(No Model.)

C. D. JENNEY.

BRUSH HOLDER FOR DYNAMOS.

No. 410,670. Patented Sept. 10, 1889.

Fig. 1.

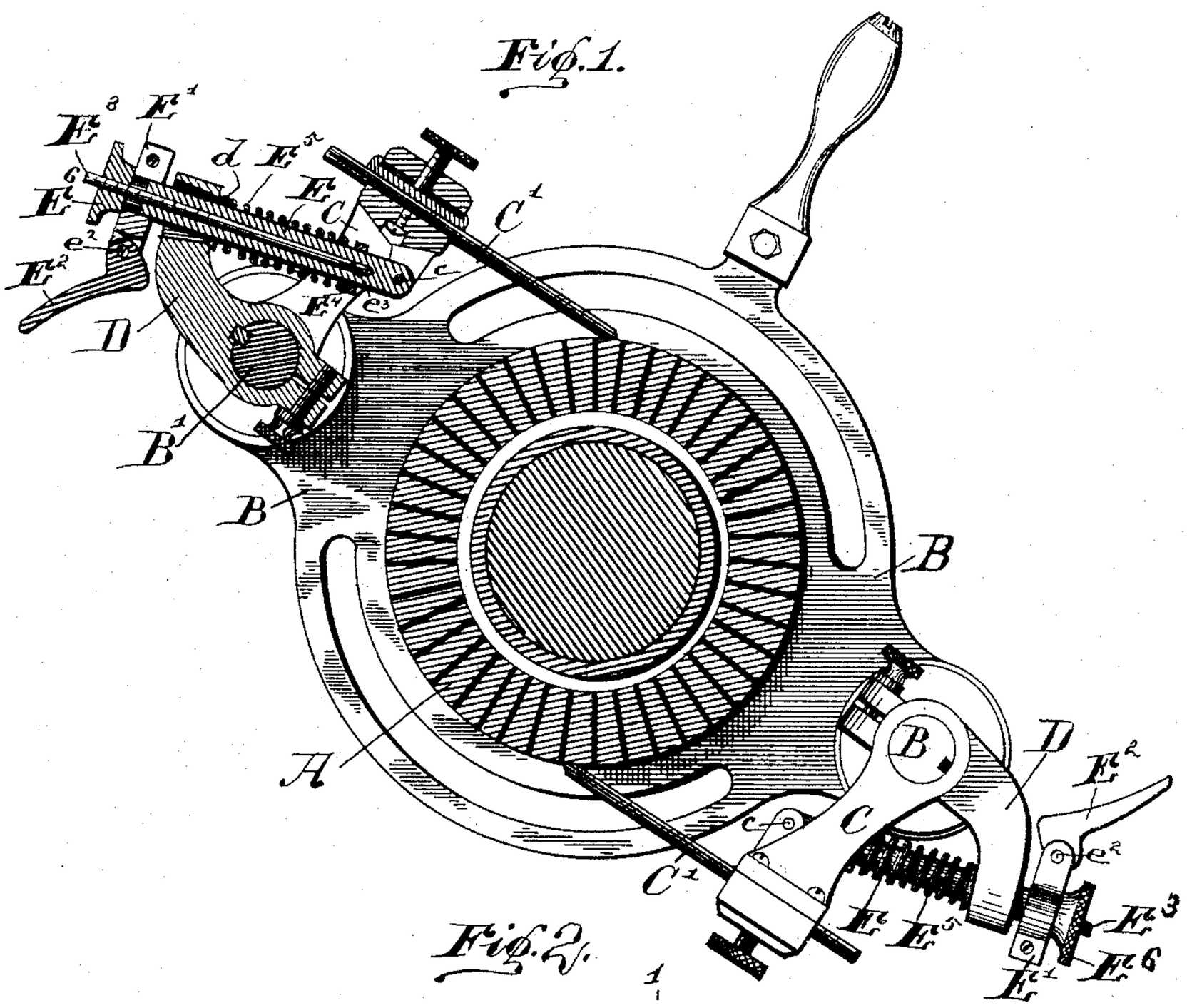


Fig. 2.

