

No. 712,477.

Patented Nov. 4, 1902.

N. C. BASSETT.

BRUSH HOLDER.

(Application filed Mar. 24, 1902.)

(No Model.)

Fig. 1.

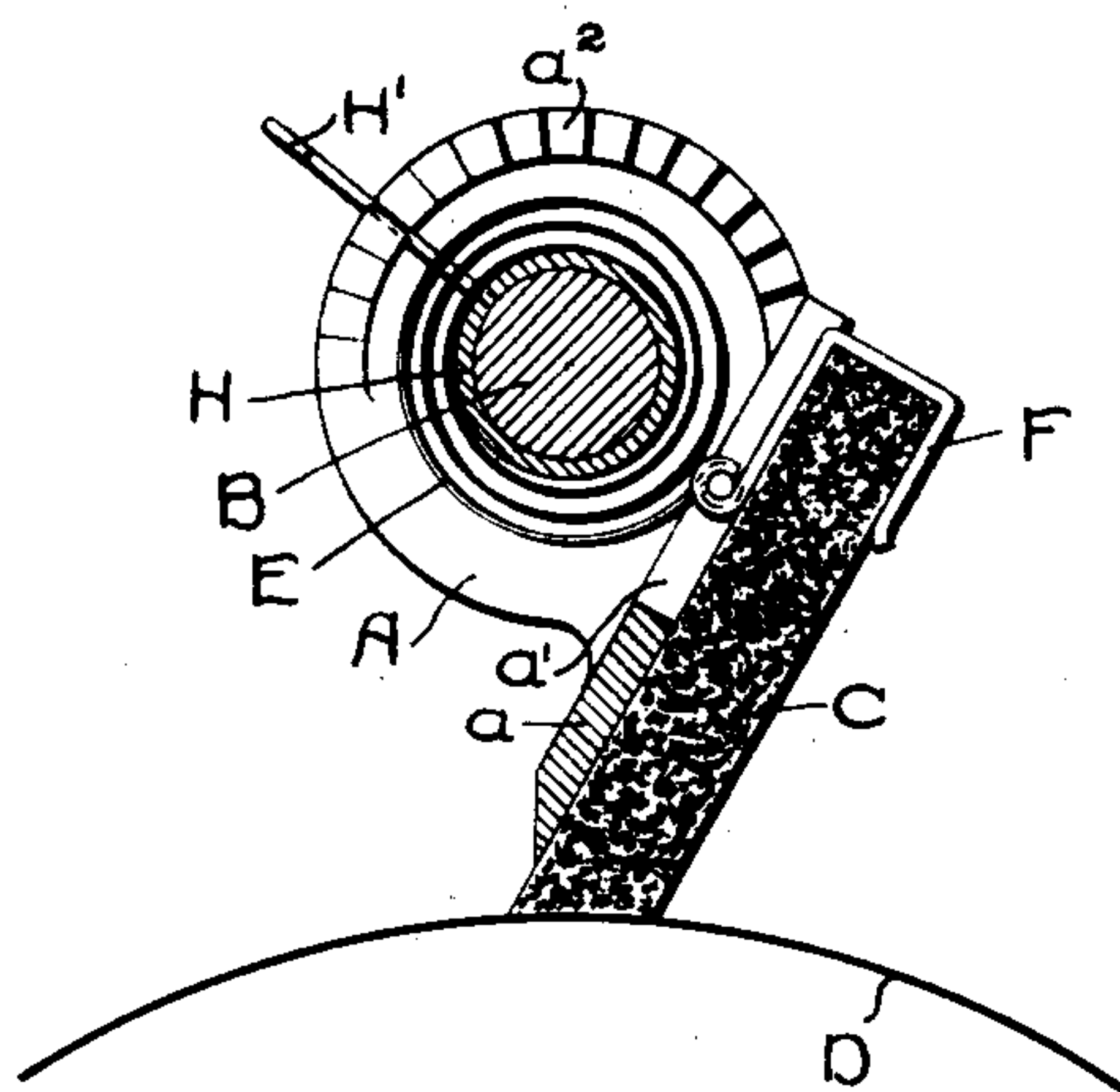
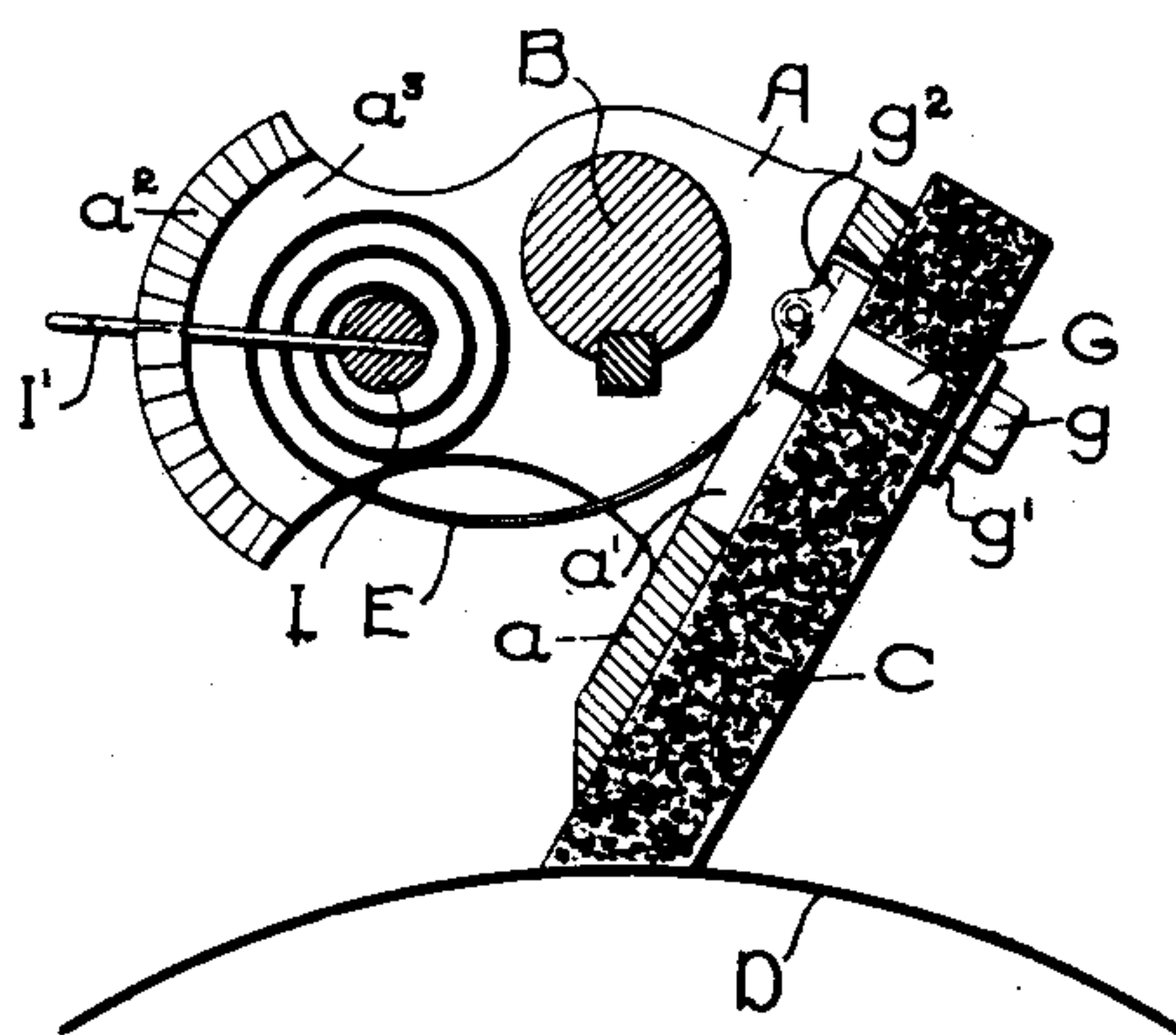


Fig. 2.



