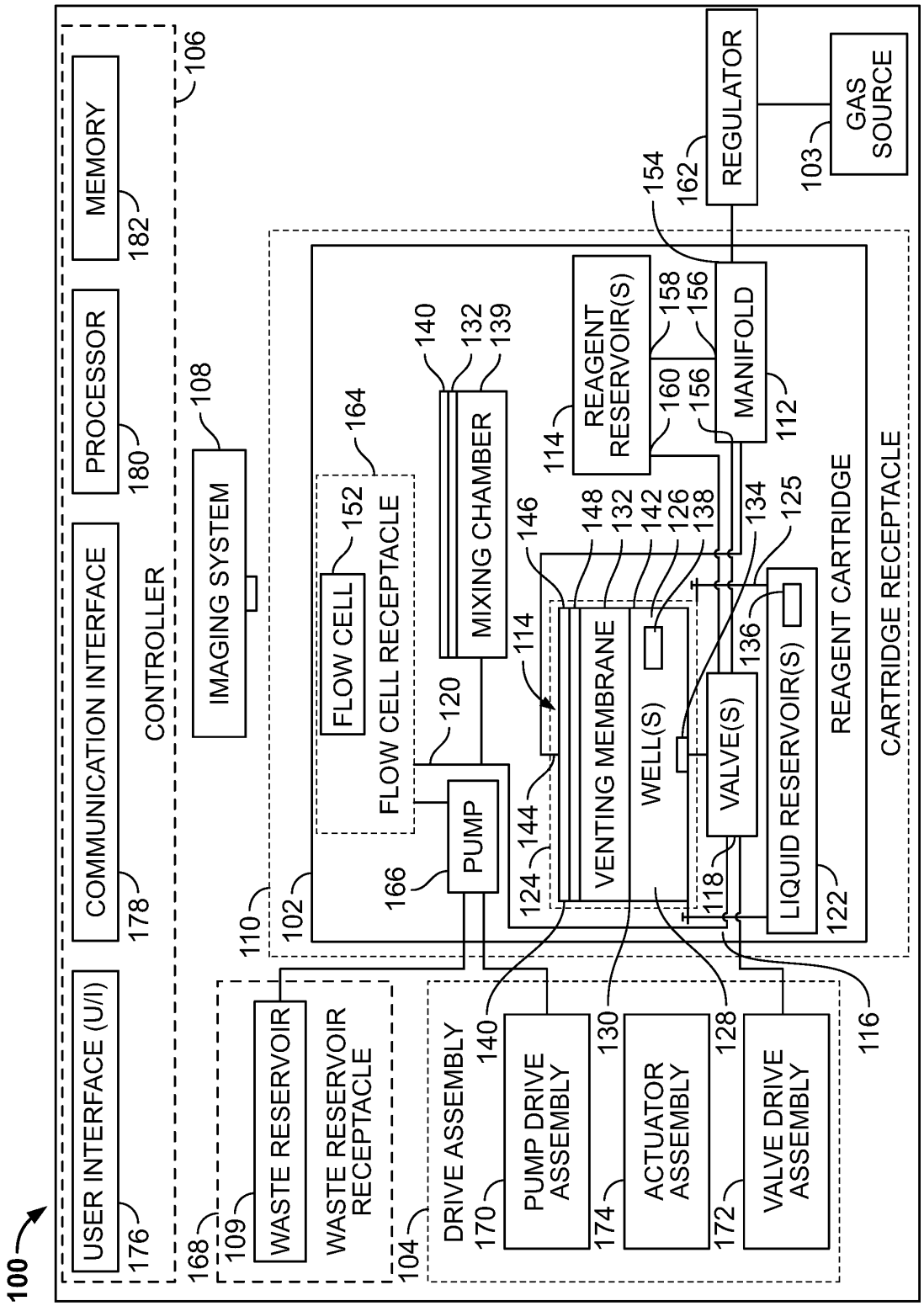

100
CONTROLLER
106
USER INTERFACE (U/I)
176
COMMUNICATION INTERFACE
178
PROCESSOR
180
MEMORY
182
IMAGING SYSTEM
108
168
WASTE RESERVOIR
109
WASTE RESERVOIR RECEPTACLE
104
DRIVE ASSEMBLY
PUMP DRIVE ASSEMBLY
170
ACTUATOR ASSEMBLY
174
VALVE DRIVE ASSEMBLY
172
110
102
CARTRIDGE RECEPTACLE
REAGENT CARTRIDGE
FLOW CELL RECEPTACLE
164
FLOW CELL
152
MIXING CHAMBER
140
132
139
120
PUMP
166
REAGENT RESERVOIR(S)
114
MANIFOLD
112
158
156
160
154
REGULATOR
162
GAS SOURCE
103
VENTING MEMBRANE
146
148
132
142
126
138
134
125
WELL(S)
114
VALVE(S)
136
LIQUID RESERVOIR(S)
122
124
144
118
140
130
128
116

