

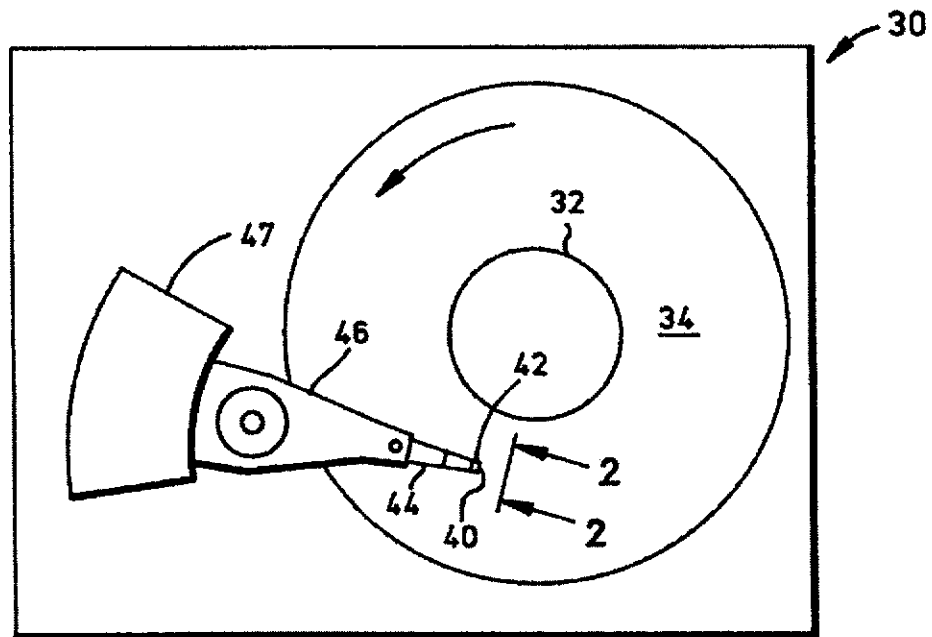


FIG. 1
(PRIOR ART)

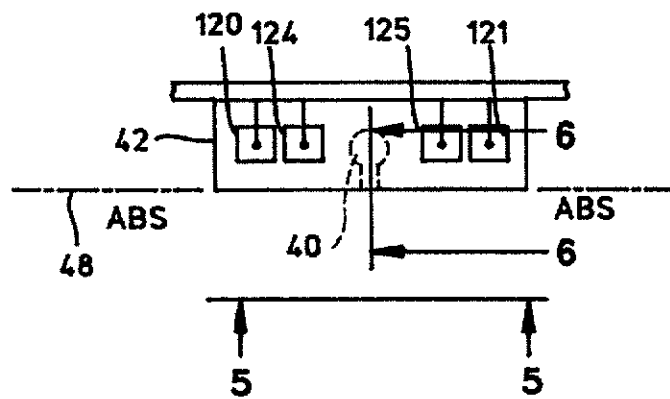


FIG. 2
(PRIOR ART)

