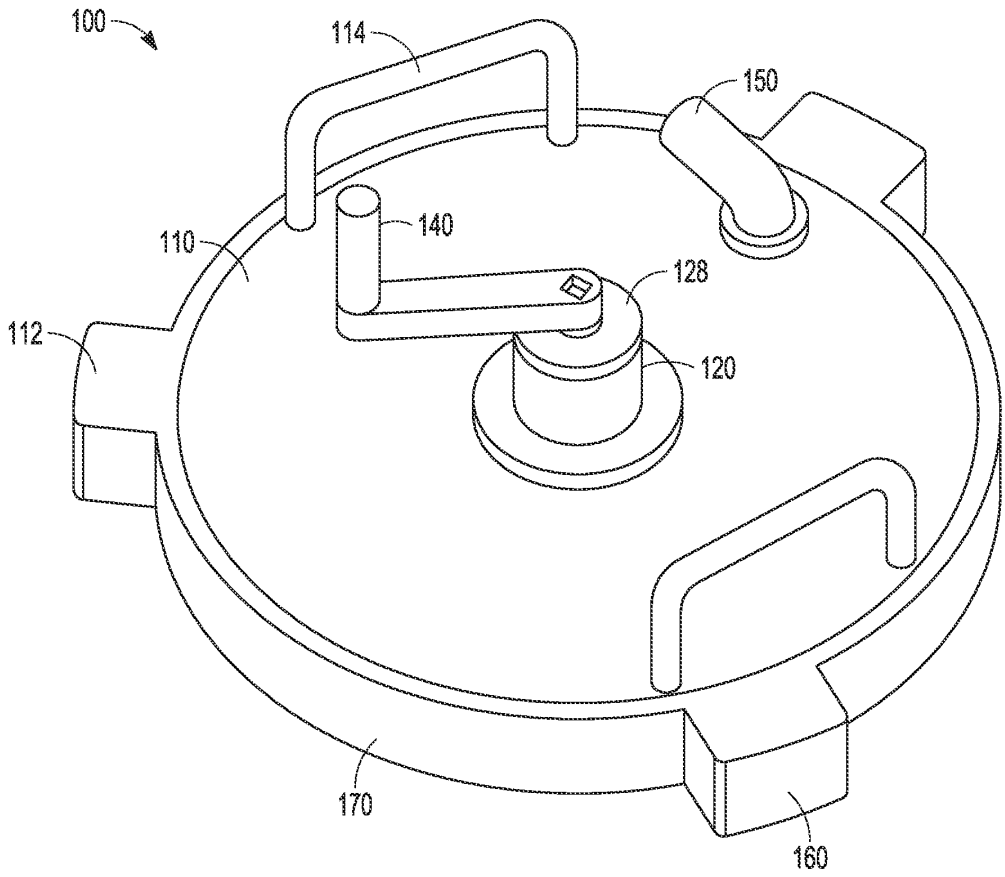

FIG. 1A

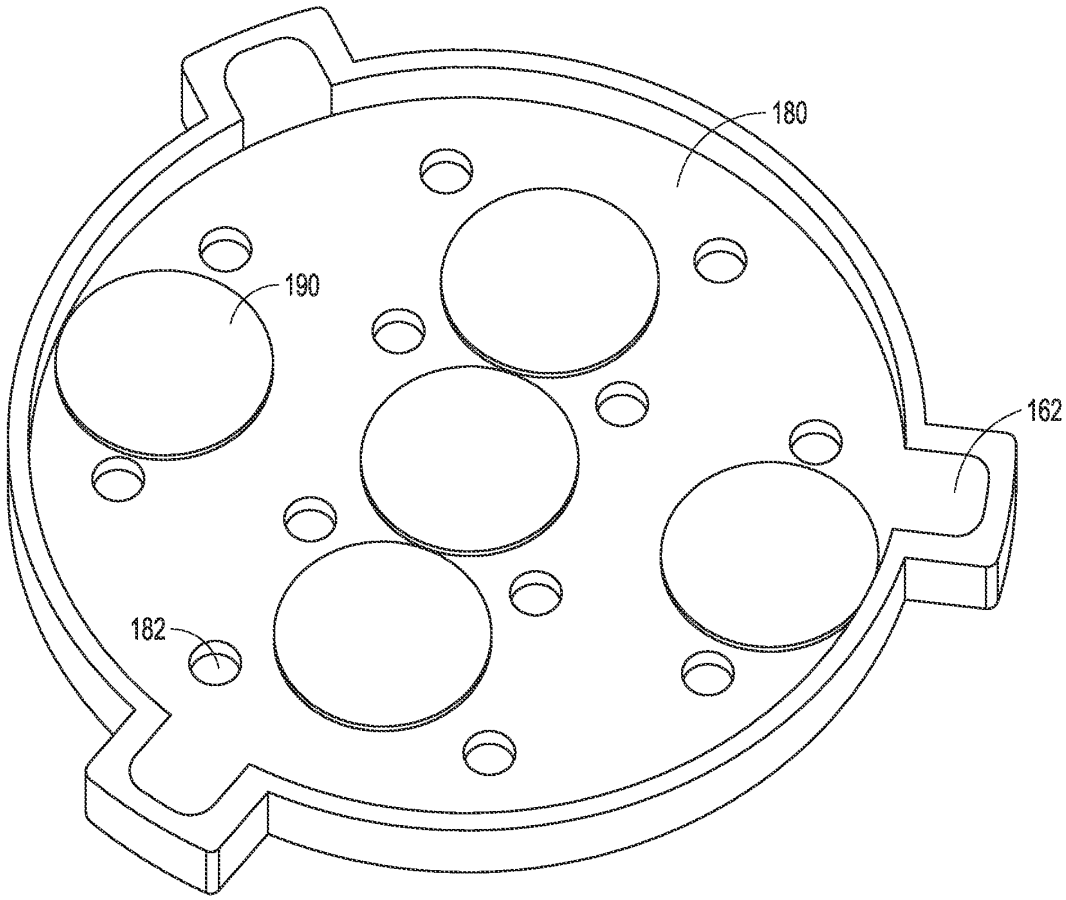

FIG. 1B

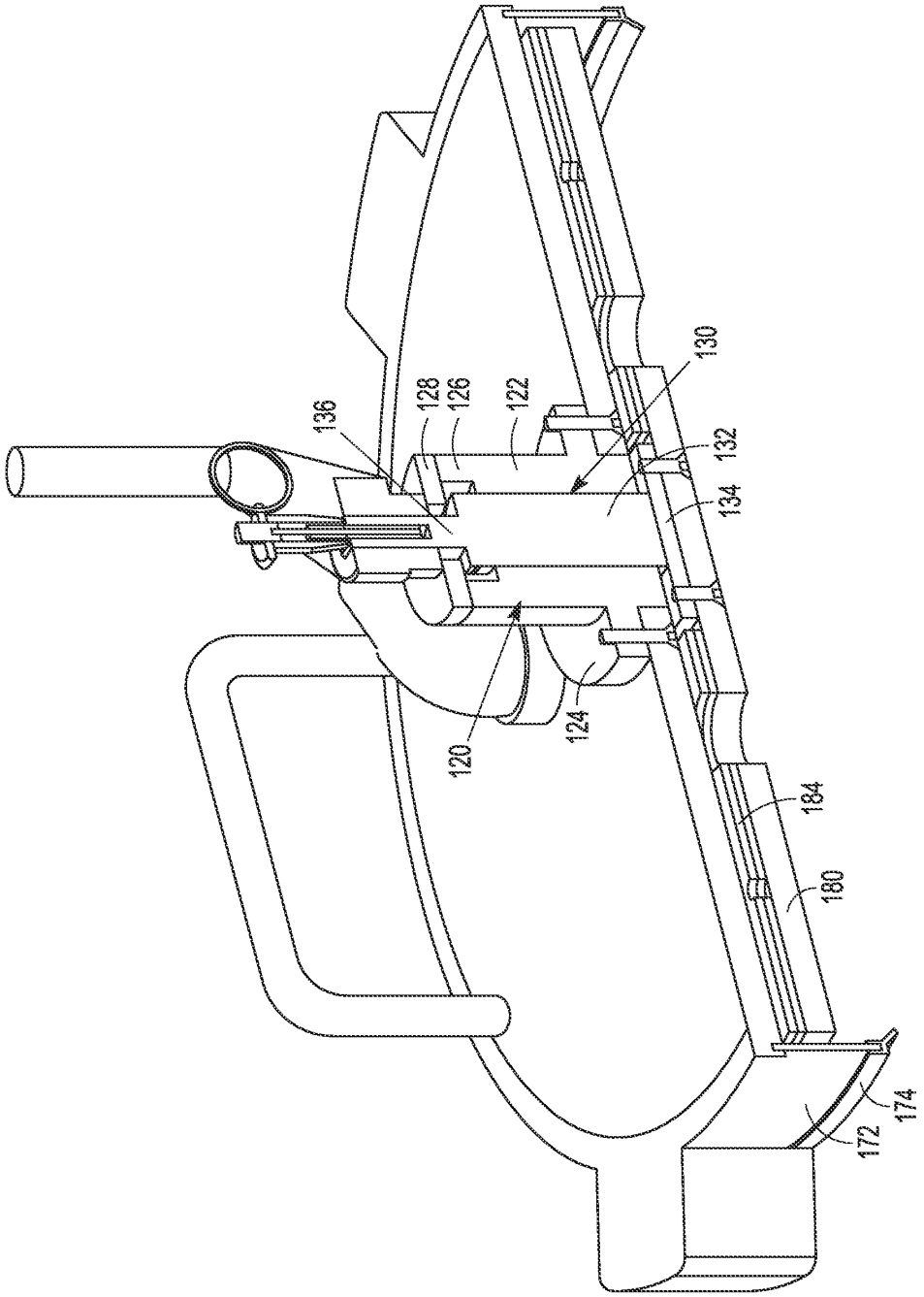

FIG. 1C

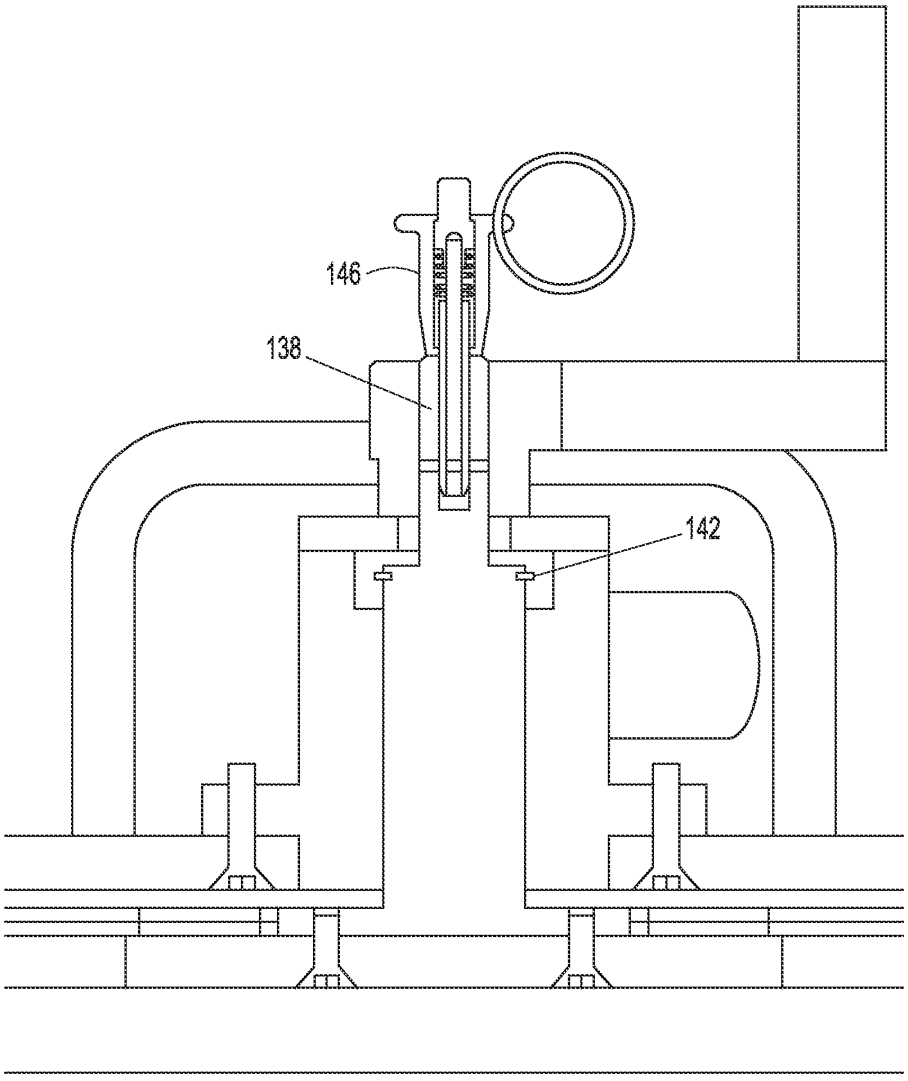

