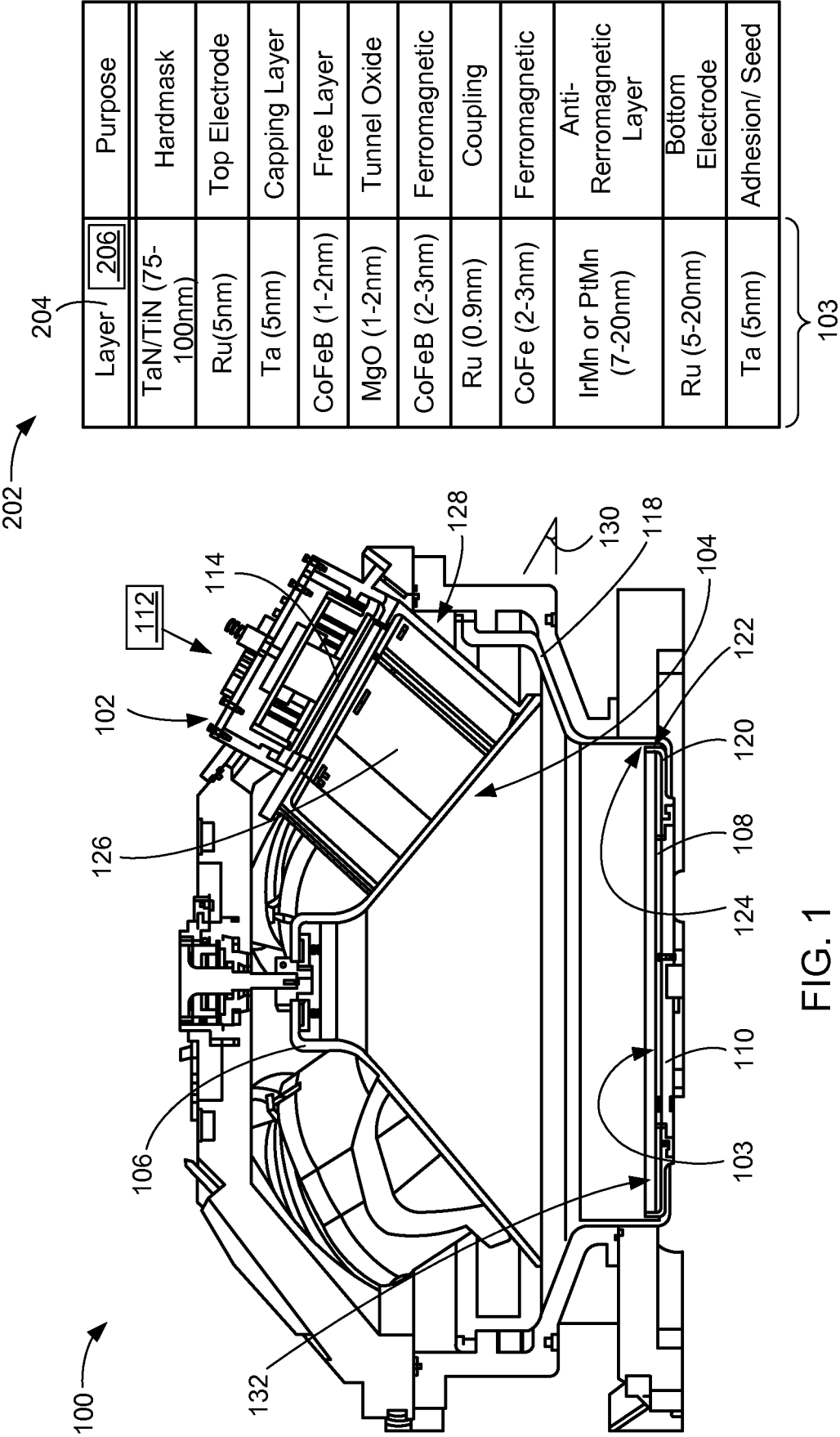




Layer	Purpose
TaN/TiN (75-100nm)	Hardmask
Ru(5nm)	Top Electrode
Ta (5nm)	Capping Layer
CoFeB (1-2nm)	Free Layer
MgO (1-2nm)	Tunnel Oxide
CoFeB (2-3nm)	Ferromagnetic
Ru (0.9nm)	Coupling
CoFe (2-3nm)	Ferromagnetic
IrMn or PtMn (7-20nm)	Anti-Ferromagnetic Layer
Ru (5-20nm)	Bottom Electrode
Ta (5nm)	Adhesion/ Seed

