

FIG. 1
(Prior Art)

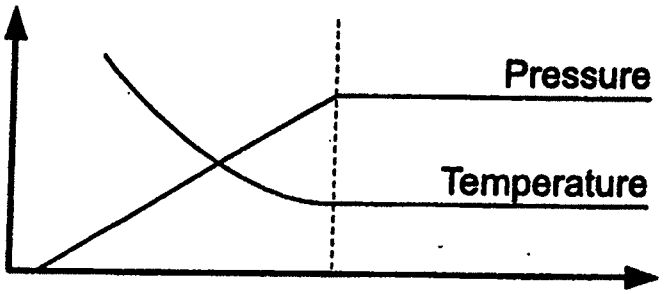


FIG. 2
(Prior Art)

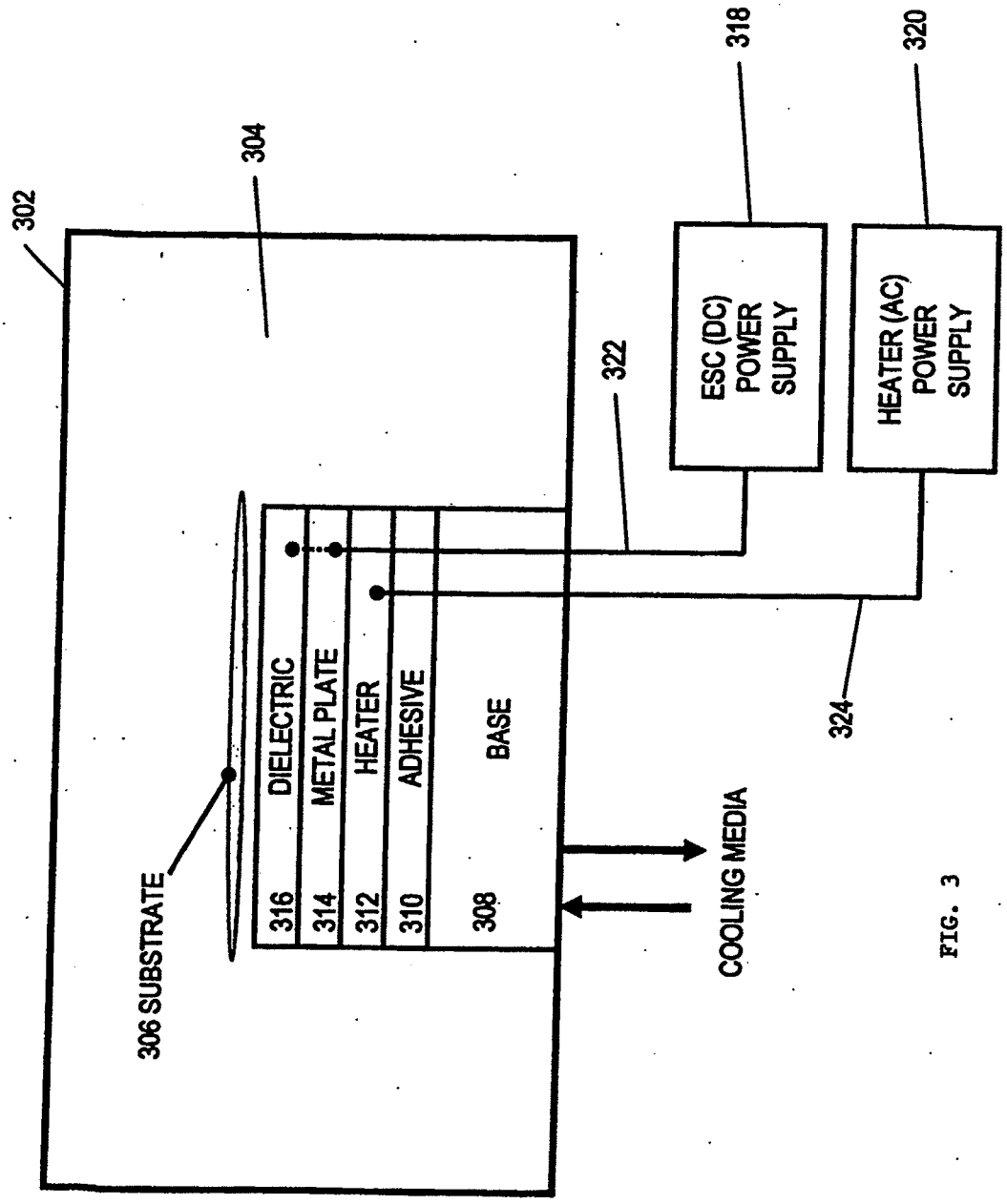

302
304
318
320
322
324
ESC (DC) POWER SUPPLY
HEATER (AC) POWER SUPPLY
DIELECTRIC
METAL PLATE
HEATER
ADHESIVE
BASE
316
314
312
310
308
306 SUBSTRATE
COOLING MEDIA