FIG. 1D

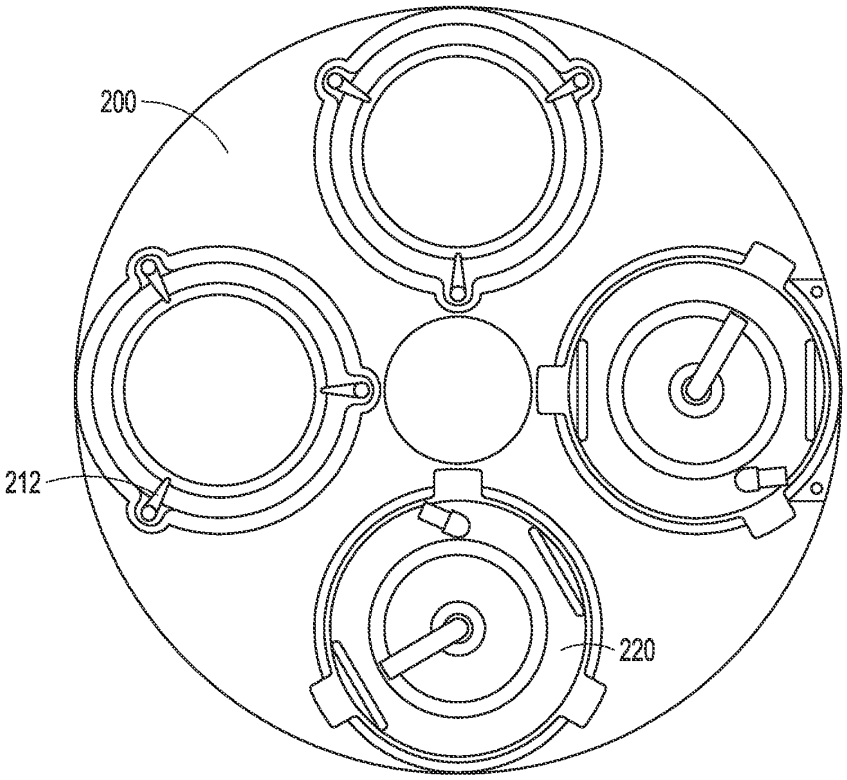

FIG. 2A

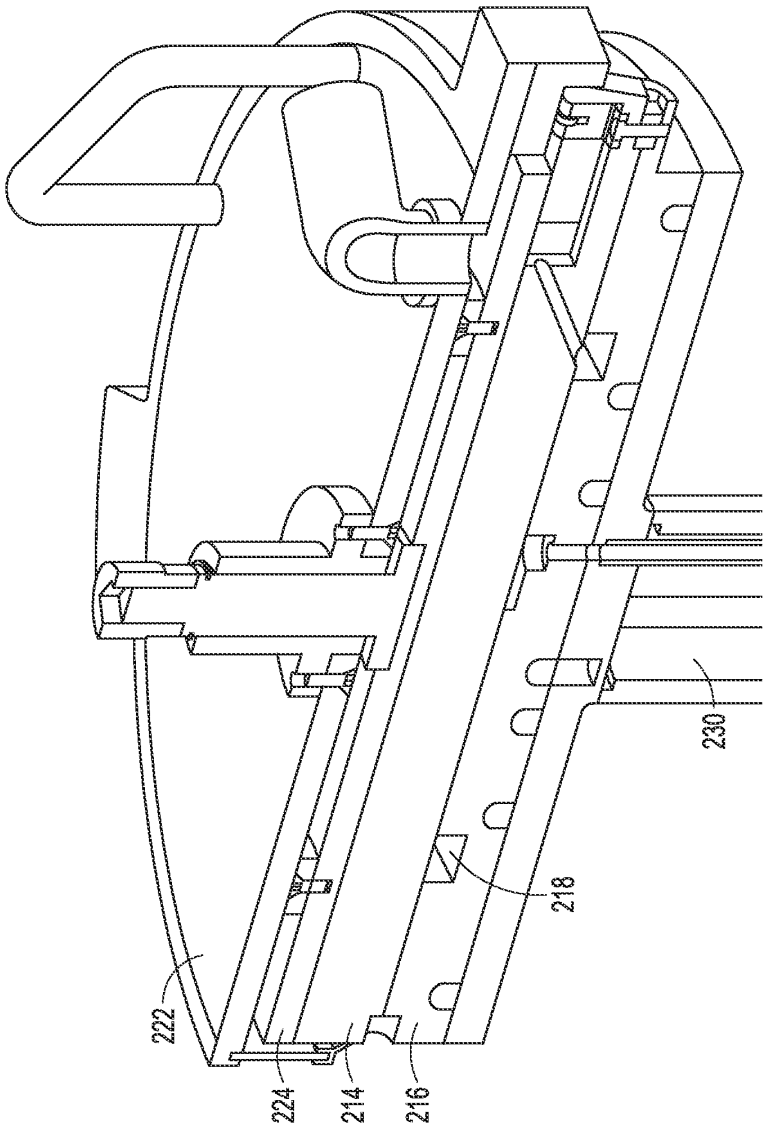

FIG. 2B

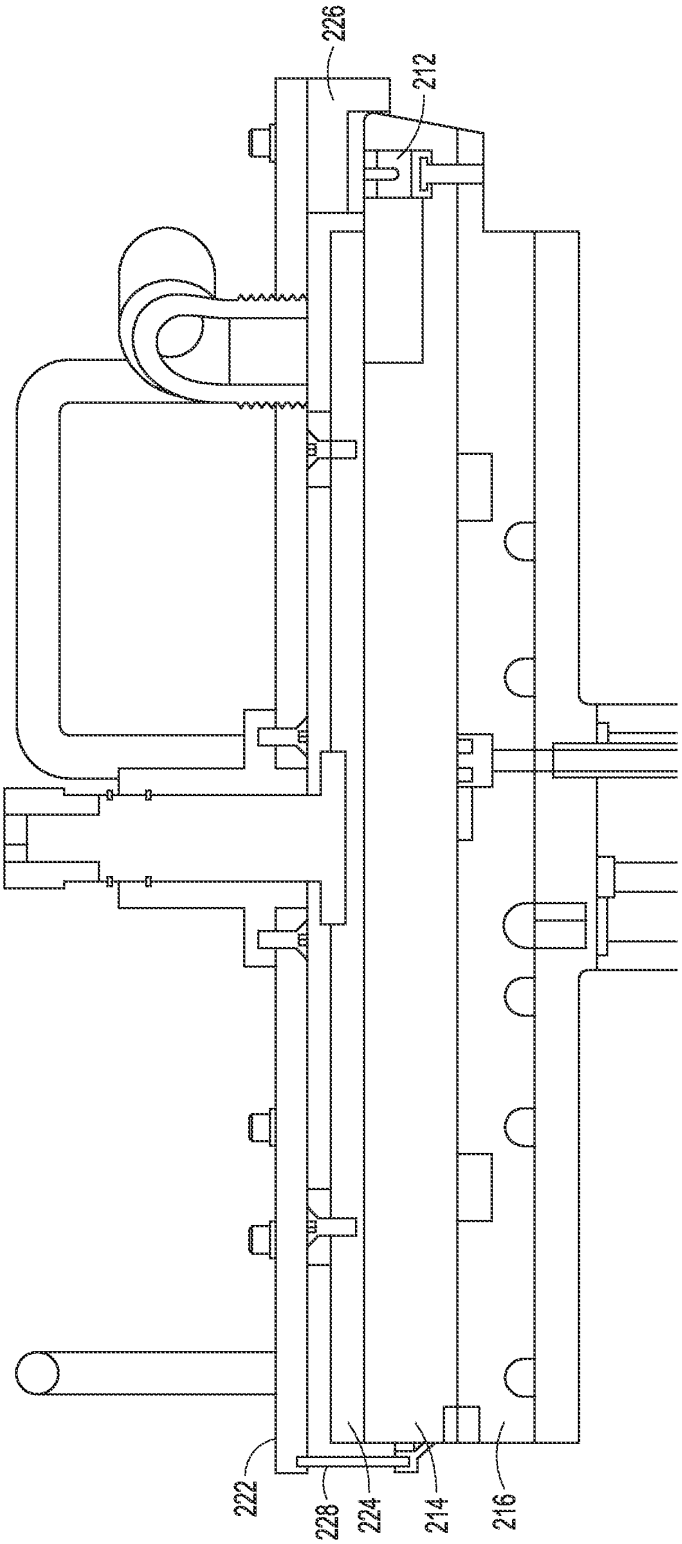

FIG. 2C

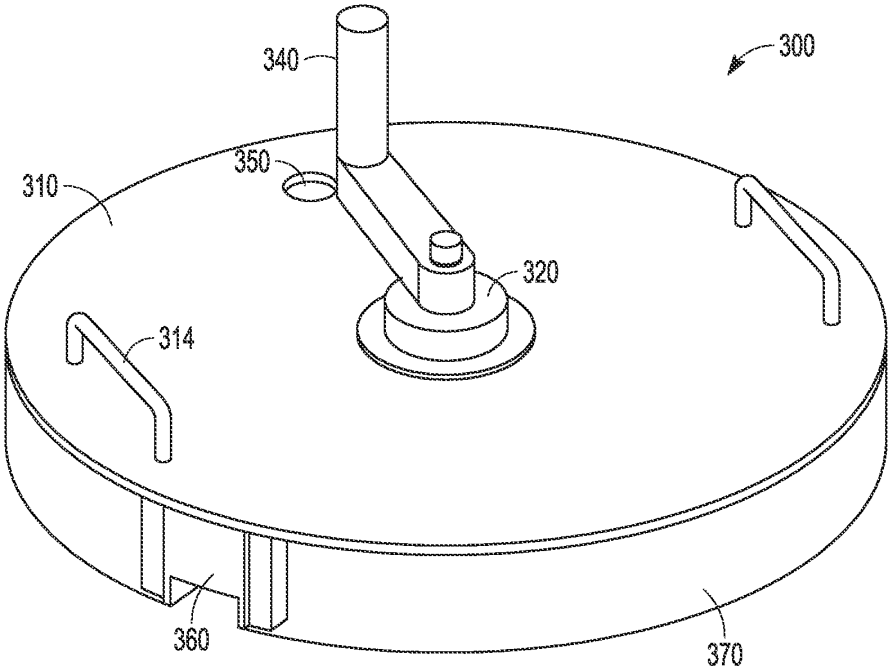

