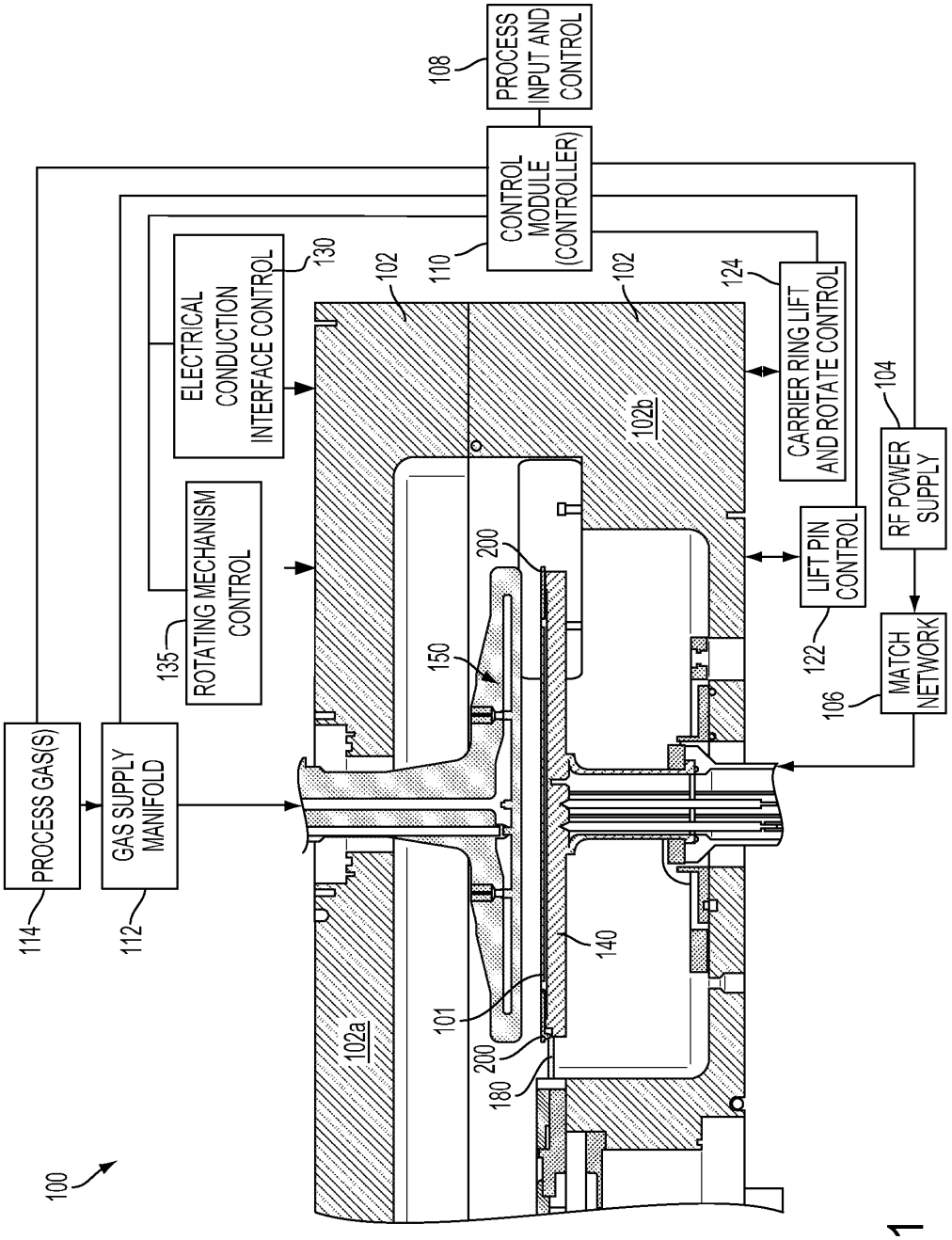

PROCESS INPUT AND CONTROL
108
CONTROL MODULE (CONTROLLER)
110
ELECTRICAL CONDUCTION INTERFACE CONTROL
130
ROTATING MECHANISM CONTROL
135
CARRIER RING LIFT AND ROTATE CONTROL
124
RF POWER SUPPLY
104
LIFT PIN CONTROL
122
MATCH NETWORK
106
PROCESS GAS(S)
114
GAS SUPPLY MANIFOLD
112
102
102a
102b
150
200
101
140
180
100

