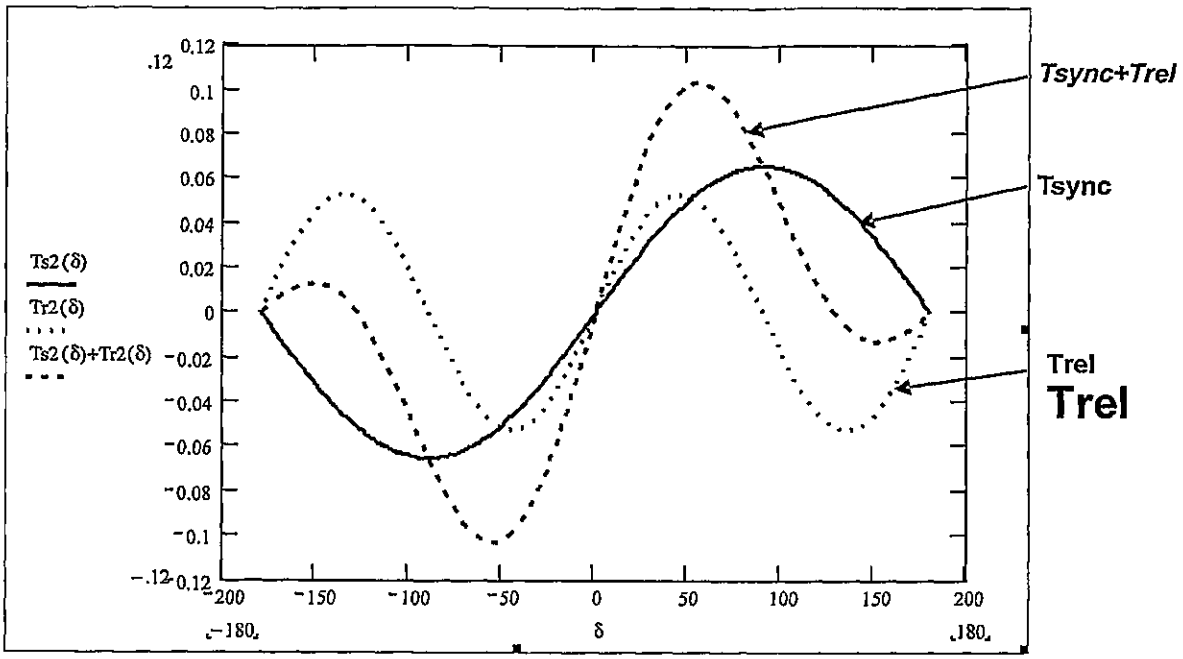



FIG. 1

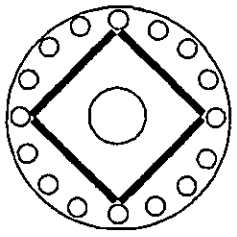


FIG. 2a

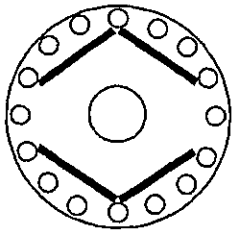


FIG. 2b

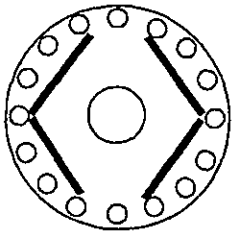


FIG. 2c

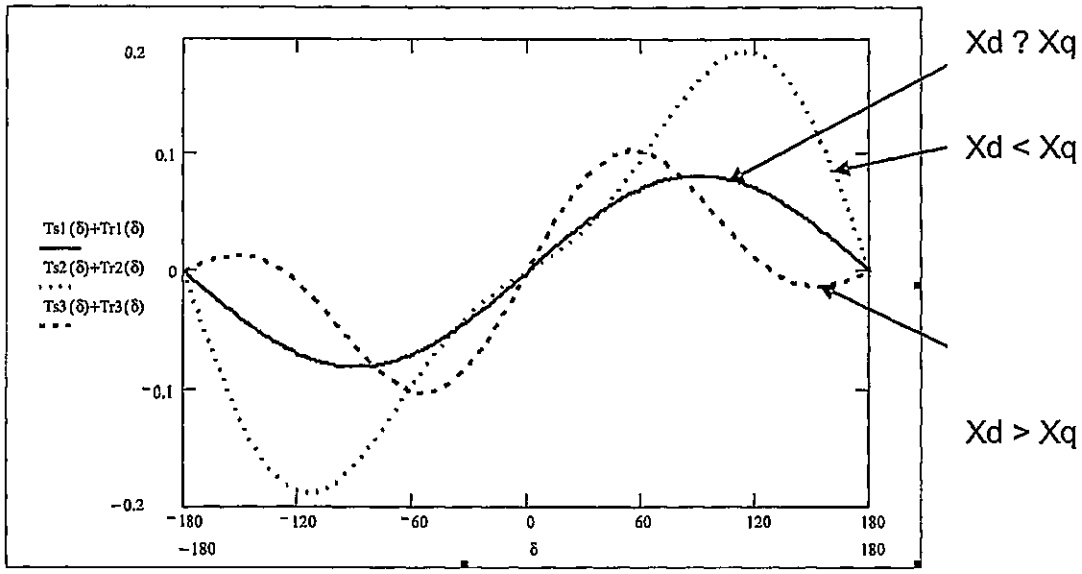

0.2
0.1
0
-0.1
-0.2
Ts1 (δ)+Tr1 (δ)
Ts2 (δ)+Tr2 (δ)
Ts3 (δ)+Tr3 (δ)
-180
-120
-60
0
60
120
180
-180
δ
180
Xd ? Xq
Xd < Xq
Xd > Xq