FIG. 2

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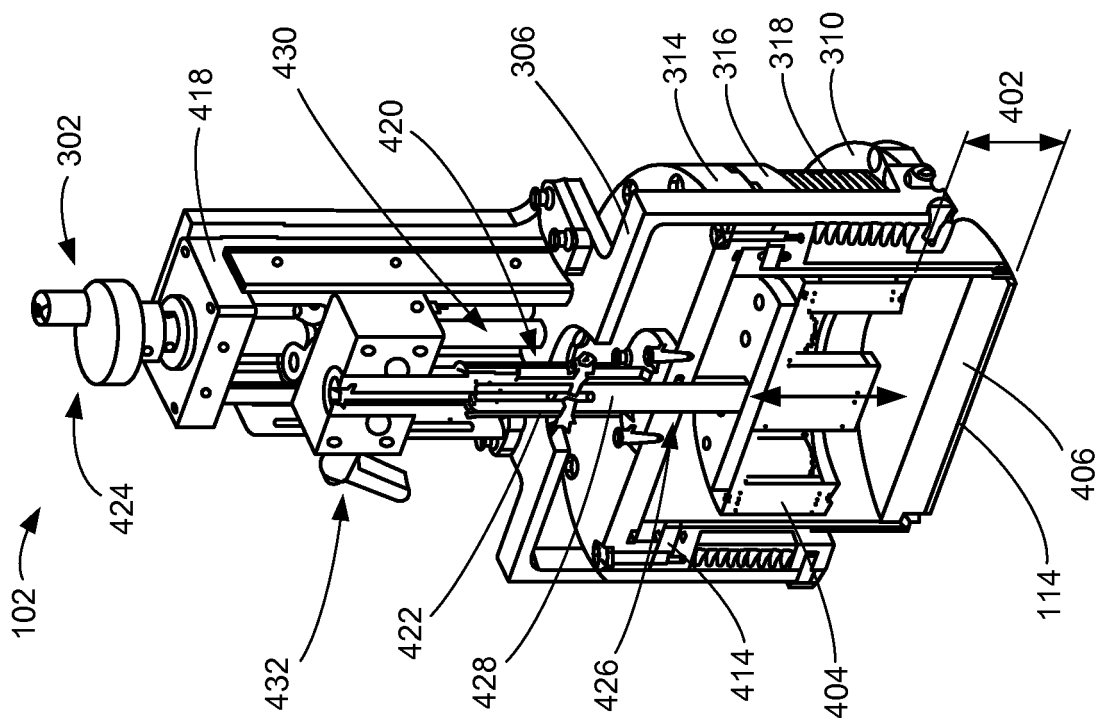


