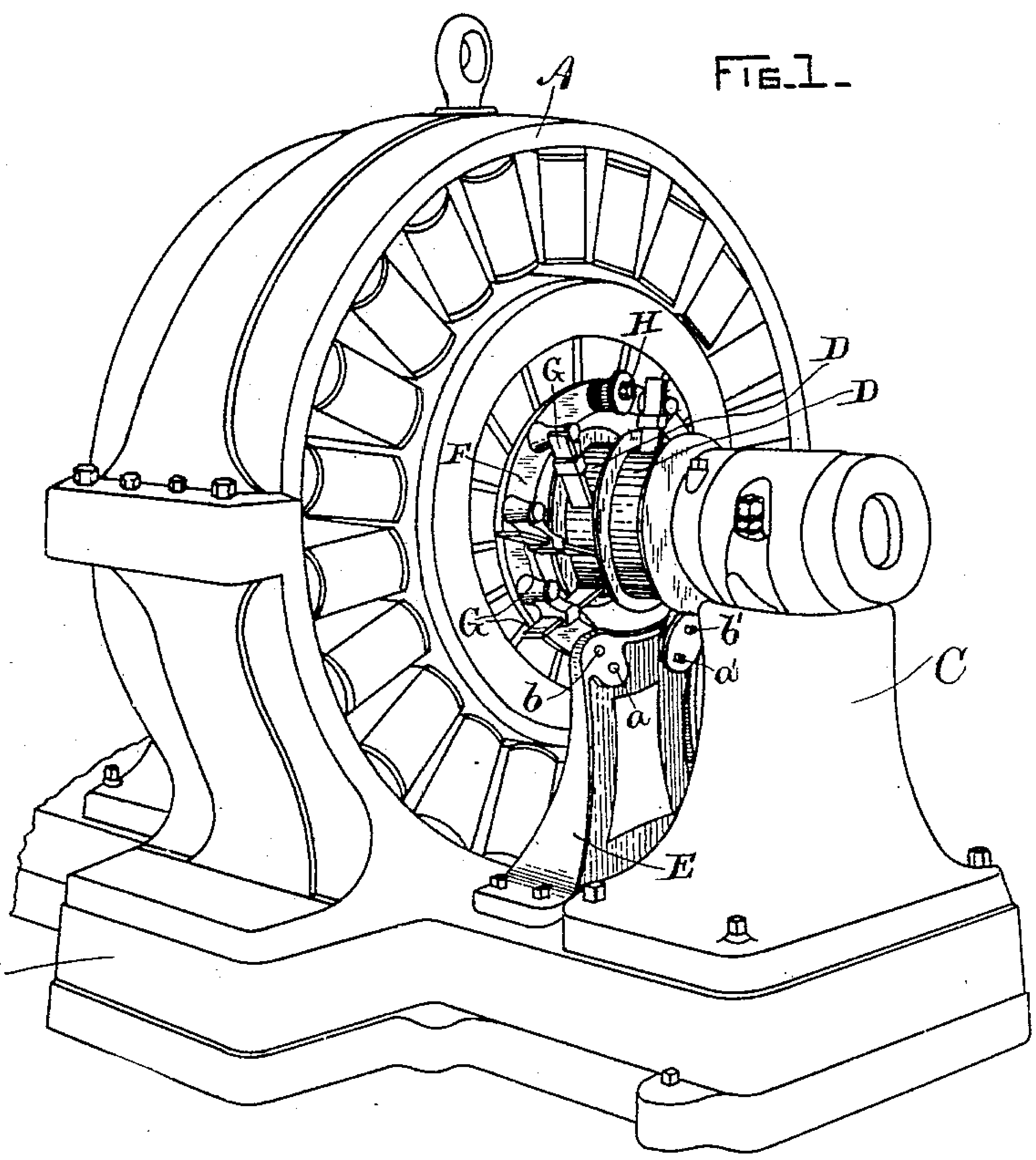