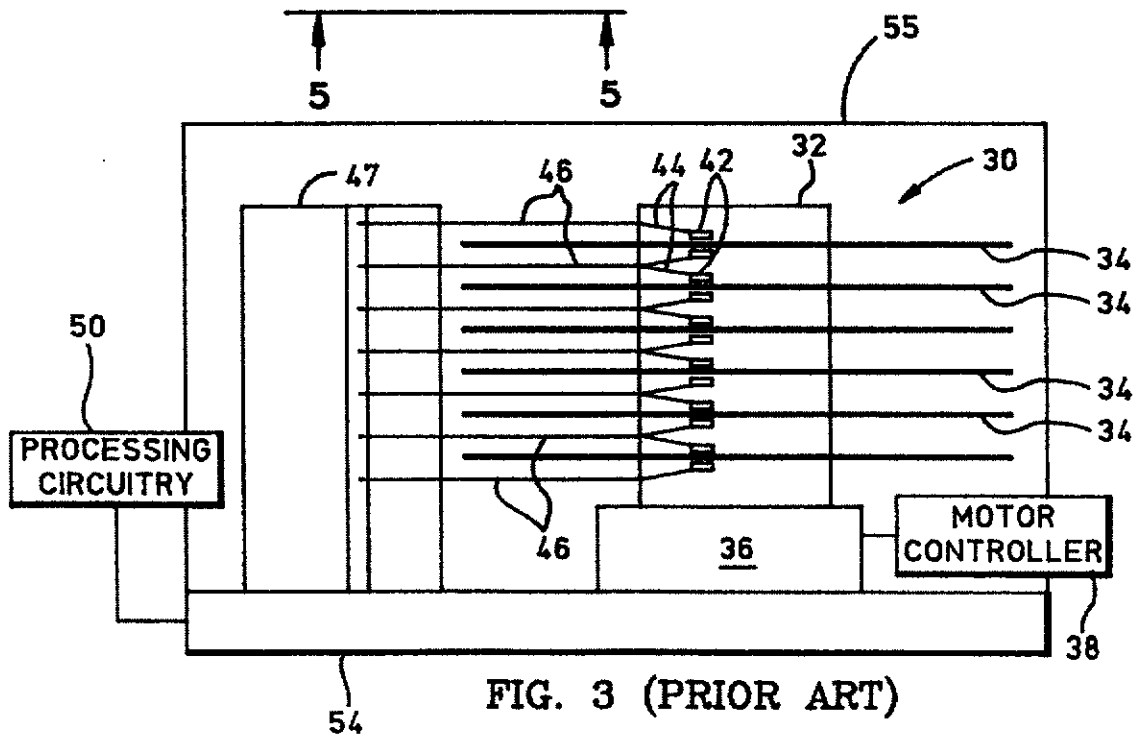
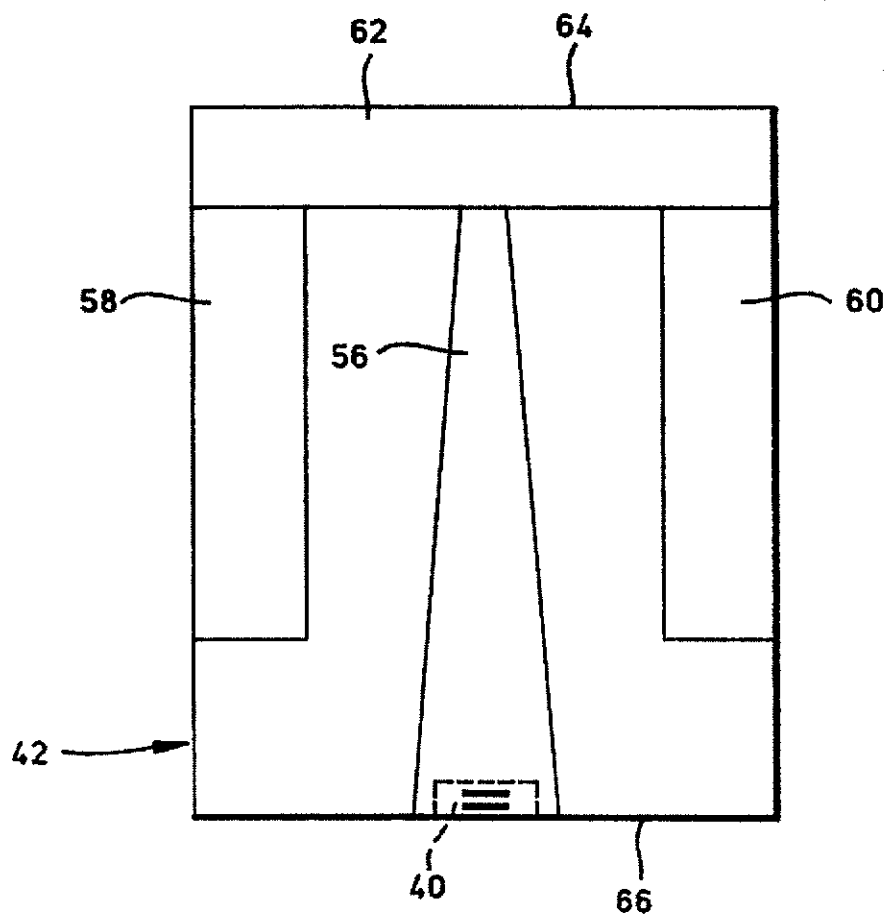
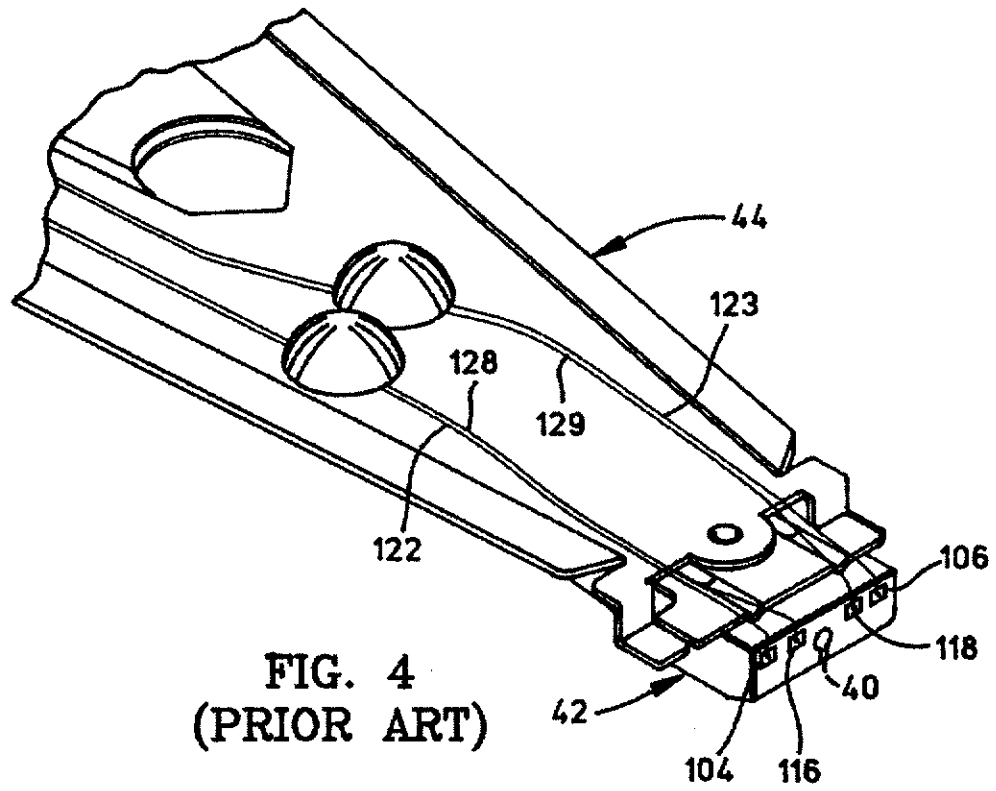


FIG. 3 (PRIOR ART)



