

No. 823,642.

PATENTED JUNE 19, 1906.

O. SIEBERS.

COLLECTING BRUSH FOR ELECTRIC CURRENT GENERATORS AND MOTORS.

APPLICATION FILED JULY 9, 1903. RENEWED JAN. 2, 1906.

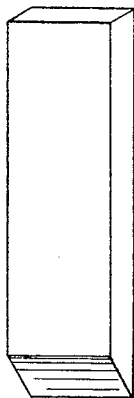


Fig. 1.

Fig. 2.



Fig. 3.

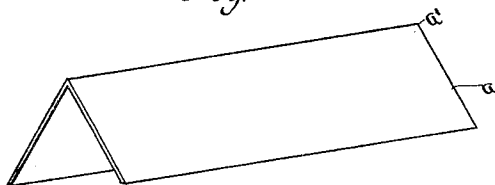
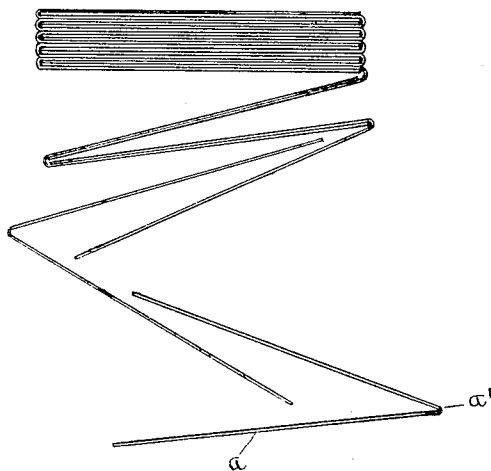


Fig. 4.



WITNESSES

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OTTO SIEBERS, OF DRESDEN, GERMANY.

COLLECTING-BRUSH FOR ELECTRIC-CURRENT GENERATORS AND MOTORS.

No. 823,642.

Specification of Letters Patent.

Patented June 19, 1906.

Application filed July 9, 1903. Renewed January 2, 1906. Serial No. 294,187.

To all whom it may concern:

Be it known that I, OTTO SIEBERS, fabricant, residing in Dresden A, 60 Wittenbergerstrasse, and Empire of Germany, have invented certain new and useful Improvements in Collecting-Brushes for Electric-Current Generators and Motors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

Dynamo-brushes consisting of a number of very thin metal strips have not proved generally satisfactory in practice, owing to their so easily separating from each other. Attempts have been made to overcome this drawback by laying the whole metal sheets one upon the other and then folding the whole together. This, however, proves insufficient to effectually prevent separation of the individual sheets, and brushes made in this manner, moreover, have the defect that the inner sheets readily break at the bends. The outer sheets, on the contrary, are much rounded at such parts, whereby the material readily becomes displaced, causing bulging at the edges. All these inconveniences are overcome by means of my invention, which is illustrated in the accompanying drawings.

Figure 1 shows a complete brush manufactured according to the present invention. Fig. 2 is an end view of the same. Fig. 3 shows one of the folded sheets of metal employed in constructing the brush. Fig. 4 shows a brush in course of manufacture, drawn to an enlarged scale.

In carrying out my invention I take metal sheets *a* of double the width which the brush is to have and bend or fold each sheet over on the center line *a'*, so that the folded sheet thus presents two laterally-connected strips and somewhat resembles a roof in form, as

Fig. 3 shows. I then insert such sheets in succession one into the other in zigzag manner, so that each member of each folded sheet *a* is between the two members of another sheet *a*, as is clearly illustrated in the enlarged view, Fig. 4. It will thus be seen that in the completed brush there are always two strips of metal lying between the two members of each folded sheet *a*, and these two strips reach approximately to the line of fold *a'*. In this manner it is not possible for the metal to bend through or break at *a'*, nor can it bulge out at such part. Furthermore, the various sheets of metal are so firmly inside one another that separation is impossible. The brush so built up is subsequently pressed and then incased in a sheet *b* of the same metal as that of which the sheets *a* are made. The casing-sheet *b* is applied by its ends being bent round, so as to be between two sheets *a* of the brush, whereupon it is soldered at the outside.

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

A collecting-brush for electric-current generators and motors, consisting of sheets of metal, each of which is twice the width of the brush, folded over at the center and inserted one in the other in zigzag manner so that each member of each folded sheet is between the two members of another folded sheet, and a sheet incasing the said series of folded sheets, having its ends inserted between the latter, the said folded sheets and the casing-sheet being held together by solder applied on the outside, substantially as described.

In witness whereof I have hereunto signed my name, this 2d day of June, 1903, in the presence of two subscribing witnesses.

OTTO SIEBERS.

Witnesses:

PAUL E. SCHILLING,
PAUL ARRAS.