United States Patent [19]

Trago et al.

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[54] **METHOD OF FABRICATING AN INJECTED MOLDED MOTOR ASSEMBLY**

[76] Inventors: **Bradley A. Trago**, 922 Cerasus Dr., Rockford, Ill. 61108; **Edward J. Byrnes**, 116 Woodland Ct., #1D, Carpentersville, Ill. 60110; **Griff D. Neal**, 2600 N. Southport Ave., Unit 31, Chicago, Ill. 60614

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[51] Int. Cl.^{6} **H02K 15/04**

[52] U.S. Cl. **29/596**; 264/272.2; 310/42; 310/43; 310/90

[58] Field of Search 29/596, 598; 310/42, 310/43, 90, 71; 264/272.2, 272.19

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Primary Examiner—Carl E. Hall
Attorney, Agent, or Firm—Leydig, Voit & Mayer

[57] **ABSTRACT**

An electrical motor and the process for forming that motor utilizes injection molding techniques to unitize the stator assembly. The stator assembly includes a stator lamination stack and preferably a metal front end cap which is secured to the lamination stack after the lamination stack is insulated and wound. The windings are terminated at a plurality of conductive pins fusion welded to the terminating ends of the windings. The stator assembly with front end cap in place is positioned in an injection molding die. Pressure is applied to the die, and molten plastic is injected under pressure to fill voids in the stator assembly, and also to form a plastic mass which will serve as the rear end cap. The rear end cap is also molded with a connector portion which fixes the conductive pins in place as a part of the connector. A bore formed in the stator assembly provides mounting surfaces for bearings on a rotor assembly.
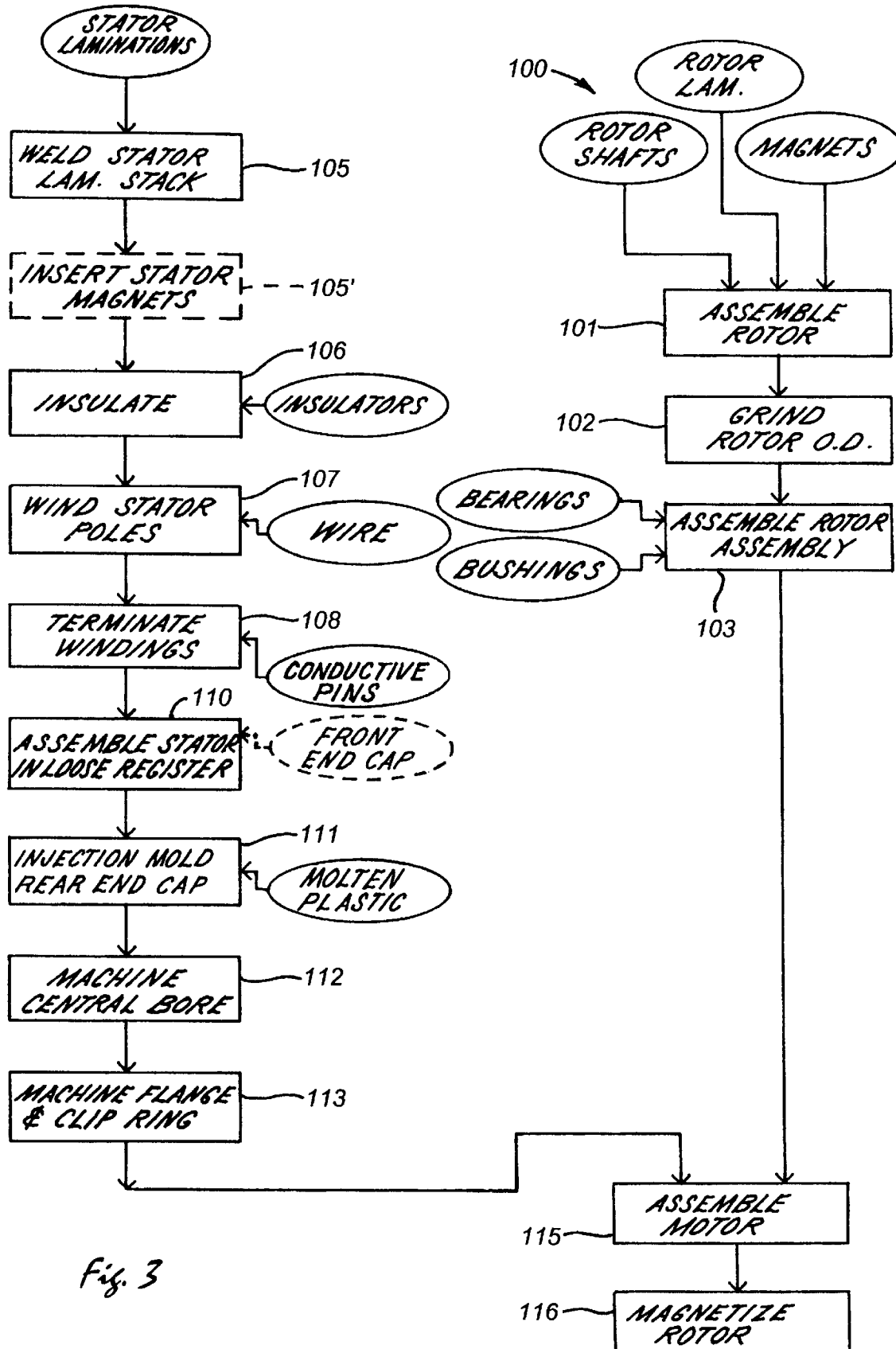
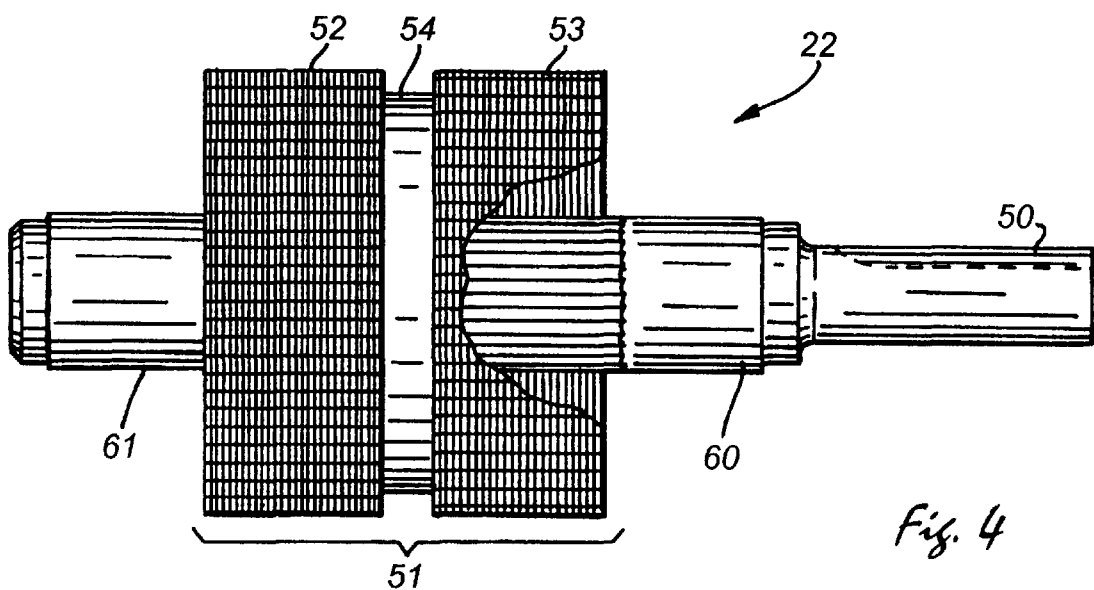**28 Claims, 10 Drawing Sheets**