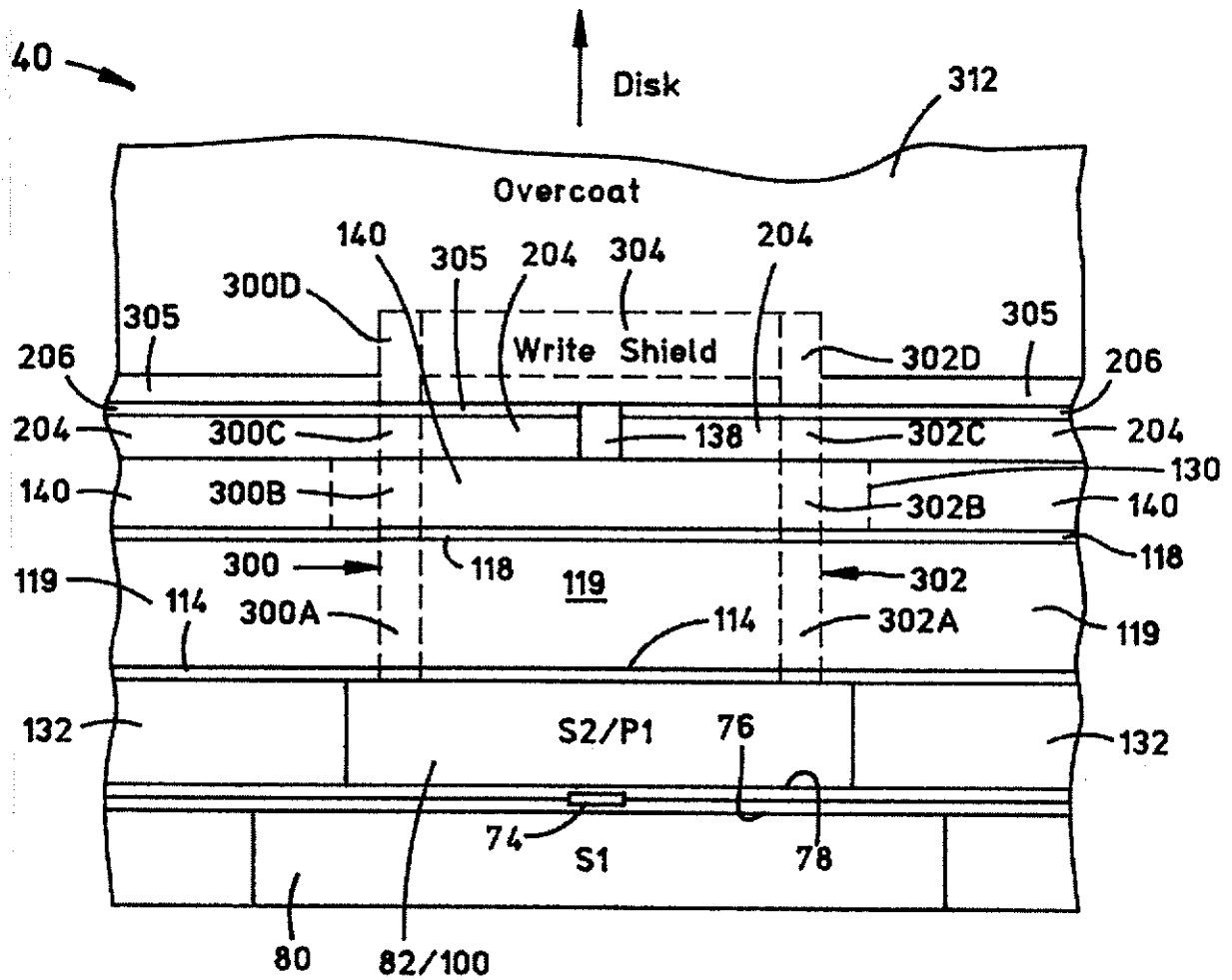


FIG. 7

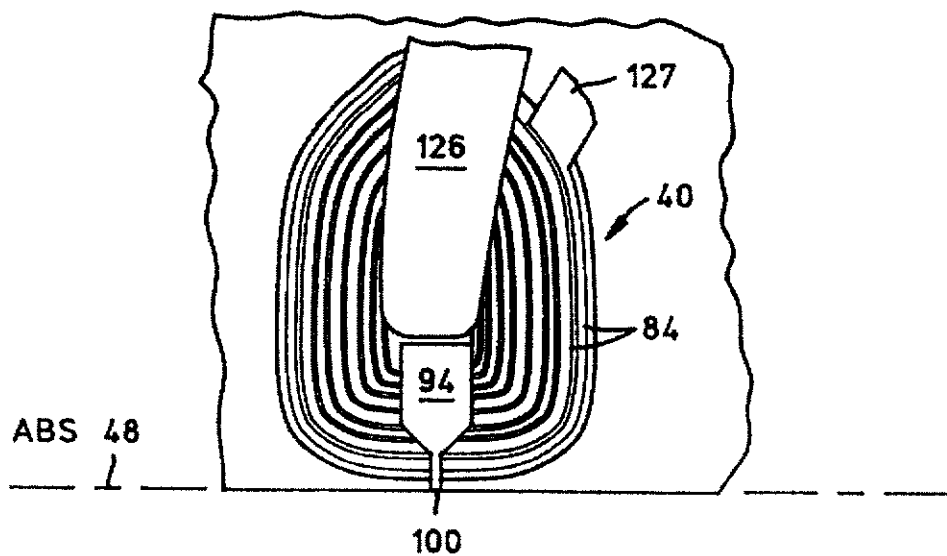


FIG. 8

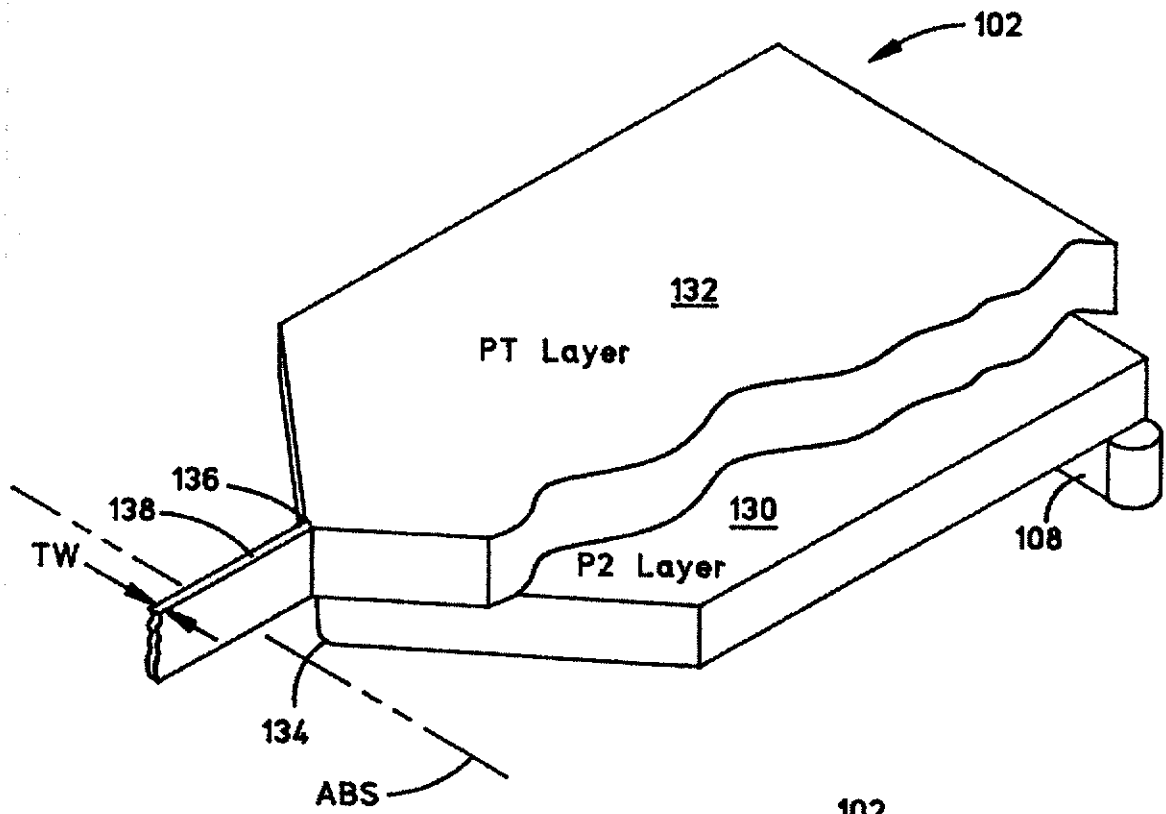


FIG. 9

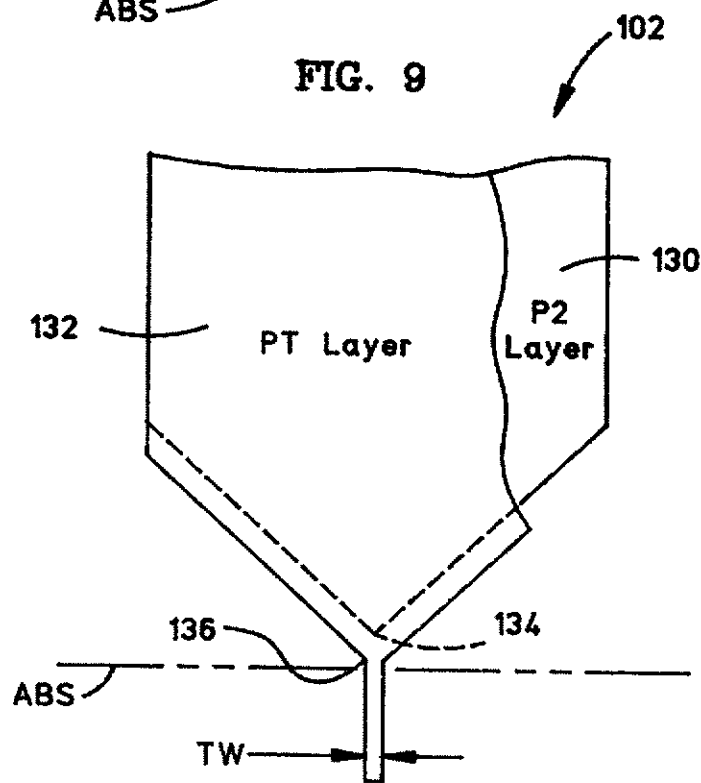


FIG. 10

