A. J. BROWN.

VENTILATING MEANS FOR LAMINATED CORES.

APPLICATION FILED OCT. 19, 1905.

925,991. Patented June 22, 1909.

Fig. 1.

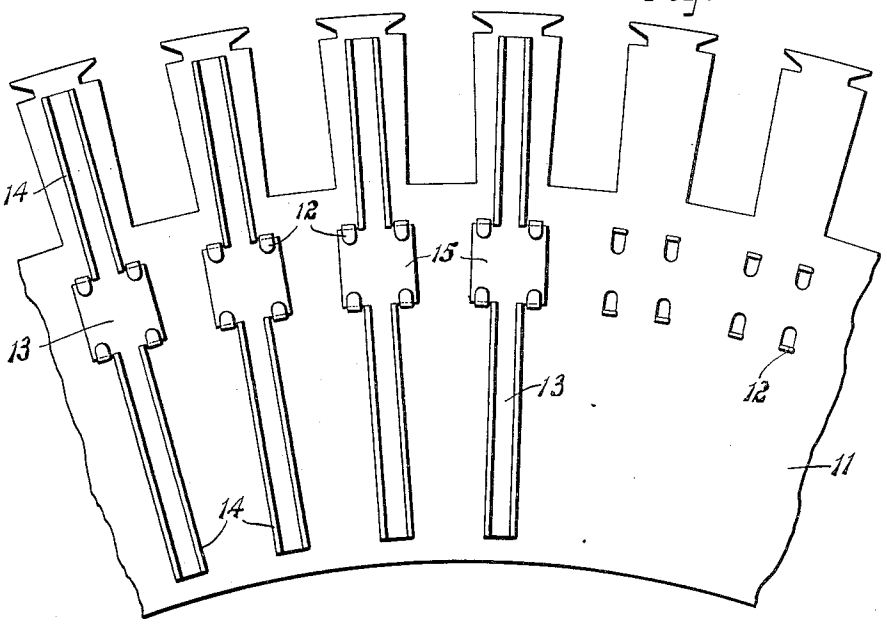


Fig. 6.

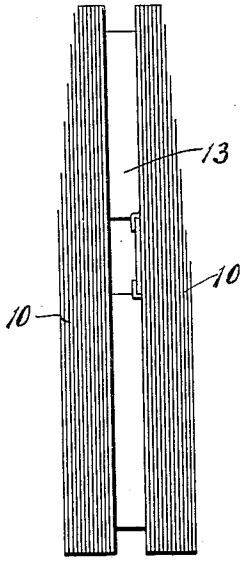


Fig. 2.

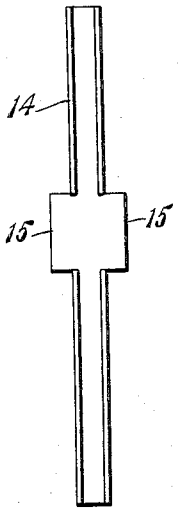


Fig. 3.

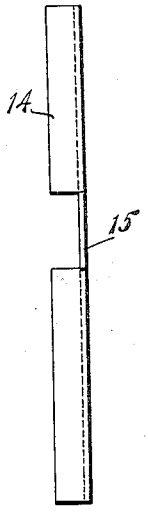


Fig. 5.

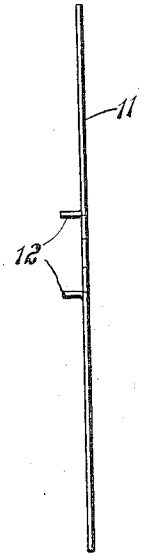
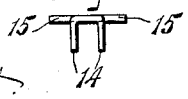


Fig. 4.



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UNITED STATES PATENT OFFICE.

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VENTILATING MEANS FOR LAMINATED CORES.

No. 925,991. Specification of Letters Patent. Patented June 22, 1909.

Application filed October 19, 1905. Serial No. 283,530.

To all whom it may concern:

Be it known that I, ARTHUR J. BROWN, citizen of the United States, residing at Norwood, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Ventilating Means for Laminated Cores, of which the following is a full, clear, and exact specification.

My invention relates to spacing members for the laminæ of cores of dynamo-electric machines.

The object of my invention is to provide a spacing member which will be easily and cheaply made and one which will not interfere with the free circulation of air through the ventilating passage-ways in the cores.

In carrying out my invention I provide a spacing member for laminæ of dynamo-electric machines which comprises a member U-shaped in cross section and having laterally extending wings or projections.