FIG. 1

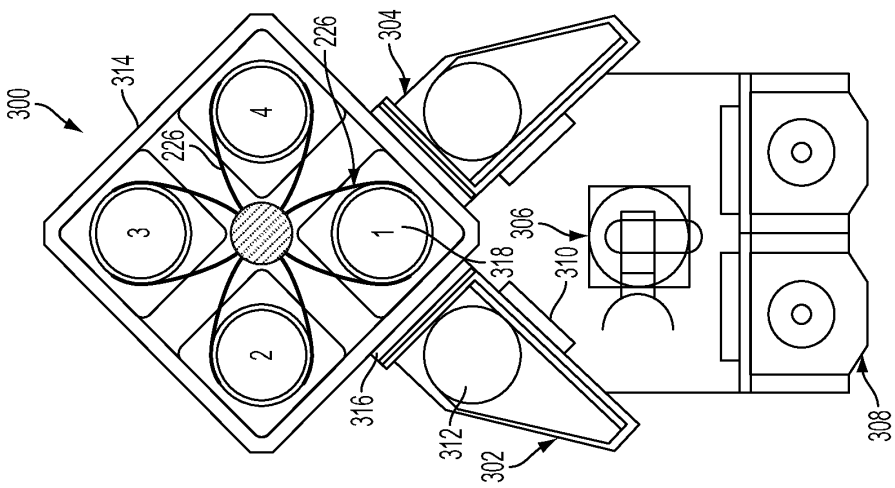

300
314
226
304
4
3
2
1
318
306
310
316
312
302
308

FIG. 3

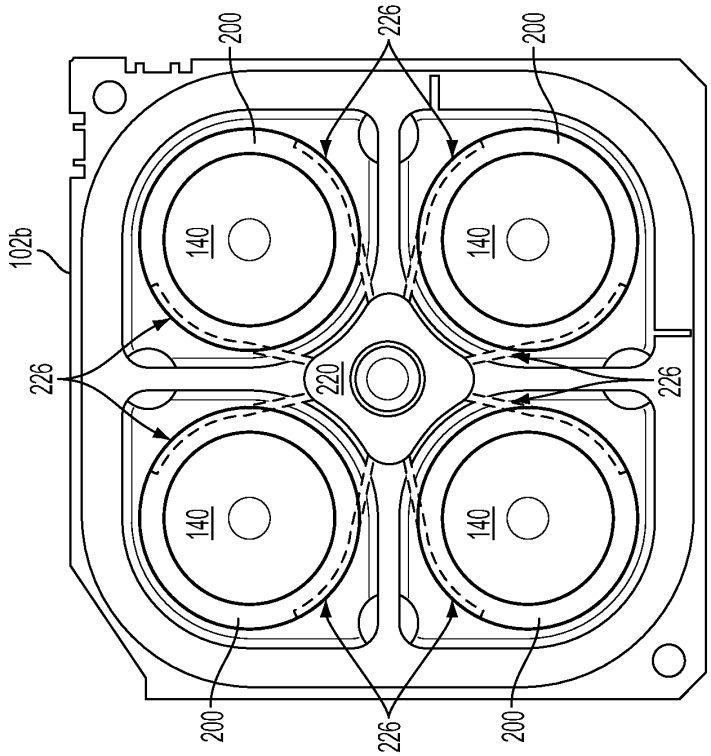

200
226
200
102b
140
140
226
220
226
140
140
200
226
200

FIG. 2

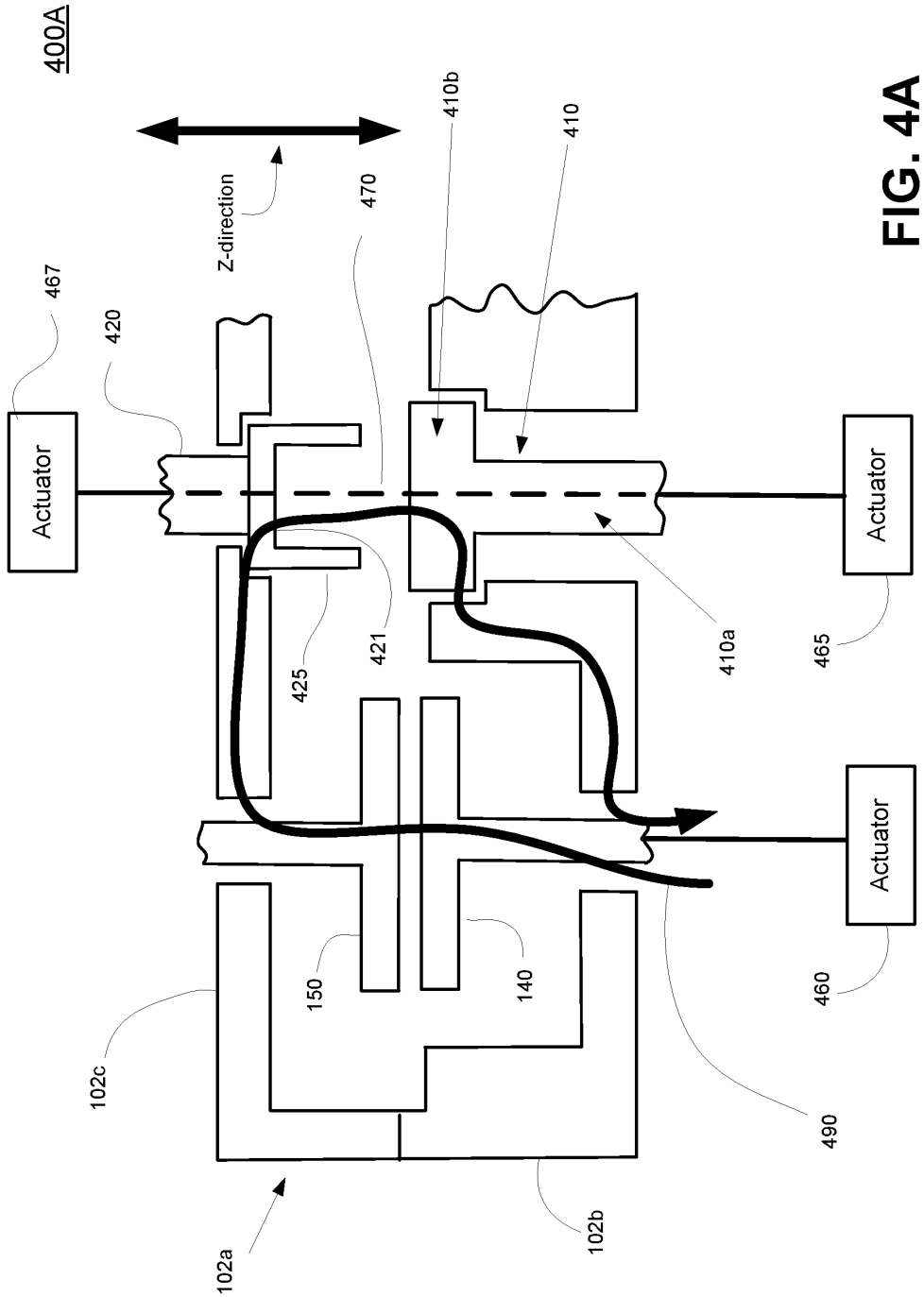

400A
Z-direction
470
410b
410
467
420
Actuator
Actuator
Actuator
425
421
410a
465
460
150
140
102c
490
102a
102b

