A. WEHRSEN.

DISK FOR INFLUENCE OR STATIC INDUCTION AND CONDENSER MACHINES.

APPLICATION FILED MAR. 10, 1908.

901,666. Patented Oct. 20, 1908.

Fig. 1.

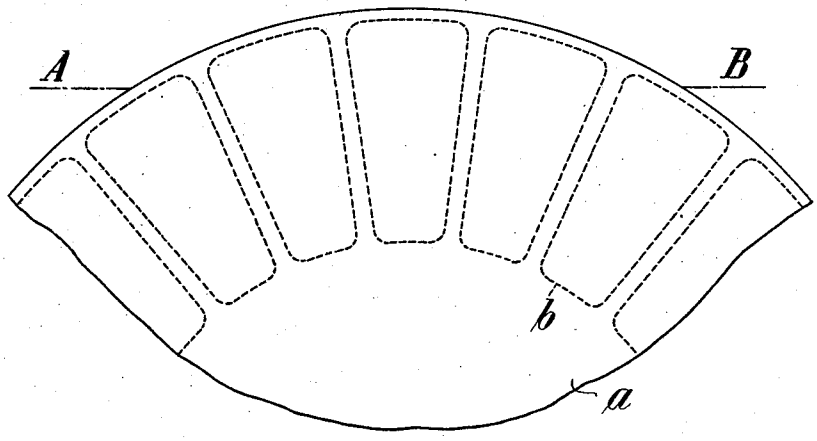


Fig. 2.

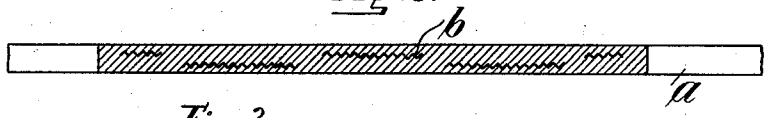


Fig. 3.

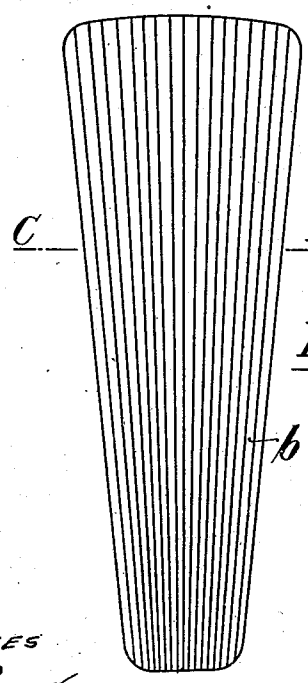


Fig. 4.

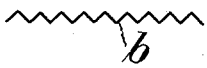
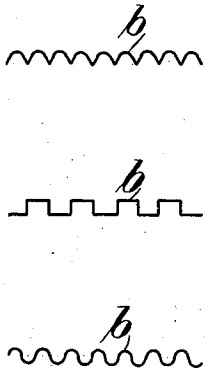


Fig. 5.



WITNESSES

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DISK FOR INFLUENCE OR STATIC INDUCTION AND CONDENSER MACHINES.

No. 901,666. Specification of Letters Patent. Patented Oct. 20, 1908.

Application filed March 10, 1908. Serial No. 420,199.

To all whom it may concern:

Be it known that I, ALFRED WEHRSEN, mechanician, a subject of the King of Prussia and German Emperor, residing at 31 Schlesischestrasse, Berlin, S. O. 33, Germany, have invented certain new and useful Improvements in Disks for Influence or Static Induction and Condenser Machines, of which the following is a specification.

It is a known fact that in influence or static induction and condenser machines having disks made of any suitable insulating material, such as vulcanite for example, with metal sectors let in, the full effect of the disks depends on the magnitude of the surface of these metal sectors. To secure a good result from the machine as a whole hitherto one must restrict oneself to a certain definite number of sectors, and these must be separated one from another by a sufficiently wide or thick layer of the insulating material. A limit is, however, soon reached, and it cannot be exceeded in practice. Under my invention, in order to secure a larger superficial area for the sector, these metal sectors, which are conductors of electricity, are corrugated or undulated, so that their superficial area is increased to a very considerable extent without enlarging their width.

It has been found in practice that in static induction and condensing machines the spacing of the disks, whether in single revolution or double revolution machines, must differ according to the length of the sparks to be got. (By single revolution machines I mean machines consisting of fixed and rotating disks, the latter turning in only one direction, either on single or multiple machines, as contrasted with, machines having a double revolution, the disks in which turn in opposite directions). The present invention offers an excellent means of attaining a very favorable result, as the corrugation or undulation of the sectors admits of the fullest utilization of the longest possible sparks, and also admits of the largest quantity of electricity being utilized.

In order that my invention may be properly understood, I have hereunto appended an explanatory drawing, whereon the new form of the sector is shown in various embodiments by way of example.

Figure 1 shows a portion of the disk with the improved sector let into it. Fig. 2 is a section along the line A—B of Fig. 1. Fig. 3 is a separate sector. Fig. 4 is a cross section along the line C—D of Fig. 3, and Fig. 5 shows other cross sectional forms of sectors, made in accordance with this invention.

The sectors *b*, which are made of metal, and surrounded on all sides by the suitable insulating material of which the disk *a* is composed, are good conductors of electricity, and in accordance with this invention they are corrugated or undulated so as to give a greater surface area without increasing their breadth. As can be seen from Fig. 4, the cross sectional form of these sectors may be made in zig-zag, or, as will be seen from Fig. 5, in sharpened corrugations, or in the forms shown in the last two diagrams lettered *b* in Fig. 3.

What I do claim as my invention and desire to secure by Letters Patent is.—

1. In a static induction machine, a disk composed of insulating material and having metal sectors embedded therein, said sectors being corrugated.

2. In a static induction machine, a disk composed of insulating material and having metal sectors embedded therein, said sectors being corrugated, said corrugations being of rectangular shape in cross section.

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

ALFRED WEHRSEN.

Witnesses:

HENRY HASPER,

WOLDEMAR HAUPT.