Considering my invention from a more specific standpoint it consists of a spacing member for a laminated core of a dynamo-electric machine comprising a core plate having laterally extending lips punched therefrom, and a plurality of channel-shaped rib members having wings or projections held to the core plate by the lips which are bent over the wings or projections.

For a better understanding of my invention reference is had to the accompanying drawing in which—

Figure 1 is a face view of a portion of one of my spacing members; Figs. 2, 3 and 4 are face, side and plan views respectively of one of the rib members employed in my spacing device; Fig. 5 is an edge view of one of the core punchings to which the ribs are attached; and Fig. 6 is a view of two groups of laminæ of a core separated by a spacing member embodying my invention.

Referring to the figures of the drawing, I have shown at 10 groups of laminæ of a core of a dynamo-electric machine separated by my spacing member. The core may be either that of a stationary or rotary member. An end plate 11 of each group, one of which is shown in Fig. 1, is provided with a number of lips or projections 12, punched from the body of the plate. The plate may be circular in shape, or may be a short segment which is arranged end to end with other similar segments to encircle the core. The lips or projections 12 are arranged in two rows as shown and are preferably punched in the plate at the same time that the latter is cut from the sheet metal. These lips or projections hold the spacing ribs 13 as shown.

Each spacing rib 13 is preferably made of sheet metal and consists of a plate having portions 14 of its outer edges bent at right angles thereto, forming two U-shaped or channel-shaped portions separated by two laterally extending wings or projections 15. If desired the core plate 11 may be provided with a plurality of groups of lips and each spacing rib may be provided with more than one pair of wings or projections, or there may be but a single wing extending from one side only. For ordinary sized machines, however, a single pair of holding wings is preferable. Also, if the core plate is of large size, two such spacing members may be arranged end to end in a radial line. Each spacing member 13 is preferably punched in the shape shown, that is, with the U-shaped portions 14 and the wings 15, by a single operation, suitable dies being provided for that purpose.

The lips 12 of the plate when punched from the plate 11 extend at right angles thereto, as is shown at the right hand side of Fig. 1. Each spacing member is held to the core plate by four of the lips, which are bent over the wings of the spacing ribs as shown in the drawing. Thus the parts will be securely held together. It will be seen that the spacing ribs 13 can be easily and quickly made and can be easily fastened to the core plate. It will also be seen that the members 13 will not interfere with the free circulation of air through the passage-ways between the groups of laminæ since the air can flow freely through the member 13 itself.

I do not wish to be confined to the details shown, but aim in my claims to cover all modifications which do not depart from the spirit and scope of my invention.

What I claim as new and desire to secure by Letters Patent is:—

1. A spacer for laminæ of dynamo-electric machines, comprising a member U-shaped in cross section and having a laterally extending holding wing or projection in the plane of the base of the U.

2. A spacing rib for laminæ of dynamo-electric machines, comprising a rectangular sheet metal plate having portions of certain of its outer edges bent at right angles to its

base, and other portions unbent to form holding wings.

3. A spacer for laminated cores of dynamo-electric machines, comprising a sheet metal punching having portions of its sides bent outward at right angles forming two U-shaped portions and two flat holding wings or projections.

4. A spacing member for laminæ of dynamo-electric machines, consisting of a core plate having lips or projections, and a U-shaped member having one or more laterally extending wings, said lips being bent over said wing or wings.

5. A spacing member for laminated cores of dynamo-electric machines, comprising a core punching provided with integral punched lips or projections, and a plurality of sheet metal U-shaped members having one or more wings or arms each engaged by a plurality of said lips or projections.

6. In a laminated core of a dynamo-electric machine, a spacing member, consisting of a core plate having laterally extending lips punched therefrom, and a plurality of detachable channel-shaped rib members having one or more wings or projections, said lips being bent over the wings whereby the members will be held to the core plate.

7. A spacing member for laminated cores of dynamo-electric machines, comprising a core punching provided with a plurality of outwardly extending lips, and a plurality of sheet metal rib members, each of said members consisting of a strip resting against the face of the core punching and having laterally extending wings, and portions bent at right angles thereto and to the punching, said wings being engaged by the lips of the core plate, whereby the ribs will be held to the core punching.

8. A spacer for laminæ of dynamo-electric machines, comprising a straight metal strip having its edges bent at right angles to its base along part of its length, while along the remainder of its length its edges remain unbent to form holding wings.

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

ARTHUR JAMES BROWN.

Witnesses:
FRED J. KINSEY,
ARTHUR F. KWIS.