FIG. 4A

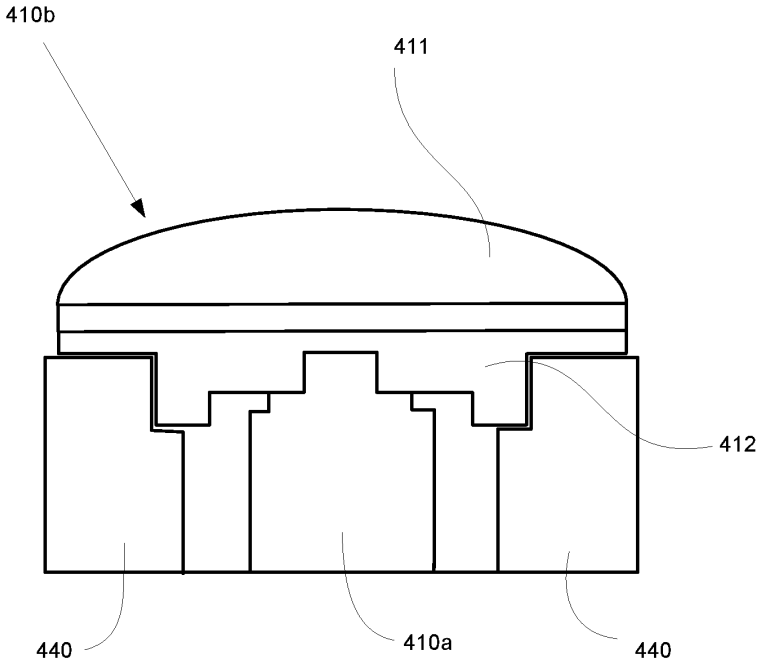


FIG. 4B

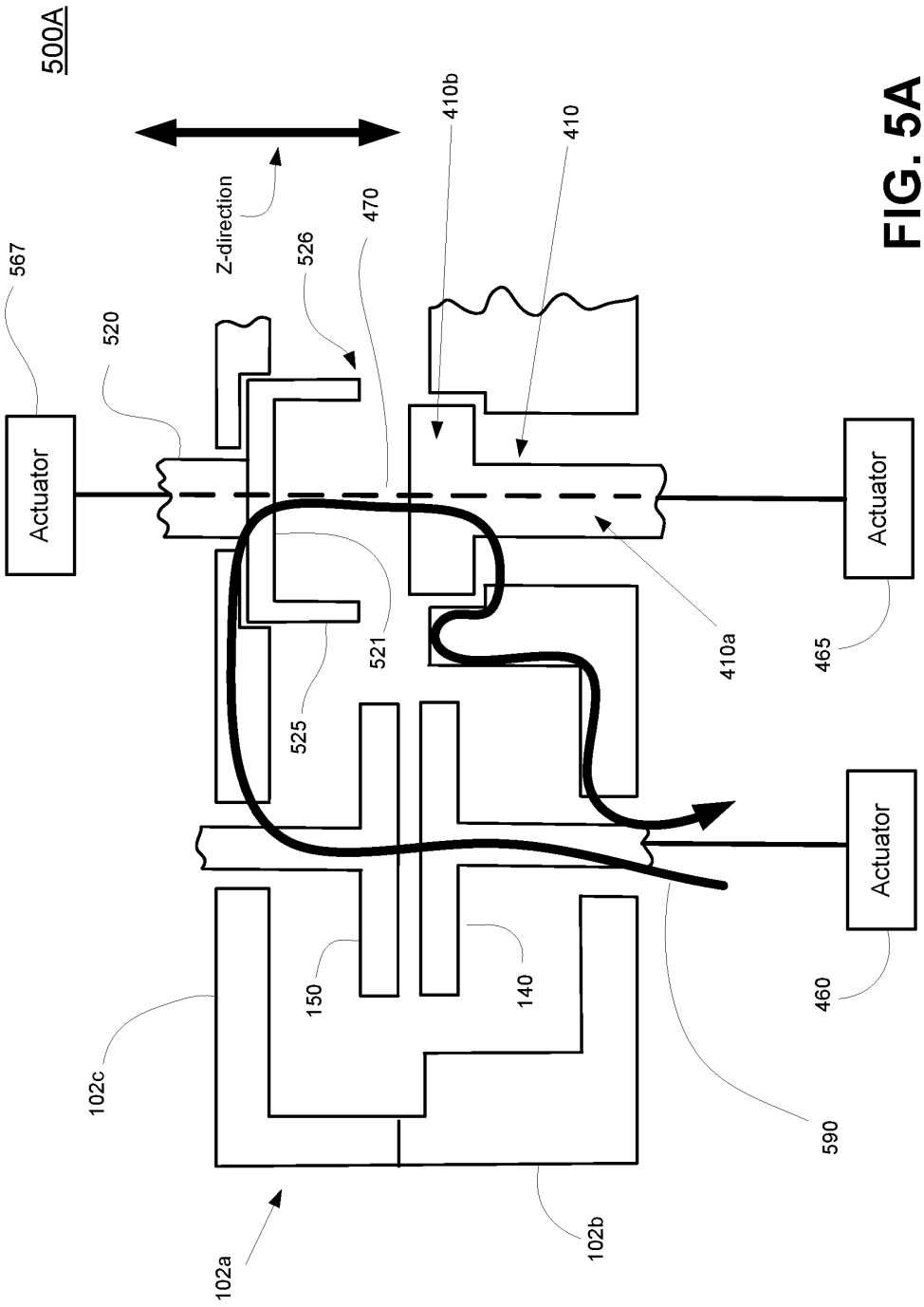

500A
Z-direction
410b
410
470
526
567
520
Actuator
521
525
410a
Actuator
465
Actuator
460
150
140
102c
590
102a
102b

