W. T. HENSLEY.

BRUSH HOLDER.

APPLICATION FILED NOV. 8, 1907.

975,424. Patented Nov. 15, 1910.

Fig. 1.

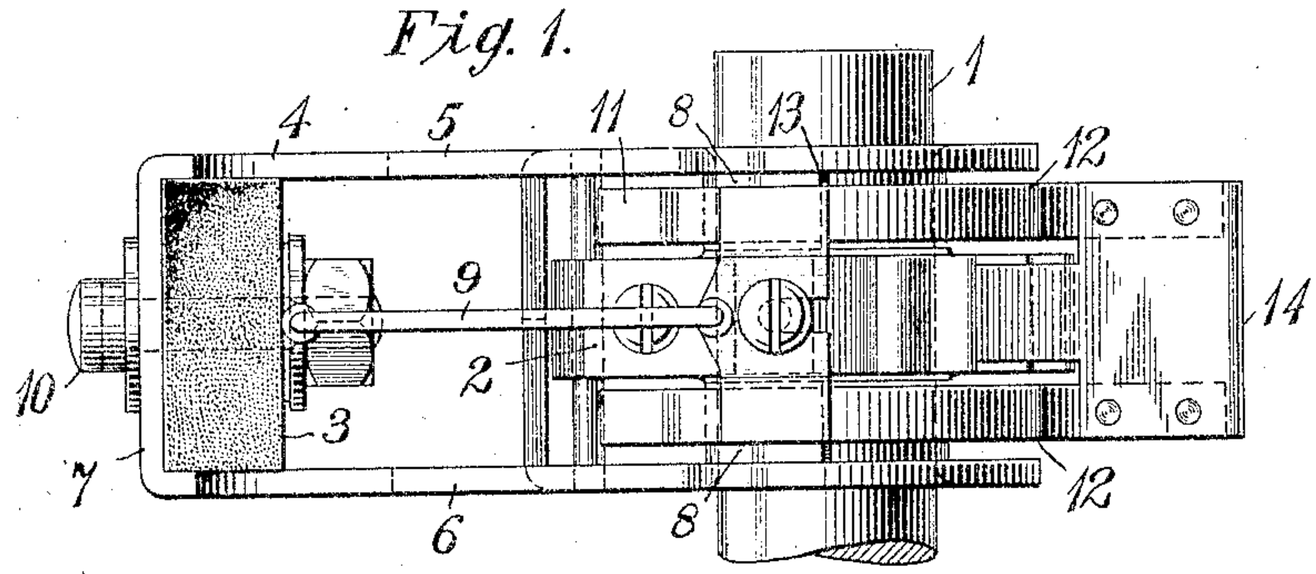


Fig. 2.

