

C. W. STARKER.
BRUSH HOLDER.
APPLICATION FILED JAN. 23, 1915.

1,292,660.

Patented Jan. 28, 1919.

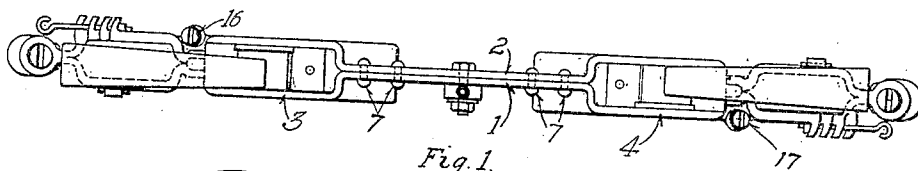


Fig. 1.

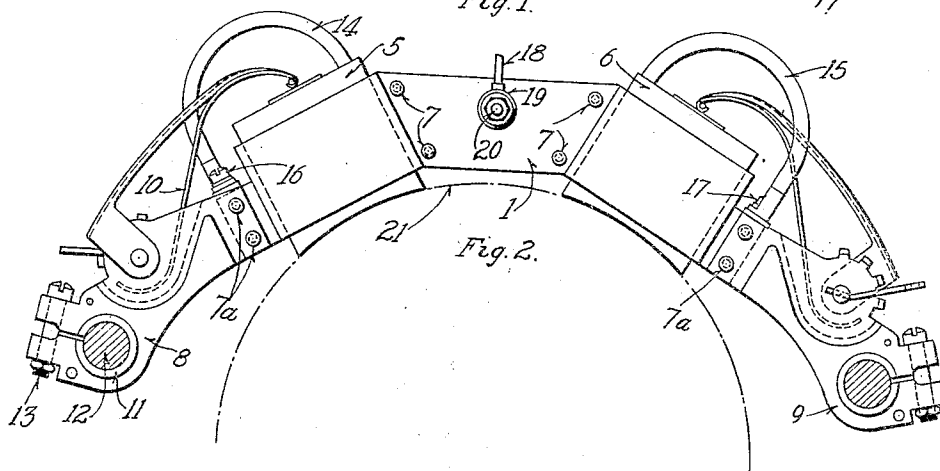


Fig. 2.

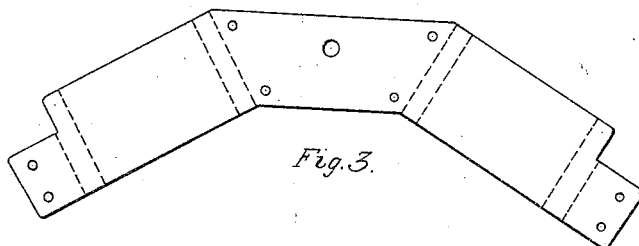


Fig. 3.

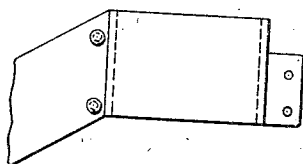


Fig. 4.

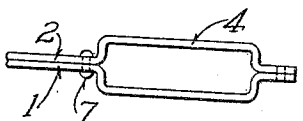


Fig. 5.

WITNESSES:

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CHARLES W. STARKER, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR TO WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

BRUSH-HOLDER.

1,292,644.

Specification of Letters Patent.

Patented Jan. 28, 1919.

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To all whom it may concern:

Be it known that I, CHARLES W. STARKER, a subject of the Emperor of Germany, and a resident of Pittsburgh, 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 brush holder that is formed entirely from punched pieces of sheet metal and which is simple in construction and cheap to manufacture.

A further object of my invention is to provide a brush holder having a plurality of brush boxes arranged in tandem and provided, at its ends, with supporting devices.

A still further object of my invention is to provide a brush holder in which the brush-box member is formed separately, thereby permitting the application of a standard type of supporting device to brush-box members adapted to receive brushes of different sizes.