FIG. 3

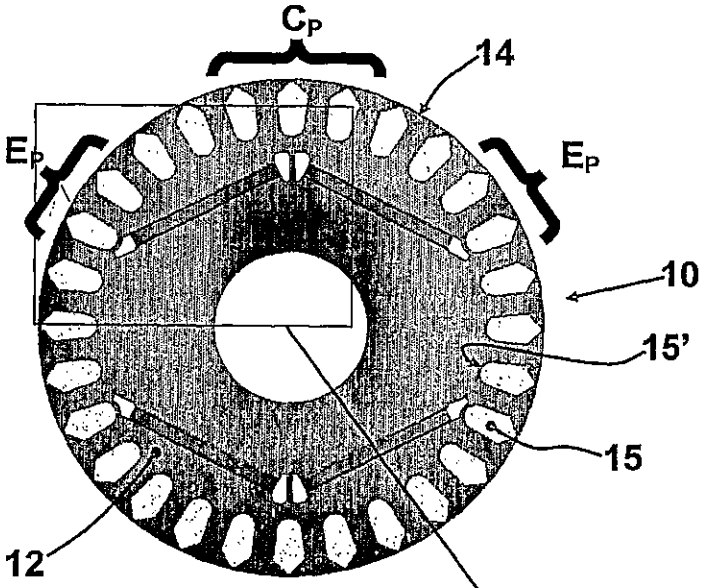



FIG. 4

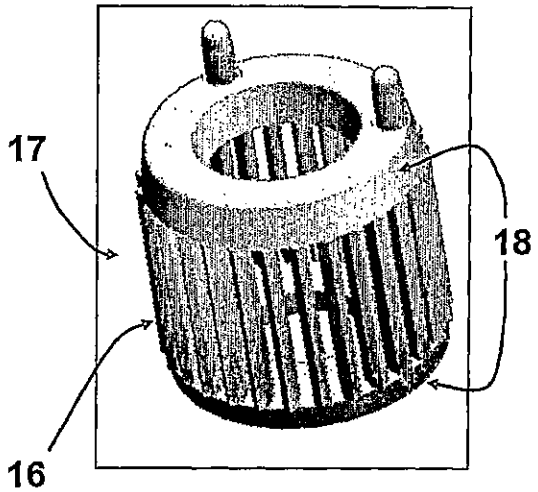



FIG. 5