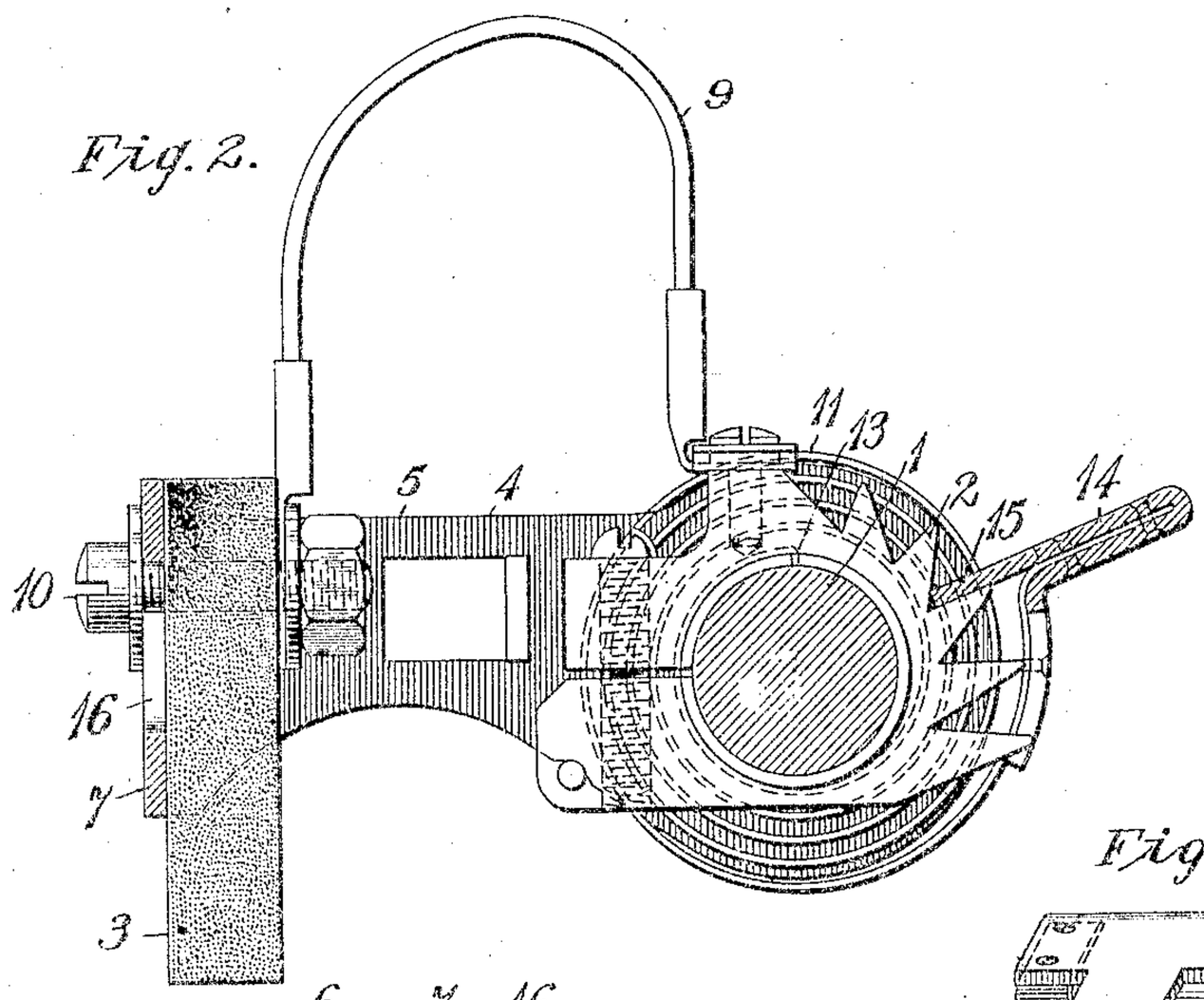


Fig. 3.

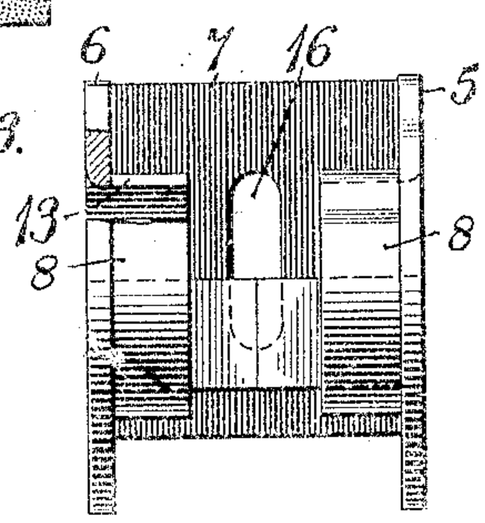
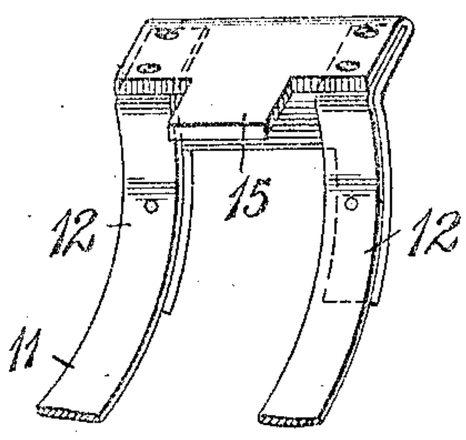


Fig. 4.



WITNESSES:

Fred. A. Miller

R. J. Dearborn

INVENTOR

William T. Hensley

BY

Hensley & Carr

ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM T. HENSLEY, OF WILKINSBURG, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, OF EAST PITTSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

BRUSH-HOLDER.