Fig. 1

Fig. 2

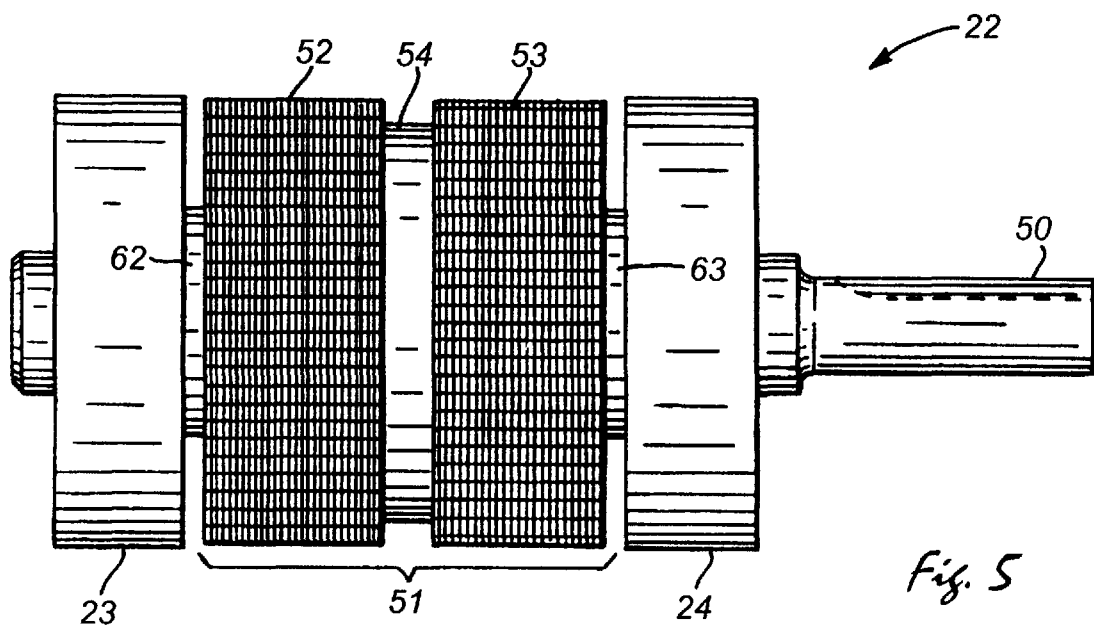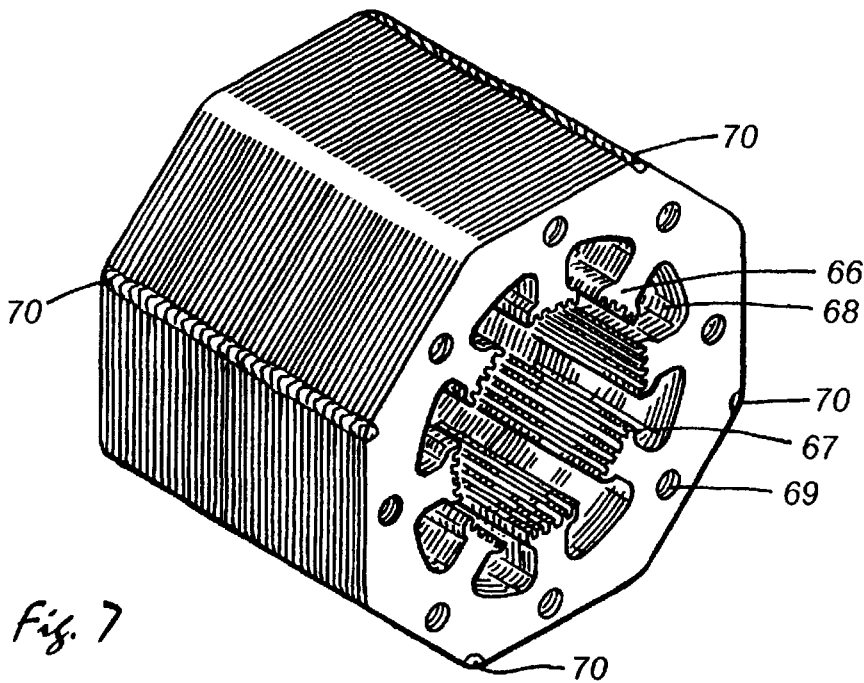Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