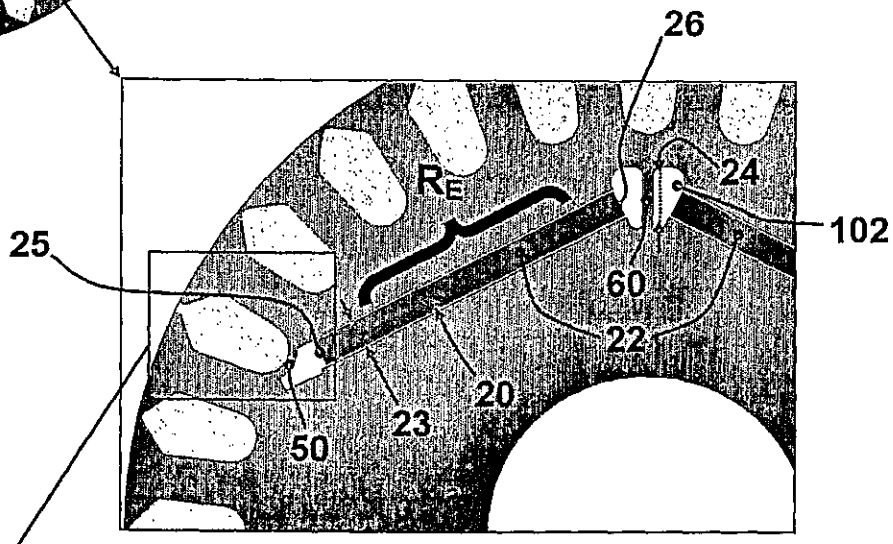



FIG. 6

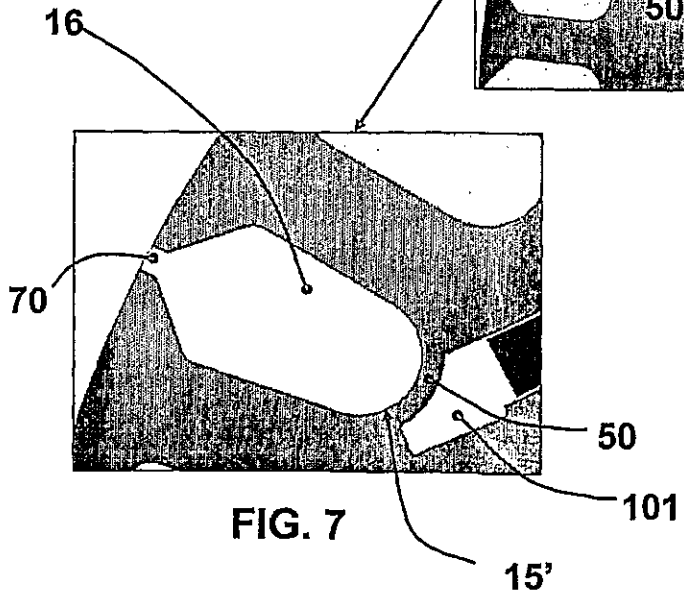



FIG. 7

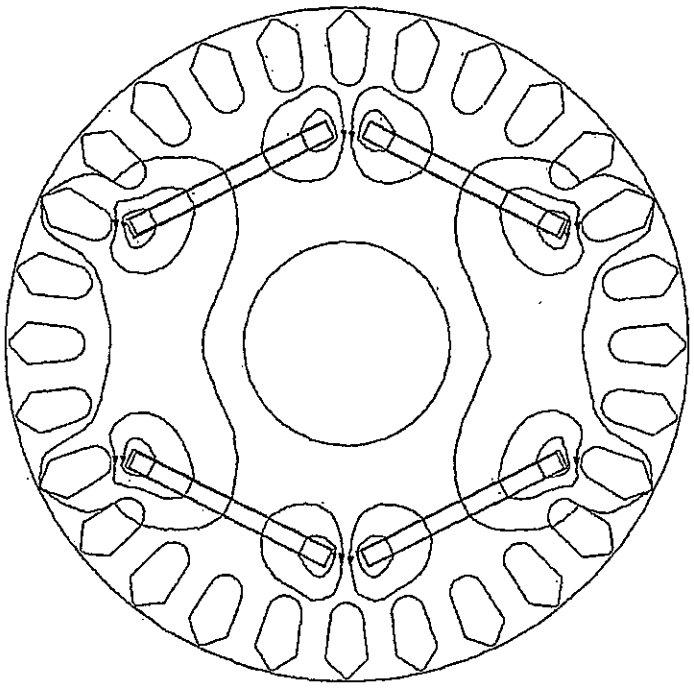