FIG. 4

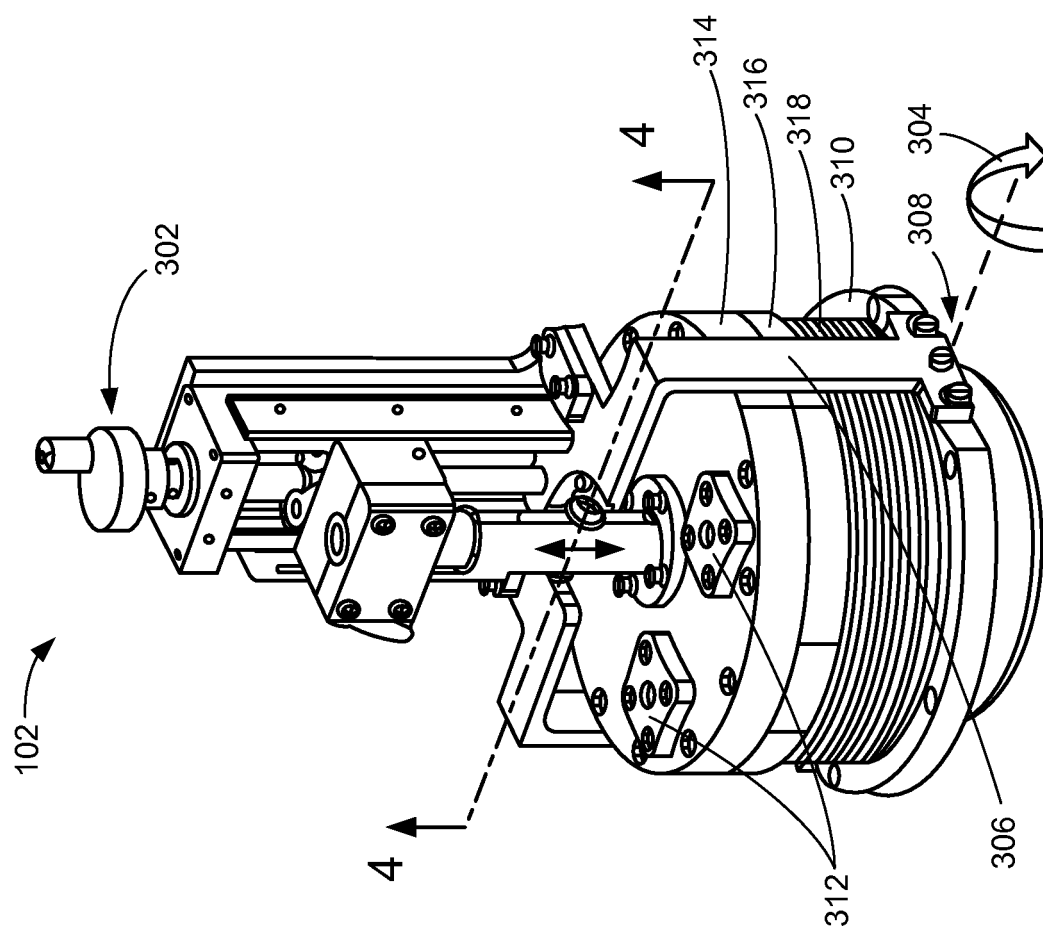


FIG. 3

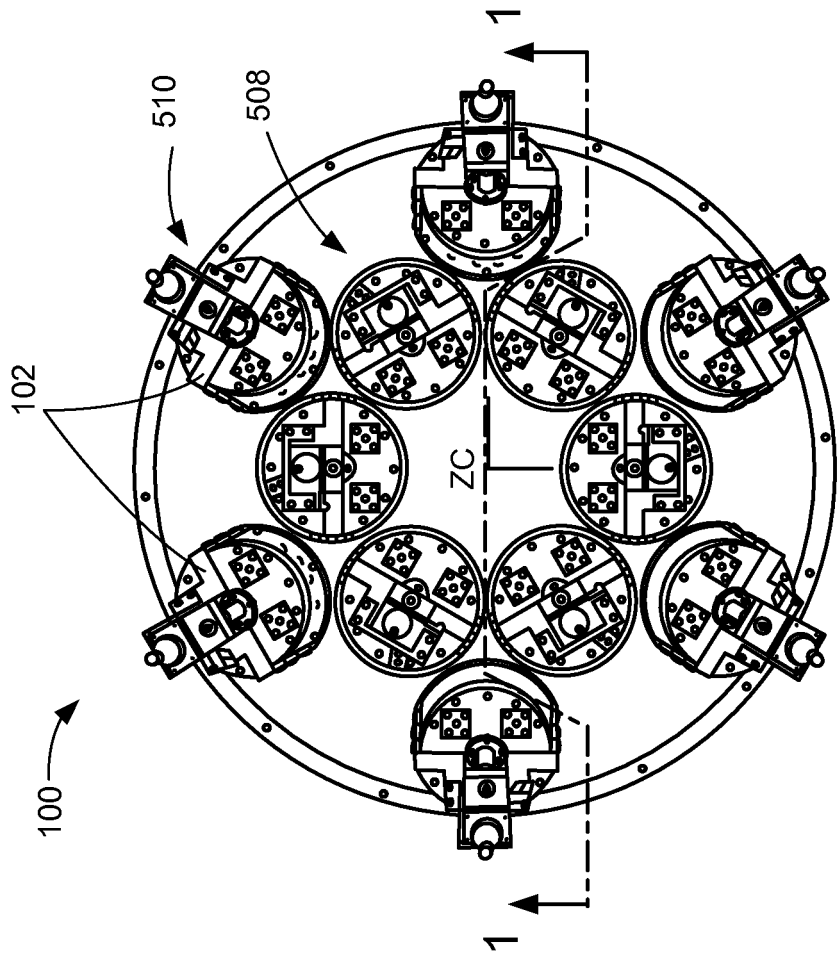


FIG. 6

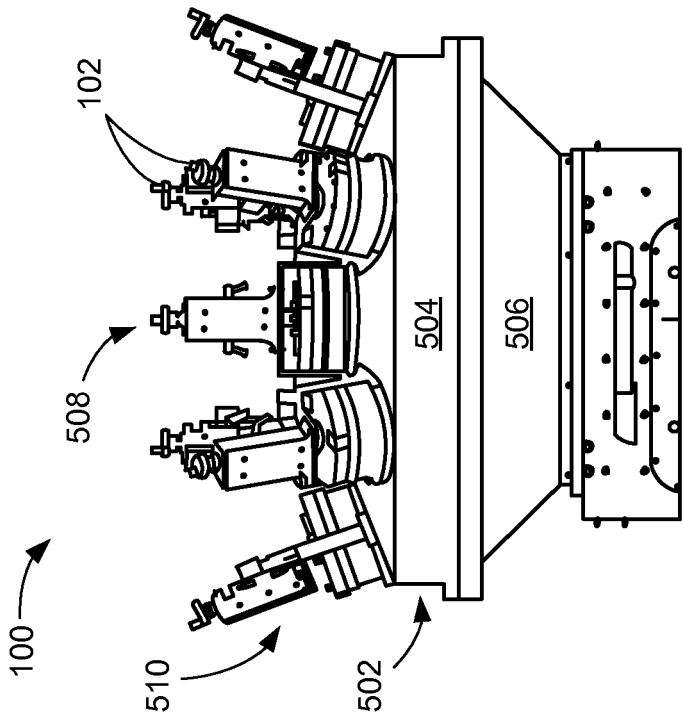