FIG. 3

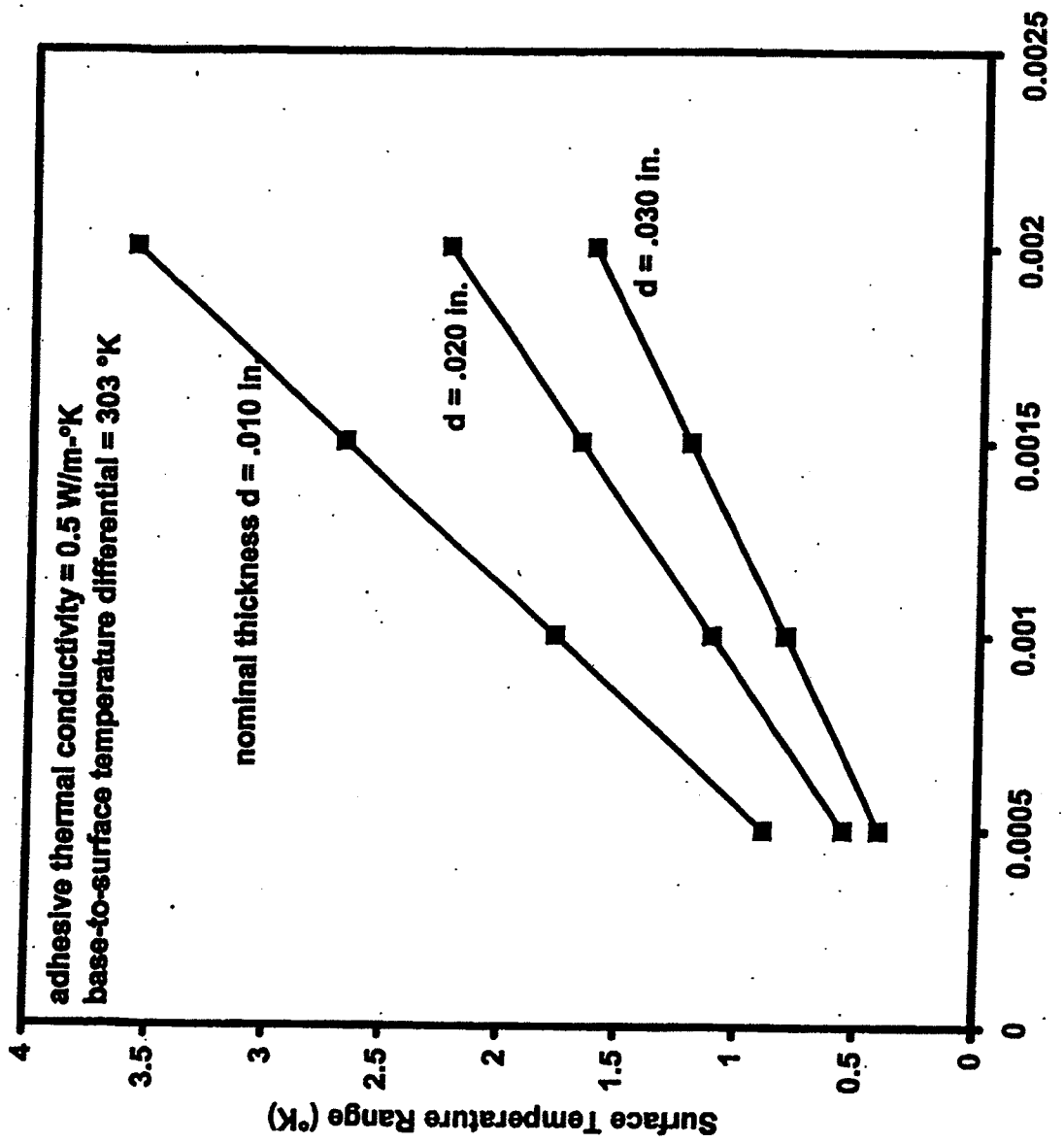

adhesive thermal conductivity = 0.5 W/m-°K
base-to-surface temperature differential = 303 °K
nominal thickness d = .010 in
d = .020 in.
d = .030 in.
Surface Temperature Range (°K)
0
0.5
1
1.5
2
2.5
3
3.5
4
0
0.0005
0.001
0.0015
0.002
0.0025

FIG. 4

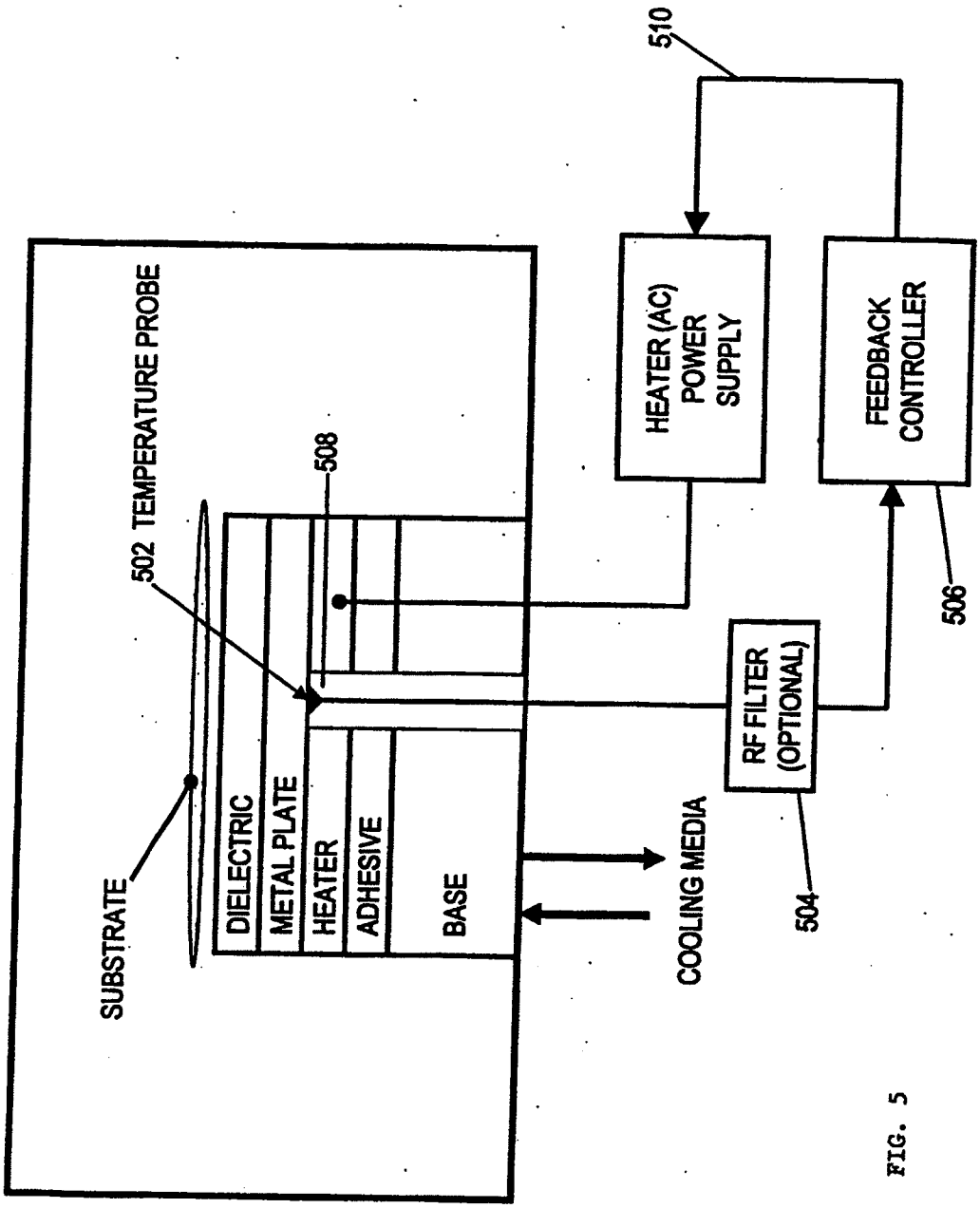

510
HEATER (AC) POWER SUPPLY
FEEDBACK CONTROLLER
502 TEMPERATURE PROBE
508
506
RF FILTER (OPTIONAL)
SUBSTRATE
DIELECTRIC
METAL PLATE
HEATER
ADHESIVE
BASE
COOLING MEDIA
504

