

(No Model.)

2 Sheets—Sheet 2.

T. A. EDISON.
DYNAMO ELECTRIC MACHINE.

No. 287,512.

Patented Oct. 30, 1883.

Fig. 3.

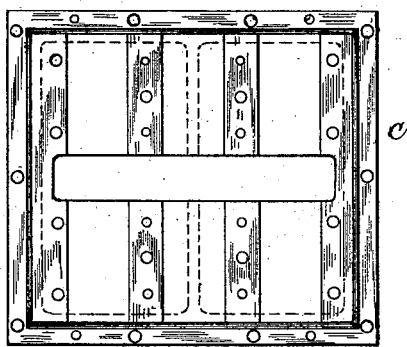
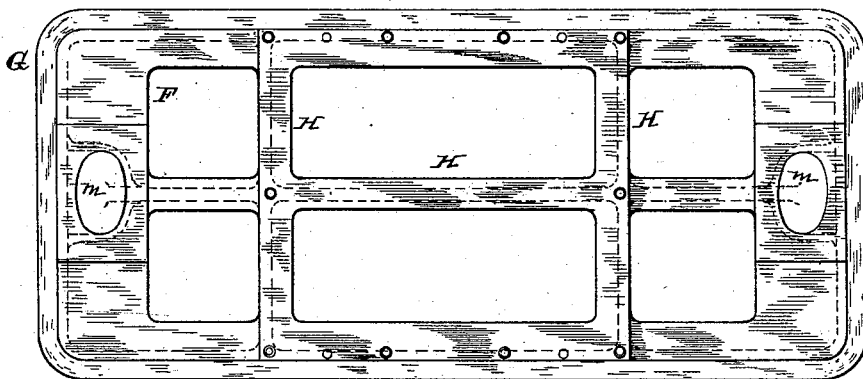


Fig. 4.



ATTEST:

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Att'y.

UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF MENLO PARK, NEW JERSEY.

DYNAMO-ELECTRIC MACHINE.

SPECIFICATION forming part of Letters Patent No. 287,512, dated October 30, 1883.

Application filed June 29, 1883. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. EDISON, of Menlo Park, in the county of Middlesex and State of New Jersey, have invented a new and useful Improvement in Dynamo-Electric Machines, (Case No. 577,) of which the following is a specification.

This invention relates to the bed-plates on which dynamo-electric machines are mounted, its object being to maintain a circulation of air about the armature and between the armature and pole-pieces of the machine, whereby undue heating of the armature is prevented; and I accomplish this object by providing openings in the bed-plate upon which the machine rests, which openings permit air to penetrate to the space between the polar extensions in which the armature revolves. The bed-plate is preferably of iron, having a smaller plate of non-magnetic material, preferably zinc, placed upon it, to separate it from the magnet-poles. Both plates are made in the form of ribbed frames, the bed-plate being mounted upon ways, so that the air penetrates under it and through it and the zinc plate to the armature and polar extensions. Both plates are made of as open a form as is consistent with the proper degree of strength.

The invention is illustrated in the annexed drawings, in which—

Figure 1 is an elevation of a dynamo-electric machine with the bed-plates in longitudinal vertical section; Fig. 2, a vertical transverse section of the plates; Fig. 3, a plan view of the zinc plate, and Fig. 4 a plan view of the iron bed-plate.

A A are the polar extensions of the field-magnet of the machine, between which the armature B revolves in the direction shown by arrow *a*.

C is the zinc plate or frame, whose lower edge, *b*, rests upon the iron bed-plate D. The polar extensions A A rest upon the zinc plate C, whose upper edge is provided with apertures *c c*.

The plate D is set upon ways E E, (whereby it may be moved to tighten the belt connecting it with the source of power, as set forth in another application made by me,) and the air is thus enabled to penetrate beneath it. Such plate D is an open frame composed of an open bottom part, F, with raised sides G G. The bottom of the plate rests on the ways E E. Longitudinal and transverse ribs H H extend across, forming a rigid frame.

Upon the plate D is set the zinc plate C, which also consists of an open ribbed frame, on which the polar extensions rest.

The lower bed-plate, D, is provided with oil-receptacles *m m*, to which the oil is conveyed from the bearings. This feature will, however, be included in another application.

The arrows in Figs. 1 and 2 show the air circulation when the armature is revolving in the direction indicated. Air will enter below the plate D and pass through both plates to the armature, as shown by arrow *d*. It will enter, also, as shown by arrows *e*, at the top of the plate D, passing down, and then up through the center of the plate to the armature; and, also, the air will pass to and around the armature through the apertures *c* at the top of the zinc plate, as shown by arrows *f*.

It is to be understood that all patentable features of invention shown or described, but not claimed herein, are reserved for protection by other patents, and have been or will be included in other applications for patents.

What I claim is—

1. The combination, with a dynamo-electric machine, of an open bed-plate therefor, through which air penetrates to the space between the polar extensions of the machine in which the armature revolves, substantially as set forth.

2. The combination, with a dynamo-electric machine, of a bed-plate provided with openings and mounted upon ways, substantially as set forth.

3. The combination, with a dynamo-electric machine, of an open iron bed-plate and an open non-magnetic plate between said iron plate and the field-magnet of the machine, substantially as set forth.

4. The non-magnetic plate provided with apertures in its upper edges for admitting air to the armatures, substantially as set forth.

5. The combination, with a dynamo-electric

tric machine, of a bed-plate therefor, formed as a ribbed frame and mounted upon ways, substantially as set forth.

6. The combination, with a dynamo-electric machine, of a non-magnetic plate placed between the polar extensions of the machine and the iron bed-plate, and formed as a ribbed frame, substantially as set forth.

This specification signed and witnessed this 25th day of June, 1883.

THOS. A. EDISON.

Witnesses:

H. W. SEELEY,

EDWARD H. PYATT.