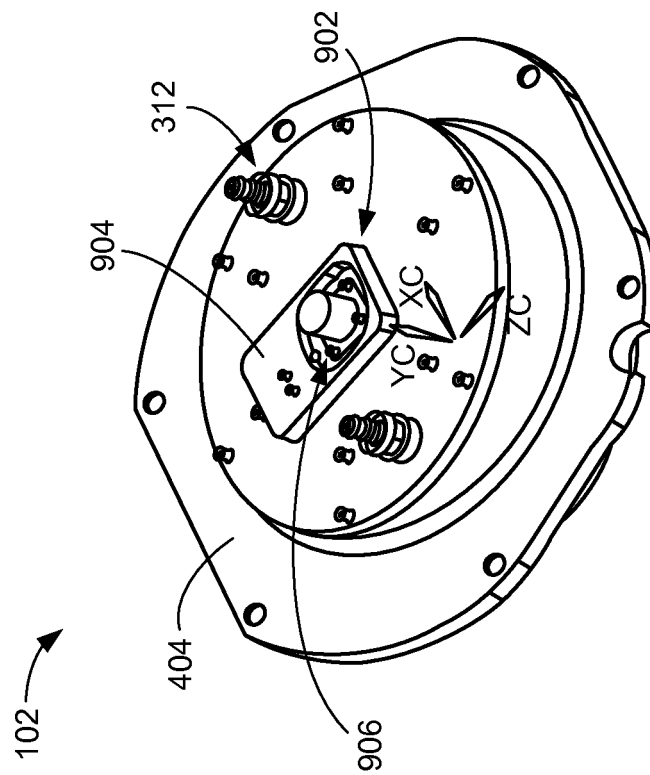
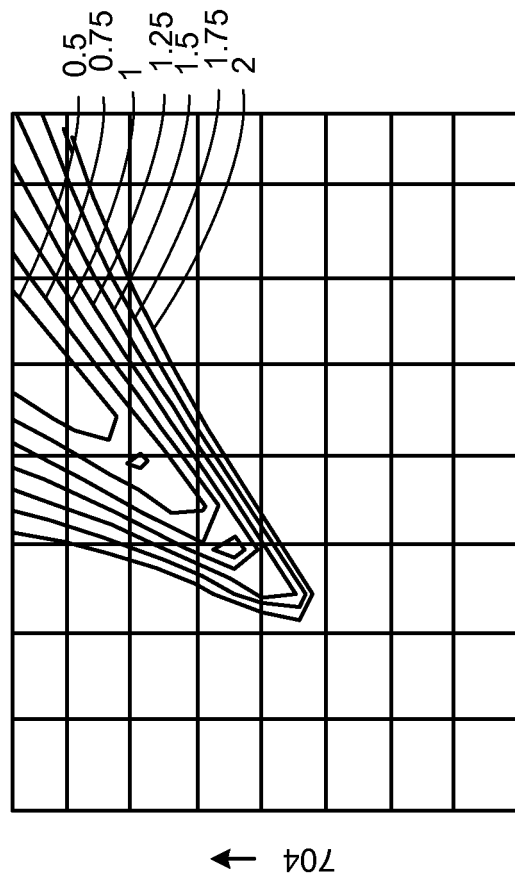
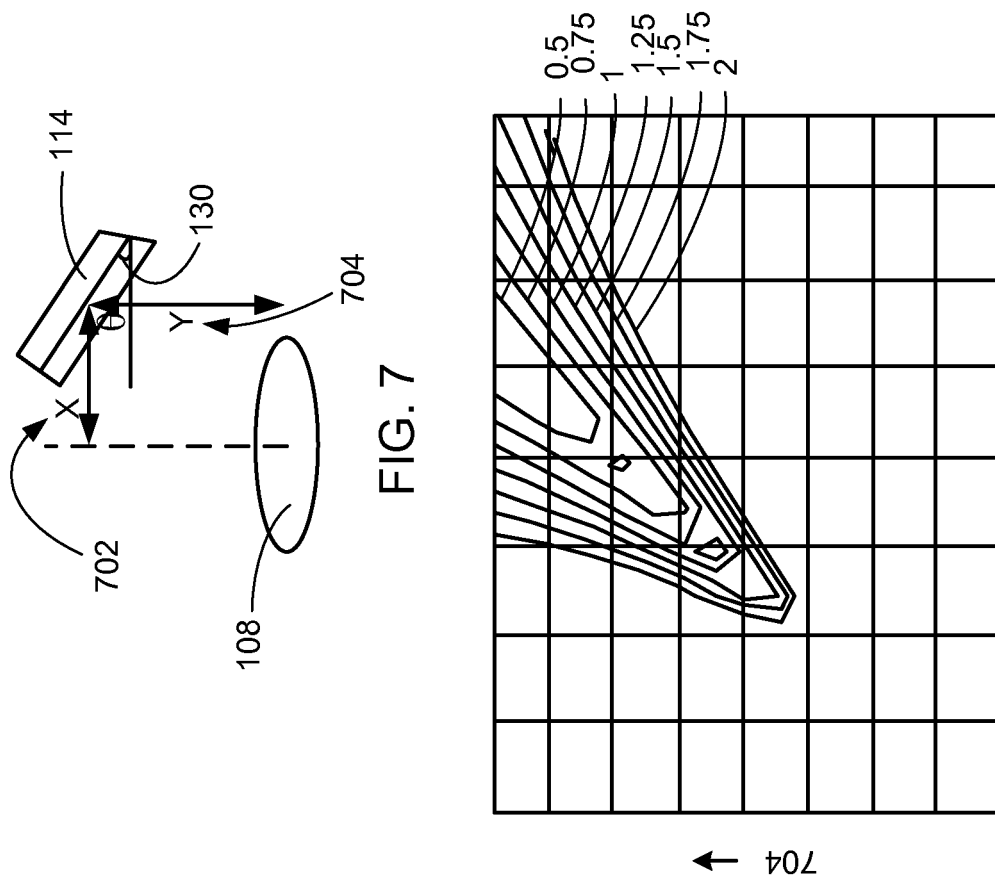