7
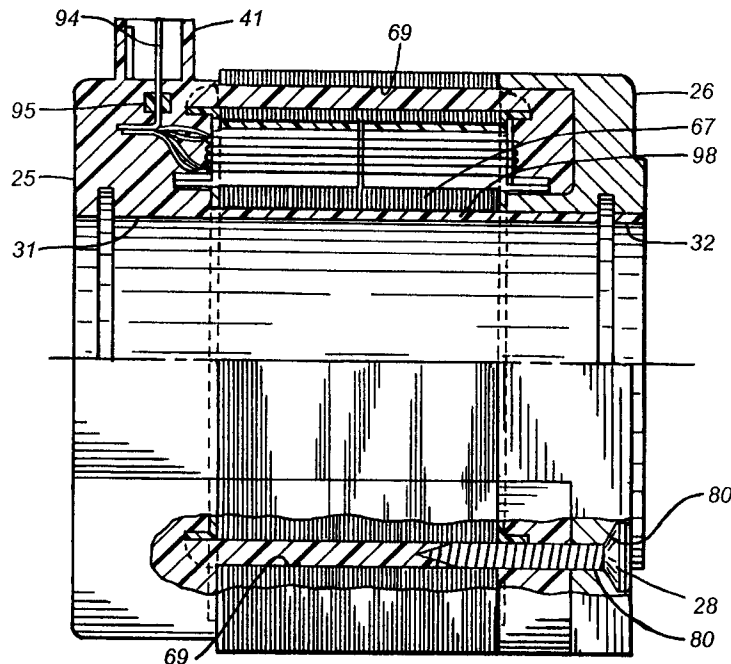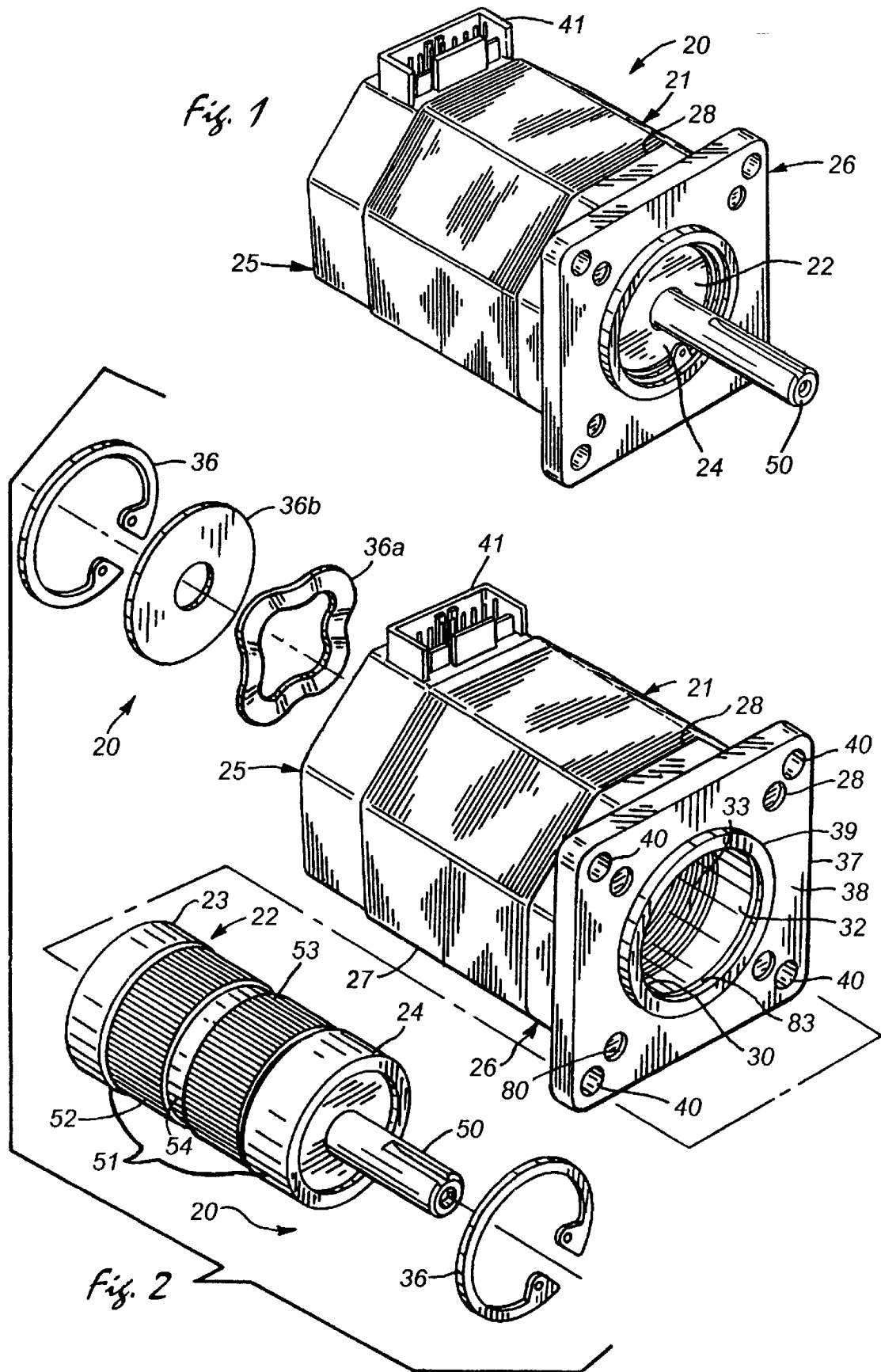