FIG. 8

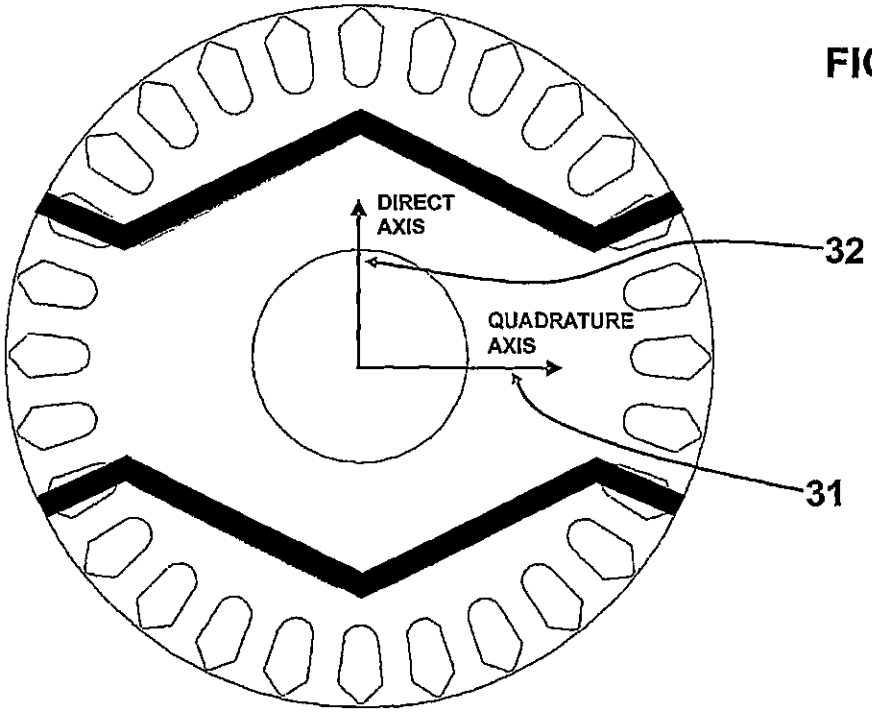



FIG. 9

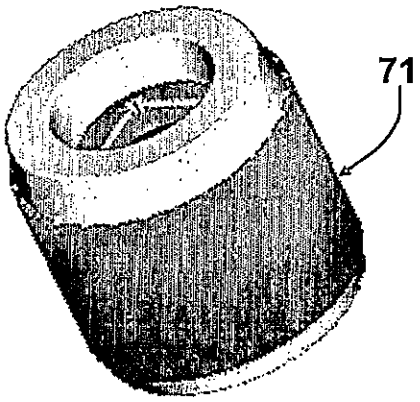



FIG. 10