FIG. 5



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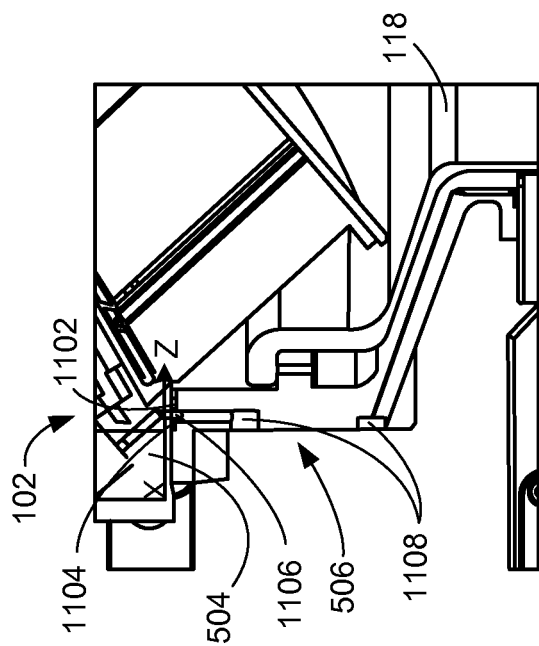


FIG. 11

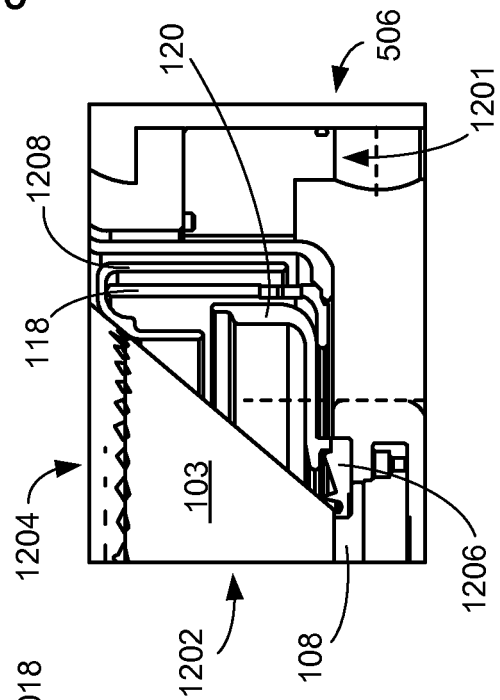


FIG. 12

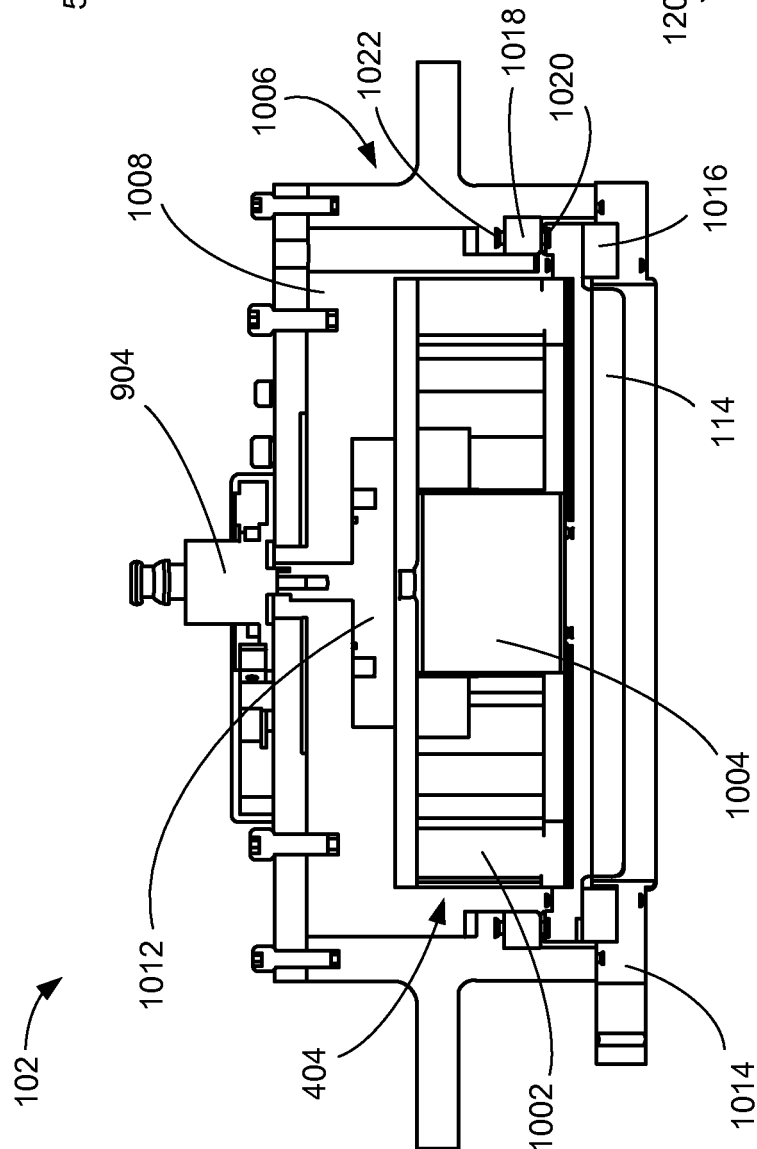