FIG. 5

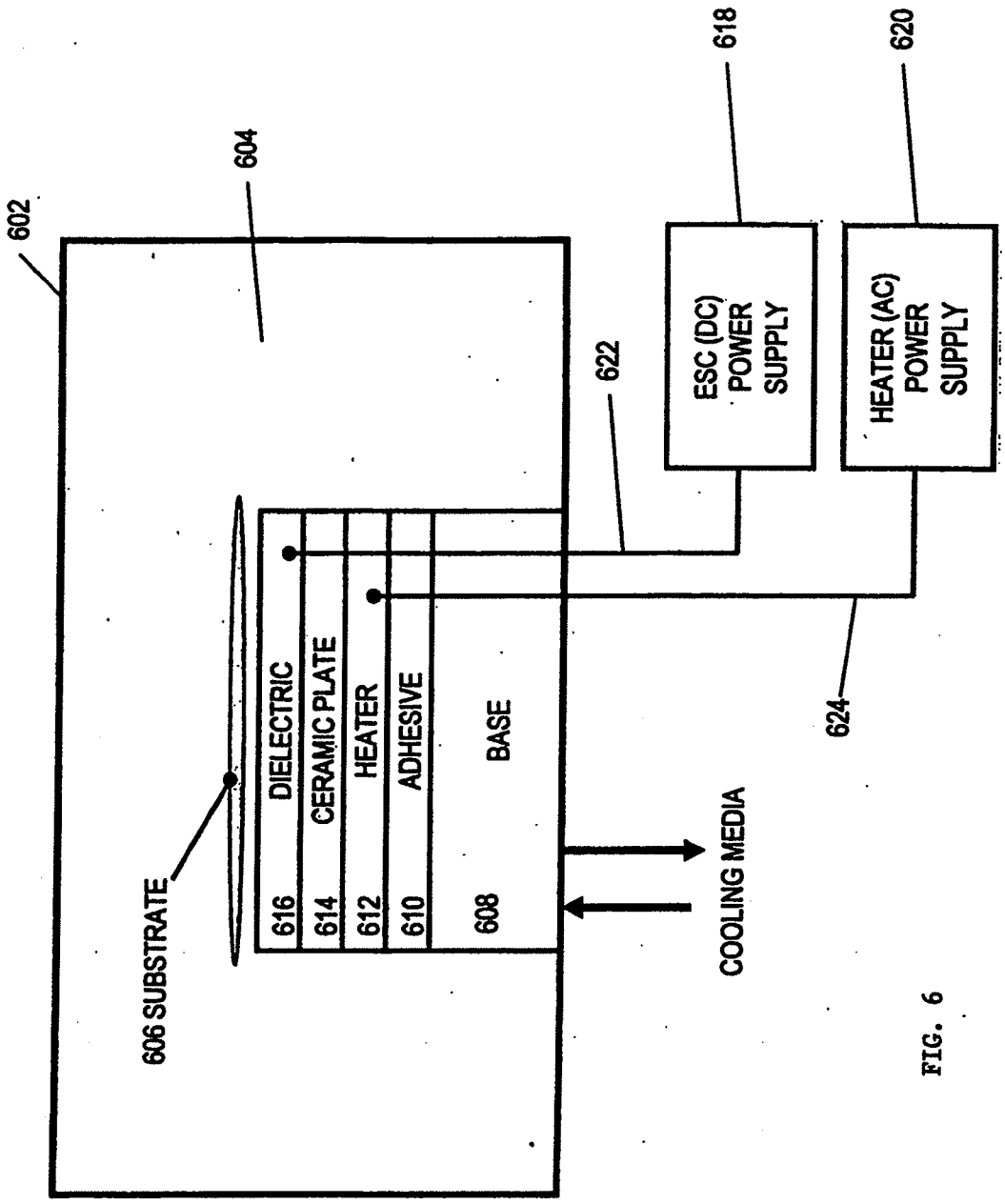

602
604
606 SUBSTRATE
616
DIELECTRIC
614
CERAMIC PLATE
612
HEATER
610
ADHESIVE
608
BASE
622
618
ESC (DC) POWER SUPPLY
620
HEATER (AC) POWER SUPPLY
624
COOLING MEDIA