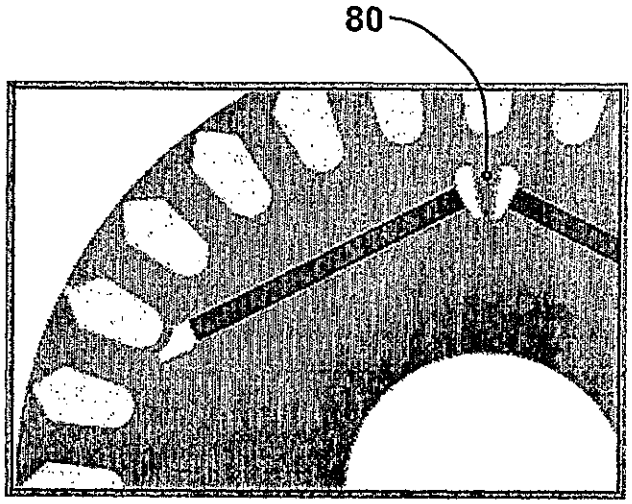



FIG. 11

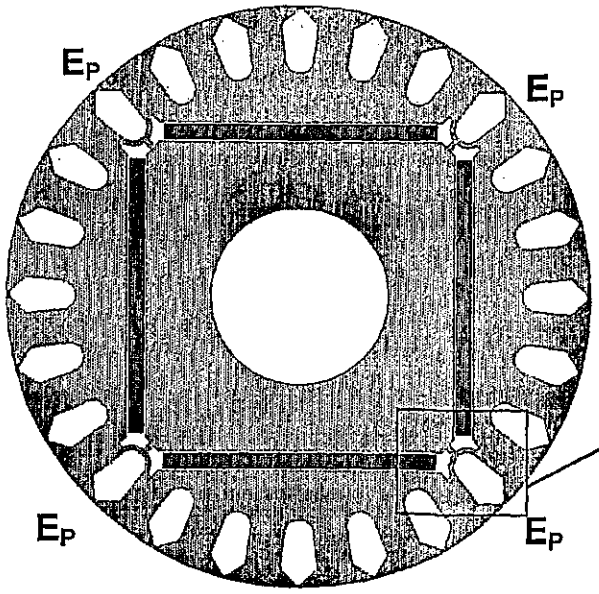



FIG. 12

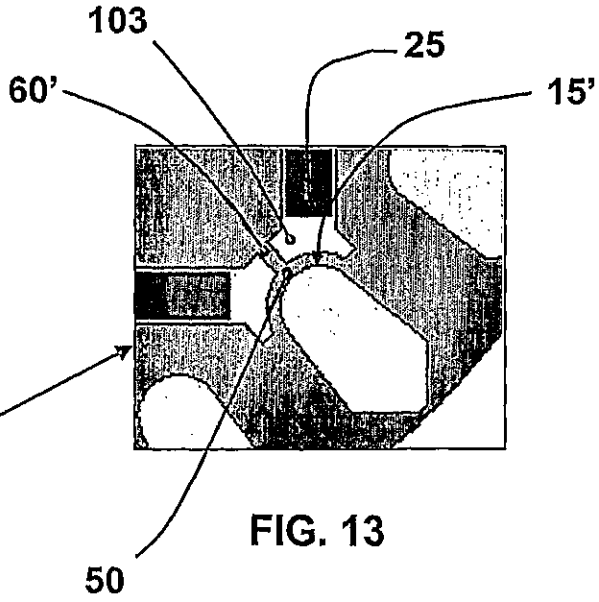



