(No Model.)

J. H. YEARSLEY.

BRUSH HOLDER FOR DYNAMOS.

No. 584,912. Patented June 22, 1897.

Fig. 1.

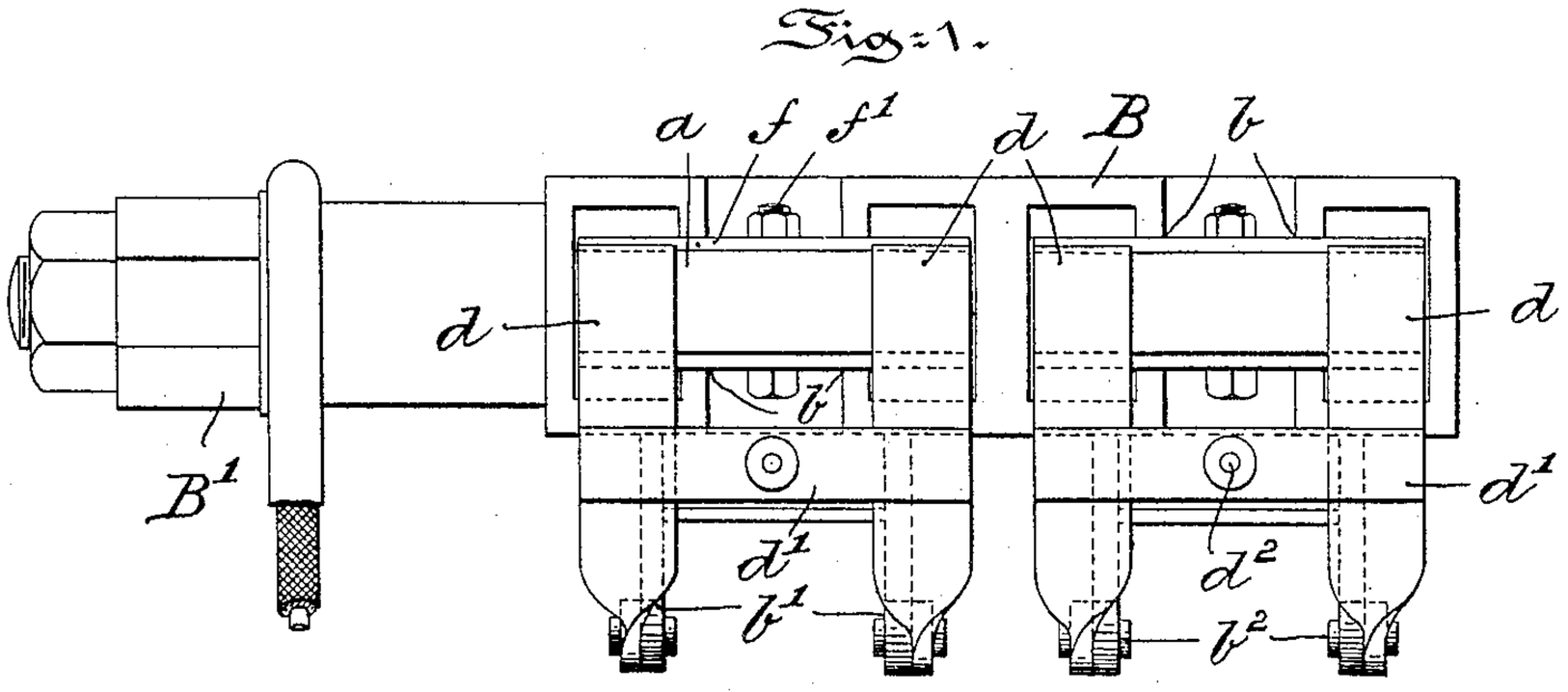


Fig. 2.