FIG. 3A

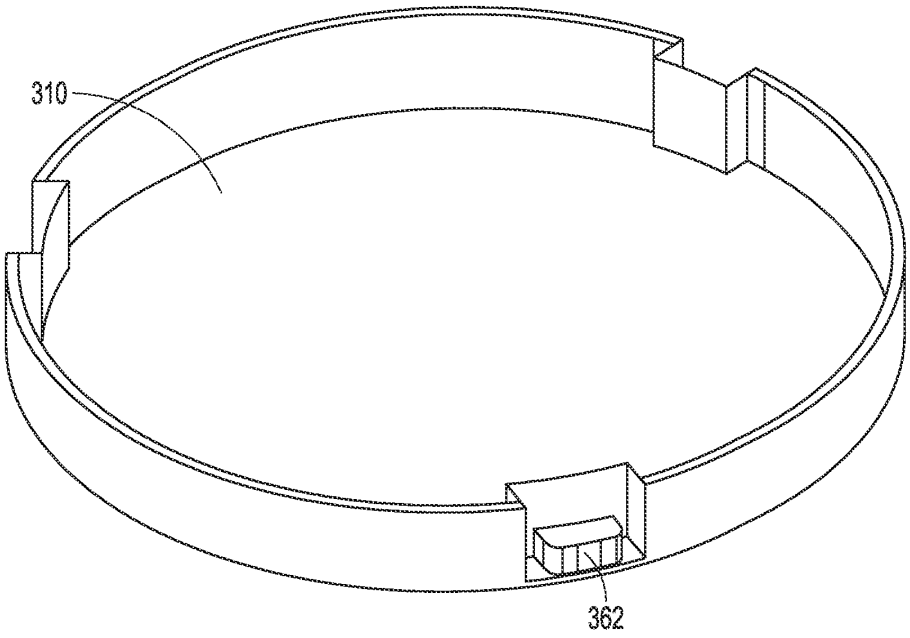

FIG. 3B

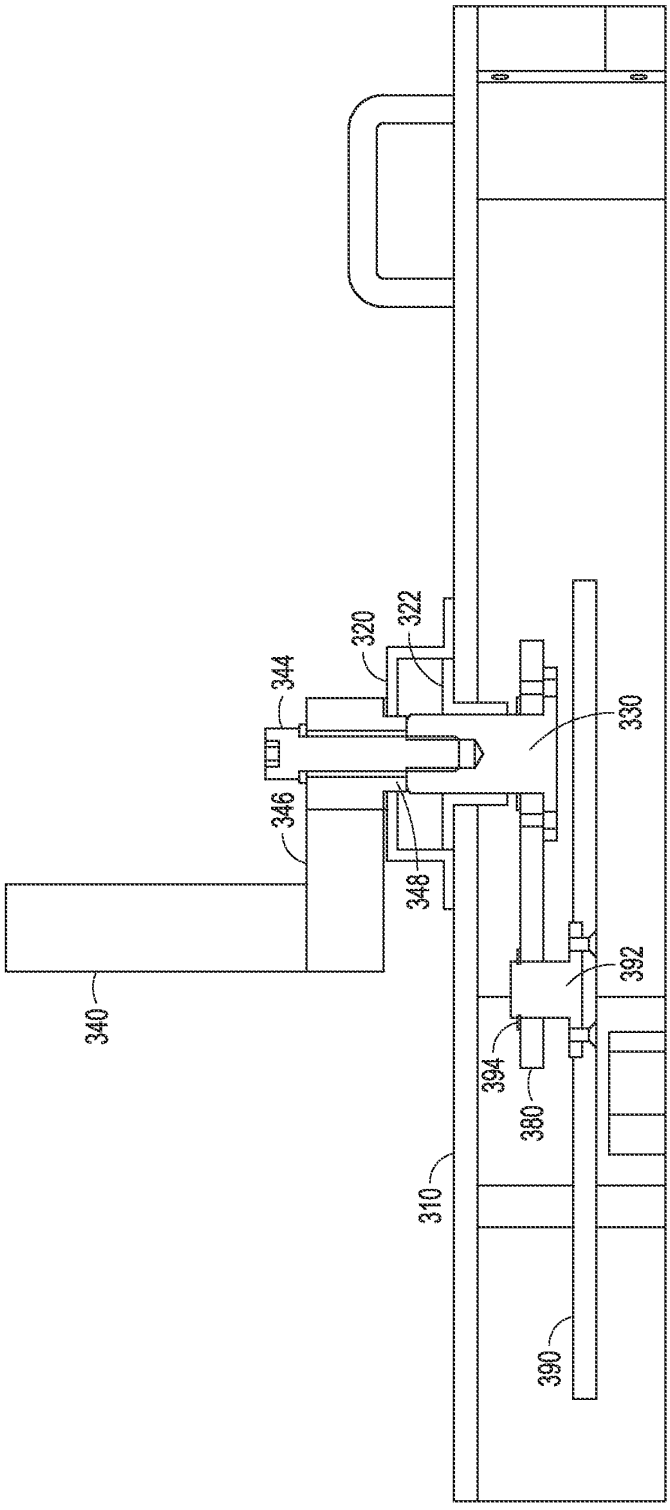

FIG. 3C

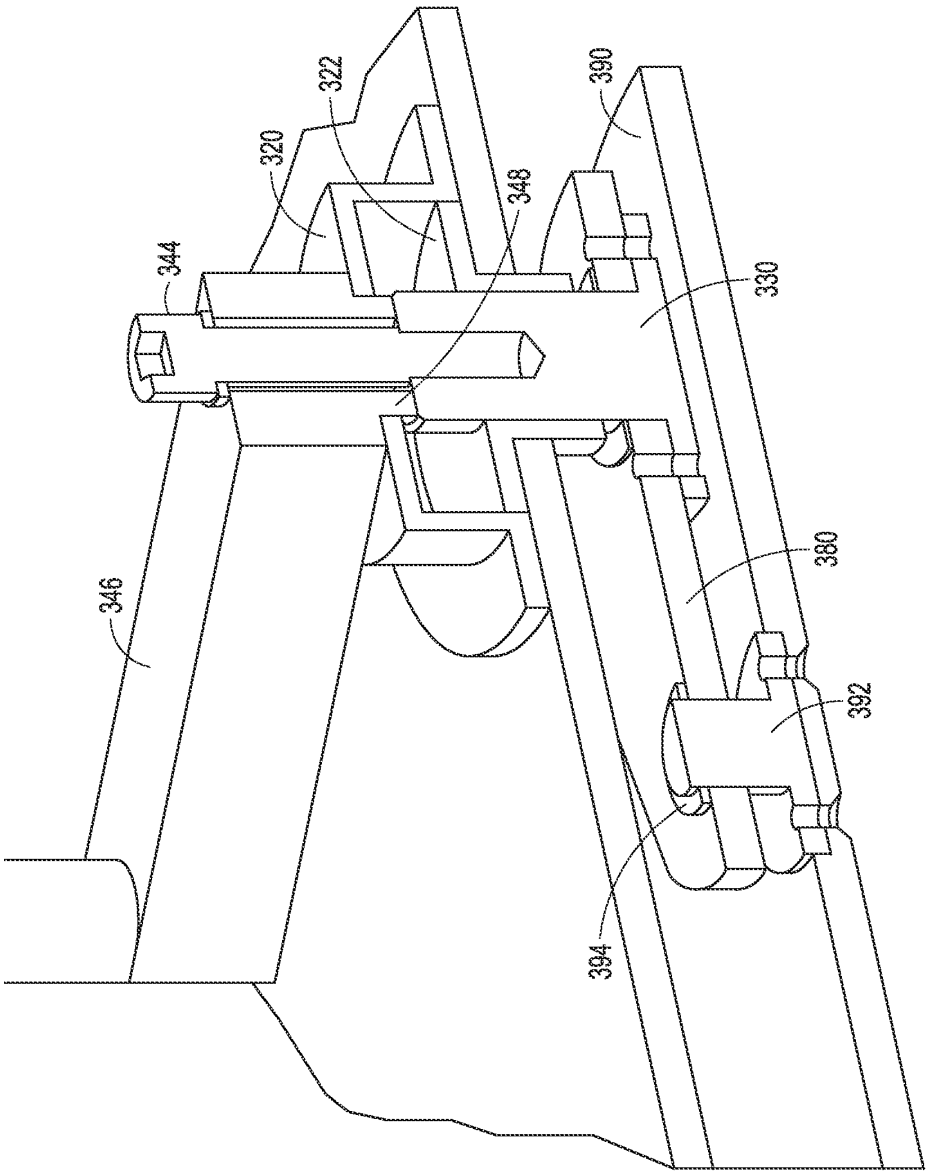

FIG. 3D

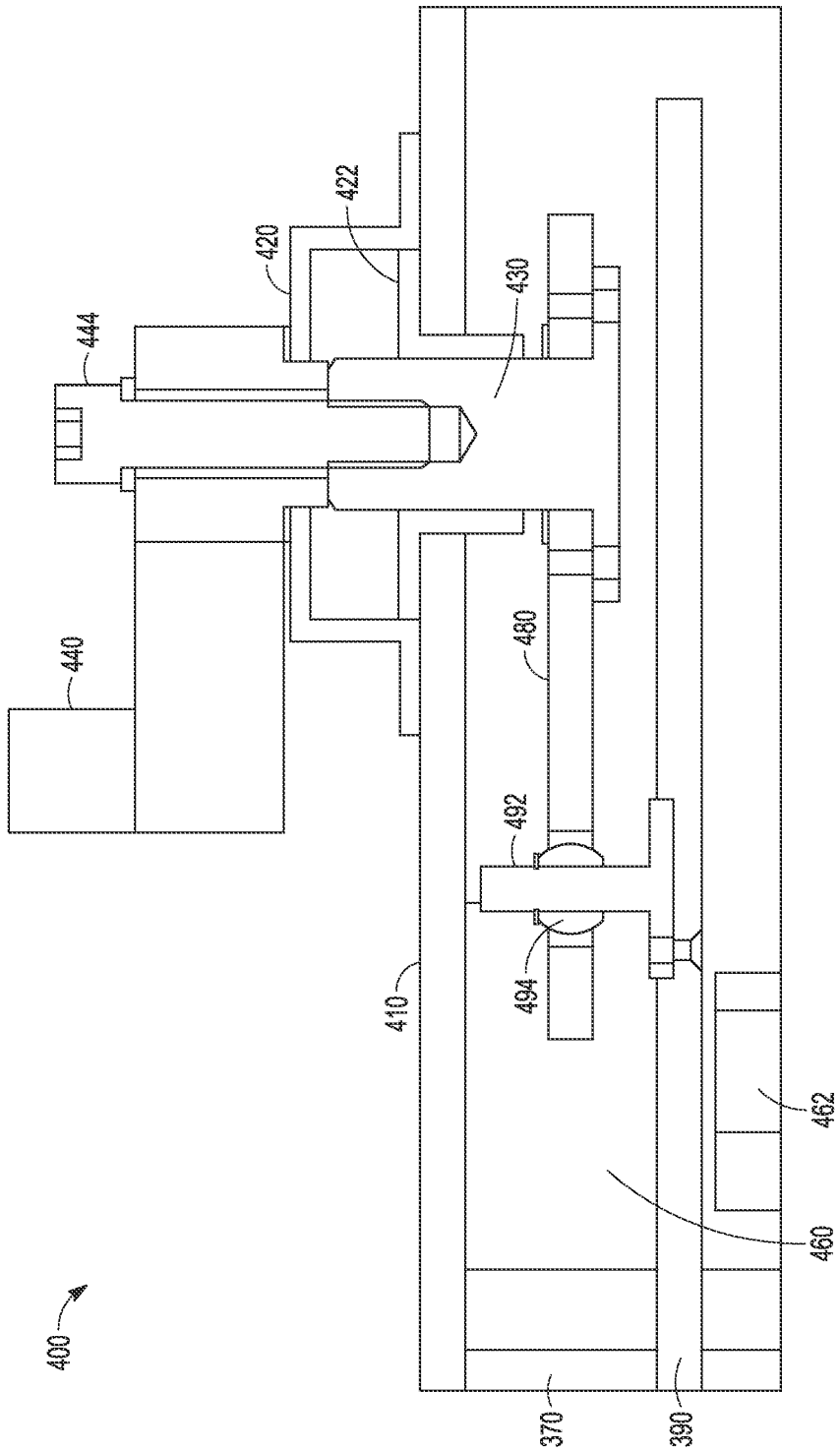