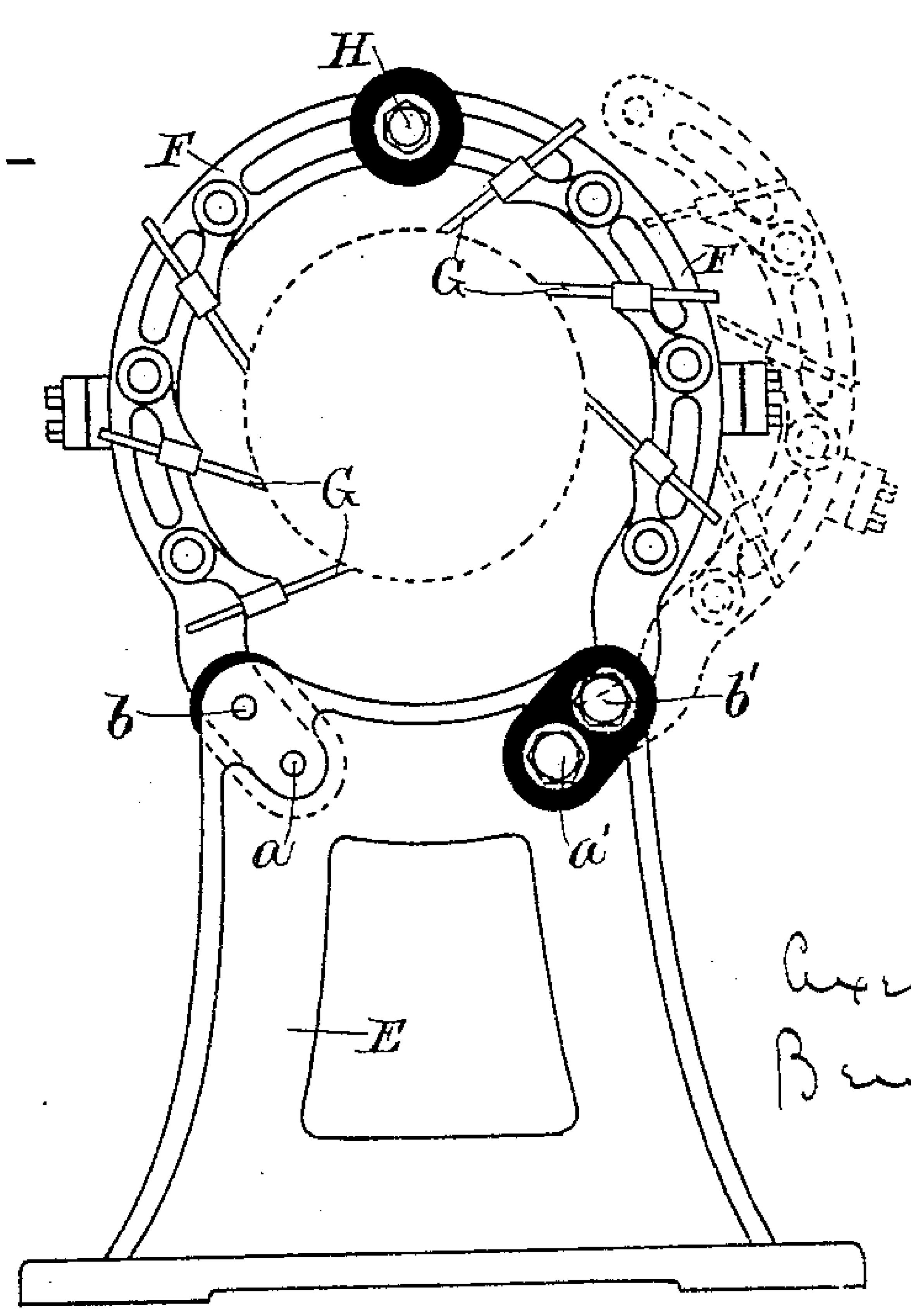


