798,222. PATENTED AUG. 29, 1905.

R. SIEGFRIED.

VENTILATING DEVICE FOR CORES OF ELECTRICAL MACHINES.

APPLICATION FILED JAN. 3, 1905.

Fig. 1.

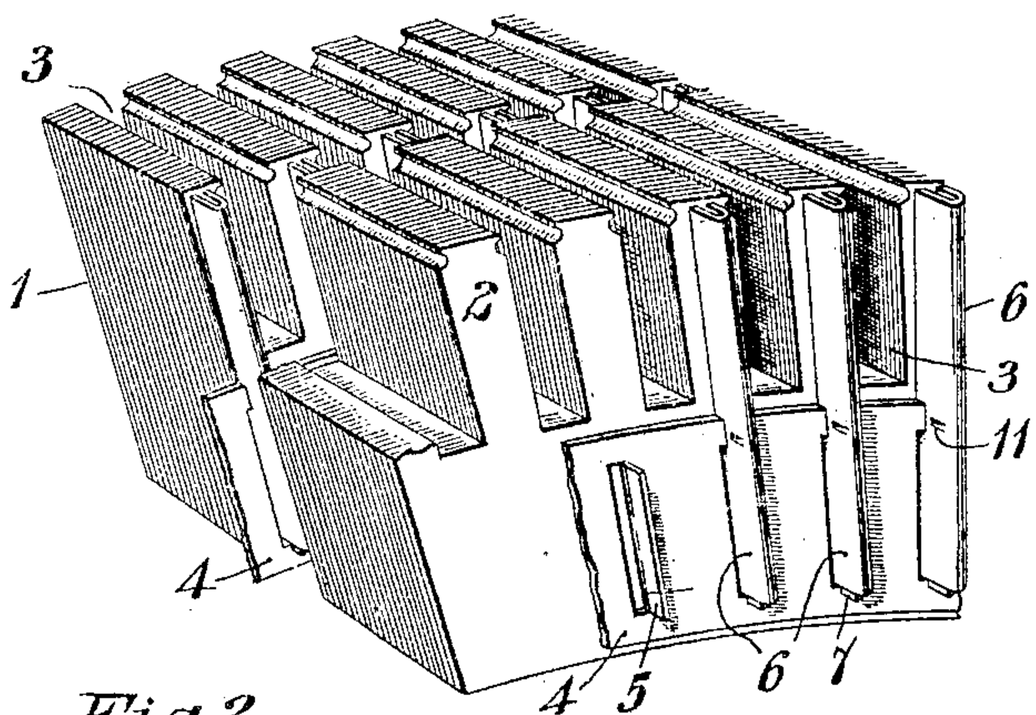


Fig. 2.