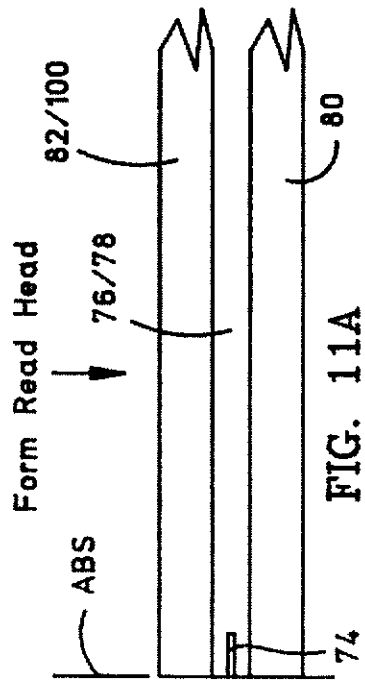


FIG. 11A

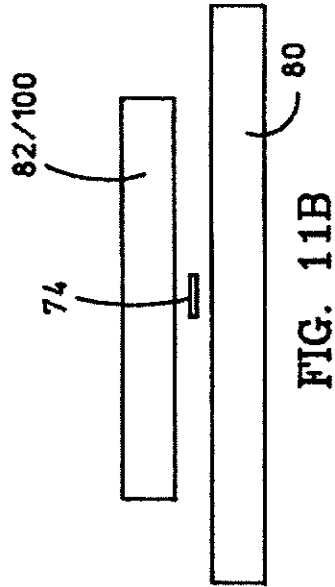


FIG. 11B

Planarize P1, Form Studs and
Back Gap, Form Coils and Insulation,
and Deposit thick Alumina