FIG. 1

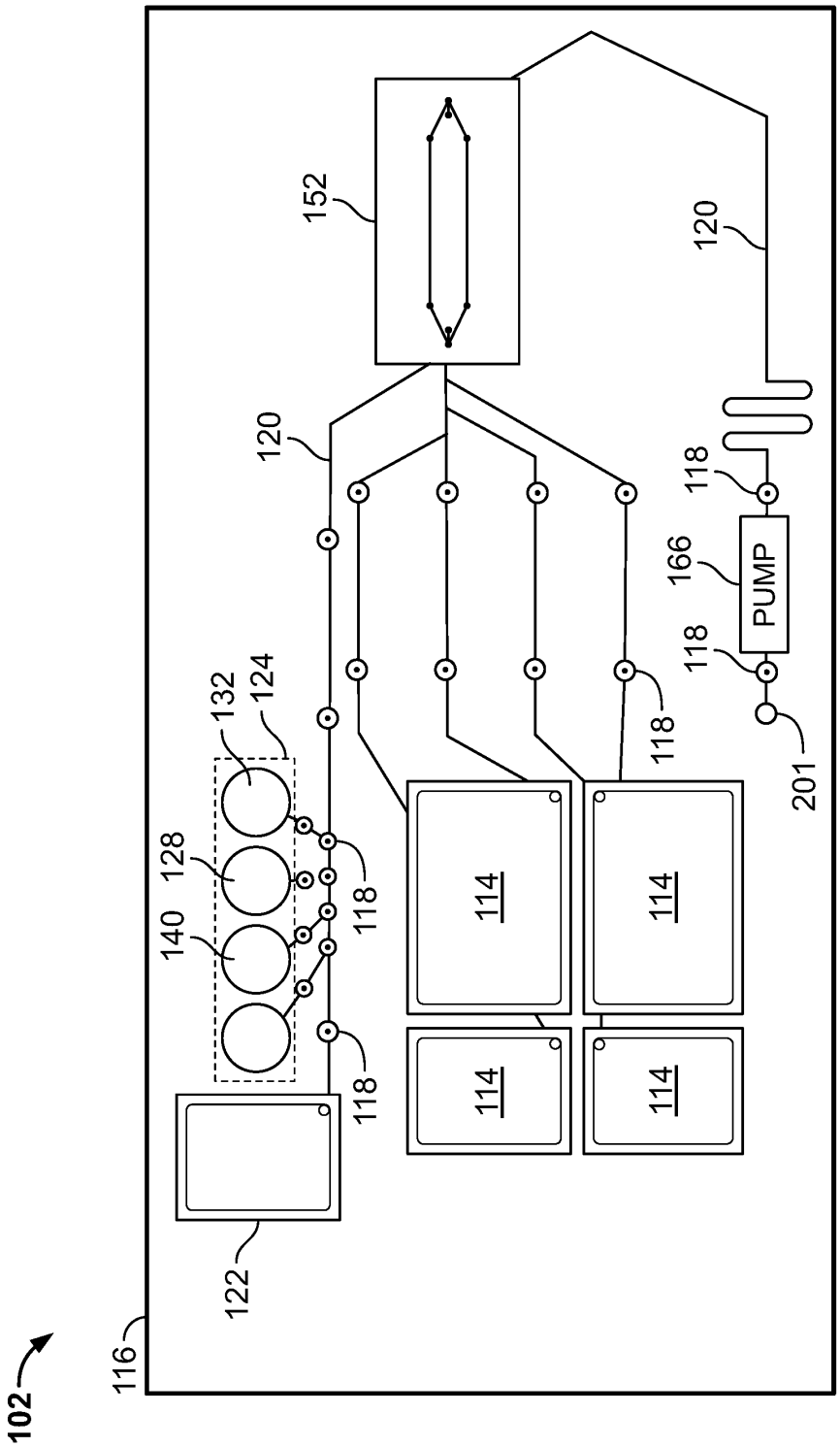

102
116
122
152
120
120
118
166
PUMP
118
118
201
132
124
128
140
118
118
114
114
114