FIG. 10

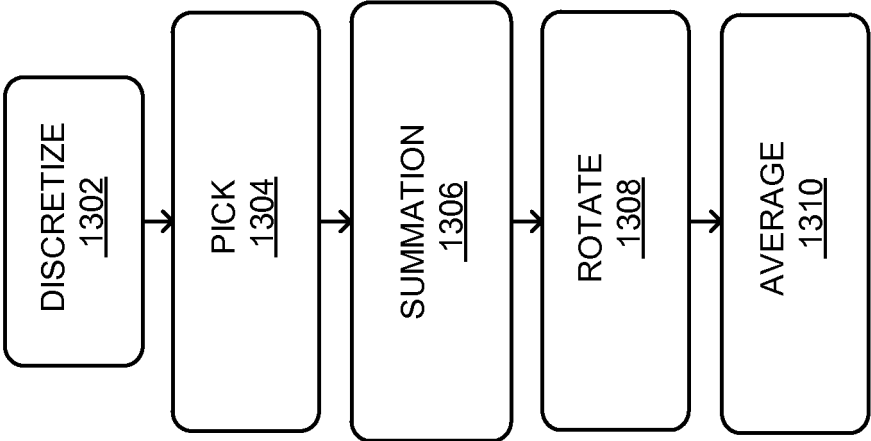


FIG. 13

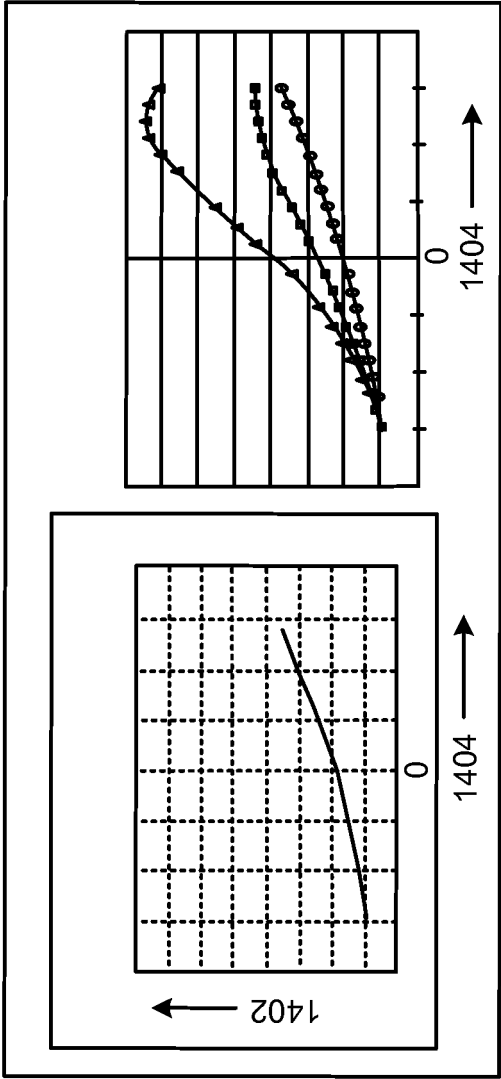


FIG. 14

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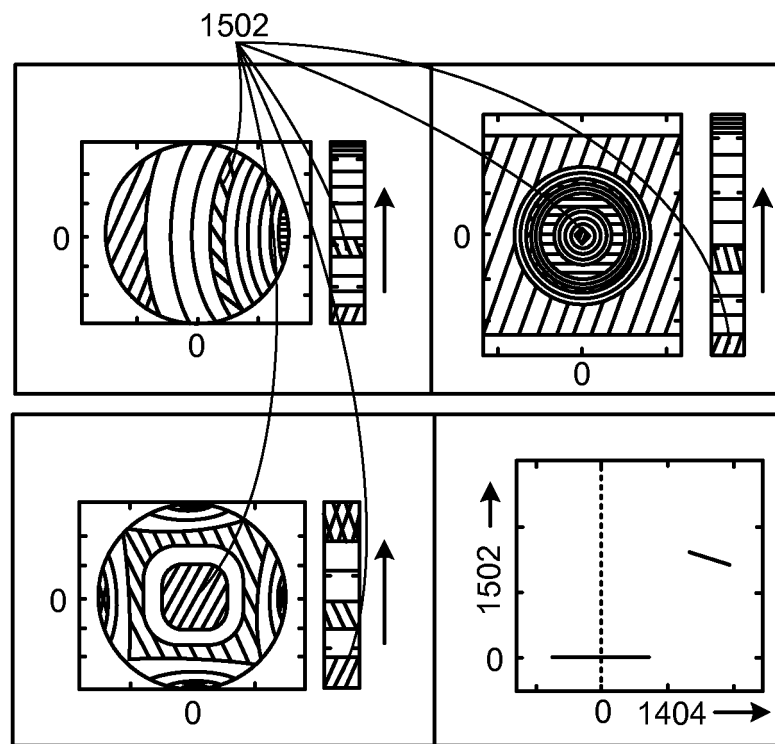