FIG. 5A

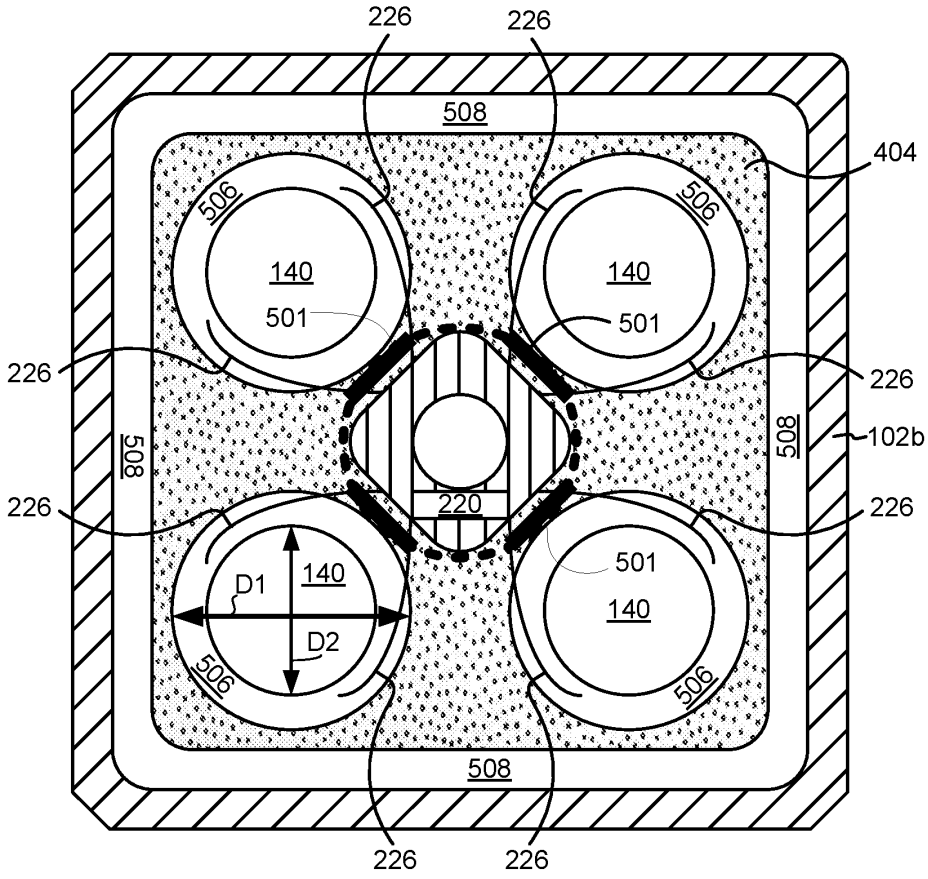

226
226
508
404
506
140
501
226
226
508
102b
220
D1
D2
226
226
508
226
226

FIG. 5B

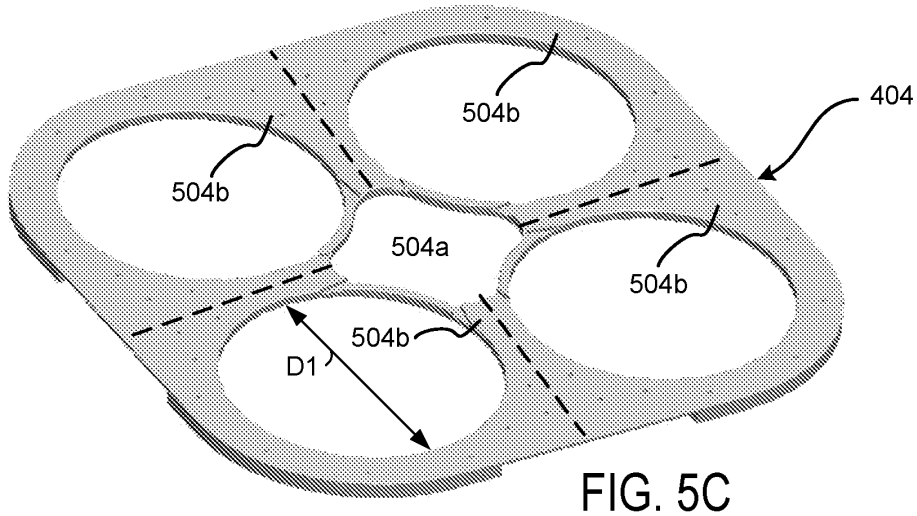

504b
404
504b
504a
504b
504b
D1

FIG. 5C

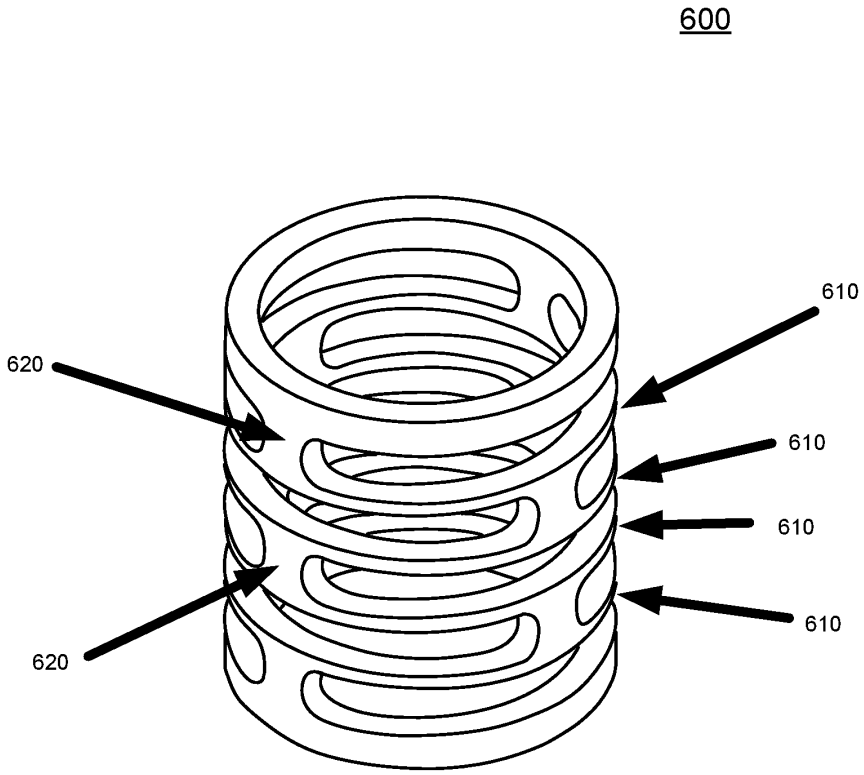


FIG. 6

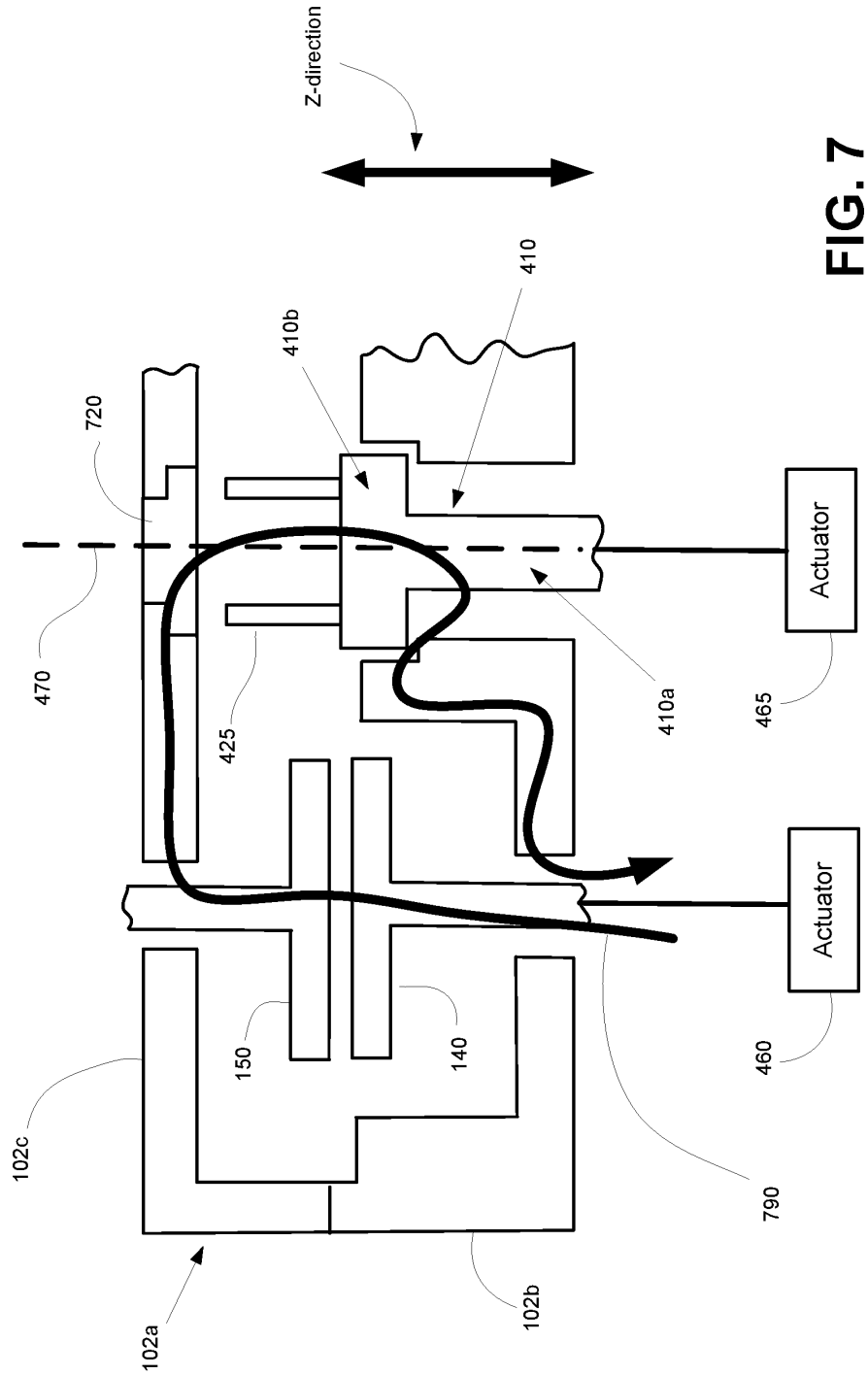

700
Z-direction
410
410b
720
470
425
410a