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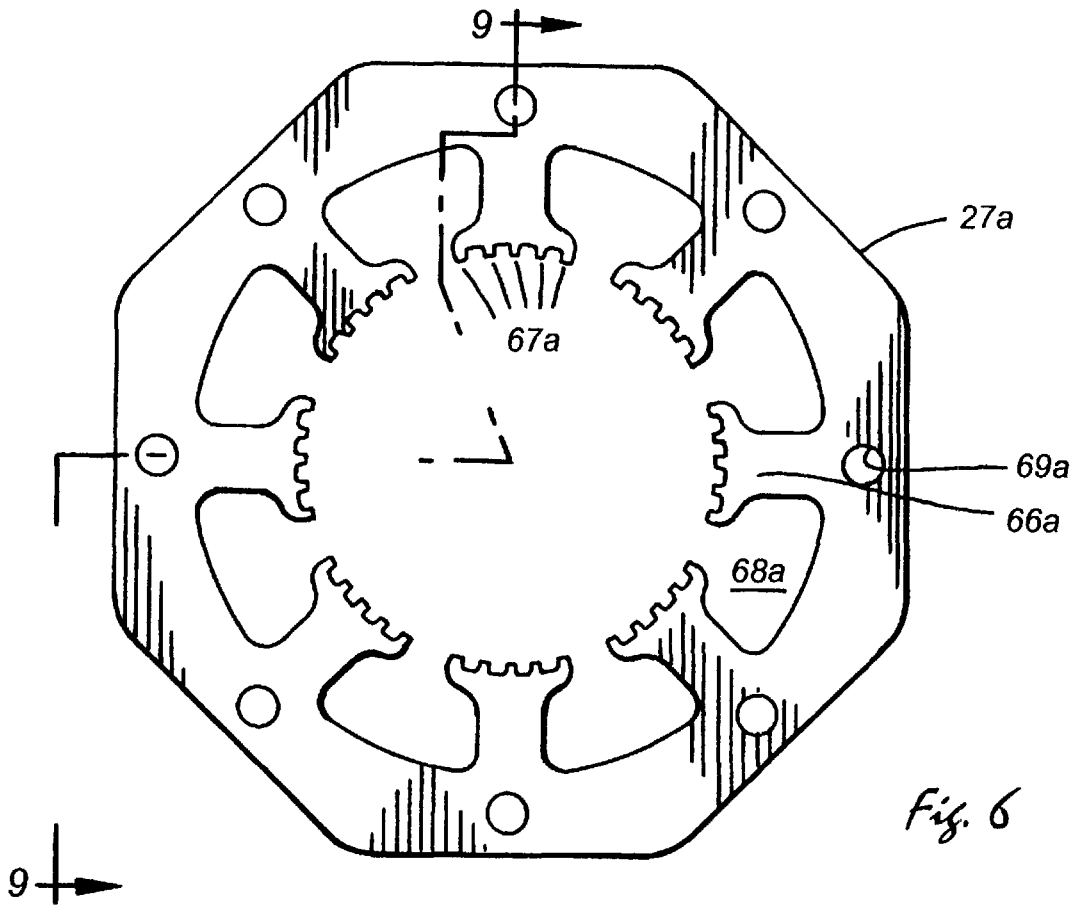
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