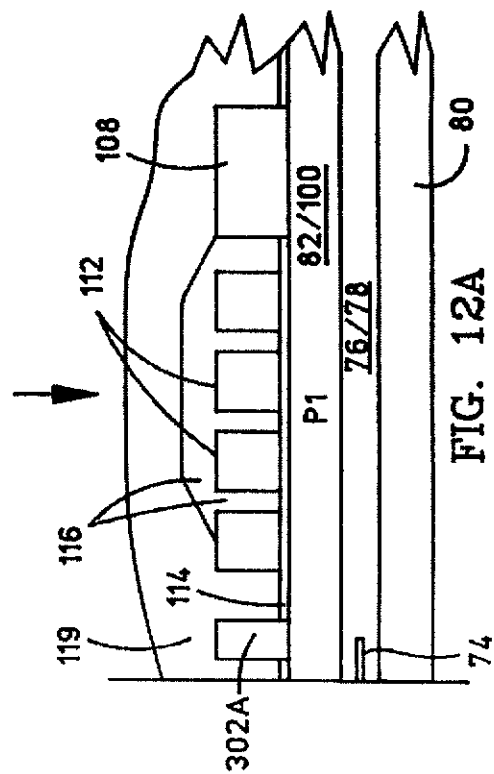


FIG. 12A

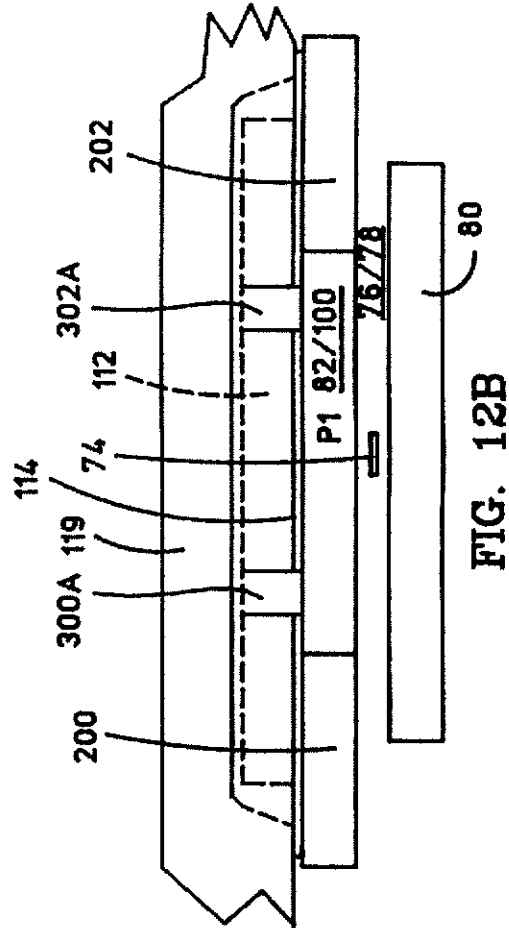


FIG. 12B

CMP flat and deposit
and pattern alumina
isolation layer

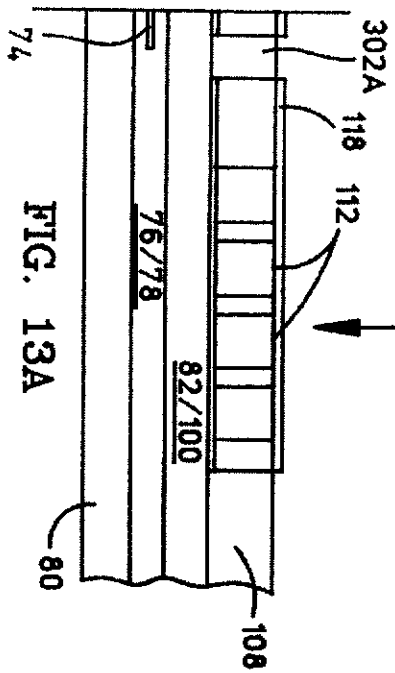


FIG. 13A

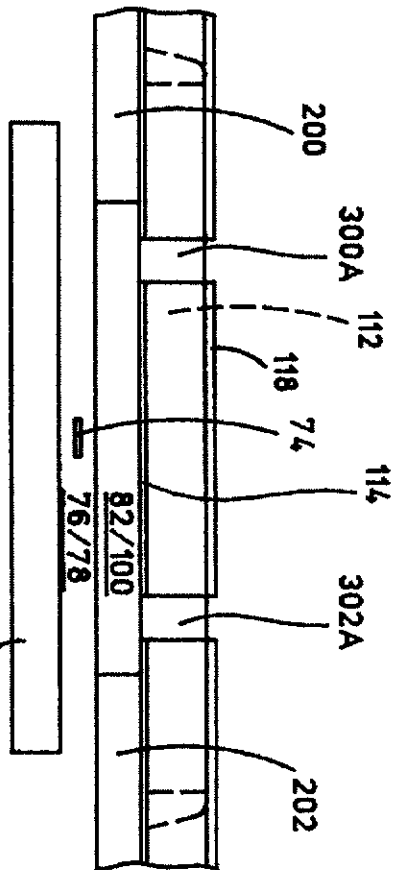


FIG. 13B

Form Second Pole
piece layer and studs

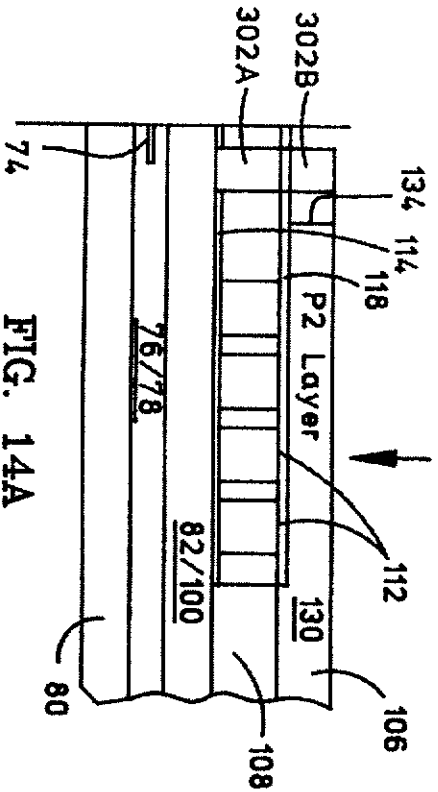


FIG. 14A

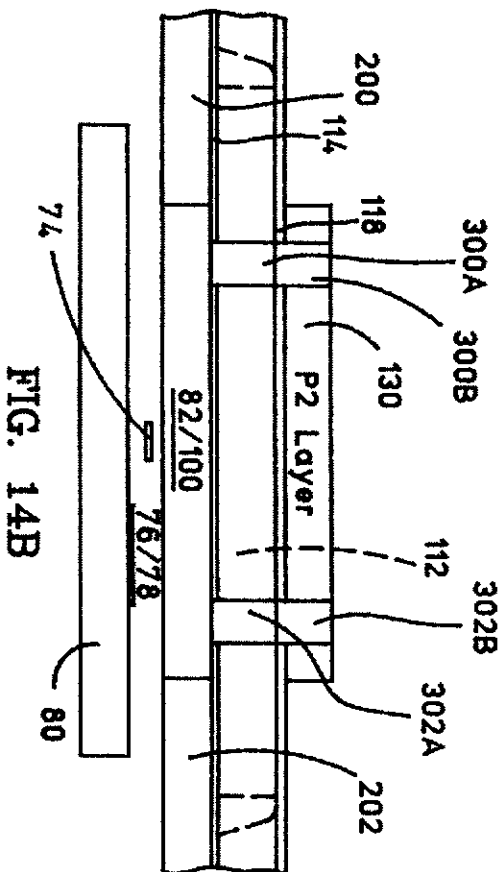


FIG. 14B

Form Adhesion/Stop Seed Layer and Pole Tip Photo for Pole Tip Layer and Studs

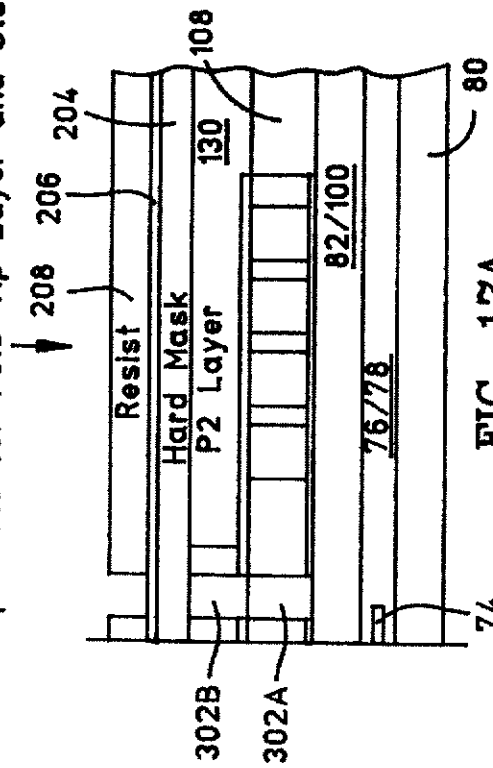


FIG. 17A

Reactive Ion Etch into Adhesion/Stop Seed Layer and Hard Mask for Pole Tip Layer and Studs