Actuator
465
Actuator
460
150
140
102c
790
102a
102b

FIG. 7

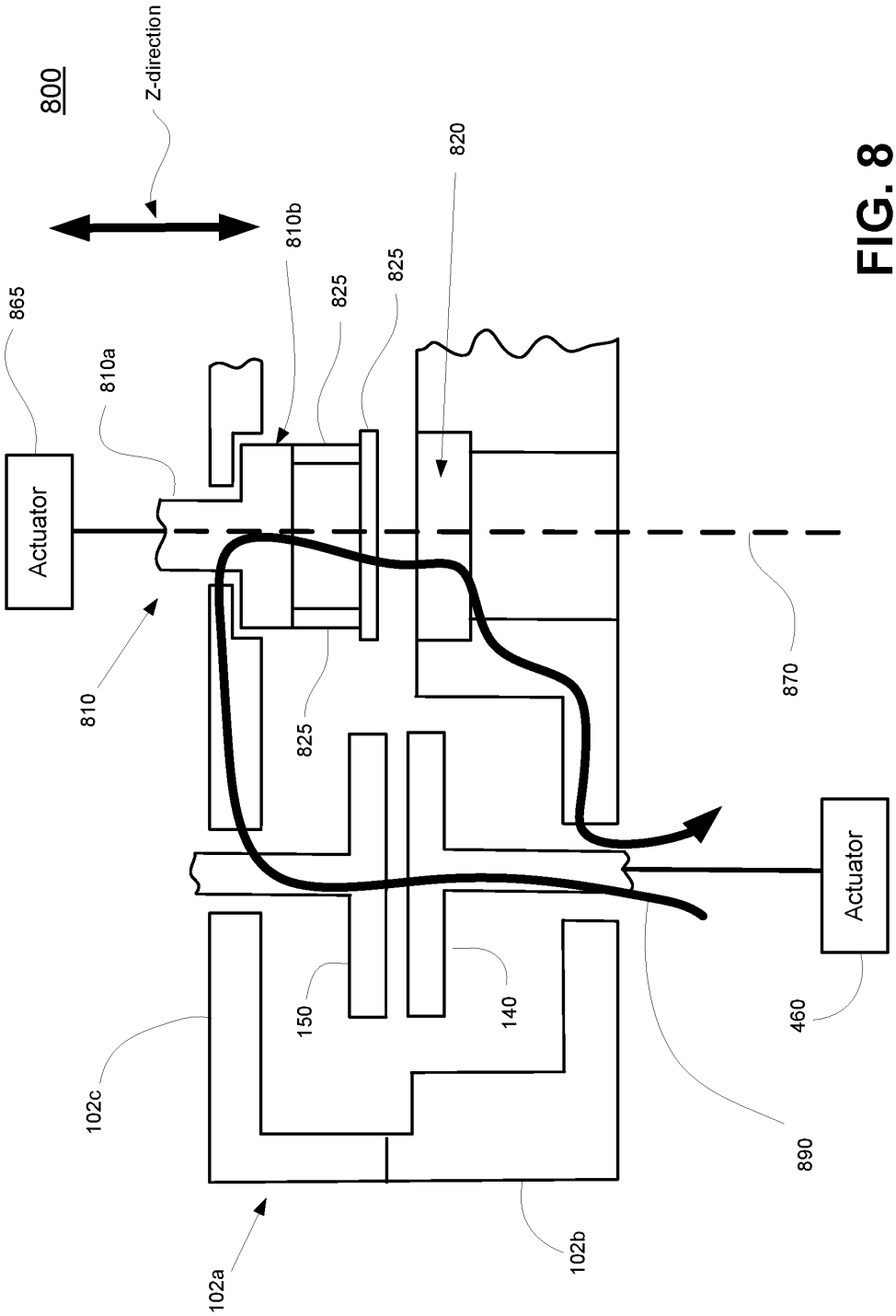

800
Z-direction
820
810b
825
825
865
810a
Actuator
810
825
870
Actuator
460
150
140
890
102c
102a
102b

FIG. 8

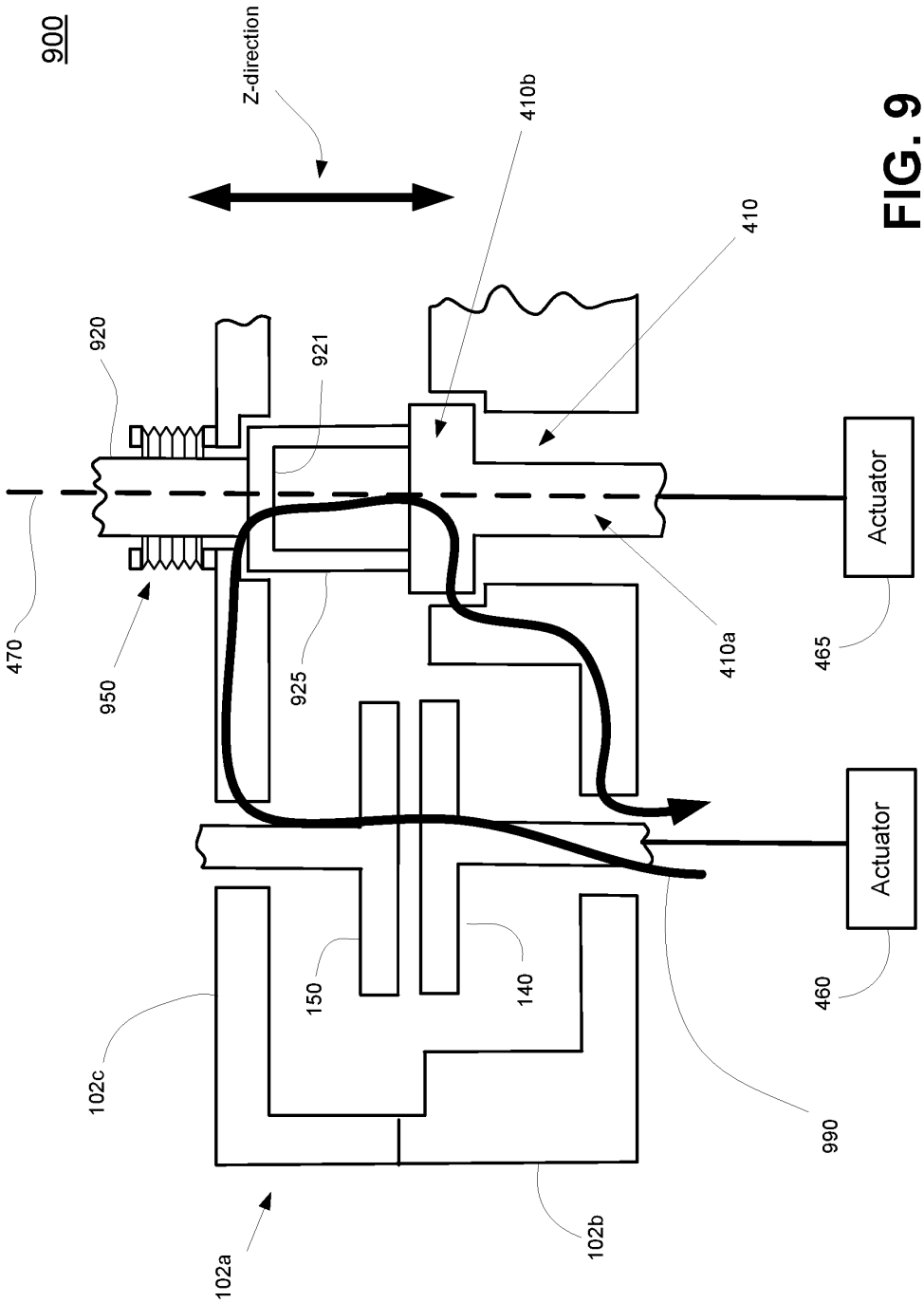

900
Z-direction
410b
410
920
921
Actuator
470
950
925
410a
465
Actuator
150
140
460
102c
990