975,424. Specification of Letters Patent. Patented Nov. 15, 1910.

Application filed November 8, 1907. Serial No. 401,272.

To all whom it may concern:

Be it known that I, WILLIAM T. HENSLEY, a citizen of the United States, and a resident of Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Brush-Holders, of which the following is a specification.

My invention relates to brush-holders for dynamo-electric machines, and it has for its object to provide a device of this character that shall be especially simple and durable in construction and be adapted for use with machines of relatively small size.

Figure 1 of the accompanying drawings is a plan view, and Fig. 2 is a sectional elevation of a device constructed in accordance with my invention, and Figs. 3 and 4 are detail views of parts of the brush-holder shown in the other figures.

Referring to the drawings, the structure here illustrated comprises a stationary rod or shaft 1, a clamping ring 2 which is secured to the shaft and is provided with a notched outer surface, a brush 3 and a supporting arm 4 therefor which is rotatably mounted on the rod or shaft 1.

The supporting arm 4 is preferably punched out of sheet brass or other suitable material and comprises two side portions 5 and 6, an end portion 7 to which the brush is secured and a pair of hub projections 8 which are rotatably mounted on the rod or shaft 1, with the clamping ring 2 between them.

A flexible electrical connection is established between the clamping ring 2 and the brush 3 by a connector or jumper 9 which may be formed of woven copper ribbon, or of other suitable material, the outer end of the connector or jumper being clamped in engagement with the brush by means of a bolt 10 which also serves to secure the brush to the outer end of the supporting arm.

A spiral spring 11 comprising two parts 12 is interposed between the rotatably mounted brush-supporting arm and the clamping ring 2. The inner extremities of the spring parts are fixed in slots 13 in the hubs 8 and the outer extremities are joined together by a cross strip 14 having a projection 15 which is adapted to engage the outer notched surface of the clamping ring. The teeth with which the clamping ring is provided are of different lengths, in order that they may be readily engaged by the projection 15 as it is adjusted to vary the tension exerted by the spring.

The bolt 10 extends through a slot 16 which permits of substantially radial adjustment of the brush relative to the commutator cylinder with which it is adapted to engage.

Since variations in the size and arrangement of parts may be effected within the scope of my invention, I desire that only such limitations shall be imposed as are indicated in the appended claims.

I claim as my invention:

1. A brush holder for dynamo-electric machines comprising a supporting rod or shaft, a ring provided with a plurality of peripheral projections and clamped to said rod or shaft, a double arm rotatably mounted on the rod or shaft at the respective sides of said ring, and having a brush secured to its outer extremity, a spiral spring surrounding said rod or shaft and having its inner end fastened to the brush arm, and means attached to the outer end of the spring to engage any one of the projections of the clamping ring in accordance with the spring pressure desired.

2. A brush-holder for dynamo-electric machines comprising a supporting rod or shaft, a clamping ring secured to the shaft and having a notched outer surface, an arm rotatably mounted on the rod or shaft, and a double spiral spring interposed between the arm and the rod.

3. A brush-holder for dynamo-electric machines comprising a supporting rod or shaft, a clamping ring secured to the rod or shaft and having a notched surface, a double arm rotatably mounted on the rod or shaft and having its side members located at opposite sides of the clamping ring, and a two-part spiral spring having its inner end secured to the arm and its outer end adjustably secured to the clamping ring.

4. A brush-holder for dynamo-electric machines comprising a rod or shaft, a clamping ring secured thereto and having a notched outer surface, a supporting arm rotatably mounted on the rod or shaft and having a brush located at its outer extremity, said arm comprising side portions, an end portion to which the brush is secured

and a pair of hub projections mounted on the rod or shaft, and a two-part spiral spring the inner extremities of which are secured to the hubs of the supporting arm and the outer extremities of which are joined by a cross strip adapted to engage the notches on the outer surface of the clamping ring.

In testimony whereof, I have hereunto subscribed my name this 30th day of Oct., 1907.

WILLIAM T. HENSLEY.

Witnesses:
CARL F. LAMBERT,
BIRNEY HINES.