

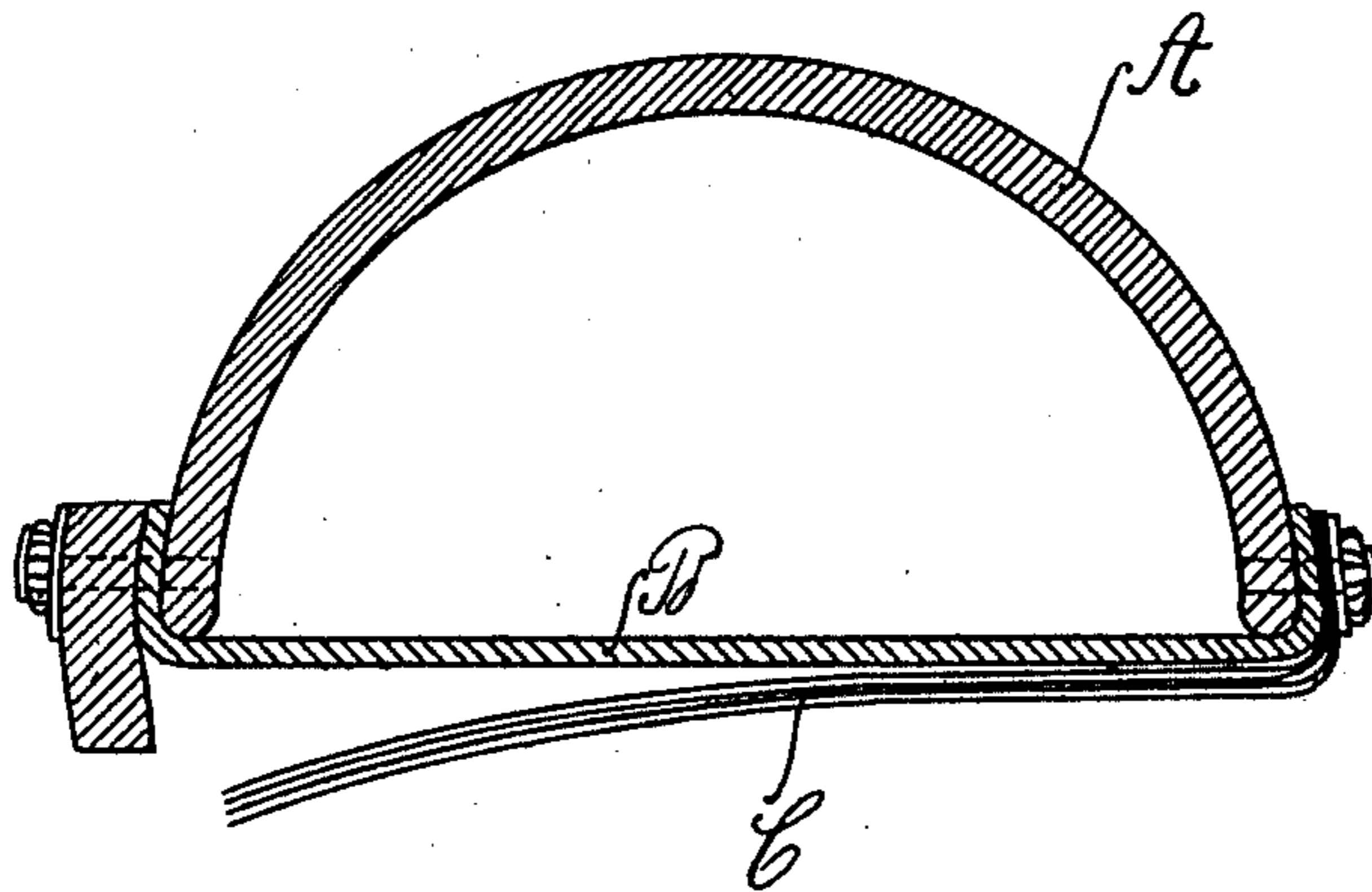
W. GERB.

DEVICE FOR GRINDING COMMUTATORS OR COLLECTING RINGS.

APPLICATION FILED JAN. 2, 1909.

945,270.

Patented Jan. 4, 1910.



Witnesses:

Hugh Gramatzki  
Elsa Haupt

Inventor:

William Gerb

# UNITED STATES PATENT OFFICE.

WILLIAM GERB, OF BERLIN, GERMANY.

DEVICE FOR GRINDING COMMUTATORS OR COLLECTING-RINGS.

945,270.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed January 2, 1909. Serial No. 470,299.

*To all whom it may concern:*

Be it known that I, WILLIAM GERB, a subject of the King of Prussia, residing at Berlin, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Devices for Grinding Commutators or Collecting-Rings; 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 appertains to make and use the same.

My invention relates to an improved device for grinding or polishing the commutators or collecting-rings of dynamo-electric machines in a very effective and convenient manner.

According to my invention I stretch a band of pliable material between the ends of a bent resilient electrically non-conducting handle and attach one or more strips of emery cloth or the like at one side of the device in front of the band. When the device is pressed against the surface to be ground or polished, the band faced with the emery cloth adapts itself to the rounded surface, fitting tightly to it, whereby an extremely vigorous abrasive effect is produced, which present a more or less rigid abrasive surface. In this manner, moreover, the entire surface of the emery cloth is utilized; while a further advantage is that one and the same device can be employed for commutators or collecting-rings of divers diameters, whereas ordinarily a number of grinding contrivances would have to be provided.

My invention is illustrated in the accompanying drawing, in which the figure is a section through one form of the new device.

A is a bowed electrically non-conducting handle, which may for instance be made of vulcanite, fiber, india-rubber covered steel, etc., and which owing to the curved shape possesses a certain degree of resilience. Between the ends of the handle A there is stretched a flexible band, such as a piece of

webbing B. At the one end one or more strips C of emery cloth or the like are attached, the other extremity of such strip or strips being free. When a plurality of strips is employed, they may be of different degrees of fineness.

In use, the device is grasped by the handle A and applied to the surface to be treated, against which the emery cloth thus lies. On the exertion of increased pressure upon the handle, the web B with the emery cloth on its face is caused to adapt itself exactly to the surface to be treated, which will thus be most effectively ground or polished by the entire surface of the emery cloth. The grinding is thus rendered exceedingly rapid and uniform. Mica insulation projecting from the face of the commutators can be most thoroughly removed by the new device.

It will be observed that there is no tensile strain on the emery cloth, but merely a compressive strain vertically to its surface; the strain on the web, moreover, when the contrivance is out of use is relatively small, and in use can be regulated as desired by the pressure of the hand. In this manner material is economized and safe and convenient handling of the device insured.

As all parts may be of electrically insulating material, the danger of short-circuiting can be entirely obviated.

Having thus described my invention, I declare that what I claim is—

A device for grinding or polishing commutators or collecting-rings, comprising a bent resilient electrically non-conducting handle, and a pliable band stretched between the ends thereof and faced with a flexible strip presenting an abrasive surface, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM GERB.

Witnesses:

KATHARINE MEYER,  
HUGH GRANDTSKI.