Witnesses:

*Ernest R. Krumey*  
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Norman C. Bassett.  
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# UNITED STATES PATENT OFFICE.

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## BRUSH-HOLDER.

SPECIFICATION forming part of Letters Patent No. 712,477, dated November 4, 1902.

Application filed March 24, 1902. Serial No. 99,626. (No model.)

*To all whom it may concern:*

Be it known that I, NORMAN C. BASSETT, a citizen of the United States, residing at Lynn, county of Essex, State of Massachusetts, have  
5 invented certain new and useful Improvements in Brush-Holders, (Case No. 2,576,) of which the following is a specification.

This invention relates to brush-holders for dynamo-electric machines; and its object is  
10 to simplify the construction and improve the efficiency of devices of this class. I provide a single coiled spring, which presses the carbon brush not only against the commutator,  
15 but against the face of the brush-holder in order to insure a good electrical contact therewith.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of a brush-holder embodying my invention. Fig. 2 is a  
20 modification of the same.

The holder consists of a casting A, rigidly fastened on a stationary stud B and having a flat flange  $a$ , against which rests a carbon brush C. Said flange is inclined to a radius  
25 of the commutator D and in the direction of rotation, so that the reaction of the commutator will force the lower end of the brush against the face A.

To keep the brush in good contact with the  
30 entire face of the flange, a coiled spring E is arranged in the rear of the brush, with one end fastened to the upper end of the brush. In Fig. 1 this fastening is accomplished by means of a hook F, of metal, fitting over the  
35 upper end of the brush and attached to the free end of the spring. Fig. 2 shows a bolt G passing through the upper end of the brush and secured by a nut  $g$  and washer  $g'$ . The head  $g^2$  of the bolt is shaped to receive the  
40 free end of the spring, which is suitably fastened thereto. In each modification there is a slot  $a'$  through the flange  $a$  to permit a movement of the spring and the hook or bolt toward the commutator. The spring E is so  
45 arranged that its tension can be adjusted to vary the pressure on the brush. In Fig. 1 the spring is attached to a sleeve H, rotatable on the stud B and provided with a lever-handle H', which can be engaged with any  
50 one of a series of ratchet-teeth  $a^2$  on the holder A concentric with the stud B. In

Fig. 2 the holder is extended beyond the stud B and provided with a flange  $a^3$ , carrying the ratchet-teeth  $a^2$ , concentric with a rotatable arbor I, to which the spring is attached. A  
55 lever-handle I', projecting from the arbor and adapted to engage with the ratchet-teeth, enables the tension of the spring to be adjusted. In either case the spring in tending to unwind exerts a pressure on the brush,  
60 tending both to force it lengthwise against the commutator and to pull it laterally against the face of the flange  $a$ .

What I claim as new, and desire to secure by Letters Patent of the United States, is—  
65

1. The combination with a brush-holder having a flange inclined to the radius of the commutator, of a carbon brush lying against the face of said flange, and a coiled spring in the rear of said brush, having one end con-  
70 nected directly with the upper end of said brush and the other end with the brush-holder.

2. The combination with a brush-holder having a flange inclined to the radius of the commutator, of a carbon brush lying against the face of said flange, a coiled spring in the rear of said brush, and a metallic fastening device attached to the free end of said spring  
75 and to the upper end of said brush.

3. The combination with a brush-holder having a flange inclined to the radius of the commutator, of a carbon brush lying against the face of said flange, a coiled spring in the rear of said brush, and a metallic hook at-  
80 tached to the free end of said spring and fitting over the upper end of said brush.

4. The combination with a brush-holder having a flange  $a$  provided with a slot  $a'$ , of a carbon brush lying against the face of said  
85 flange, a coiled spring E having means for adjusting its tension, and a metallic fastening device connecting the free end of the spring with the brush, and movable in said slot.  
90

In witness whereof I have hereunto set my hand this 20th day of March, 1902.

NORMAN C. BASSETT.

Witnesses:

BENJAMIN B. HULL,  
HELEN OSFORD.