FIG. 6

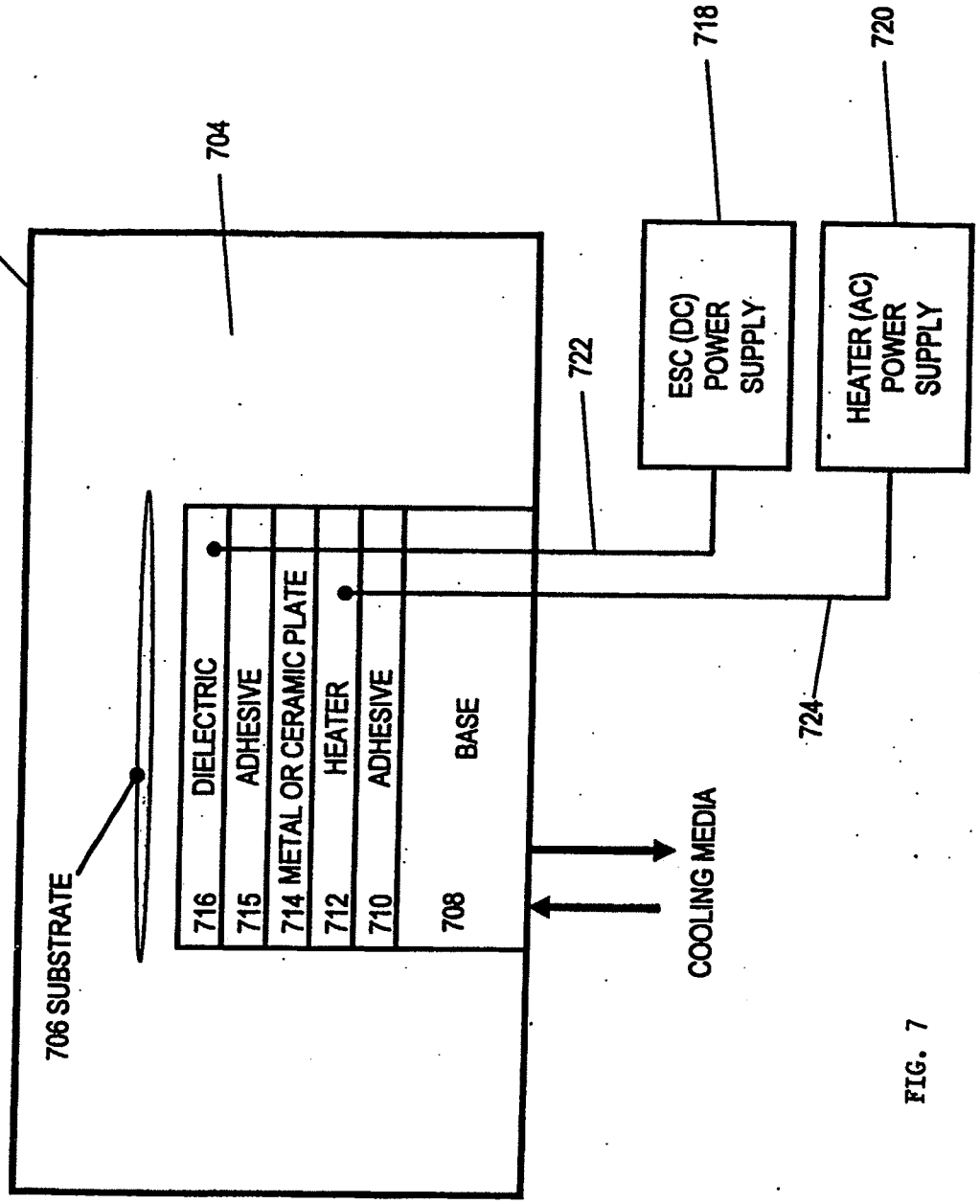

702
704
718
720
722
724
ESC (DC) POWER SUPPLY
HEATER (AC) POWER SUPPLY
706 SUBSTRATE
716 DIELECTRIC
715 ADHESIVE
714 METAL OR CERAMIC PLATE
712 HEATER
710 ADHESIVE
708 BASE
COOLING MEDIA

FIG. 7

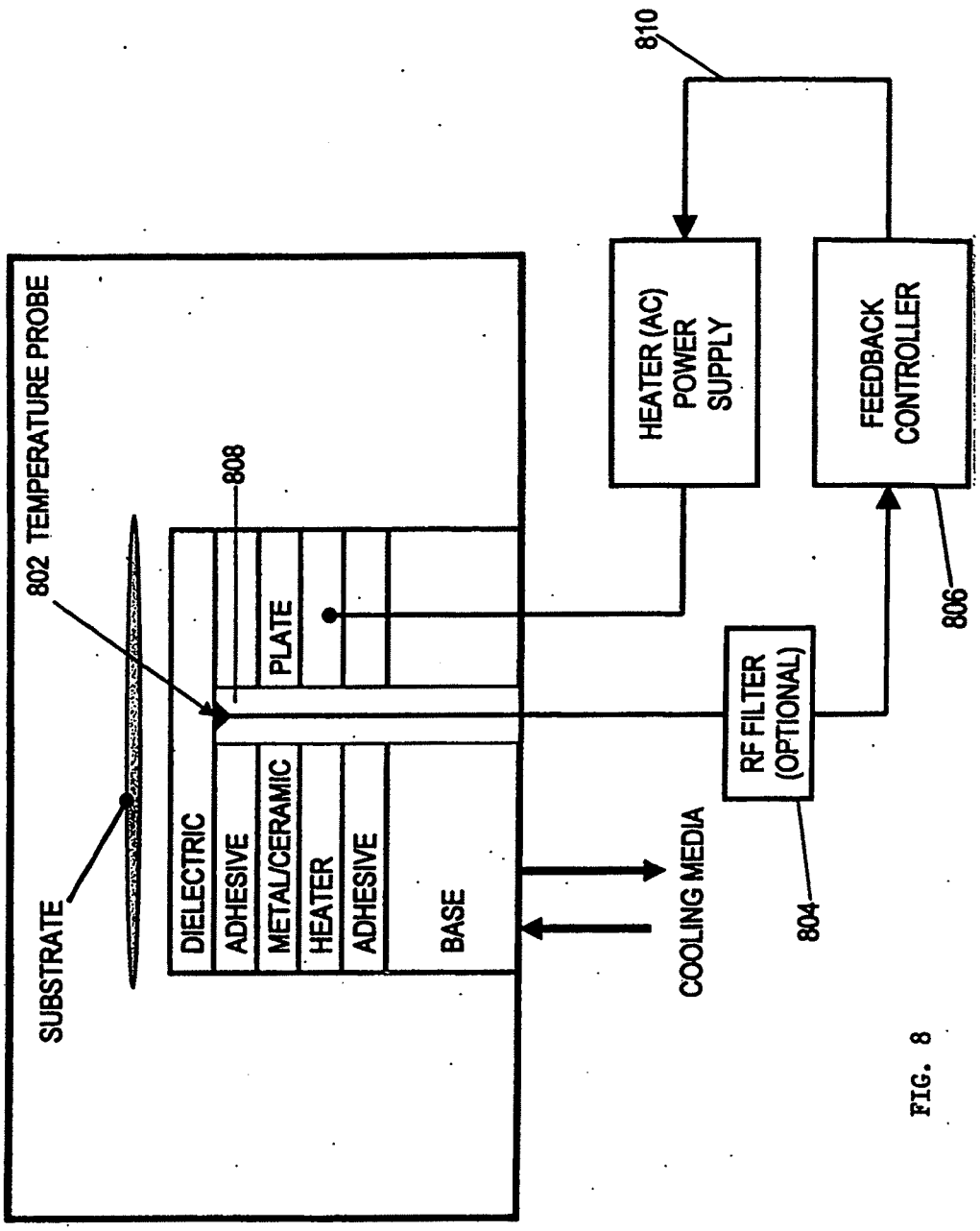

810
HEATER (AC) POWER SUPPLY
FEEDBACK CONTROLLER
802 TEMPERATURE PROBE
808
PLATE
806
RF FILTER (OPTIONAL)
SUBSTRATE
DIELECTRIC
ADHESIVE
METAL/CERAMIC
HEATER
ADHESIVE
BASE
COOLING MEDIA
804