FIG. 4A

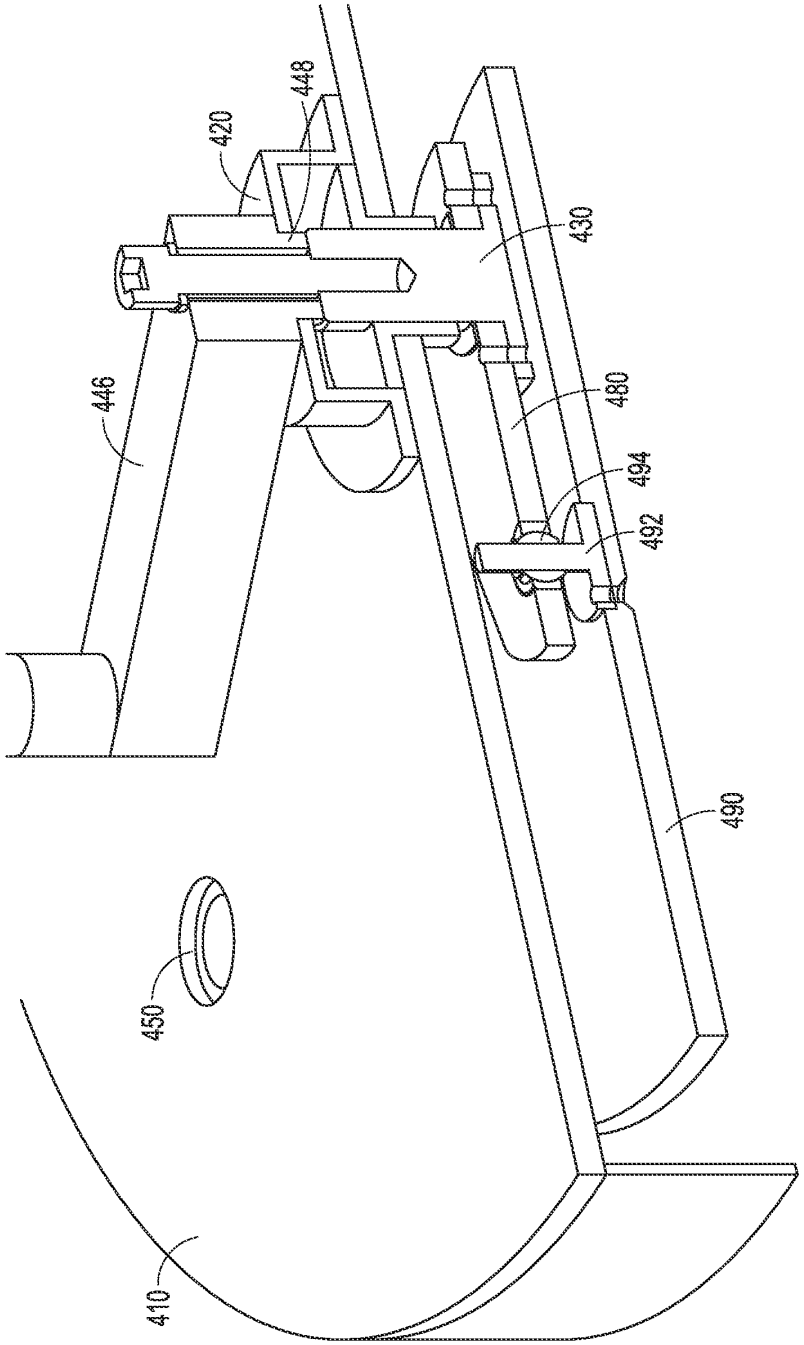

FIG. 4B

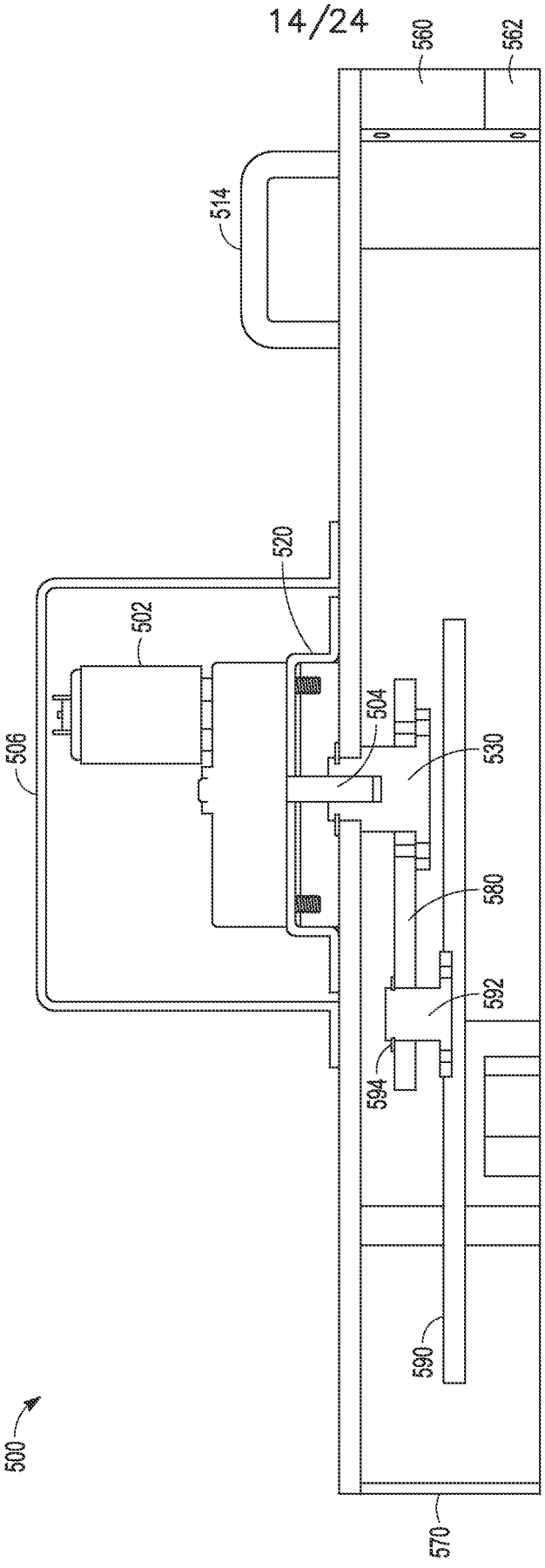

FIG. 5A

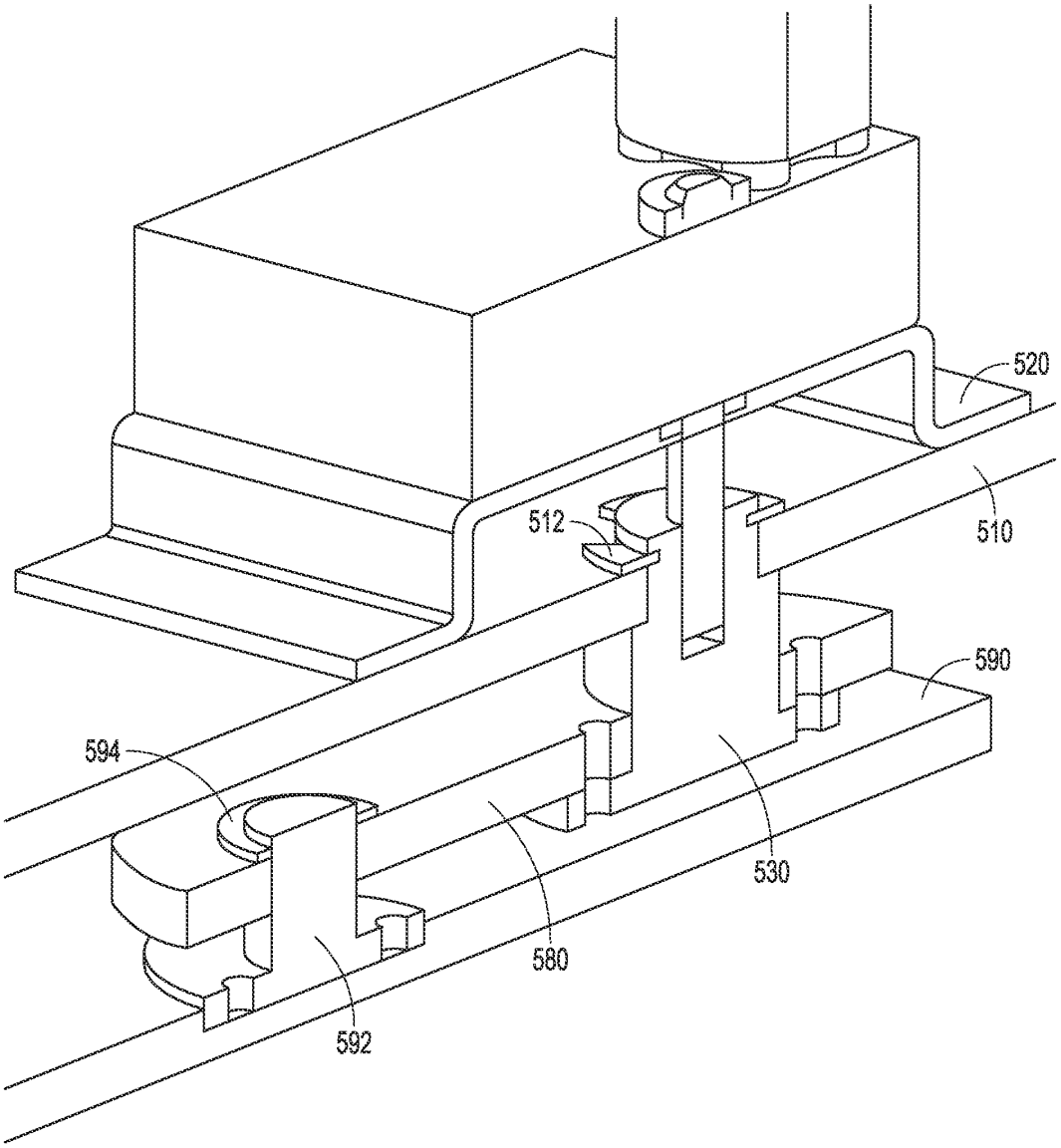

FIG. 5B

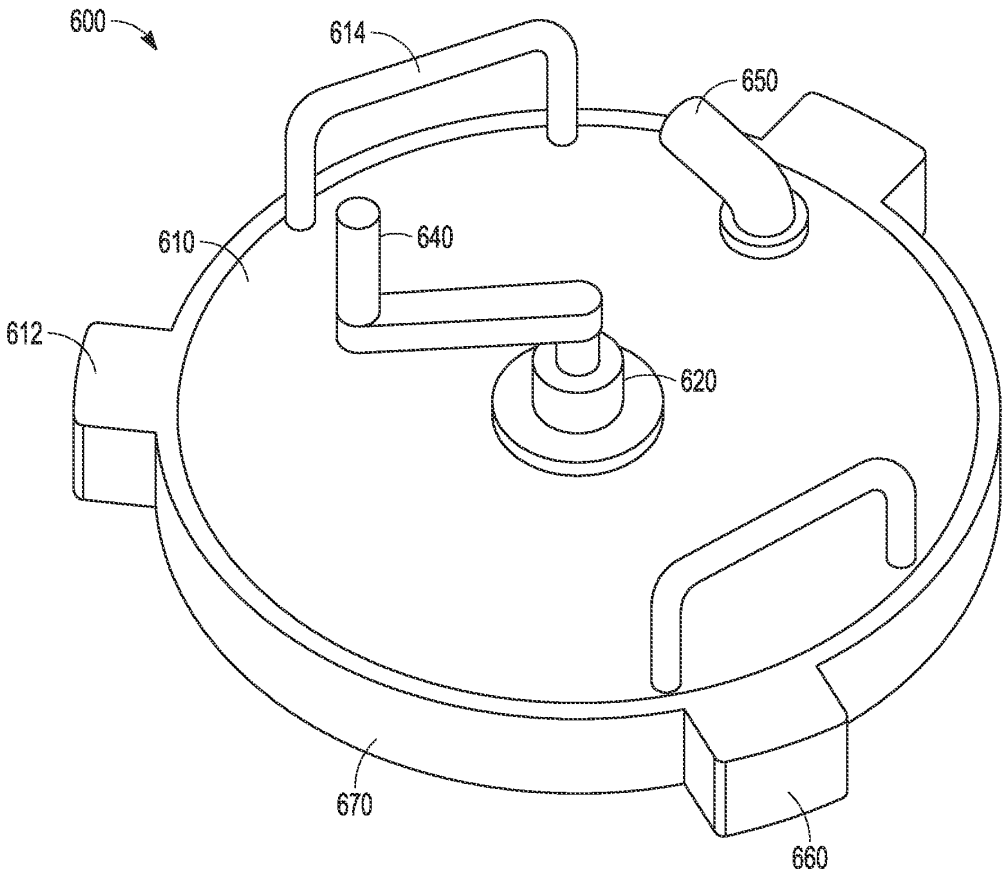