114

FIG. 2

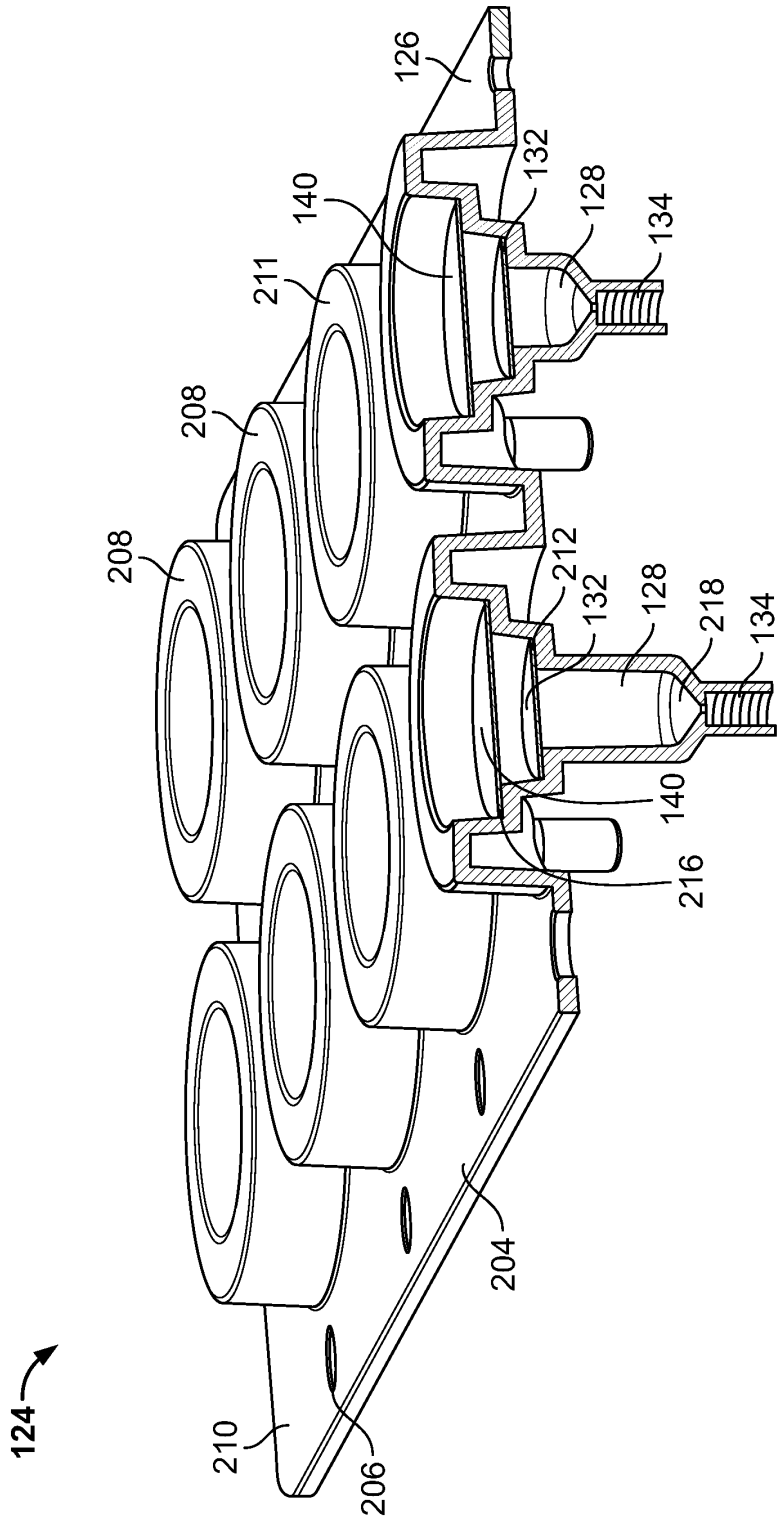

126
132
128
134
140
211
208
208
212
132
128
218
134
140
216
204
124
210
206