FIG. 8

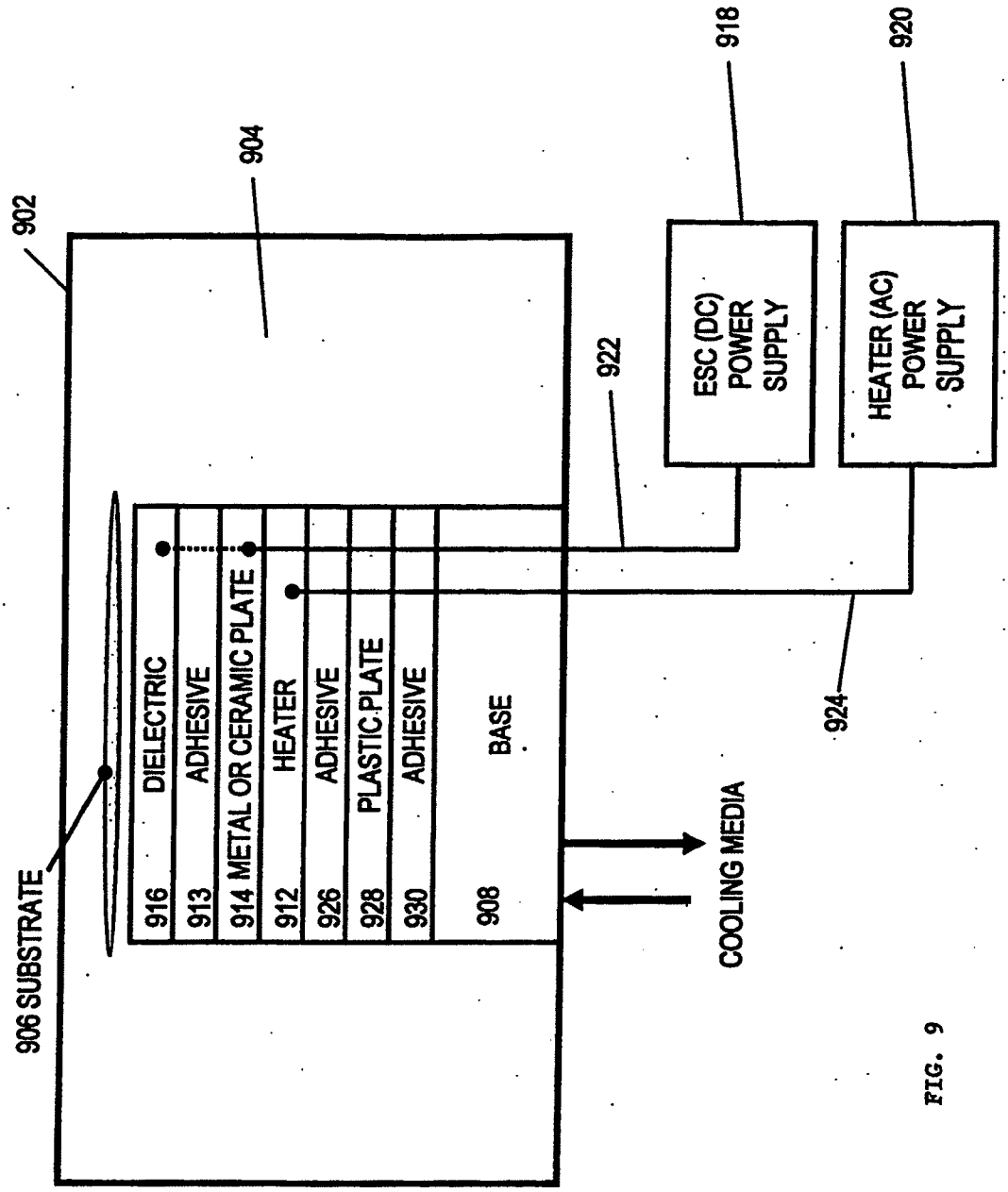

902
904
906 SUBSTRATE
916 DIELECTRIC
913 ADHESIVE
914 METAL OR CERAMIC PLATE
912 HEATER
926 ADHESIVE
928 PLASTIC PLATE
930 ADHESIVE
908 BASE
922
924
918
ESC (DC) POWER SUPPLY
920
HEATER (AC) POWER SUPPLY
COOLING MEDIA