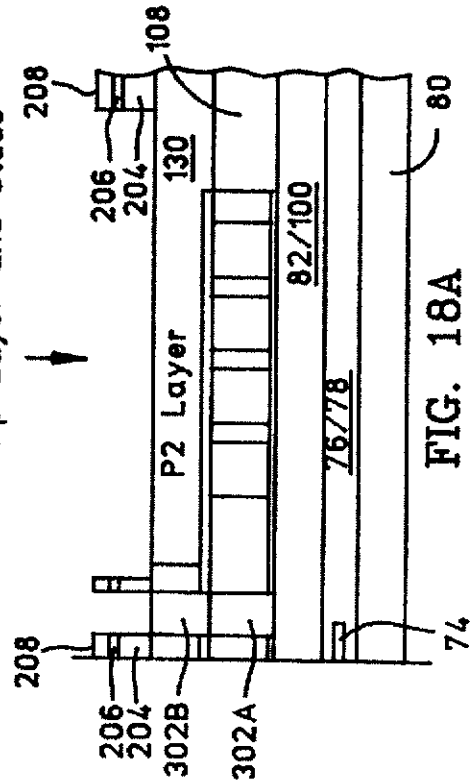


FIG. 18A

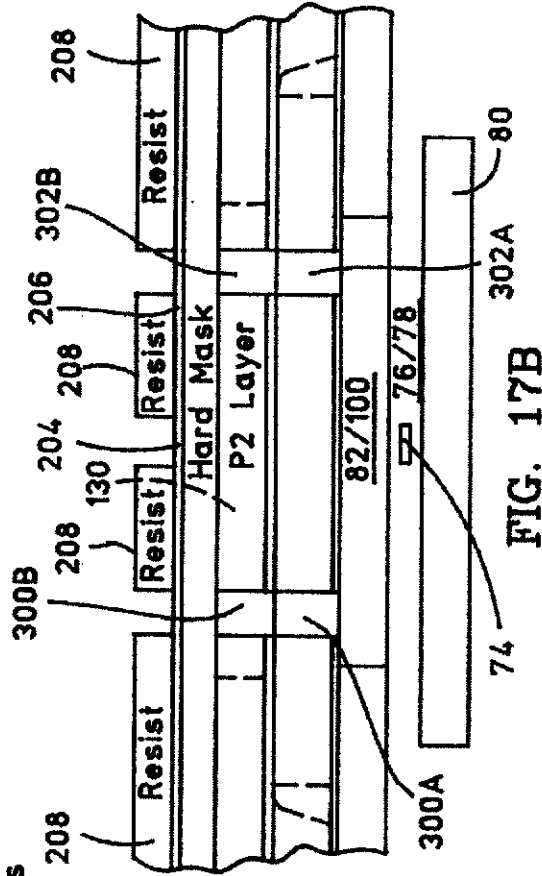


FIG. 17B

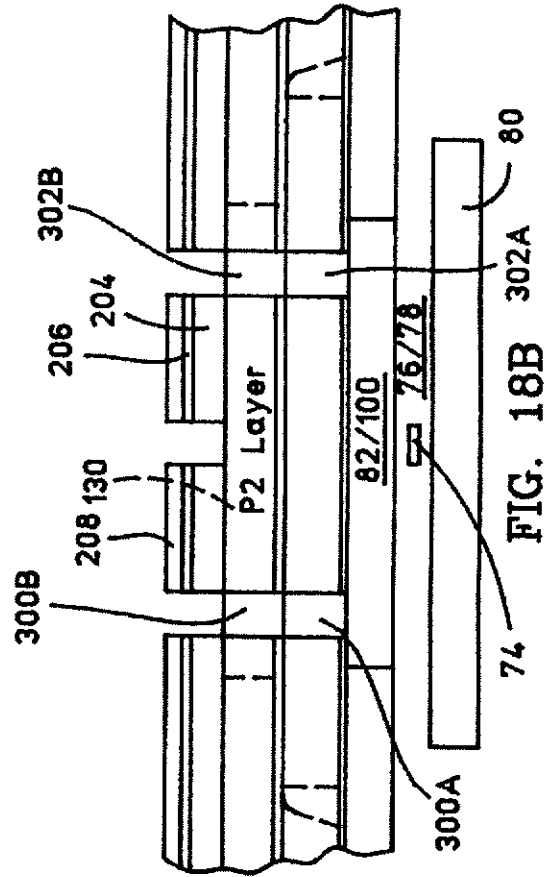


FIG. 18B

Remove Photo and Deposit NiFe Seed Layer to fill trench and Stud Holes

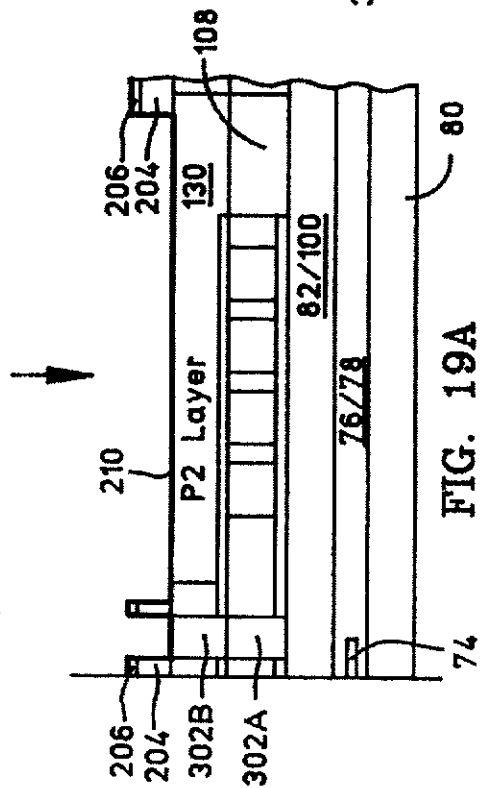


FIG. 19A

Full fill plating (Pole Tip and Studs)