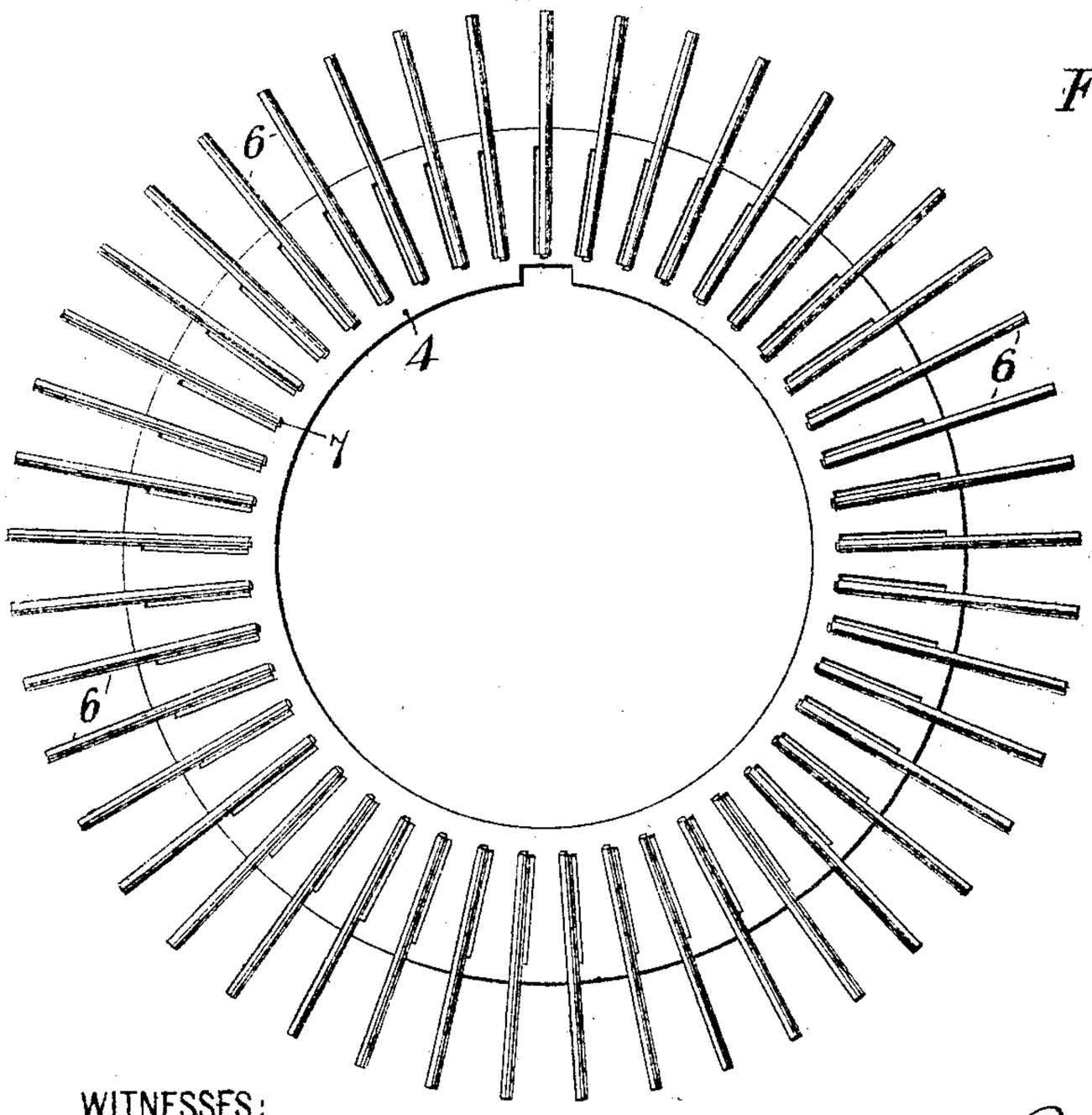
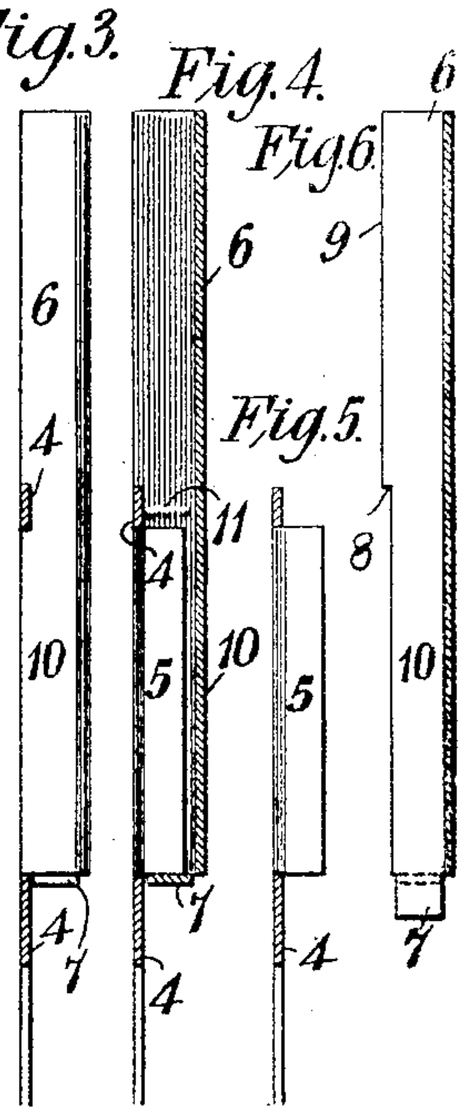


Fig. 3.

Fig. 4.