FIG. 2.



WITNESSES.
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UNITED STATES PATENT OFFICE.

AXEL EKSTRÖM, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE GENERAL ELECTRIC COMPANY, OF NEW YORK.

BRUSH-SUPPORTER FOR DYNAMO-ELECTRIC MACHINES.

SPECIFICATION forming part of Letters Patent No. 494,739, dated April 4, 1893.

Application filed November 16, 1892. Serial No. 452,147. (No model.)

To all whom it may concern:

Be it known that I, AXEL EKSTRÖM, a citizen of the United States, residing at Lynn, county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Brush-Supporters for Dynamo-Electric Machines, of which the following is a specification.

My present invention provides an improved brush support for dynamo electric machines, and its main feature consists of a heavy two-part metal ring which is supported from the bed plate of the machine by a separate standard of its own, rather than by a bearing on the armature shaft as has heretofore been the prevailing custom. The ring is made up of two nearly semi-circular parts each pivoted to the standard, and fastened together at their meeting ends by a bolt or other means. On this ring are supported the brushes which when dealing with heavy currents will comprise a number of each polarity, and of which the brushes connected to one terminal of the circuit are carried upon one of the portions of the ring, and those connected to the other terminal upon the other. The two parts of the ring are insulated from each other and both are insulated from the standard on which they are mounted. By this construction a firm support for the brushes is provided, and the brushes with their supports may be readily swung aside away from the commutator or collector rings for repairing the latter, or in order to permit the removal of the armature from the machine. Another advantage of considerable importance is that the armature shaft may be shortened, the main journal box being placed close to the commutator, while in existing constructions quite a space must be allowed at this point to form a bearing for the brush holder which is sleeved upon the armature shaft. This effects quite a considerable gain in the larger types of machines both in weight and expense.

The drawings which I now proceed to describe show the invention applied only to an alternating current dynamo, but it is of course equally applicable to any form of dynamo electric machine whether of the alternating, continuous current or multiphase type, and whether a generator or motor.

Figure 1 shows in perspective a dynamo and my invention applied thereto, and Fig. 2 is an end view of the brush supporting ring.

A represents a dynamo mounted on a bed plate B, and having its armature shaft journaled in bearings carried by standards C, only one of which is shown. The dynamo represented is of the alternating current type, and the circuit terminals are led off from collector rings D, D. A separate special standard E is mounted on the bed plate under the collector rings on which is carried the brush support F on which are arranged the commutator brushes G as many in number as are desired or necessary. The support consists of two nearly semi-circular portions each journaled to the standard by pivots *a*, *a'* so that they may be swung away from the commutator readily as is suggested by the dotted line position of Fig. 2. At the meeting free ends of this split ring is a bolt H or other suitable device for securing them together, and additional bolts *b*, *b'* are employed to connect with the standard and help lock the halves of the ring in place. The two halves of the ring are insulated from one another at their meeting ends, and each is insulated from the standard so that while all the brushes upon one part are connected together through the metal of the ring, yet short-circuiting of the machine is guarded against.

What I claim as new, and desire to secure by Letters Patent, is—

1. A brush support for dynamo electric machines consisting of a split ring surrounding the commutator, as described.

2. A brush support for dynamo electric machines consisting of two independent pivoted semi-circular portions making a split ring nearly surrounding the commutator, and means for securing the two portions together, as described.

3. A brush support for dynamo electric machines consisting of a ring having a bearing on a separate standard rather than on the armature shaft, and divided electrically into two portions by insulating material, as described.

4. A brush support for dynamo electric machines consisting of a split ring supported by a separate standard rather than by a bearing on the armature shaft, and consisting of two portions each of which is pivoted to the standard, and a bolt or like means for securing their meeting ends together, as set forth.

In witness whereof I have hereto set my hand this 9th day of November, 1892.

AXEL EKSTRÖM.

Witnesses:
JOHN W. GIBBONEY,
BENJAMIN B. HULL.