FIG. 15

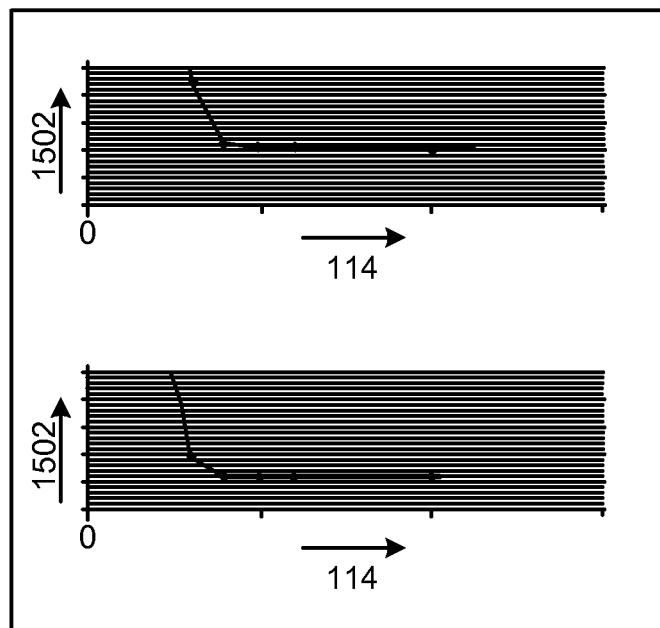


FIG. 16

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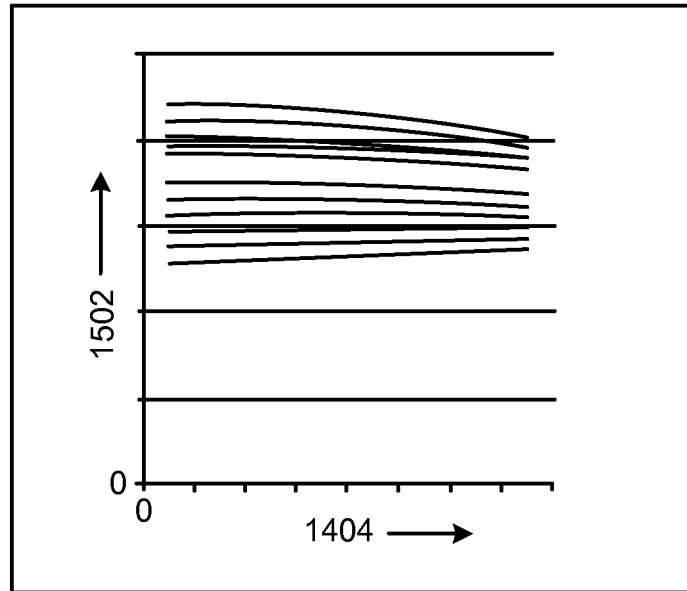