FIG. 13

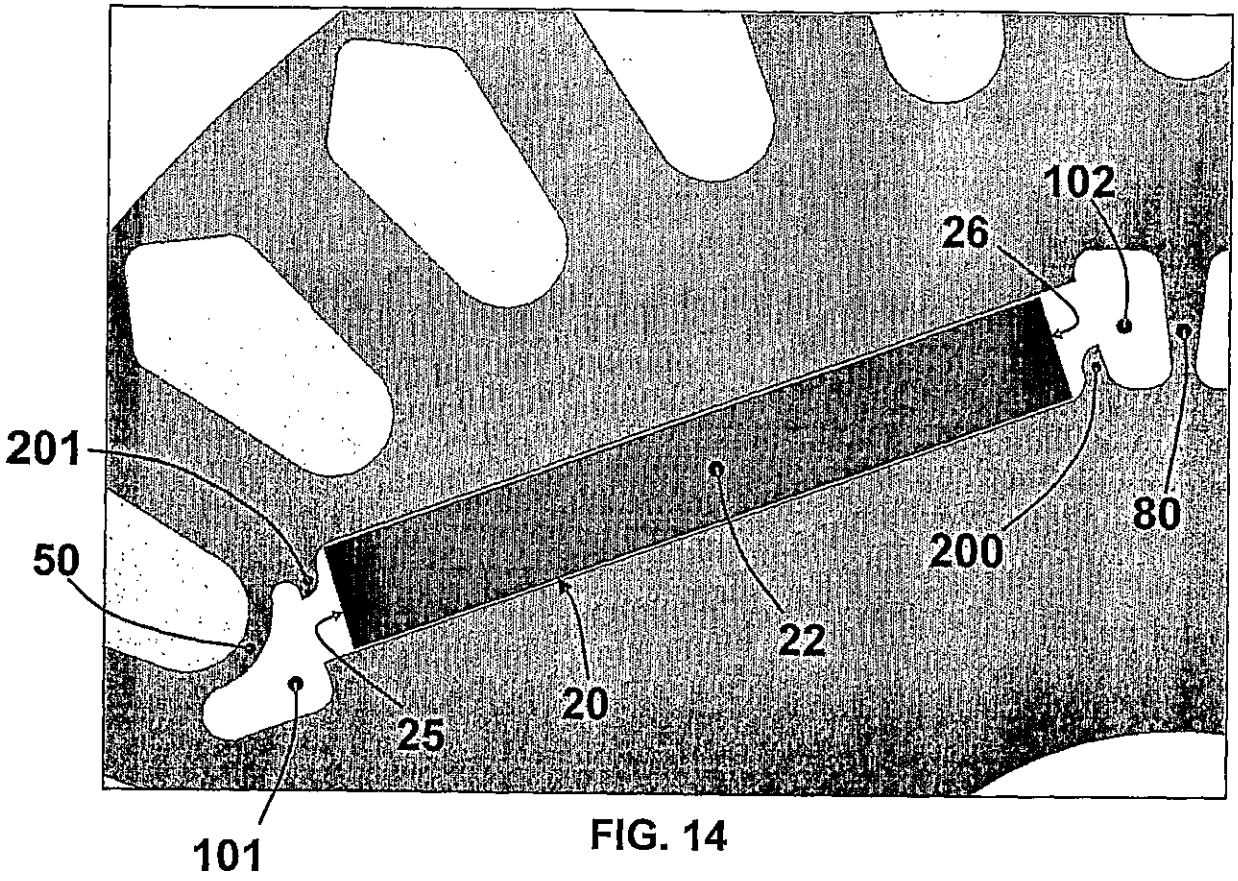



FIG. 14

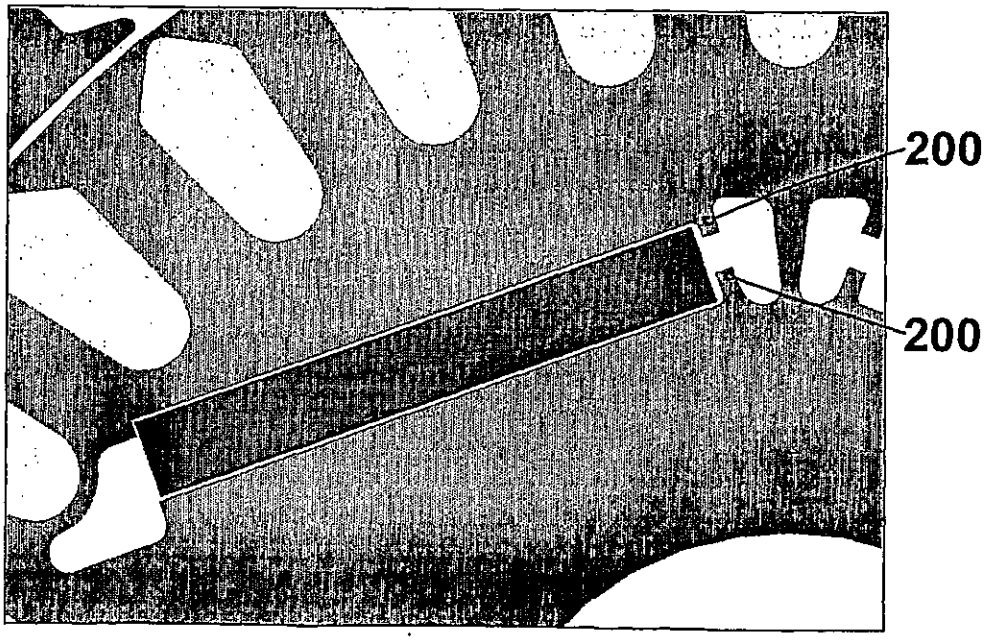



FIG. 15