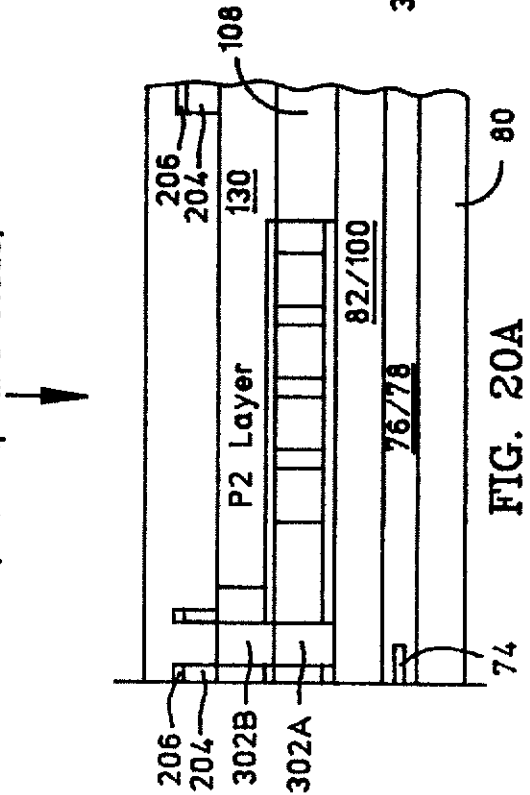


FIG. 20A

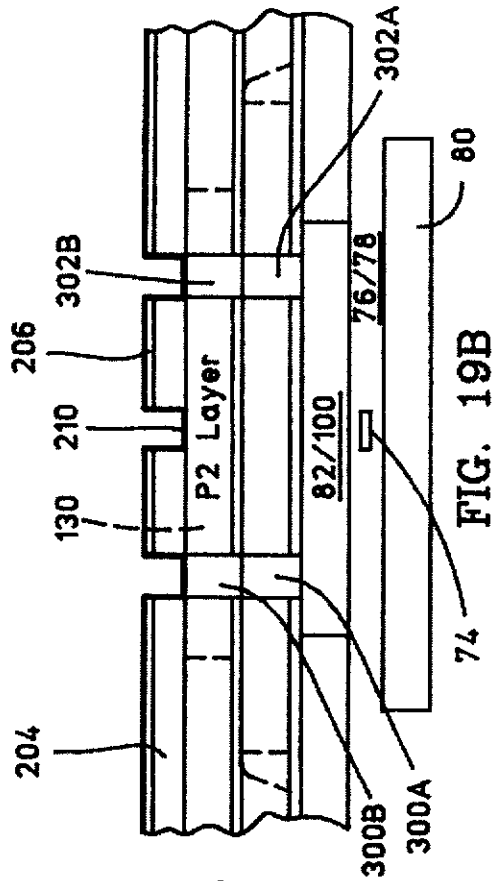


FIG. 19B

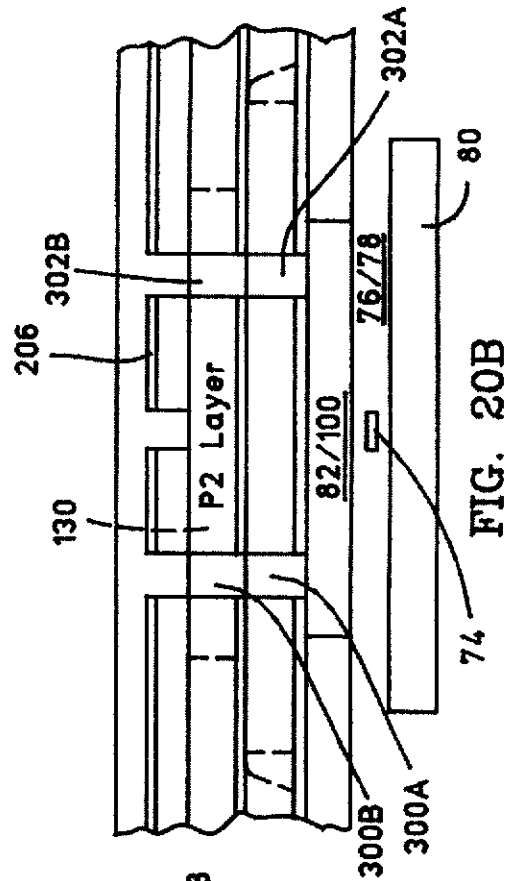
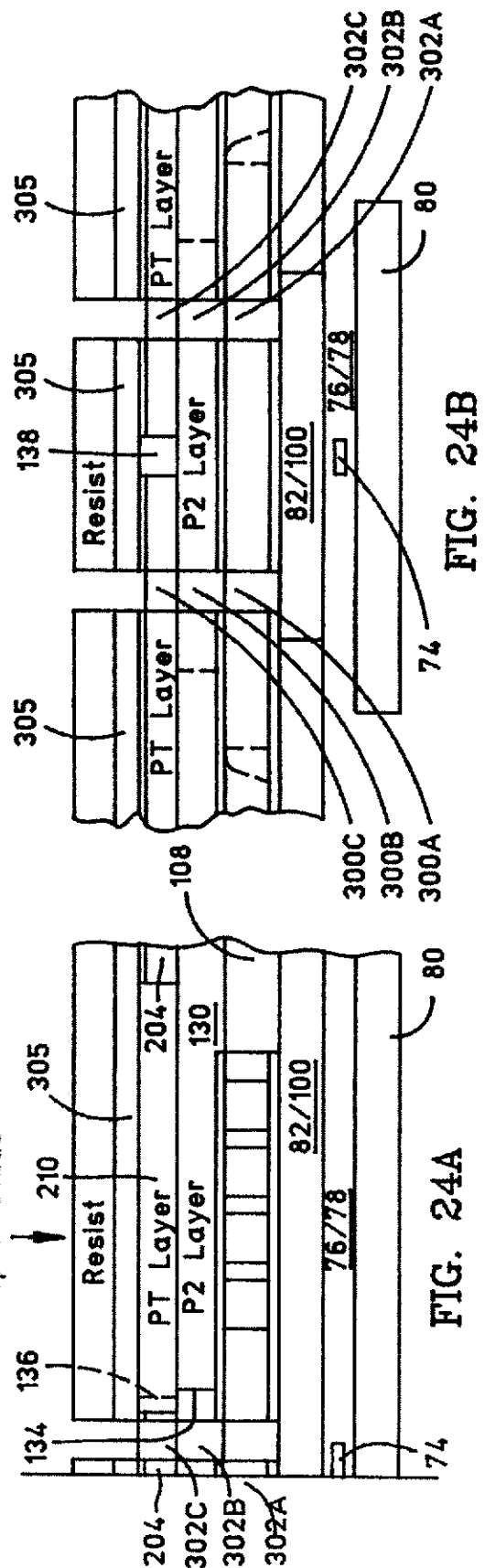
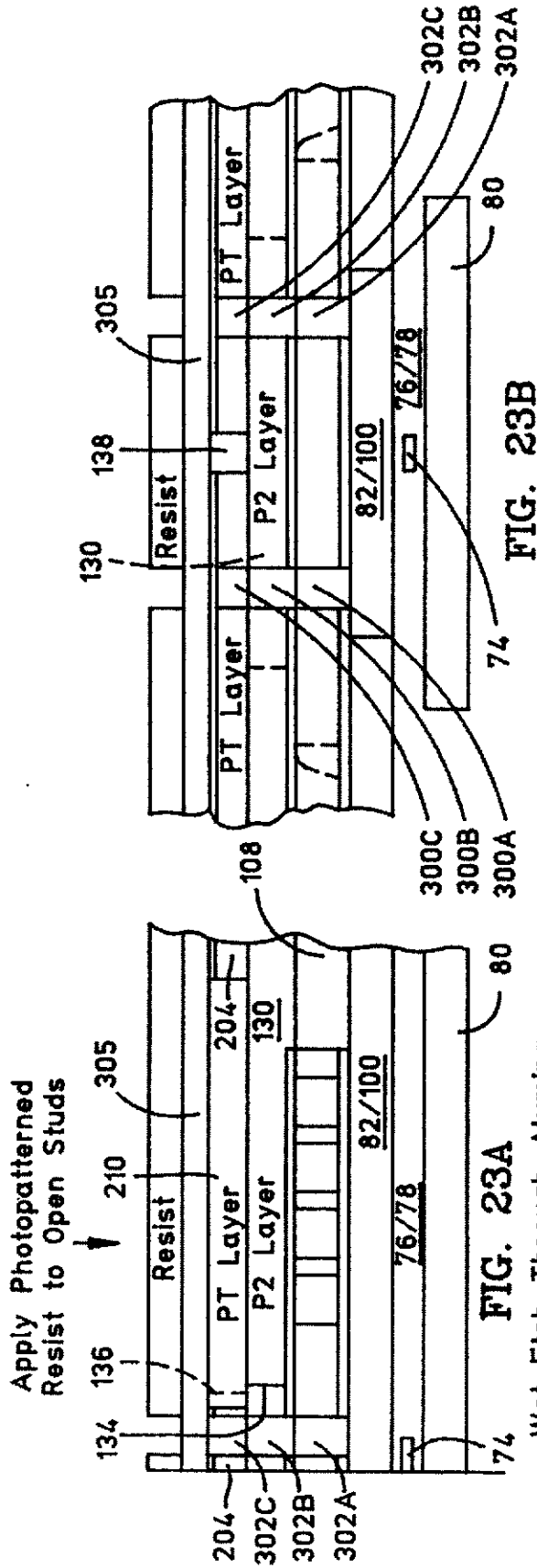