FIG. 9

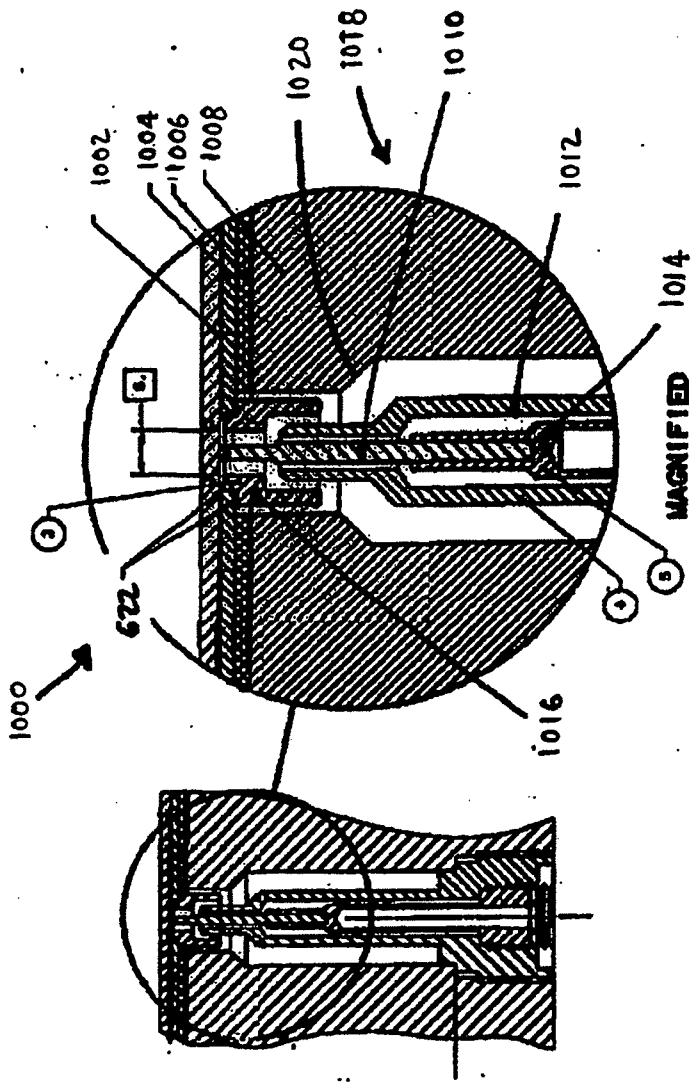

1000
1002
1004
1006
1008
1020
1018
1010
1012
1014
1016
622
MAGNIFIED

FIG. 10

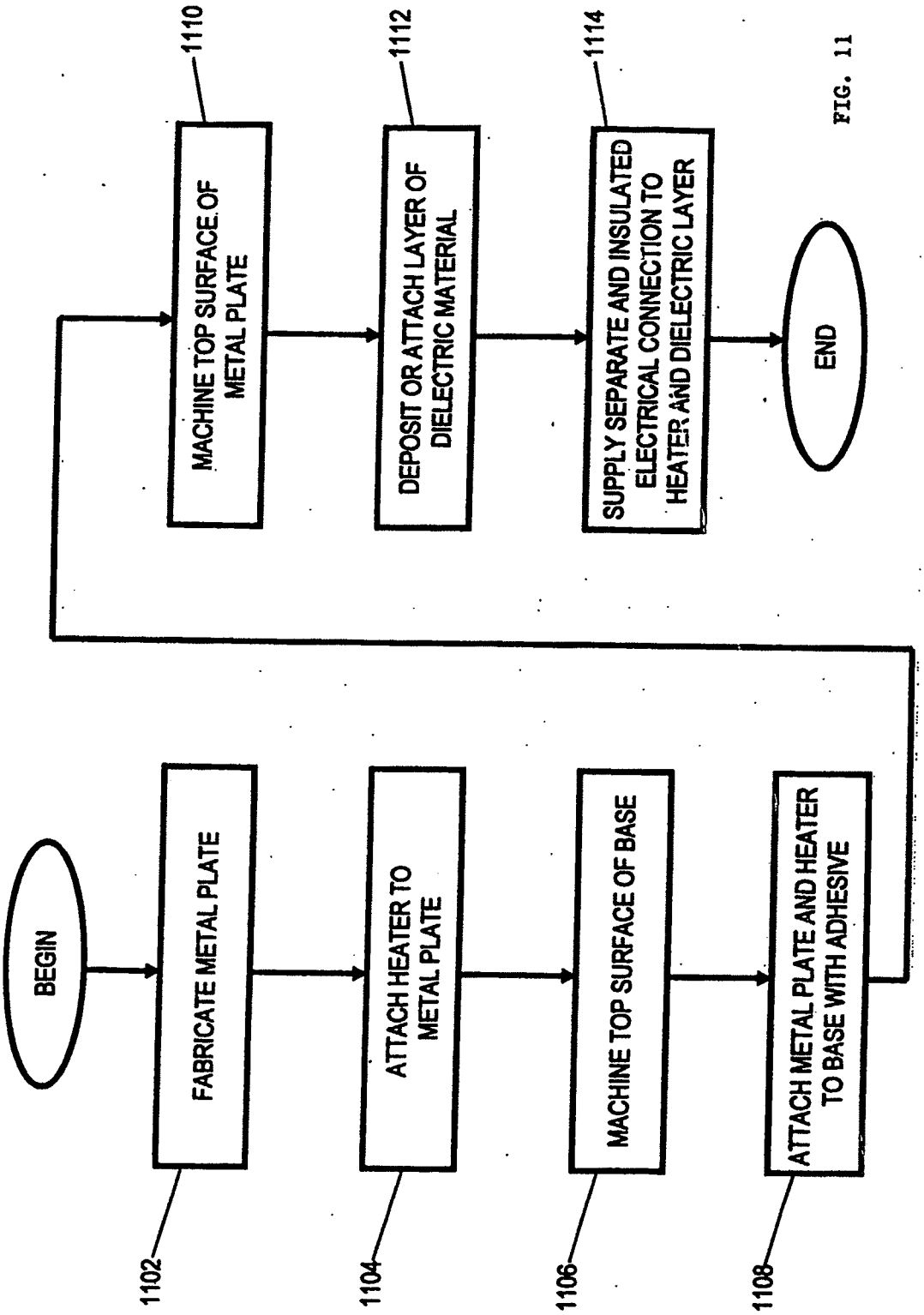

BEGIN
FABRICATE METAL PLATE
ATTACH HEATER TO METAL PLATE
MACHINE TOP SURFACE OF BASE
ATTACH METAL PLATE AND HEATER TO BASE WITH ADHESIVE
1102
1104
1106
1108
MACHINE TOP SURFACE OF METAL PLATE
DEPOSIT OR ATTACH LAYER OF DIELECTRIC MATERIAL
SUPPLY SEPARATE AND INSULATED ELECTRICAL CONNECTION TO HEATER AND DIELECTRIC LAYER
END
1110
1112
1114