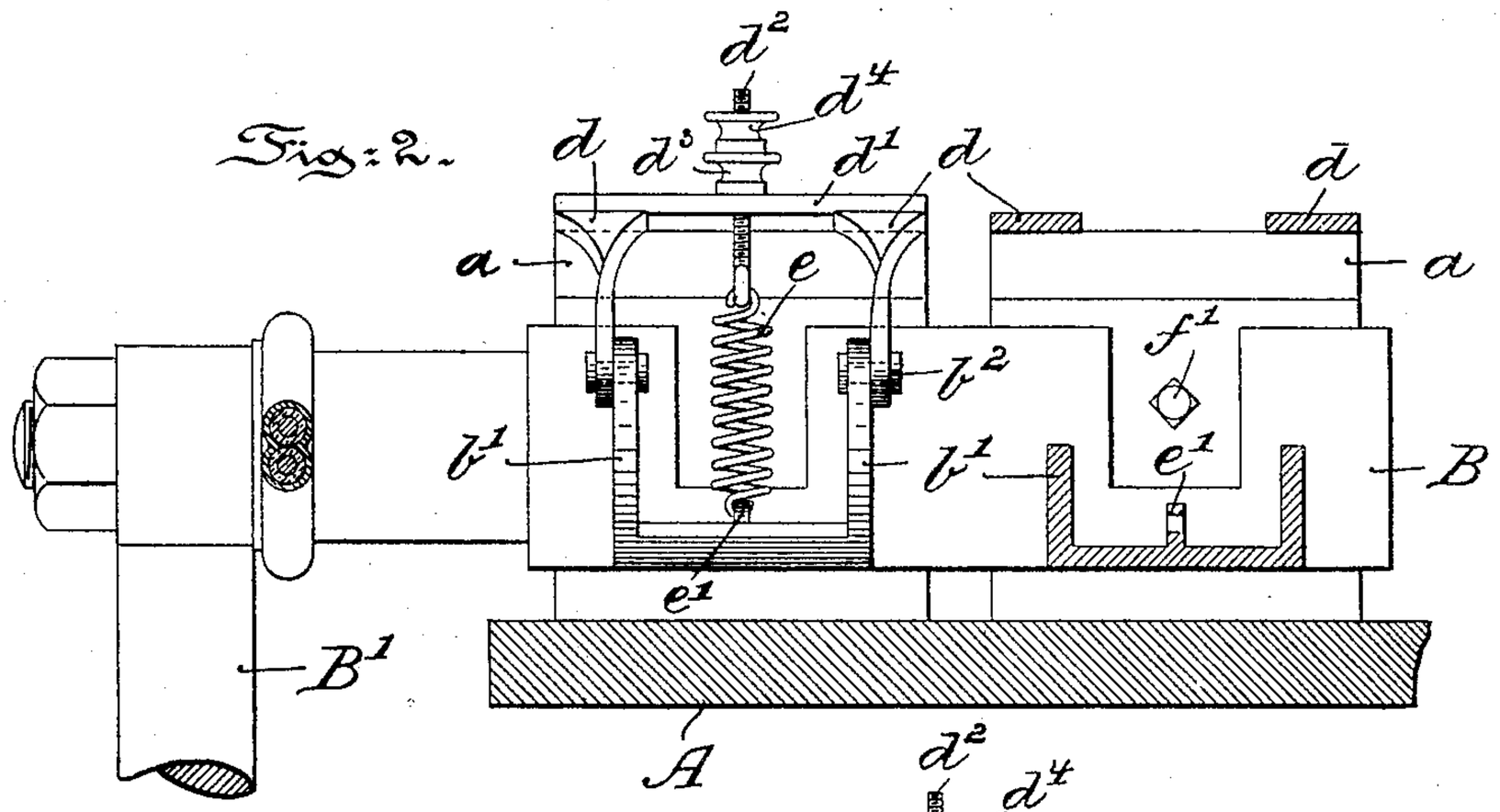
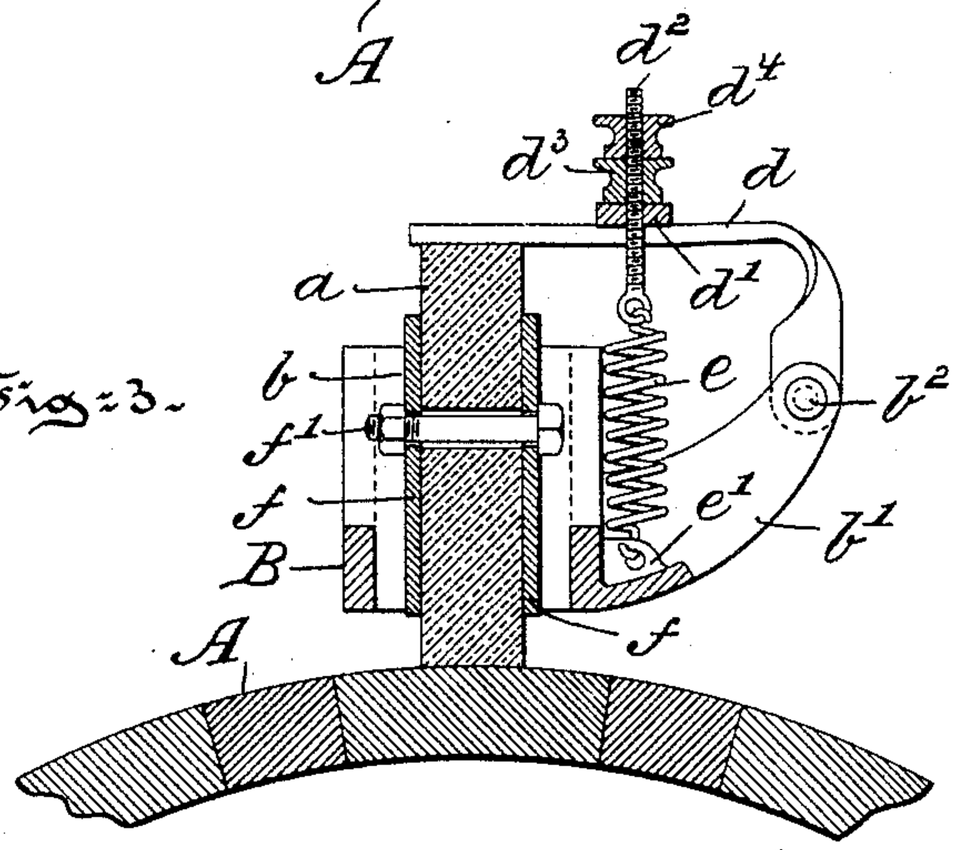


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES H. YEARSLEY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO ROBERT N. SIMPERS AND ROBERT N. SIMPERS, TRUSTEE, OF SAME PLACE.