102b
102a

FIG. 9

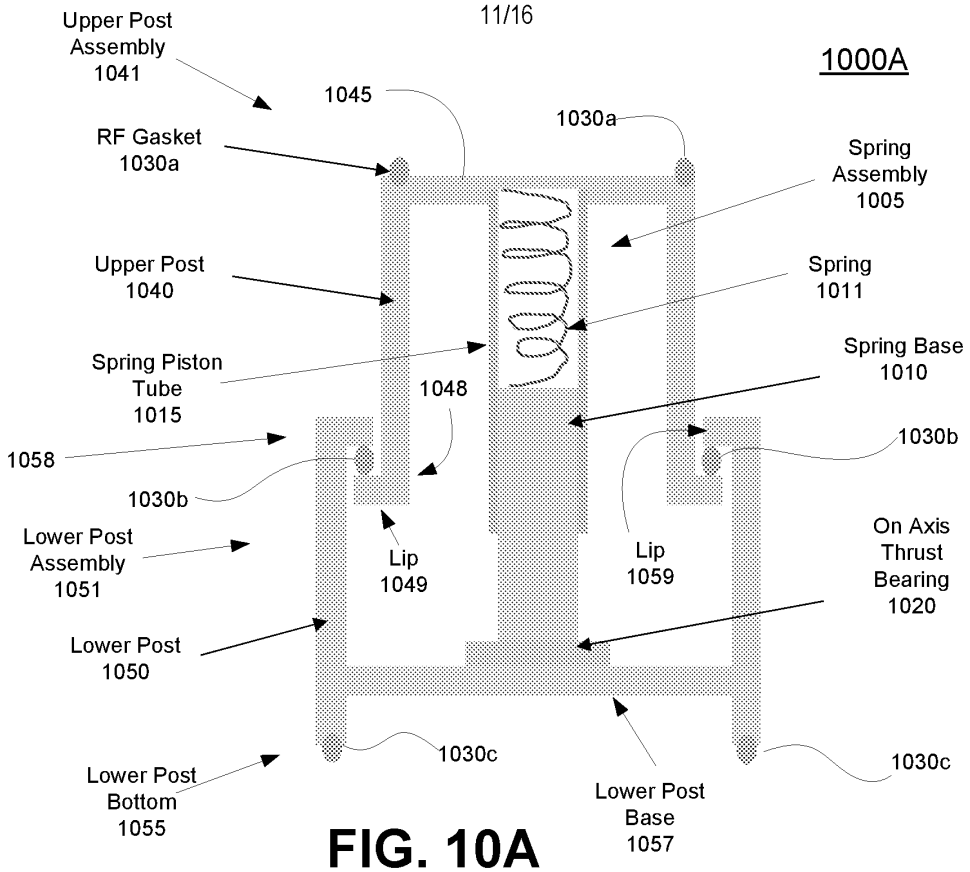


FIG. 10A

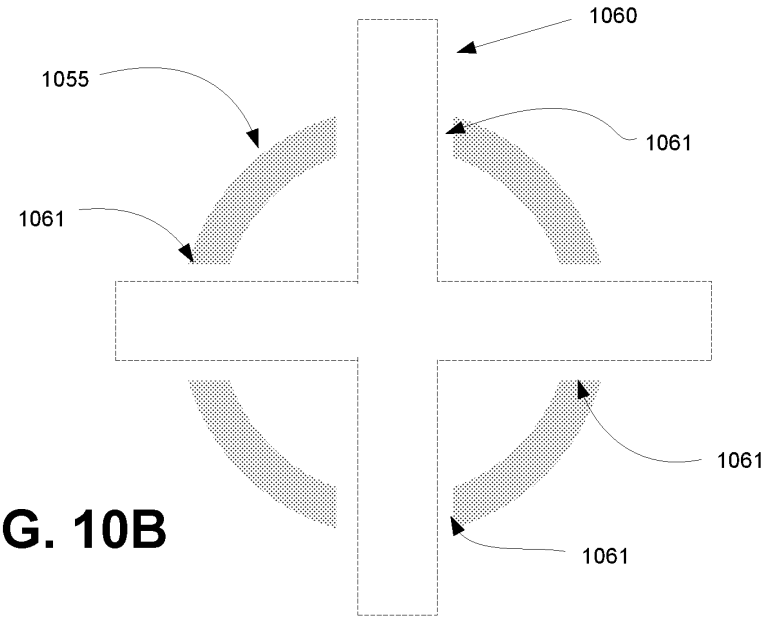


FIG. 10B

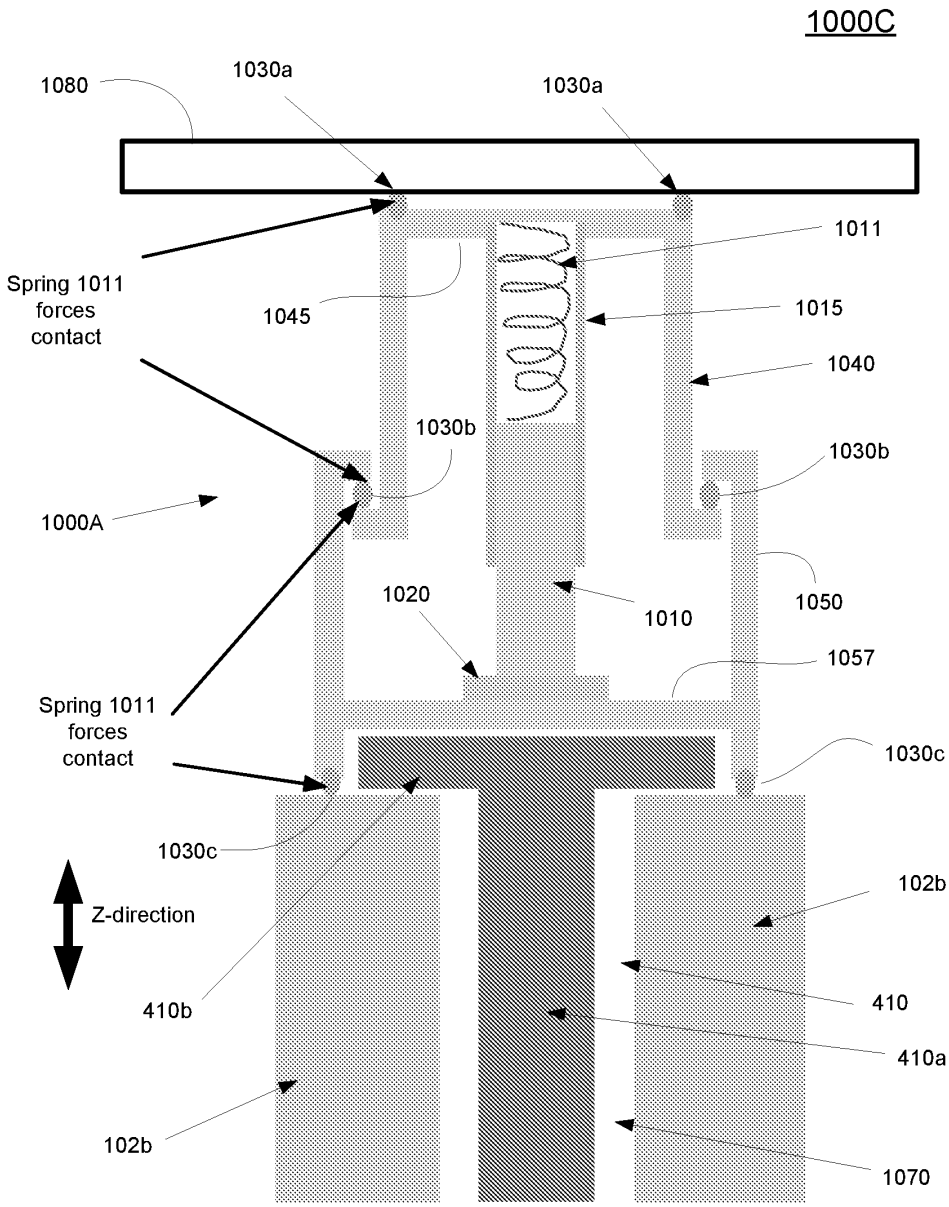

1000C
1080
1030a
1030a
1011
Spring 1011 forces contact
1045
1015
1040
1030b
1030b
1000A
1050
1020
1010
1057
Spring 1011 forces contact
1030c
1030c
102b
Z-direction
410
410b
410a
102b
1070