FIG. 6A

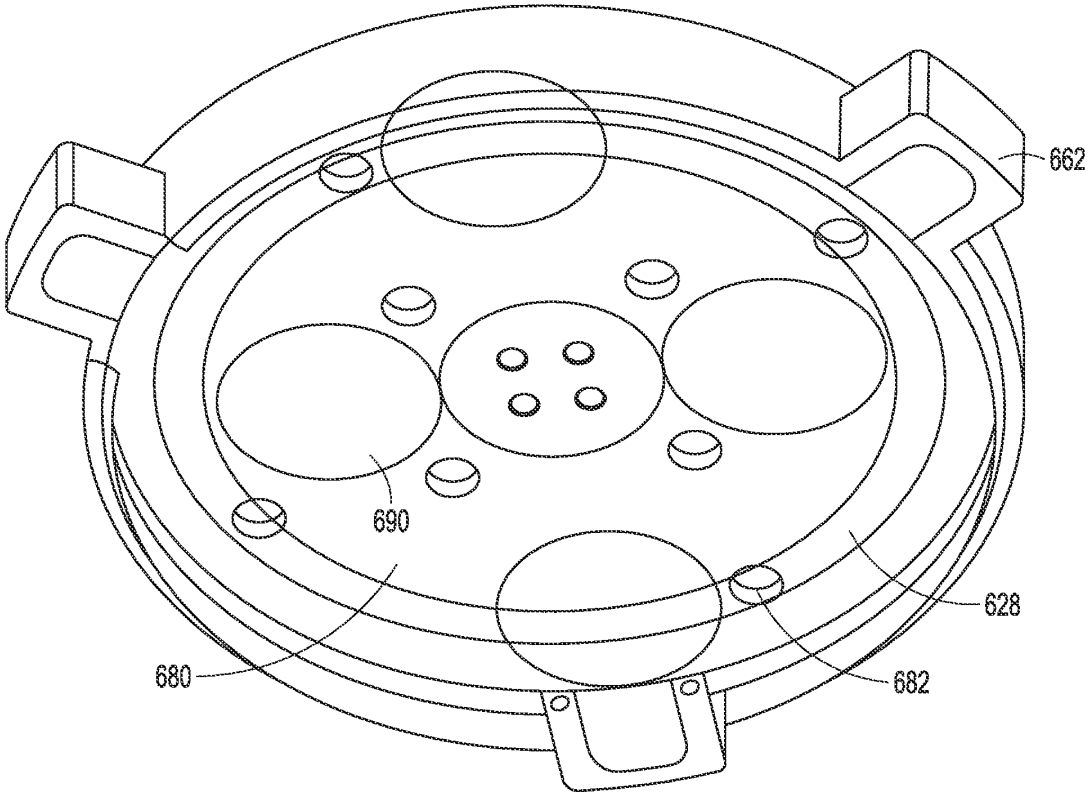

FIG. 6B

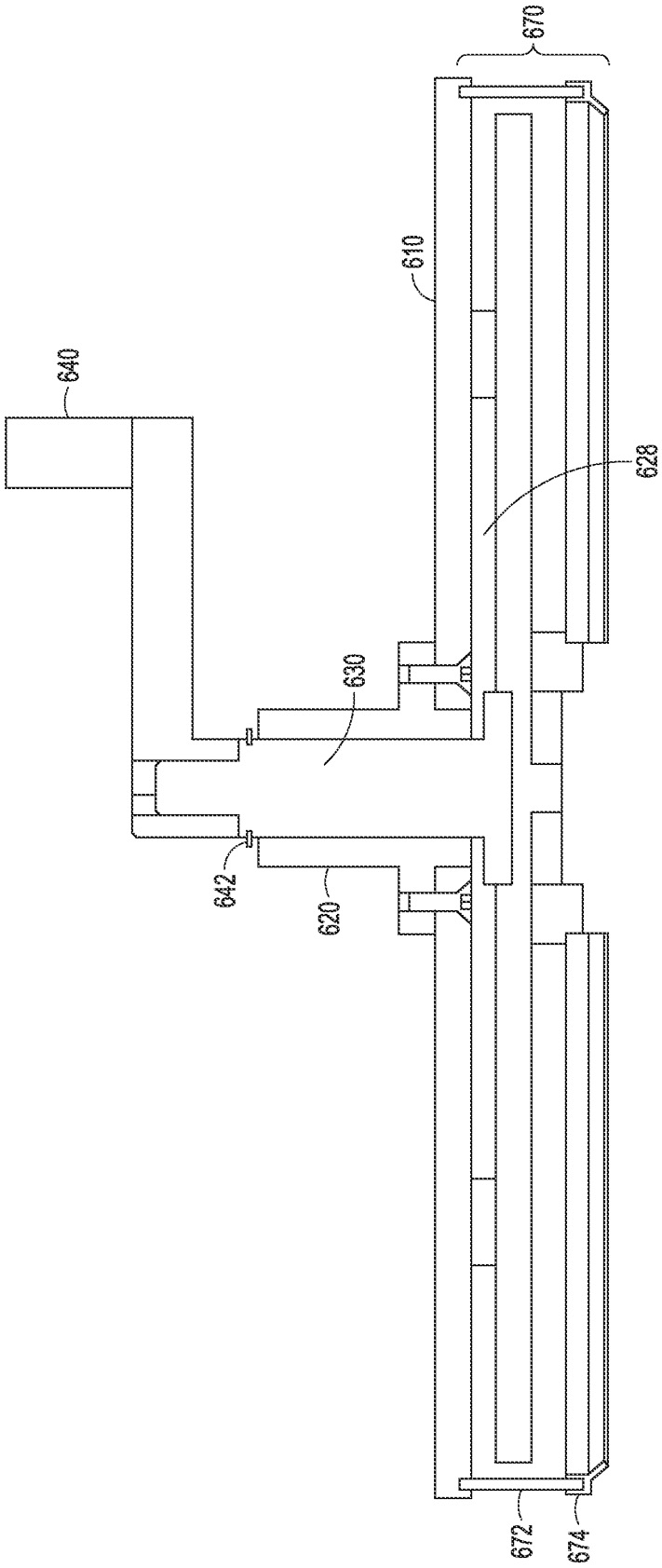

FIG. 6C

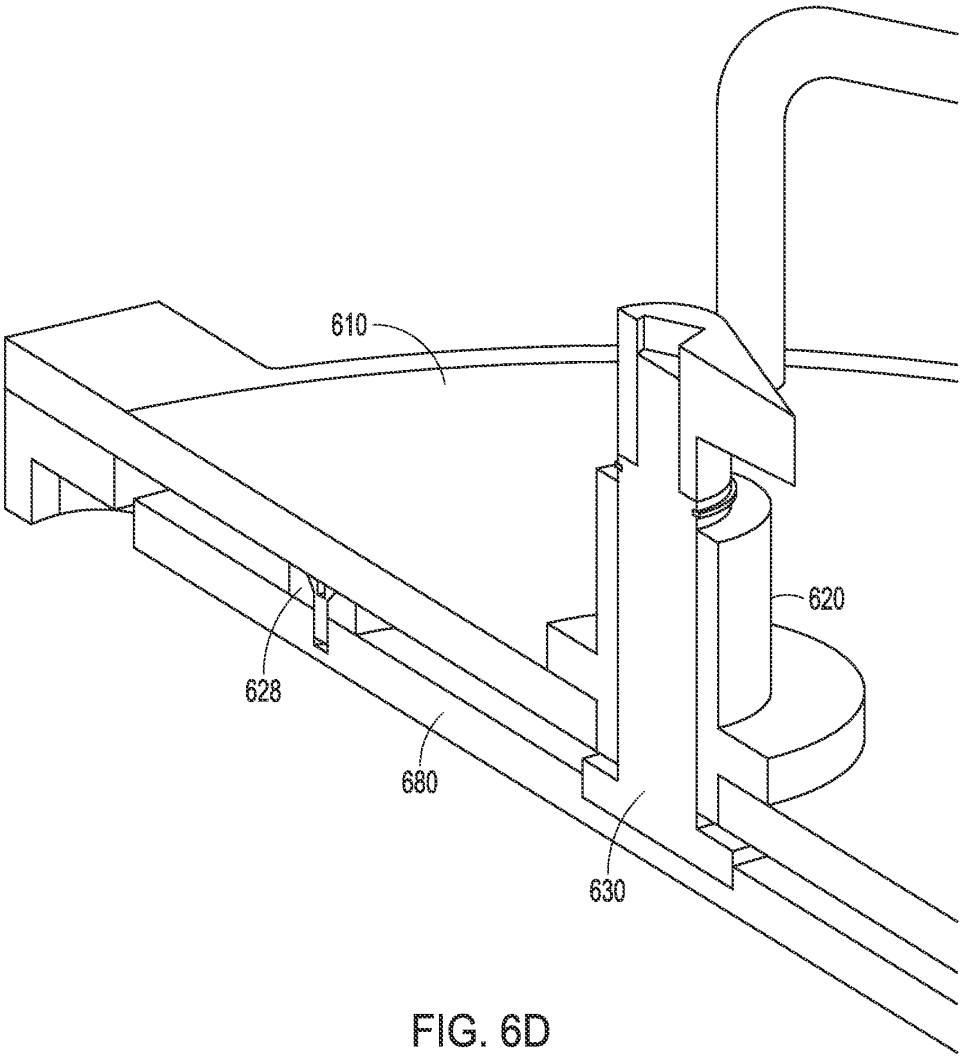

FIG. 6D