FIG. 3

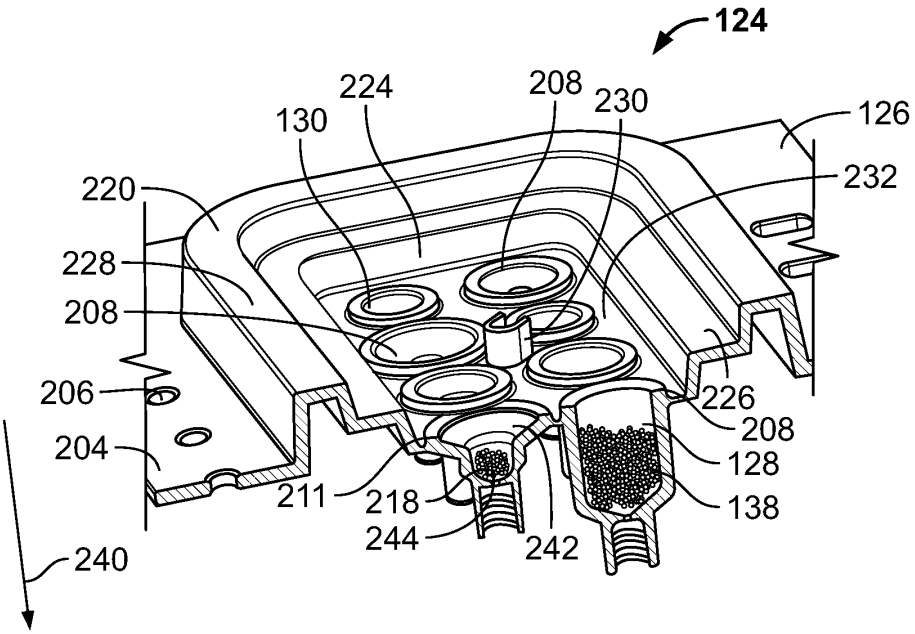

124
224
208
230
126
130
220
232
228
208
206
226
208
204
128
211
218
138
244
242
240