FIG. 17

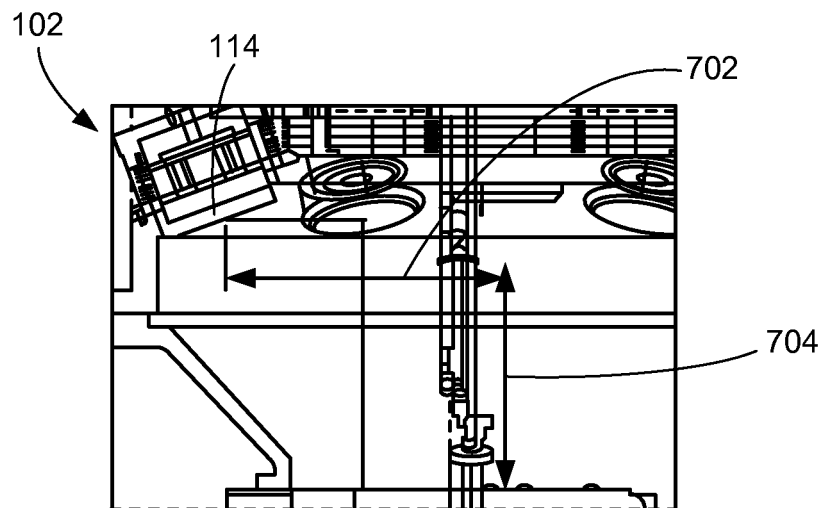


FIG. 18

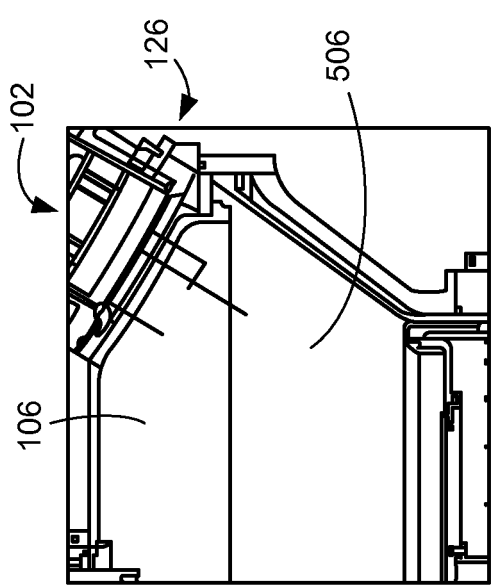


FIG. 21

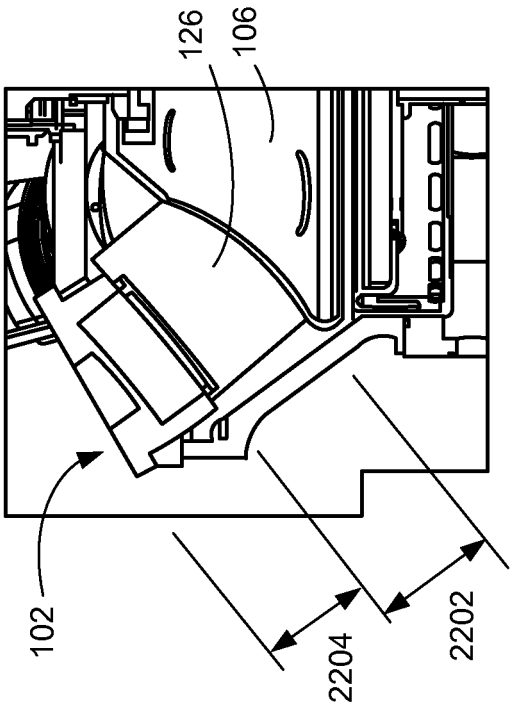


FIG. 22

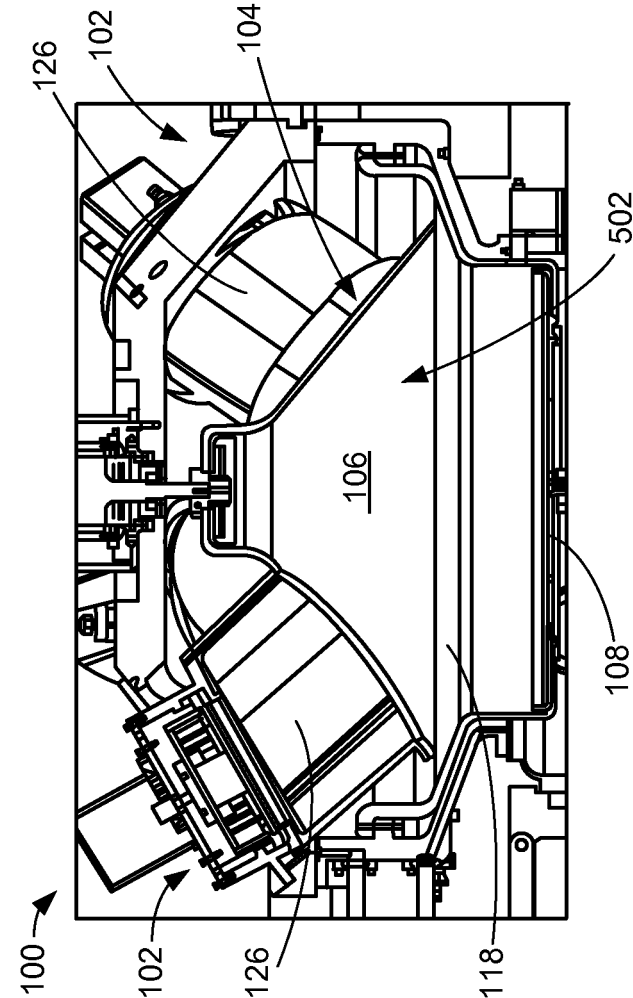


FIG. 19

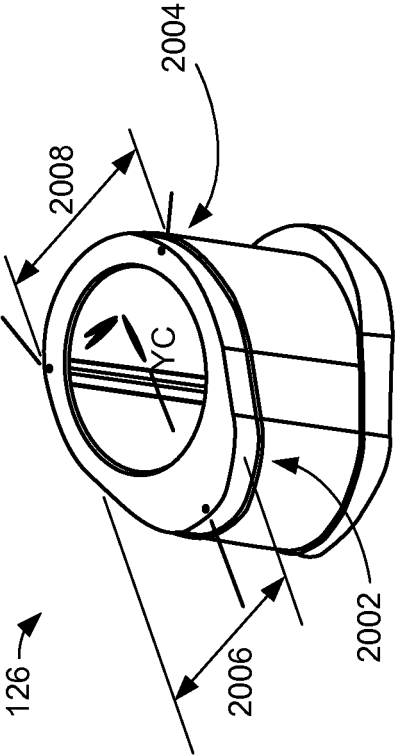


FIG. 20

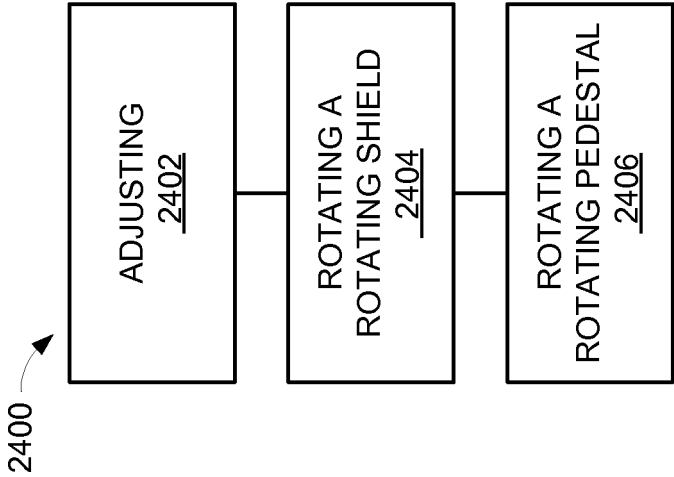


FIG. 24

Contamination tests for MC chamber		
Tests	Description	Counts
Baseline	Rotating shield (RS)	~ 3900
Pre-clean target	Pre-sputter behind RS	~ 4100
Shroud	5.5" Gnd Shroud	~ 470
DC ground	Better grounding	~ 4600
DC strike	No initial DC strike	~ 4500
Adaptor	New lower adaptor	~ 95
Magnet effect	Different magnets	~ 4800
Pressure effect	Higher pressure	~ 16
Proto 2.2	New rotating shield with new long shroud	~ 66

FIG. 23