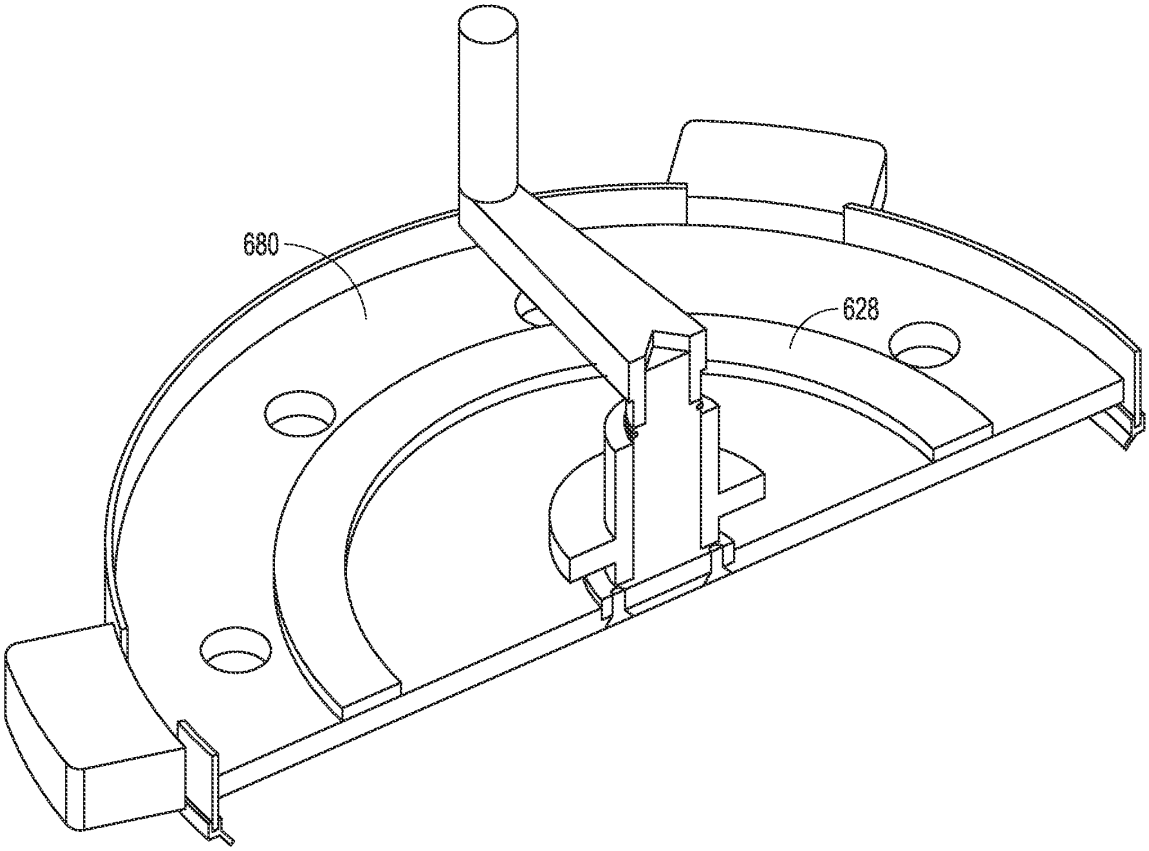

FIG. 6E

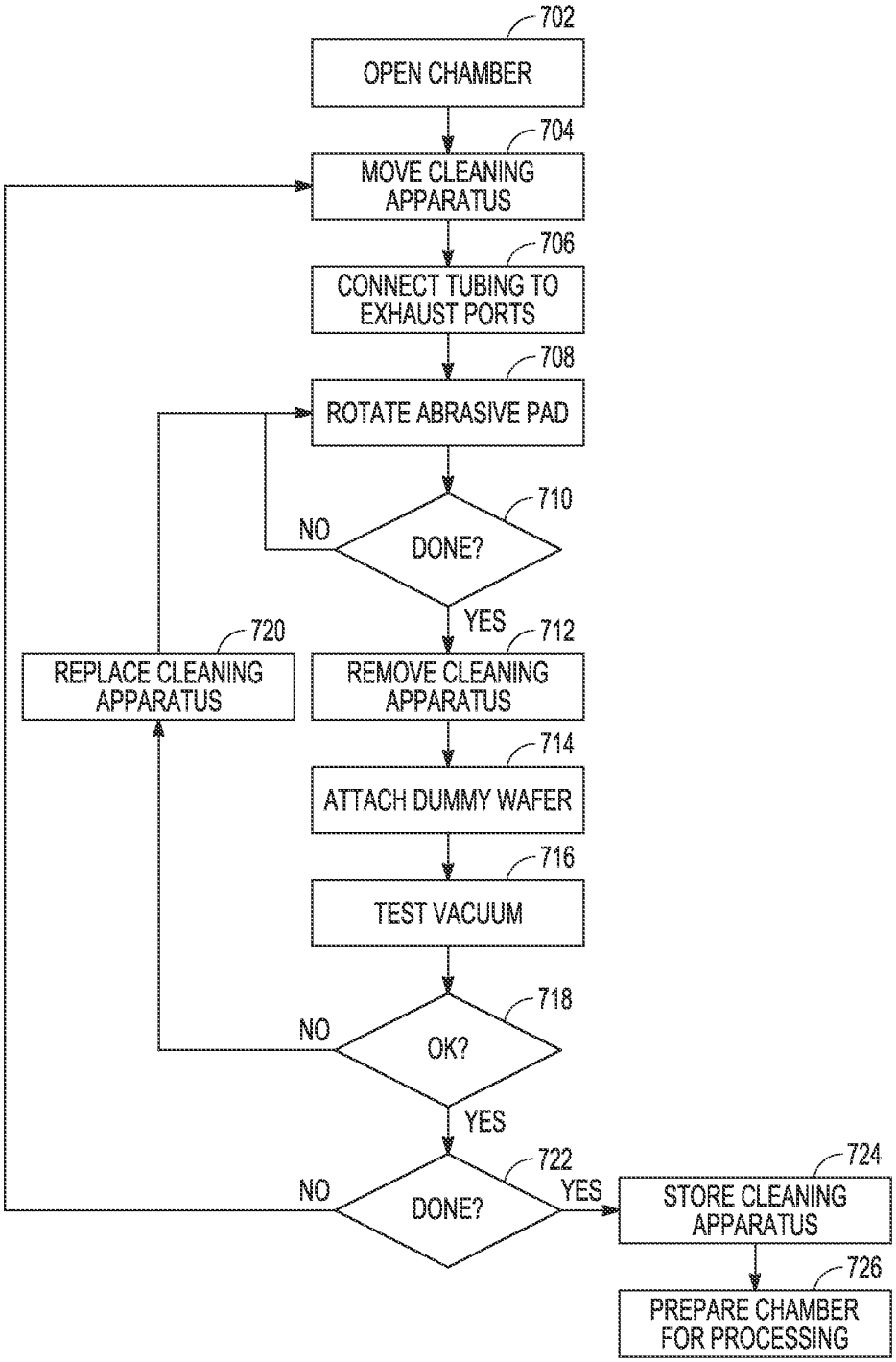
702
OPEN CHAMBER
704
MOVE CLEANING APPARATUS
706
CONNECT TUBING TO EXHAUST PORTS
708
ROTATE ABRASIVE PAD
710
DONE?
NO
YES
712
REMOVE CLEANING APPARATUS
720
REPLACE CLEANING APPARATUS
714
ATTACH DUMMY WAFER
716
TEST VACUUM
718
OK?
NO
YES
722
DONE?
NO
YES
724
STORE CLEANING APPARATUS
726
PREPARE CHAMBER FOR PROCESSING