FIG. 4

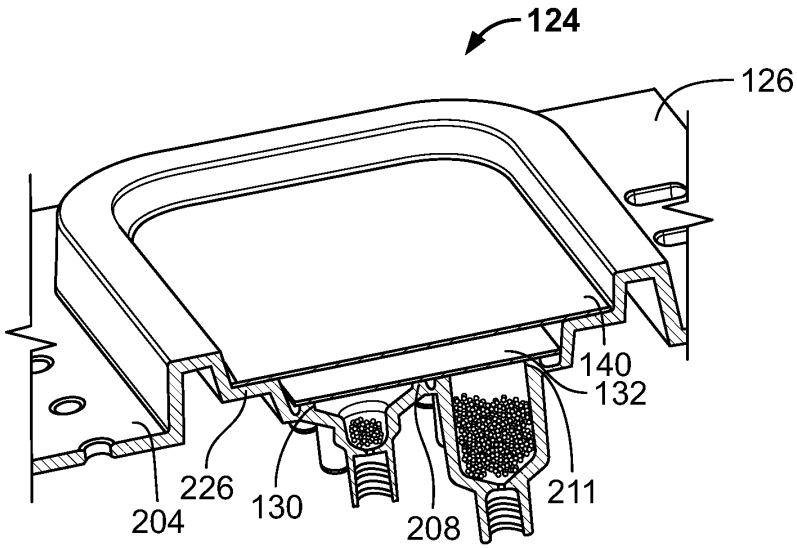

124
126
140
132
226
130
211
204
208

FIG. 5

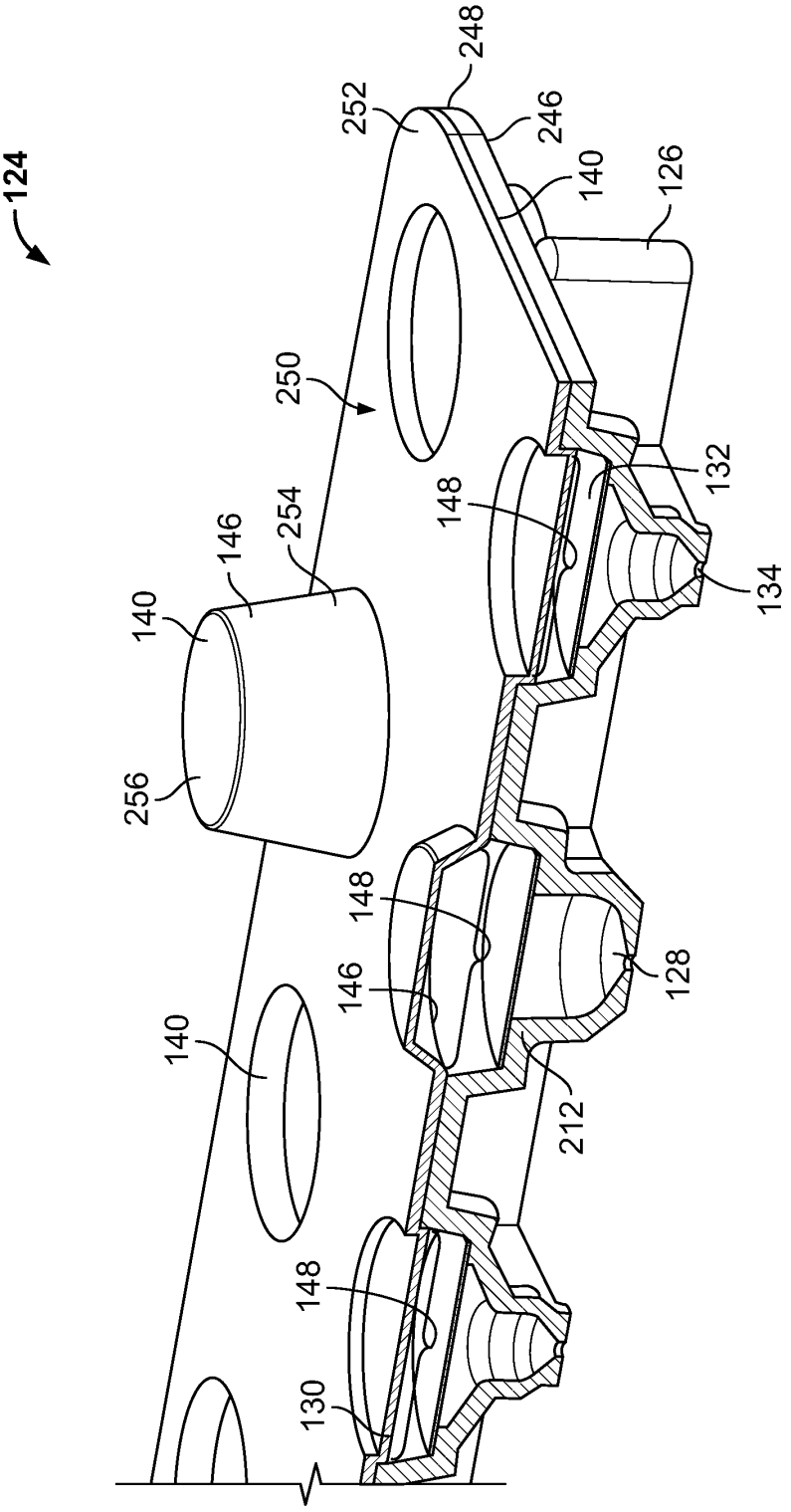

124
248
252
246
140
126
250
132
148
254
146
134
140
256
148
146
128
140
212
148
130