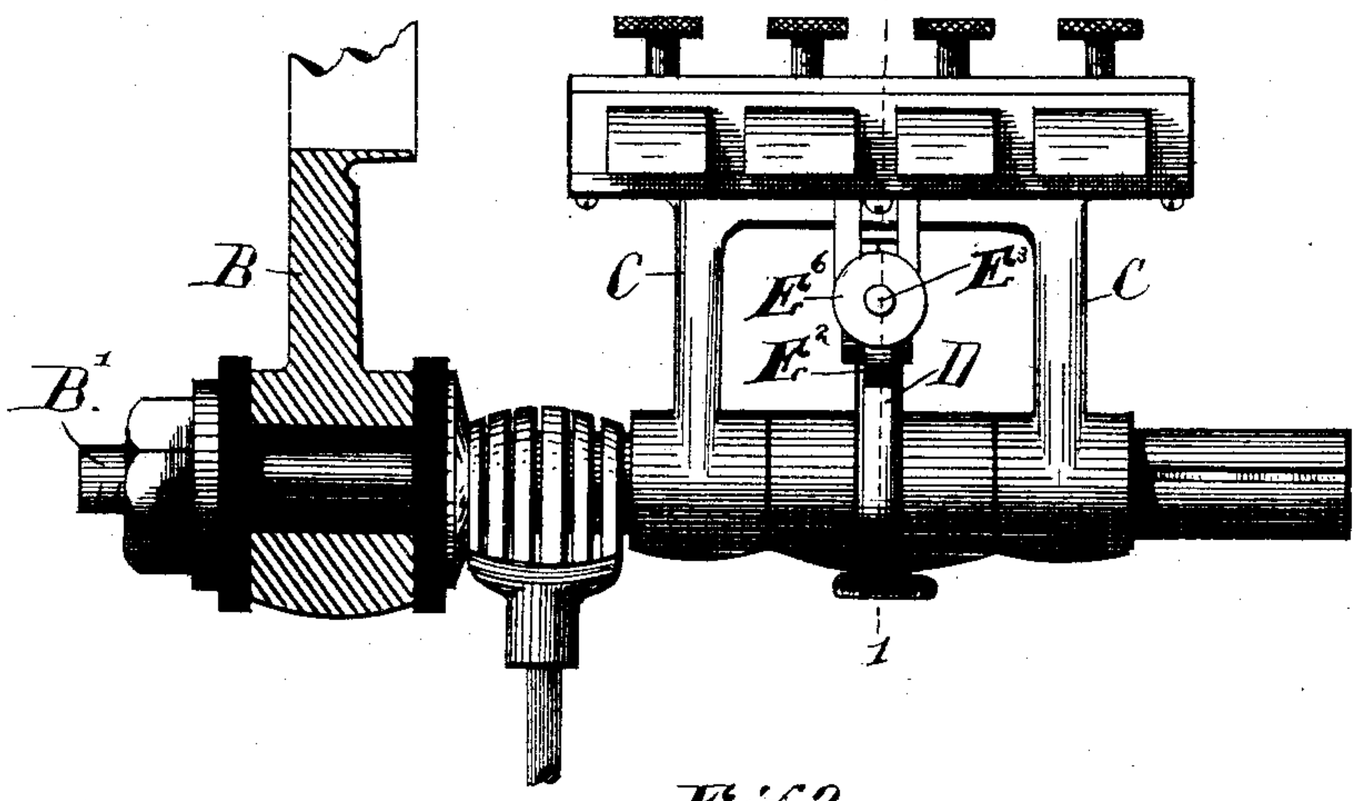
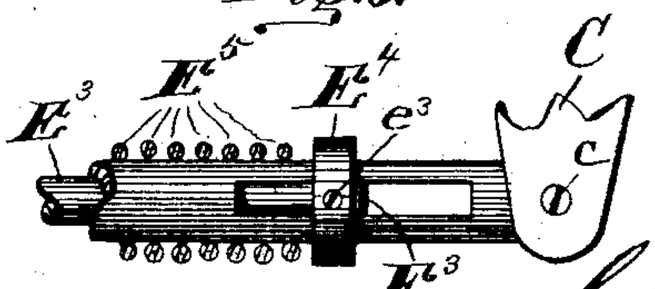


Fig. 3.



WITNESSES.

C. W. H. Brown,

F. F. Stood,

INVENTOR.

per Charles D. Jenney,

Let E. W. Bradford.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES D. JENNEY, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE THOMSON-HOUSTON ELECTRIC COMPANY, OF CONNECTICUT.

BRUSH-HOLDER FOR DYNAMO-ELECTRIC MACHINES.

SPECIFICATION forming part of Letters Patent No. 410,670, dated September 10, 1889.

Application filed August 2, 1888. Serial No. 281,728. (No model.)