BRUSH-HOLDER FOR DYNAMOS.

SPECIFICATION forming part of Letters Patent No. 584,912, dated June 22, 1897.

Application filed April 8, 1897. Serial No. 631,208. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. YEARSLEY, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Brush-Holders for Dynamo-Electric Machines, of which the following is a specification.

My invention has relation to a holder for the brush of a dynamo or similar electric machine in which the carbon or other material of which the brush is made must be pressed closely against the commutator to prevent "sparking," and in such connection it relates particularly to the construction and arrangement of such a holder.

The principal object of my invention is to provide in a brush-holder a feeding or pressing device for the brush, by means of which the brush is held closely and with a uniform pressure upon the surface of the commutator, so that all sparking or tendency to sparking is avoided.

To this end my invention consists in a brush-holder wherein the brush is adapted to be fed and in which the brush is pressed toward the commutator by means of two hinged or pivoted arms, each adapted to rest at or near the sides of the brush, said arms being united by a bridge-piece through which is adapted to pass a threaded pin or bolt, one end of said pin or bolt being under tension of a spring and the other end passing through the bridge and adapted to receive one or more adjusting-nuts, whereby the tension of the spring is brought directly upon the bridge and transmitted equally therethrough to each arm.

My invention further consists in a brush-holder for dynamos constructed and arranged in substantially the manner hereinafter described and claimed.

The nature and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a top or plan view of a brush-holder embodying main features of my invention and illustrating the same applied to two brushes. Fig. 2 is a side elevational view of the same, the right-hand end of the holder being partly sectioned and having certain parts removed for the purpose of more clearly illustrating the invention; and Fig. 3 is a cross-sectional view of the holder and of a portion of the commutator.

Referring to the drawings, A represents the commutator of a dynamo-electro machine of the ordinary type, and B represents a box or holder for the brushes *a*, which box is also of the usual construction and may be held in operative position with respect to the commutator by the frame B′ or in any well-known manner. The box B is centrally apertured or recessed, as at *b*, and in this recess the brush *a* is adapted to enter and from which it is adapted to project against the commutator A, substantially as illustrated in Fig. 3. From one side of the box B projects a bracket *b′*, to which is pivoted, as at b^2, two arms *d*, extending over and down upon the upper end of the brush *a*. These arms *d* are united together by a cross-piece or bridge *d′*.

Through the bridge *d′* extends a screw-threaded pin or bolt d^2, one end of which is secured to a spring *e*, which spring is also secured to the box, as at *e′*. The other end of the pin or bolt d^2 projects through the bridge *d′* and is adapted to receive adjusting and jam nuts d^3 and d^4, which when advanced on the pin or bolt d^2 increase the tension of the spring *e*, and thereby, through the bridge *d′* and arms *d*, increase the pressure brought upon the upper end of the brush *a* and serve to force said brush into closer engagement with the commutator A. The brush *a* by preference is reinforced or strengthened by the side plates *f*, united to each other and clamped against the brush by means of a bolt or bolts *f′*.

By the arrangement above described it will be readily understood that the pressure exerted upon the brush is evenly distributed on its upper surface, and hence the brush is held firmly and evenly upon the commutator A and sparking or tendency to sparking is reduced to a minimum. As the pressure of the spring *e* is not exerted directly upon the

arms *d* or any one of said arms, but upon the cross-piece or bridge *d'*, which is practically integral with both arms, it is obvious that each arm will always be under a constant and uniform pressure and neither arm can press with more or less force upon the brush.

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a brush-holder for dynamos, a box in which the brush is adapted to be fed toward the commutator, two arms pivoted at one end to the box and having their free ends resting upon the brush, a cross-piece or bridge uniting said arms, and a spring adapted to depress said bridge toward the box, whereby the arms are caused to press upon the brush with a constant and uniform pressure, substantially as described.

2. In a brush-holder for dynamos, a box in which the brush is adapted to be fed toward the commutator, two arms pivoted at one end to said box and having their free ends resting upon the brush, a cross-piece uniting said arms, a threaded pin passing through said cross-piece, a spring securing one end of said pin or bolt to the box, and adjusting and jam nuts adapted to advance and retract on said pin through the cross-piece, substantially as and for the purposes described.

In testimony whereof I have hereunto set my signature in the presence of two subscribing witnesses.

JAMES H. YEARSLEY.

Witnesses:
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THOMAS M. SMITH.