FIG. 6

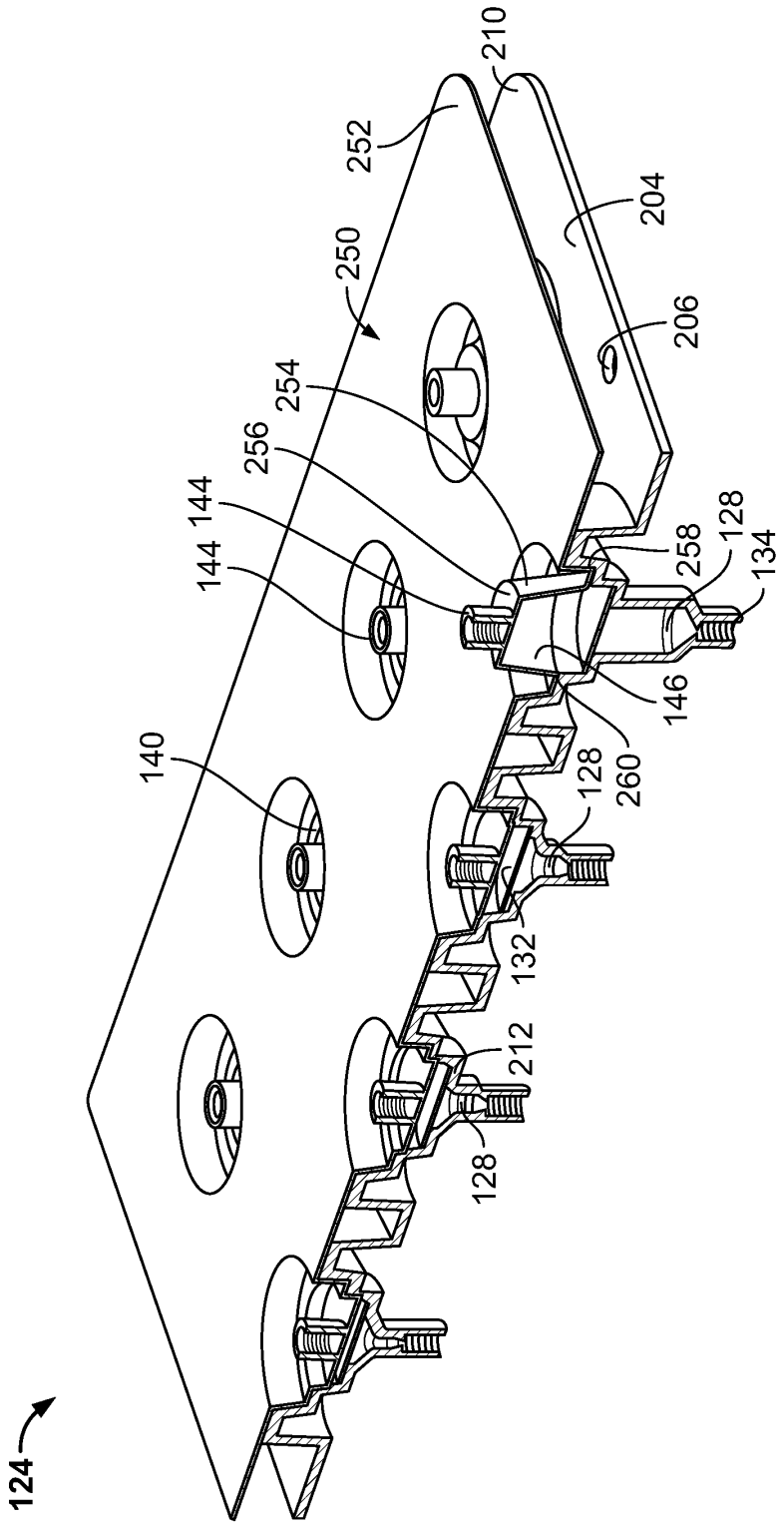

210
252
204
250
206
254
256
144
144
128
258
134
146
140
128
260
132
212
128
124

FIG. 7

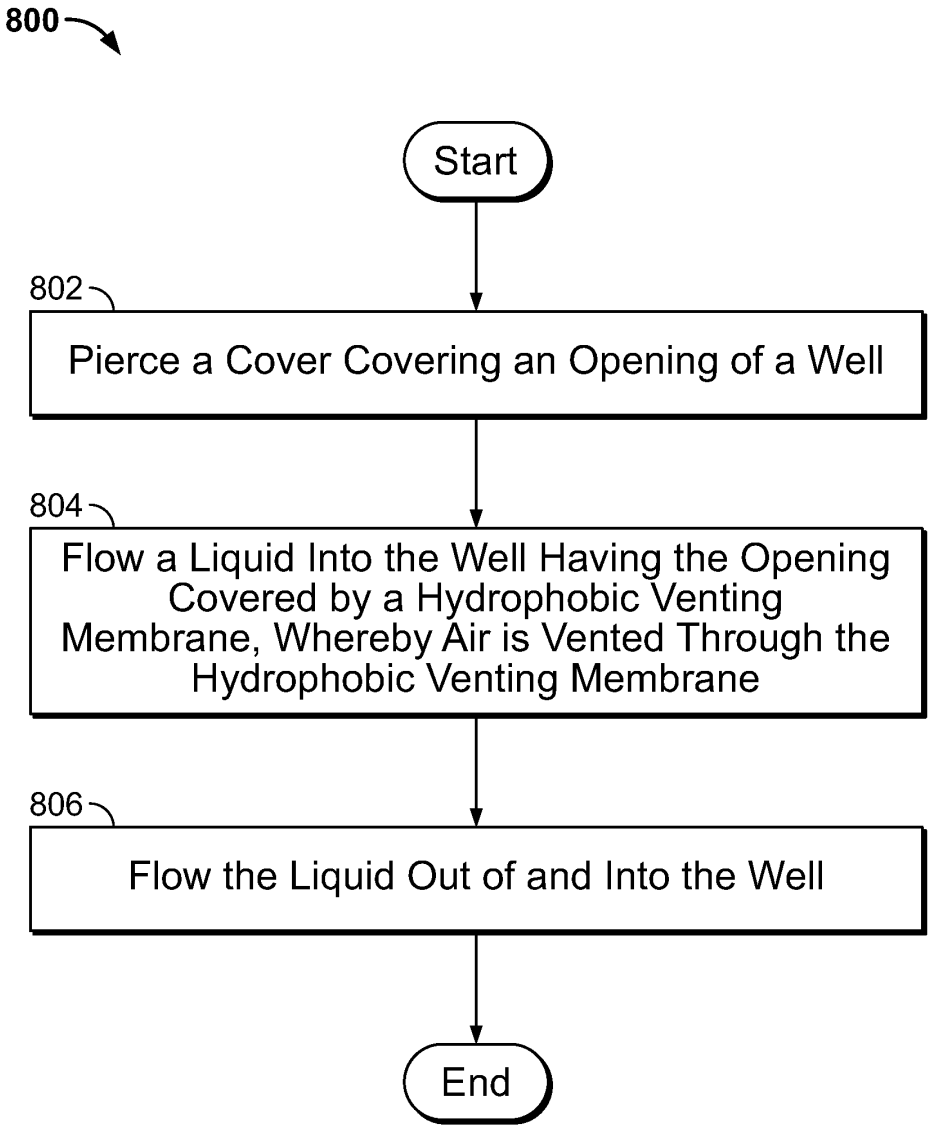

800
Start
802
Pierce a Cover Covering an Opening of a Well
804
Flow a Liquid Into the Well Having the Opening Covered by a Hydrophobic Venting Membrane, Whereby Air is Vented Through the Hydrophobic Venting Membrane
806
Flow the Liquid Out of and Into the Well
End