FIG. 11

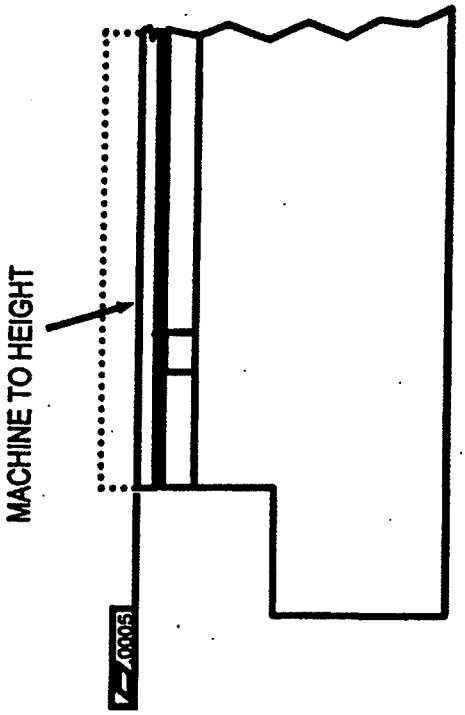


FIG. 12B

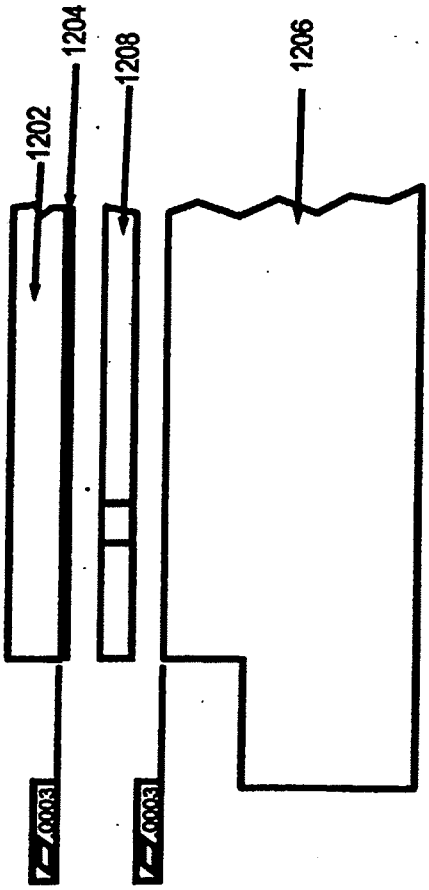


FIG. 12A

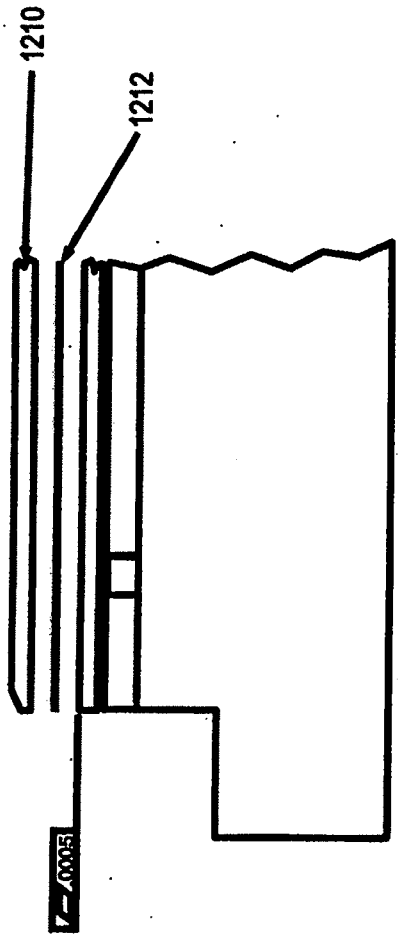


FIG. 12C

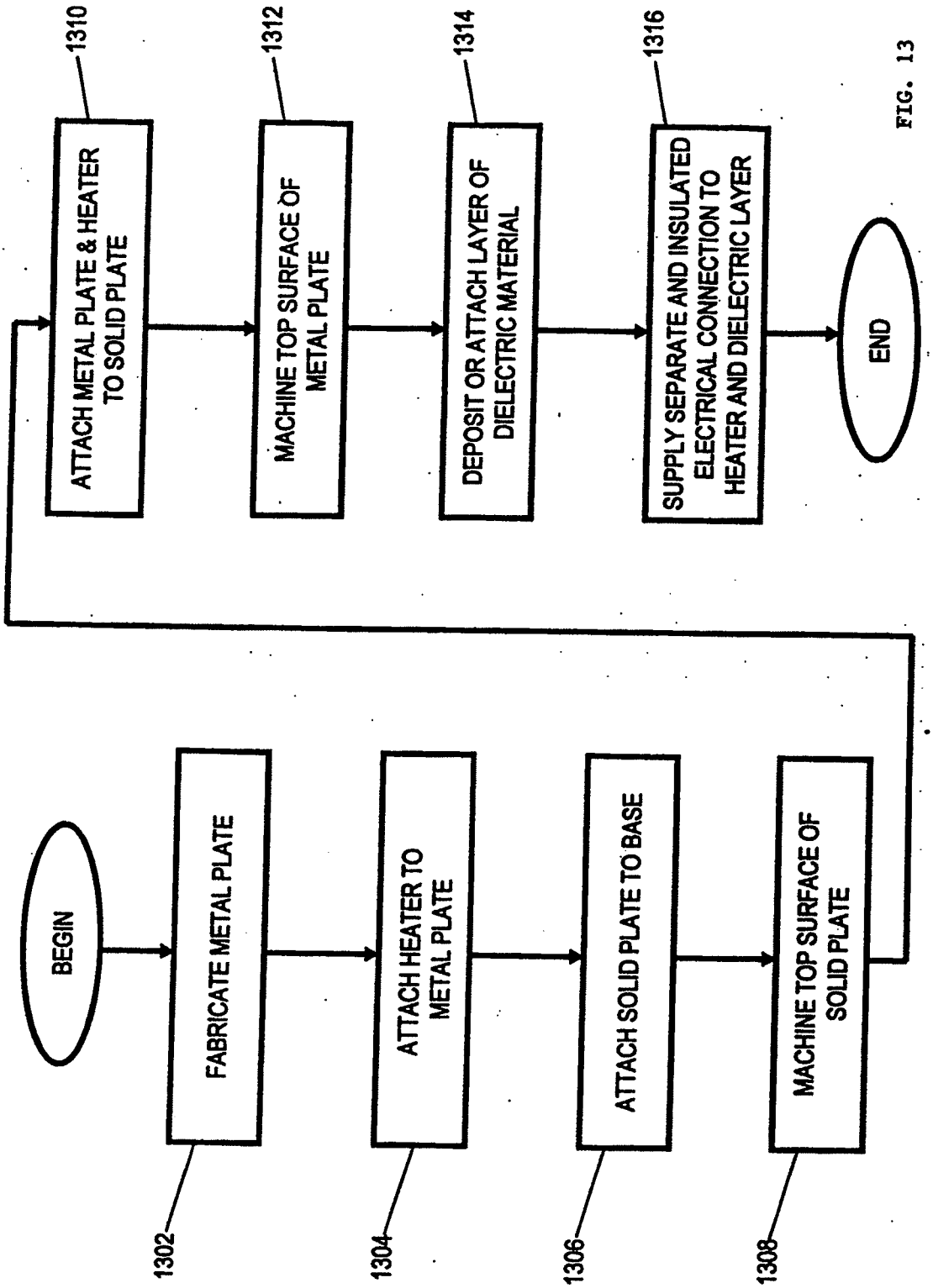

BEGIN
FABRICATE METAL PLATE
ATTACH HEATER TO METAL PLATE
ATTACH SOLID PLATE TO BASE
MACHINE TOP SURFACE OF SOLID PLATE
ATTACH METAL PLATE & HEATER TO SOLID PLATE
MACHINE TOP SURFACE OF METAL PLATE
DEPOSIT OR ATTACH LAYER OF DIELECTRIC MATERIAL
SUPPLY SEPARATE AND INSULATED ELECTRICAL CONNECTION TO HEATER AND DIELECTRIC LAYER
END
1302
1304
1306
1308
1310
1312
1314
1316