FIG. 7

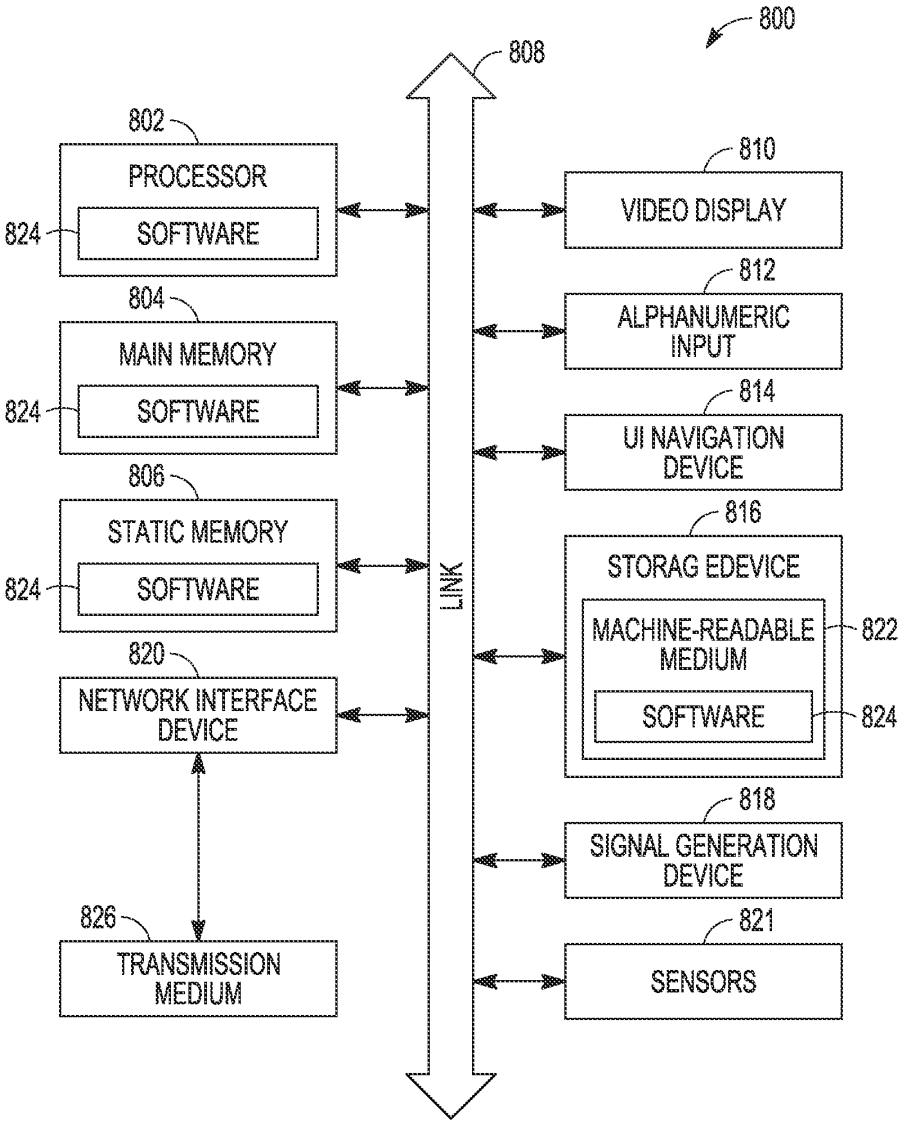
800
808
802
PROCESSOR
824
SOFTWARE
804
MAIN MEMORY
824
SOFTWARE
806
STATIC MEMORY
824
SOFTWARE
820
NETWORK INTERFACE DEVICE
826
TRANSMISSION MEDIUM
LINK
810
VIDEO DISPLAY
812
ALPHANUMERIC INPUT
814
UI NAVIGATION DEVICE
816
STORAG EDEVICE
MACHINE-READABLE MEDIUM
822
SOFTWARE
824
818
SIGNAL GENERATION DEVICE
821
SENSORS

FIG. 8

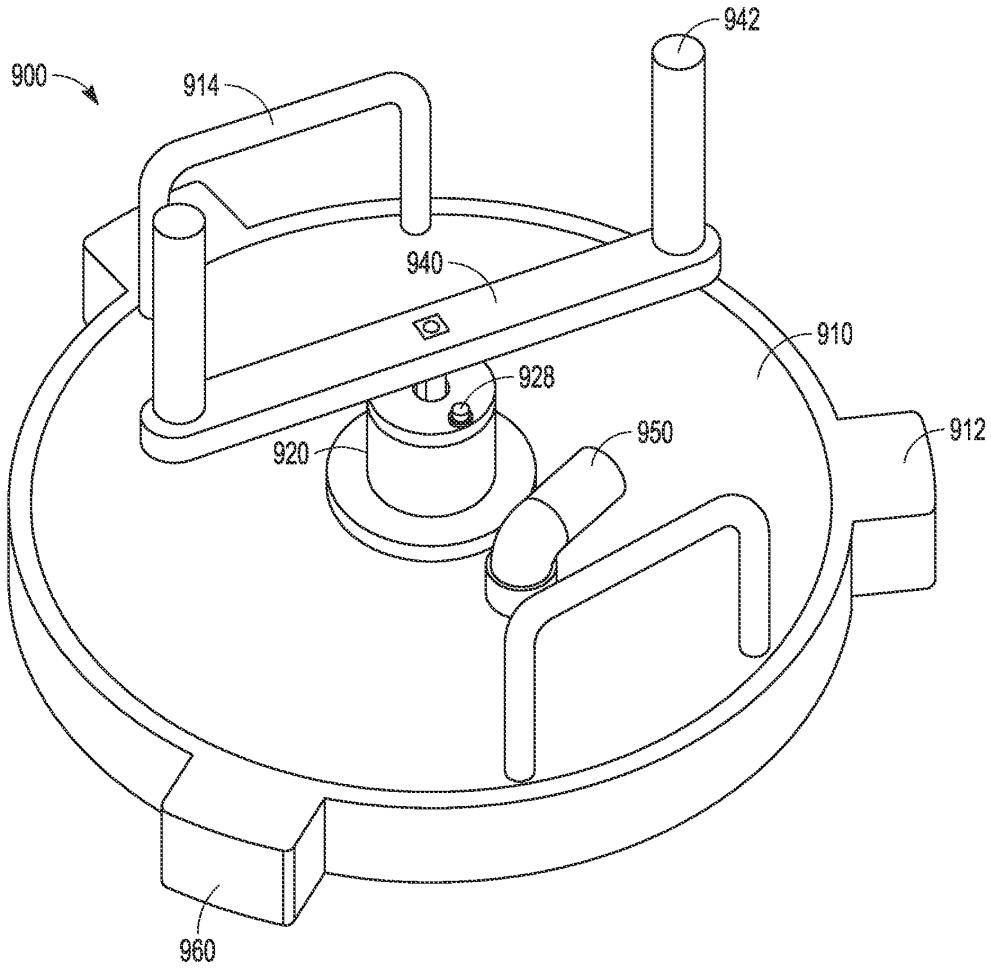

FIG. 9A

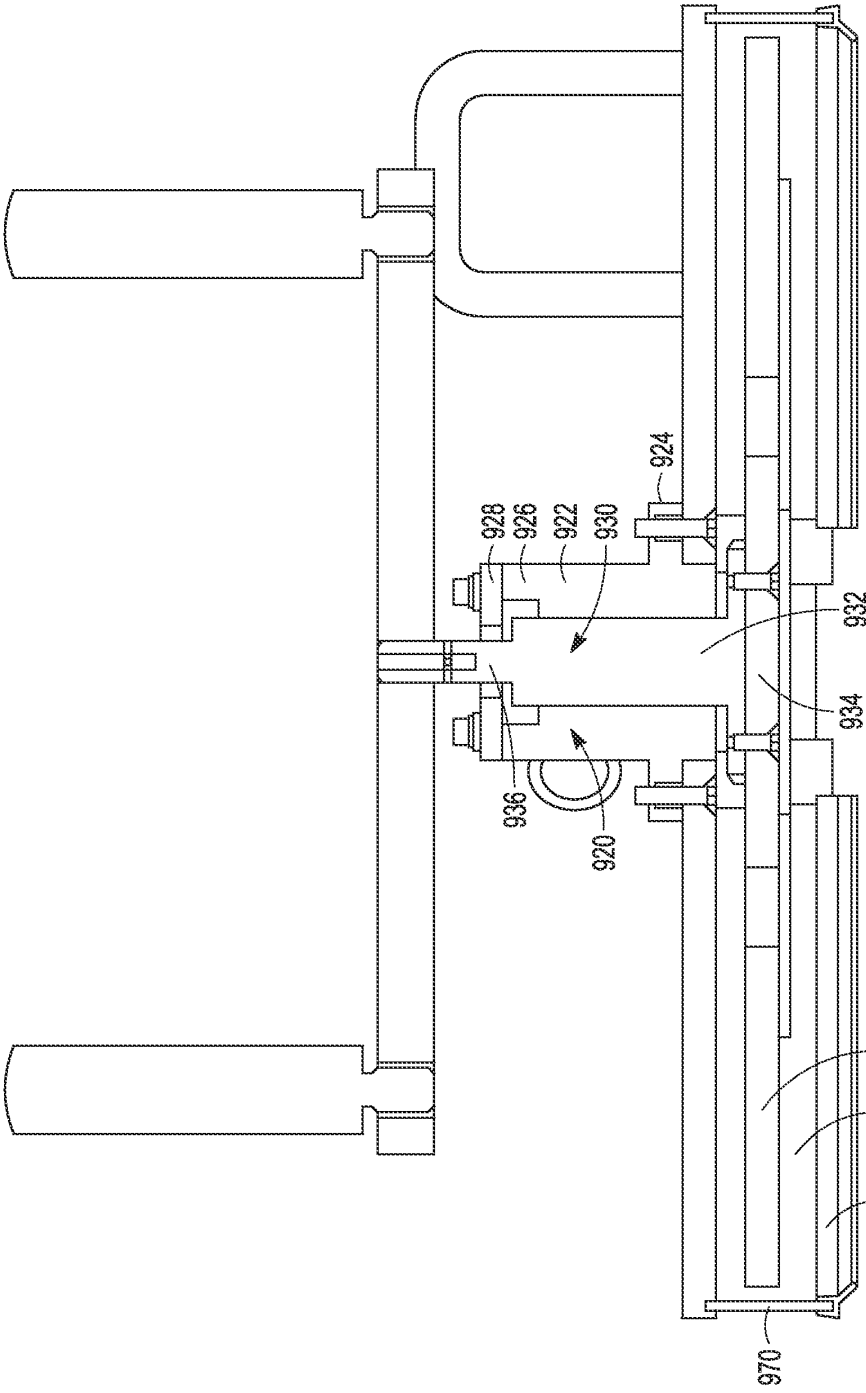

FIG. 9B