FIG. 10C

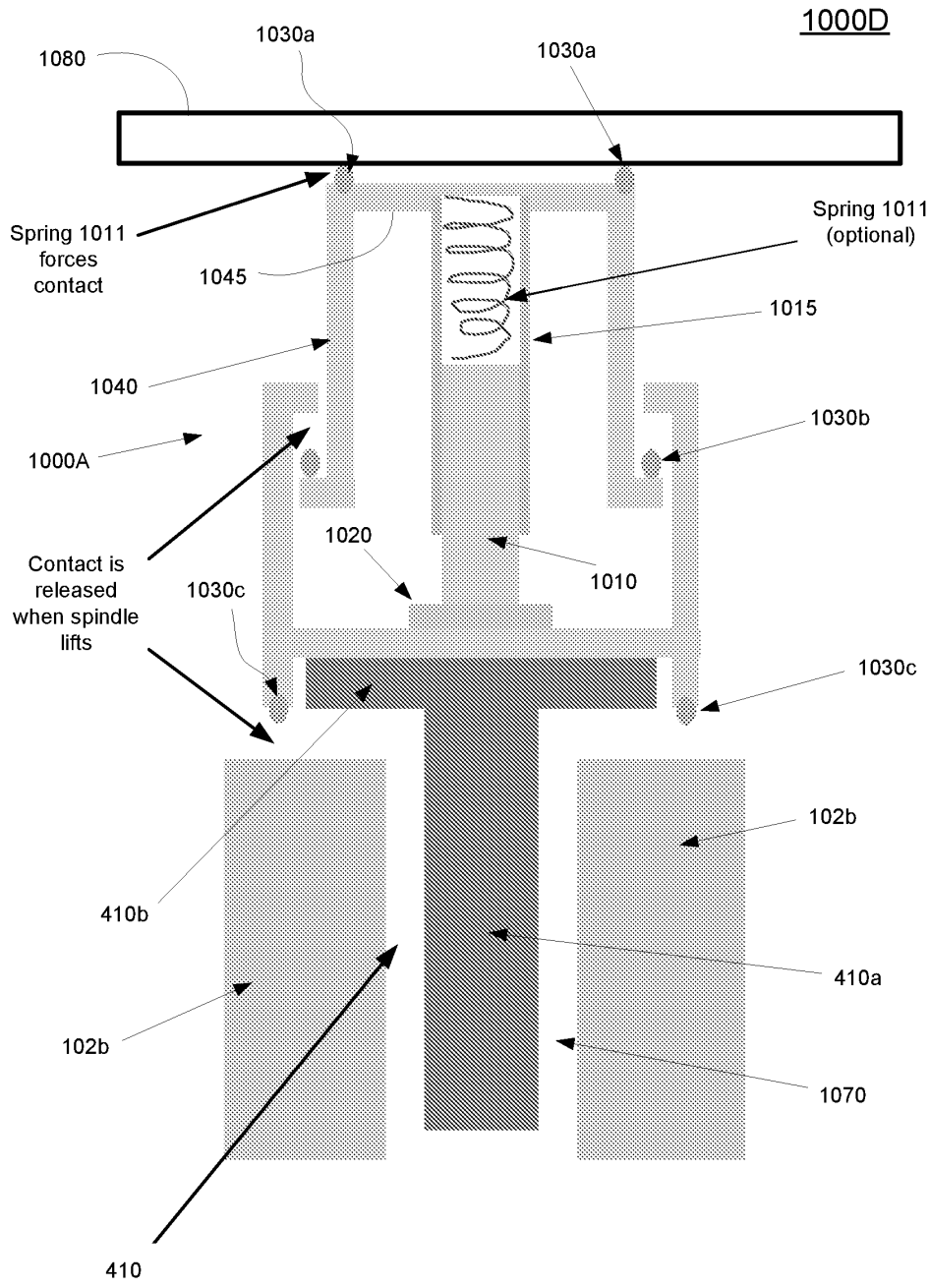

1000D
1080
1030a
1030a
Spring 1011
forces
contact
1045
Spring 1011
(optional)
1015
1040
1030b
1000A
Contact is
released
when spindle
lifts
1020
1010
1030c
1030c
102b
410b
410a
102b
1070
410

FIG. 10D

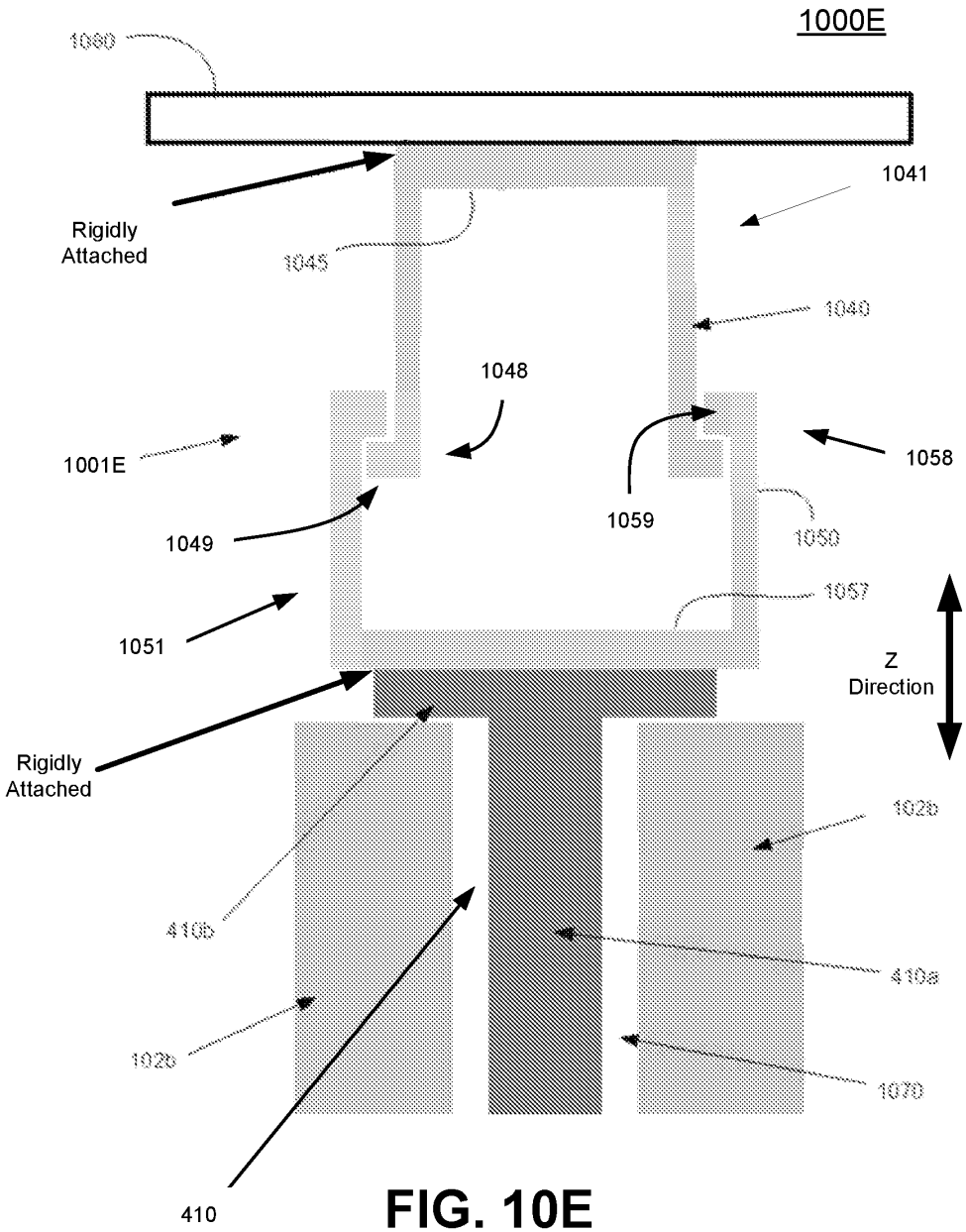

1000E
1060
1041
Rigidly Attached
1045
1040
1048
1001E
1058
1059
1049
1050
1057
1051
Z Direction
Rigidly Attached
102b
410b
410a
102b
1070
410