FIG. 20B



Remove Resist and Form Patterned Bilayer Resist to Form Studs and Top Shield

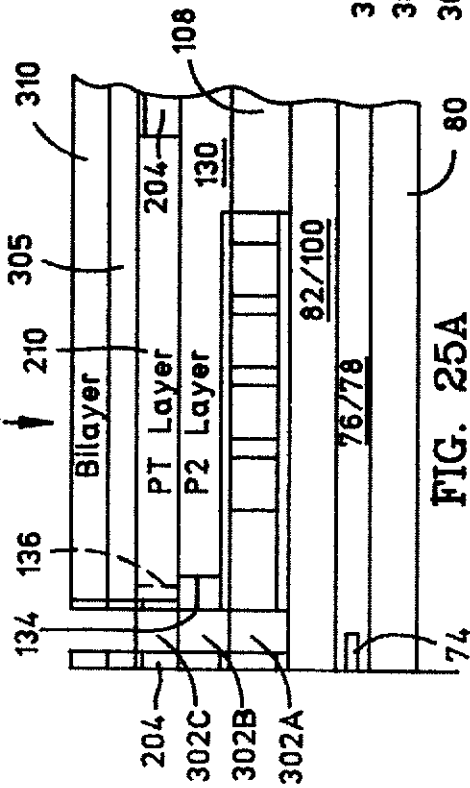


FIG. 25A

Sputter Deposit Top Shield Layer and Studs

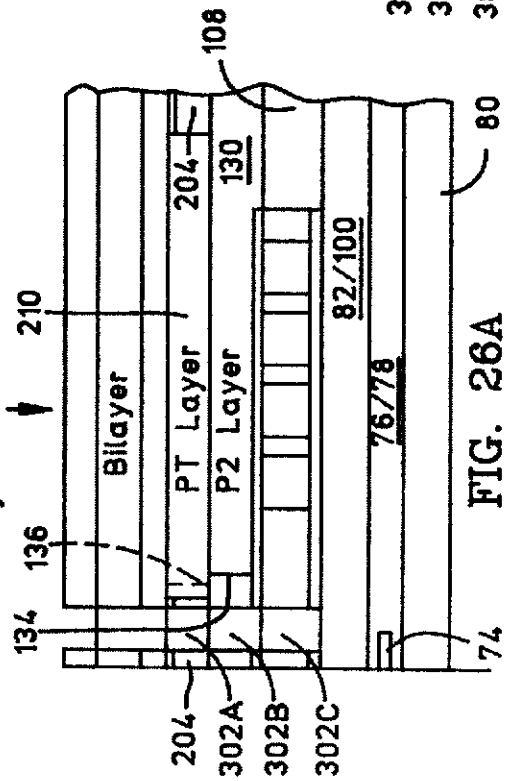


FIG. 26A

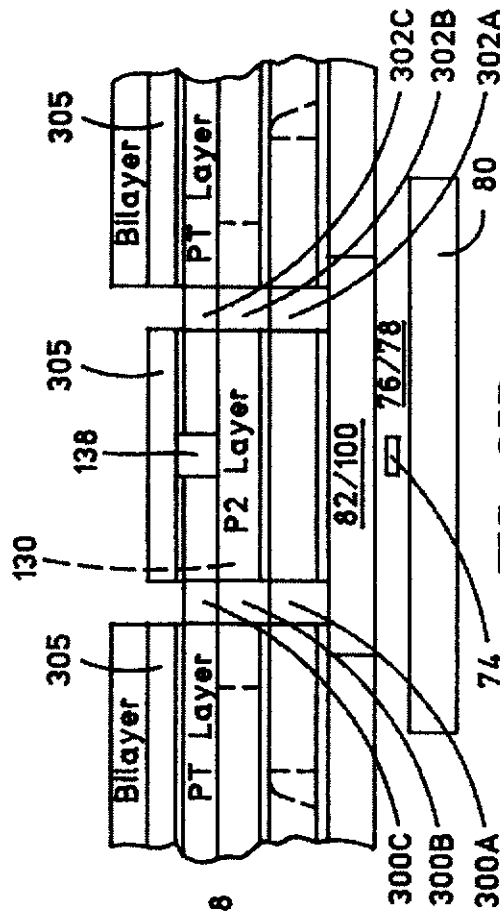


FIG. 25B

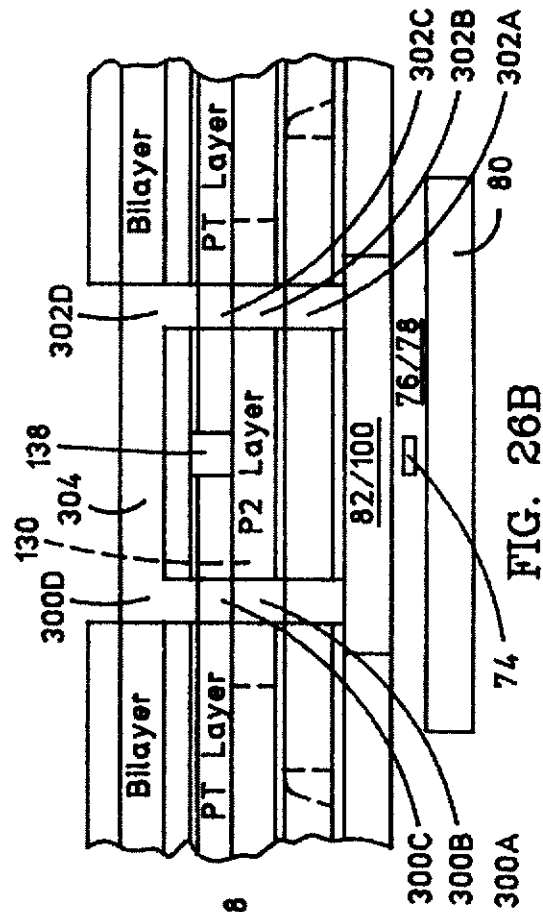


FIG. 26B