A brush holder constructed in accordance with my invention is particularly adapted for use in connection with dynamo-electric machines provided with collector rings. The tandem arrangement of the brush boxes permits brush contact at several points on the periphery of the collector ring, thereby limiting the amount of current carried by each brush and increasing the current-carrying capacity of a single brush holder. By providing supporting devices at the ends of the brush holder, the latter is held rigidly in position at two points and objectionable vibration of the brush boxes encountered in brush holders of the cantaliver type is effectually prevented.

In the accompanying drawings, Figure 1 is a plan view of a brush holder constructed in accordance with my invention; Fig. 2 is an elevational view of the brush holder shown in Fig. 1; Fig. 3 is a developed view of a sheet-metal member used in forming the body of the brush holder; Fig. 4 is a fragmentary elevational view of the member shown in Fig. 3 after it has been pressed to form, and Fig. 5 is a fragmentary plan view of two of the members shown in Fig. 3 after assembling.

The brush holder comprises two punched pieces 1 and 2 of sheet metal arranged in

side-by-side relation and spaced apart and bent at portions intermediate their ends to form rectangular boxes or guides 3 and 4 for brushes 5 and 6. The side-by-side pieces are secured together at several points by means of rivets 7, spot welds or any other suitable means. The rivets 7^a or spot welds at the ends of the side-by-side pieces 1 and 2 further serve to secure thereto the supporting members 8 and 9 that are preferably formed of punched pieces of sheet metal, as described in United States Patent #956,739, granted to Westinghouse Electric & Manufacturing Company May 3, 1910 upon an application filed by Robert Siegfried. The supporting members 8 and 9 severally comprise a coiled retaining spring 10 cooperating with the brush 5 and a split sleeve portion 11 adapted to be mounted on a suitable supporting bar 12 and clamped thereon by means of a bolt 13. The brushes 5 and 6 are provided with conducting shunts 14 and 15 the ends of which are suitably attached to the brush holder-supporting members 8 and 9 by means of screws 16 and 17. An electric conductor 18 is connected to the mid-point of the side-by-side pieces 1 and 2 by means of a terminal member 19 and a bolt 20 or any other suitable means, whereby current may flow through the brushes 5 and 6 to or from the collector ring 21. The location of the conductor 18 with respect to the brush boxes insures an equal distribution of current in the brush holder. It is apparent from the above that a brush holder may be constructed with any size of brush box and be provided with a standard type of supporting member.

The parts of the brush holder may assume other forms or may be otherwise arranged with respect to each other without departing from the invention, and I desire that it be capable of such modifications as may come within the scope of the appended claims.

I claim as my invention:

1. A brush holder for dynamo-electric machines comprising two side-by-side sheet metal pieces held together in close engagement except at points intermediate the ends thereof where they are spread apart and bent to form a plurality of brush boxes, and separate supporting members rigidly and removably attached to the ends of said side-by-side pieces and provided with pressure-exerting means for the brushes.

2. A brush holder for dynamo-electric ma-

chines comprising two side-by-side members provided intermediate the ends thereof with a plurality of brush boxes, and separate supporting means rigidly and removably attached to the ends of said side-by-side members.

3. A brush holder for dynamo-electric machines comprising two side-by-side sheet metal pieces held together in close engagement but spread apart and bent at points intermediate the ends thereof to form a plurality of brush boxes, and separate members rigidly and removably secured to the ends of said side-by-side pieces for supporting said brush holder.

4. A brush holder for dynamo-electric machines comprising two side-by-side sheet metal pieces provided intermediate the ends

thereof with a plurality of brush boxes, and separate members rigidly and removably secured to the ends of said side-by-side pieces for supporting said brush holder.

5. A brush holder for dynamo-electric machines comprising a brush box, a separate supporting member therefor, a brush contained in said brush box, and means mounted on said supporting member for exerting a pressure thereon.

In testimony whereof, I have hereunto subscribed my name this 15th day of Jan. 1915.

CHAS. W. STARKER.

Witnesses:

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B. B. HINES.