FIG. 10E

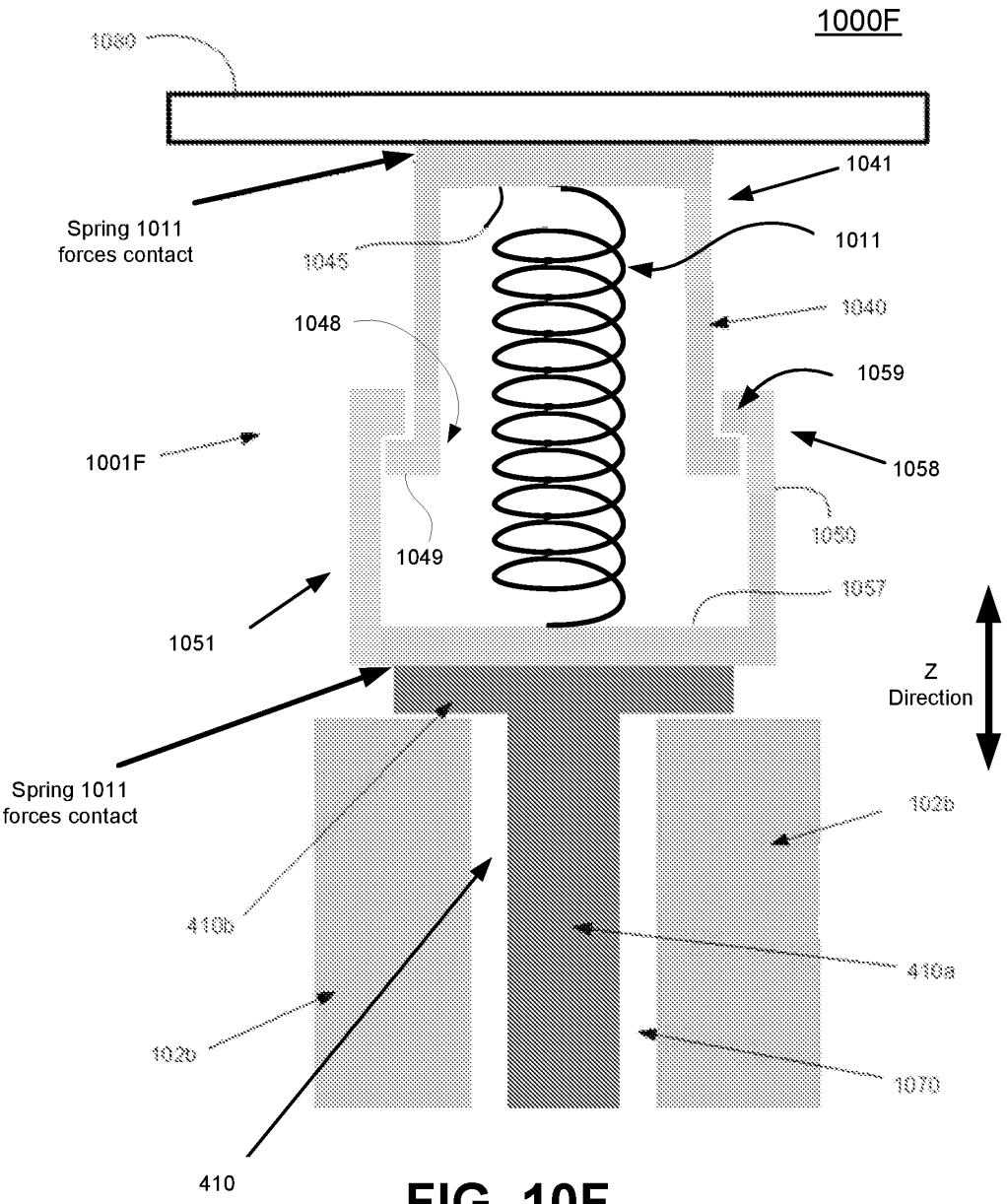

1000F
1080
1041
Spring 1011
forces contact
1045
1011
1048
1040
1059
1001F
1058
1050
1049
1057
1051
Z
Direction
Spring 1011
forces contact
102b
410b
410a
102b
1070
410

FIG. 10F

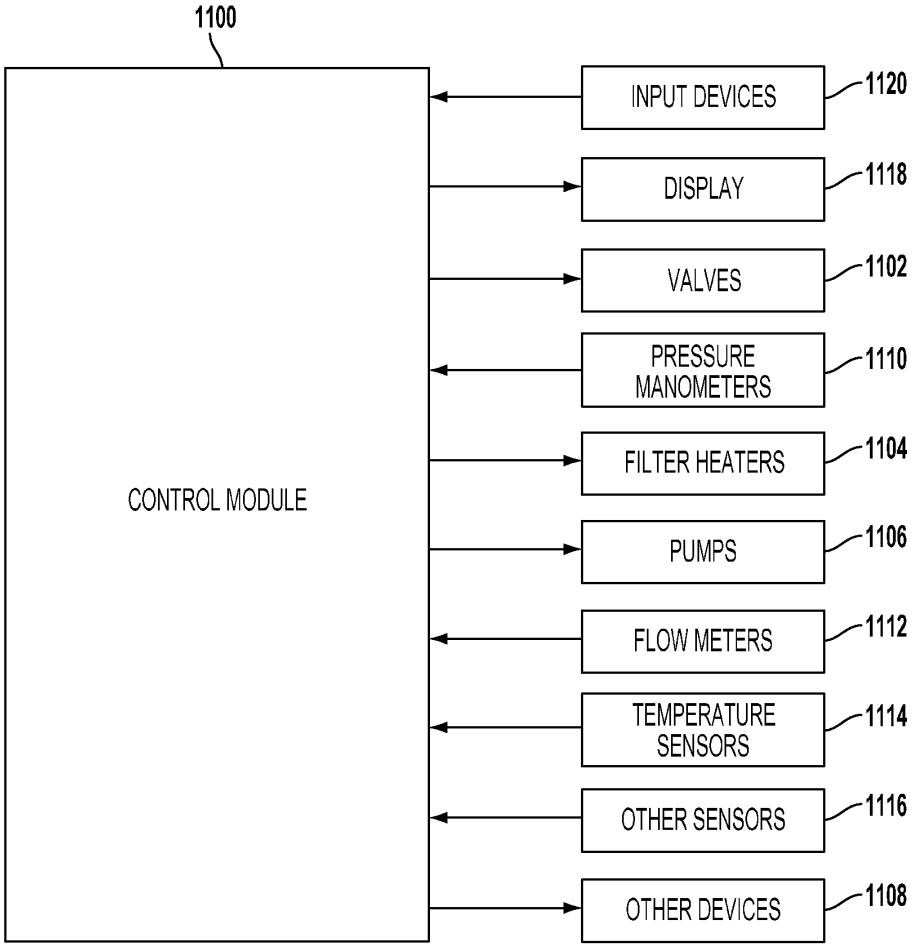

1100
CONTROL MODULE
INPUT DEVICES
1120
DISPLAY
1118
VALVES
1102
PRESSURE MANOMETERS
1110
FILTER HEATERS
1104
PUMPS
1106
FLOW METERS
1112
TEMPERATURE SENSORS
1114
OTHER SENSORS
1116
OTHER DEVICES
1108

FIG. 11