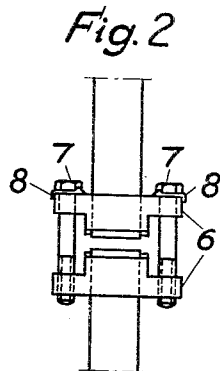
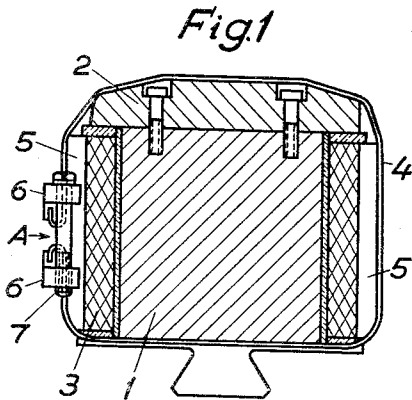


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SALIENT POLE COIL SUPPORT

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SALIENT POLE COIL SUPPORT

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2 Claims. (Cl. 310—194)

The excitation coils in synchronic electric machines with a rotating magnetic field are generally wound of copper strips on edge with insulation between the turns. On large machines the salient poles are not made in one piece with the pole centre but are attached to it by dovetailing by means of a dovetail key made in one piece with the pole and screws or in small machines only by means of screws. The pole core and pole shoe may either be formed in one piece or with a pole shoe attached to the pole core by means of screws, the pole shoe then generally being laminated. When the axial length of the poles exceeds a certain value, it generally will be necessary to brace the winding turns of the excitation coil against the core. According to an already known method this is achieved by applying a block of insulating material between the excitation coils on two adjacent poles. This block is generally so formed that it fits into the space between the coils and will therefore be provided with bevelled sides, and the block is attached by screws threaded into the rotor centre and is forced against the sides of the excitation coils. In manufacturing very large machines it generally is impossible to mount the poles on the rotor centre in the workshop due to difficulties in the succeeding transportation, but it is of course advisable to do as much work as possible in the workshop. When poles and pole centre are delivered separately, it generally has been indispensable at the place where the machine is to be mounted, to adjust and attach said blocks between the poles of the machine.

In order to avoid the necessity for the said blocks between the poles and to provide the poles with a complete winding already in the workshop, according to the present invention a bracing strip is provided, which in a plane perpendicularly to the shaft of the rotor embraces the excitation coil and the pole shoe, which strip is provided

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with a stretching device. The said strip may either be made in one piece or in two pieces which are attached to the pole by means of a separate attaching device, which will be more closely described with reference to the accompanying drawing.

The accompanying drawing shows a preferred form for the bracing of the coils.

Fig. 1 shows a pole, where the bracing strip is made in one piece and embraces the coil as well as the pole shoe. Fig. 2 shows the stretching device of the strip seen in the direction A in Fig. 1.

On the drawing the pole core is designated by 1 and the pole shoe by 2, which latter also can be made in one piece with the pole core. 3 designates the excitation coil and 4 the strip embracing the coil. 5 designates distance pieces of insulating material between the strip and the coil.

When the poles are provided with pole shoes separate from the pole cores, the strip may either be countersunk in the joint between the core and the pole shoe and will thus only embrace the pole core and the coil. The stretching device consists of two pieces 6 attached to the ends of the strip. The stretching bolts 7 are threaded into one of said pieces but traverse with sufficient clearance holes in the other pieces. By means of the screws the two pieces 6 are moved towards each other thus stretching the strip around the coil, and then the screws are fixed by means of the locking washers 8.

We claim as our invention:

1. Bracing means for the excitation coils of an alternating current machine having rotating excitation poles with pole shoes and excitation coils of copper strips wound on edge, comprising a coil bracing strip arranged in a plane perpendicular to the axis of the rotor shaft and embracing the pole core and the excitation coil and the pole shoe, and a stretching device for said bracing strip.

2. Bracing means according to claim 1, in which the said stretching device comprises two members, one attached to each adjacent end of the said strip, and two bolts each threaded into one of said members and passing through clearance holes in the opposite member.

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