FIG. 8

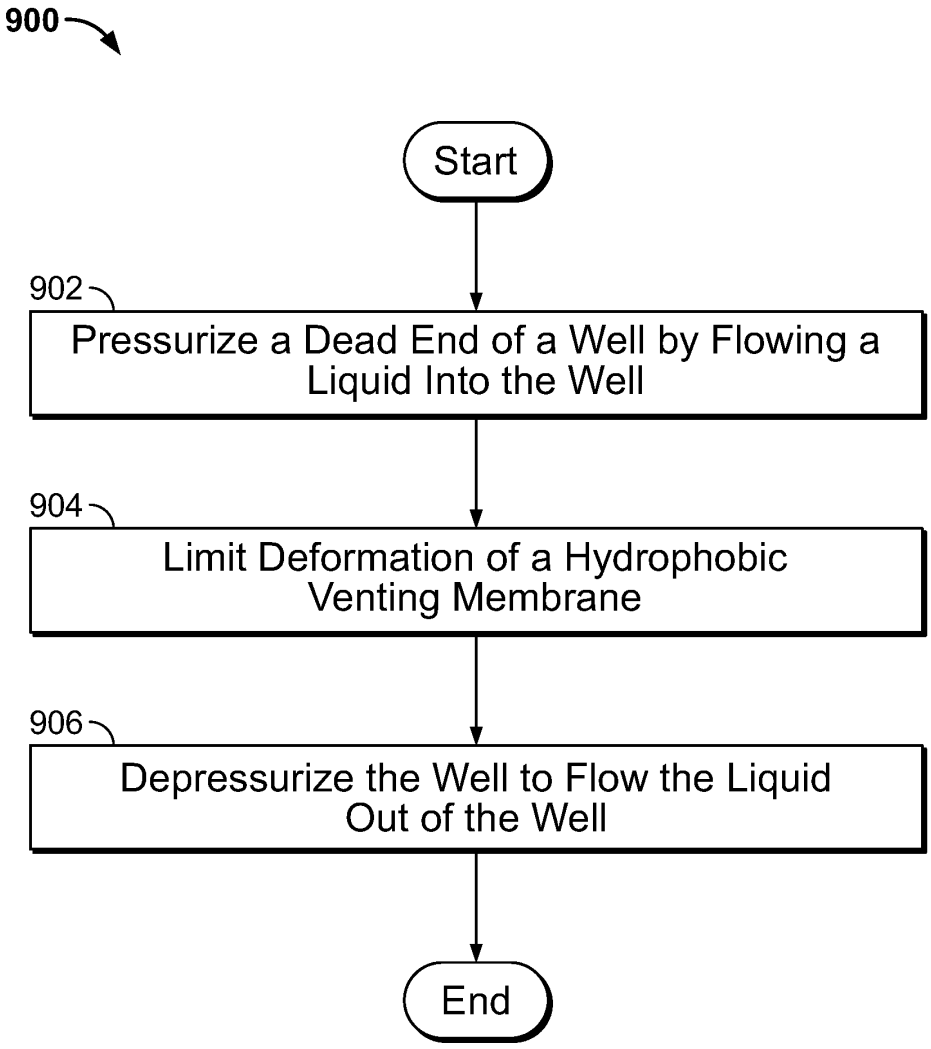

900
Start
902
Pressurize a Dead End of a Well by Flowing a Liquid Into the Well
904
Limit Deformation of a Hydrophobic Venting Membrane
906
Depressurize the Well to Flow the Liquid Out of the Well
End

FIG. 9