To all whom it may concern:

Be it known that I, CHARLES D. JENNEY, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Brush-Holders for Dynamo-Electric Machines, of which the following is a specification.

The object of my said invention is to produce a holder for the brushes of a dynamo-electric machine by which the pressure of the brushes upon the commutator may be easily and accurately regulated, and also by which said brushes may be thrown into or out of contact with said commutator at will without changing the adjustment, all as will be hereinafter particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof and on which similar letters of reference indicate similar parts, Figure 1 is a sectional view through the commutator of a dynamo-electric machine, looking outwardly toward the rocker-arm carrying the brush-holders and brushes, one of said brush-holders being shown in side elevation and the other in central section on the dotted line 1 1 in Fig. 2; Fig. 2, an end elevation of one brush-holder separately and the stud-shaft on which it is mounted, and Fig. 3 a detail view of the rod connecting the brush-holder frame and the arm.

In said drawings, the portions marked A represent the commutator of a dynamo-electric machine; B, the rocker-arm carrying the brush-holders; C, the frame of the brush-holder proper; D, an arm fixedly mounted upon the stud-shaft on which the brush-holder is mounted, and E a rod connecting the brush-holder frame to said arm.

The commutator, the rocker-arm, and the brush-holder frame are in themselves quite similar to corresponding parts heretofore produced, and, not being peculiar to my present invention, will not be further described herein, except incidentally in describing the invention.

The brush-holder frame is mounted and is partially revoluble upon the stud-shaft B′, and the arm D is fixedly mounted upon the same shaft by means of a spline or a set-screw, or both, as indicated most plainly in the sectional portion of Fig. 1. The rod E is secured at one end to the brush-holder frame C by a pivot *c* and extends through a hole in the outer end of the arm D. A yoke E′ is secured upon the outer end of this rod, and said yoke carries a cam-lever E^2, which is secured thereto by a pivot e^2. The rod E is made tubular, and inside it is a smaller rod E^3, which is secured at its inner end by means of a pin e^3 (extending through it and slots in the rod E, as shown most plainly in Fig. 3) to a collar E^4, which is mounted upon the rod E. Between said collar and the inner face of the arm D (or washer *d*, resting against it) is interposed a coiled spring E^5. The yoke E′, while capable of being moved upon the rod E, is intended to be clamped rigidly thereon. A thumb-nut E^6 is mounted upon the outer end of the small central rod E^3 and bears against the face of the yoke E′, which projects beyond the end of the rod E when adjusted and in operation, as shown most plainly in Fig. 1. Thus, by turning said thumb-nut E^6, the spring E^5 is compressed or relaxed and the bearing of the brushes C′ on the commutator A thus increased or diminished. When it is desired to raise the brushes altogether from the commutator without varying the adjustment, the cam E^2 is brought into use and forced down against the outer face of the arm D and, through the rod E, pulls the brush-holder frame back, throwing the brush altogether out of contact with the commutator.

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

1. The combination, in a brush-holder for dynamo-electric machines, of a brush-holder frame loosely mounted upon its shaft, an arm fixedly mounted on said shaft, a rod connecting said brush-holder frame and said arm, an adjustable spring whereby said brush-holder frame is forced forward, and a cam whereby the brush-holder frame may be retracted, substantially as set forth.

2. The combination, in a brush-holder for dynamo-electric machines, of the brush-holder frame revolubly mounted on its shaft, an arm fixedly mounted upon the same shaft, and a connection between said frame and said arm consisting of a tubular rod pivoted to one and

extending through the other, a collar on said rod, a spring between said collar and the face of said arm, a smaller rod located inside said rod and connected to said collar, and a thumb-nut upon the outer end of said smaller rod, whereby the spring may be compressed or relaxed as said nut is turned, substantially as set forth.

3. The combination, in a brush-holder for dynamo-electric machines, of the brush-holder frame revolubly mounted upon its shaft, an arm fixedly mounted upon the same shaft, a rod pivoted to the brush-holder frame and extending through an opening in said arm, a yoke secured to said rod outside of said arm, and a cam secured to said yoke, substantially as and for the purposes set forth.

4. The combination, in a brush-holder for dynamo-electric machines, of the brush-holder frame C, the arm D, the hollow connecting-rod E, the screw-rod E^3 therein, the spring E^5, the thumb-nut E^6, the yoke E′, and the cam E^2, substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 27th day of July, A. D. 1888.

CHARLES D. JENNEY. [L. S.]

Witnesses:

B. F. WITT,

F. W. WOOD.