FIG. 13

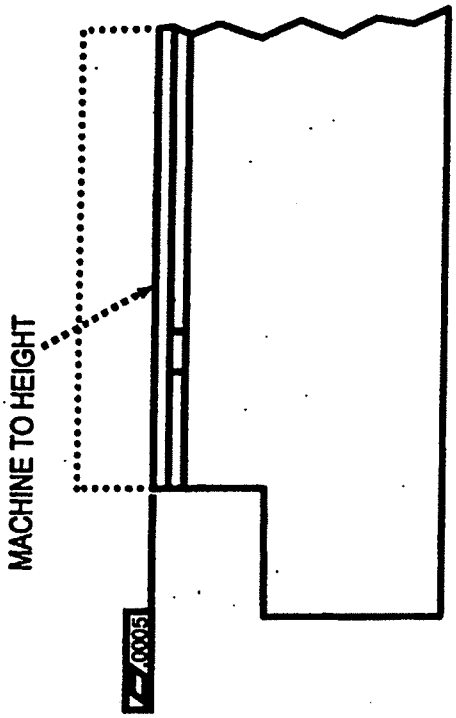


FIG. 14B

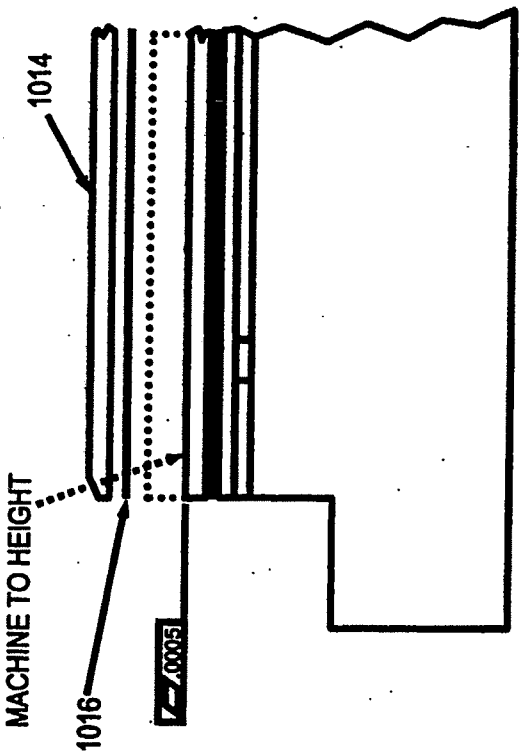


FIG. 14D

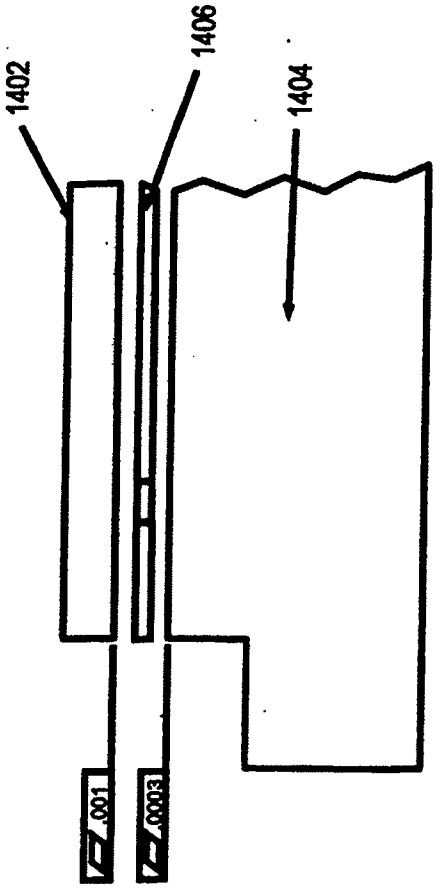


FIG. 14A

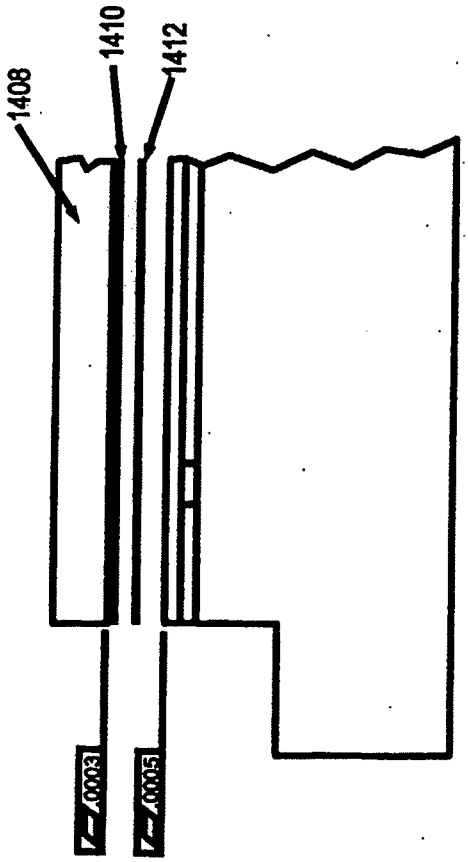


FIG. 14C

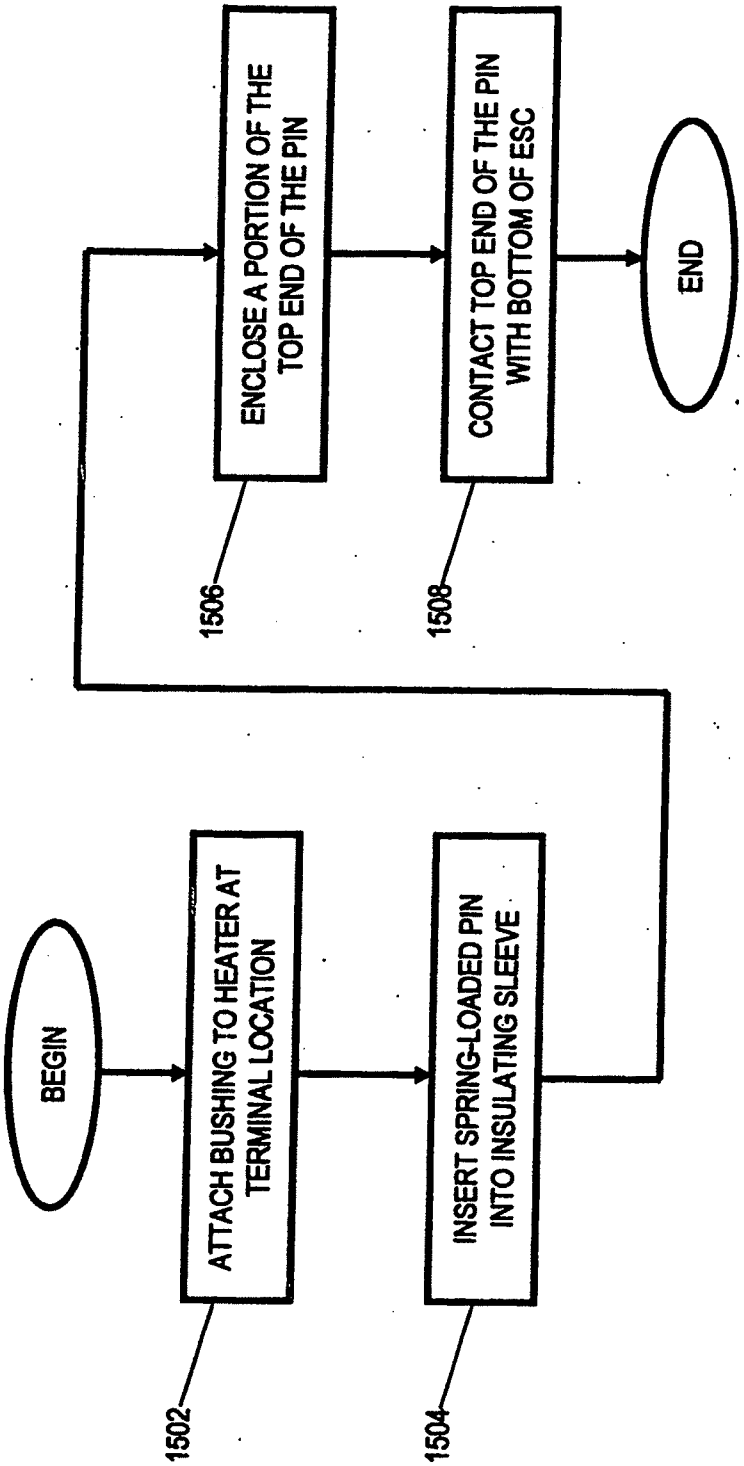

BEGIN
ATTACH BUSHING TO HEATER AT TERMINAL LOCATION
INSERT SPRING-LOADED PIN INTO INSULATING SLEEVE
ENCLOSE A PORTION OF THE TOP END OF THE PIN
CONTACT TOP END OF THE PIN WITH BOTTOM OF ESC
END
1502
1504
1506
1508

FIG. 15