Fig. 6.

Fig. 5.



WITNESSES:

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VENTILATING DEVICE FOR CORES OF ELECTRICAL MACHINES.

No. 798,222. Specification of Letters Patent. Patented Aug. 29, 1905.

Application filed January 3, 1905. Serial No. 239,536.

To all whom it may concern:

Be it known that I, ROBERT SIEGFRIED, a citizen of the United States, and a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Ventilating Devices for Cores of Electrical Machines, of which the following is a specification.

My invention relates to electrical machines, and particularly to means for providing ventilating-ducts through the cores of such machines.

The object of my invention is to provide a simple and effective device which shall insure proper ventilation of laminated cores and also provide adequate supporting means for adjacent core-plates.

With these ends in view I have devised the means shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a portion of a laminated core having my invention embodied therein. Fig. 2 is a side elevation of one of my ventilating-plates, and Figs. 3, 4, 5, and 6 are detail sectional views of a ventilating device embodying my invention.

It will be understood that my invention is adapted for use in connection with both stationary and rotatable members of electrical machines and that the illustration here given of a rotatable member only is not intended to in any wise restrict the scope of the invention.

The laminated core 1 here shown is provided with radial teeth 2, which form radial slots 3 in the usual manner, and my ventilating device comprises a sheet-metal plate 4, (here shown as a complete annulus,) from which project laterally a series of lips 5, which correspond in number and position to the teeth 2 and which are formed by cutting three sides of a rectangle through the plate 4 and bending the portion thus cut outward substantially at right angles to the plane of the plate. I then cut blanks of such form and dimensions that they may be bent into bars 6 of U shape in cross-section, each having a projecting lip 7 at one end and having their free front edges for a portion of their length cut away to form shoulders 8, which fit over the outer edge of the plate 4, so that the edges 9, which project beyond the shoulders, may fit against the face of the corresponding tooth 2. The portions 10, the edges of which are cut away to form the shoulders 8, fit over the lips 5 and may be clamped thereto by compression or indenting a portion of the metal, as indicated at 11. The lip 7 is bent at right angles to the body portion of the device across the corresponding end of the lip 5. The dent in the metal (indicated at 11) will prevent accidental displacement of the device during the assembling operation and the bent-over lip 7 will prevent any radial displacement by centrifugal action when the machine is constructed and in operation.

In case the device is embodied in machines of large size the plate 4 will of course be made in segments and may be fastened to a spider by the usual dovetail projections, or the segments of the plate 4 may be fastened to segmental core laminæ having the usual dovetail projections instead of being mounted upon a shaft, as will be the case in the form here indicated.

By employing the means here shown the lips 5 may be readily cut and bent to position by a die designed for that purpose, and the bars 6 may be formed from scraps of sheet metal, thus utilizing material which would not otherwise be available for any purpose except to be returned to the furnace for remelting. The structure thus formed is durable and efficient and is as inexpensive as it is generally feasible to employ where durability and efficiency in service are desired.

I claim as my invention—

1. A core-ventilating device comprising a plate having lips projecting laterally therefrom and bars of U shape in cross-section clamped to said lips.

2. A core-ventilating device comprising a plate having laterally-projecting, radial lips and folded strips that embrace said lips and project radially beyond the edge of the plate.

3. A core-ventilating device comprising a plate having integral, radial lips that project laterally from one face and folded strips that embrace said lips and are clamped thereto so as to rest against the face of the plate and project beyond one edge thereof.

4. A core-ventilating device comprising a plate having laterally-projecting lips and separate strips folded over and clamped to said lips to form spacing-ribs.

5. A core-ventilating device comprising a plate having laterally-projecting lips punched

from the body of the plate and strips folded over and clamped to said lips to form spacing-ribs.

6. A core-ventilating device comprising a plate having laterally-projecting lips and strips folded to embrace said lips at the sides and at one end and having shoulders that rest against one edge of the plate.

7. A core-ventilating device comprising a plate having laterally-projecting lips and strips folded over said lips and resting against the adjacent side and one edge of the plate and indented to grip the lips.

In testimony whereof I have hereunto subscribed my name this 30th day of December, 1904.

ROBERT SIEGFRIED.

Witnesses:

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