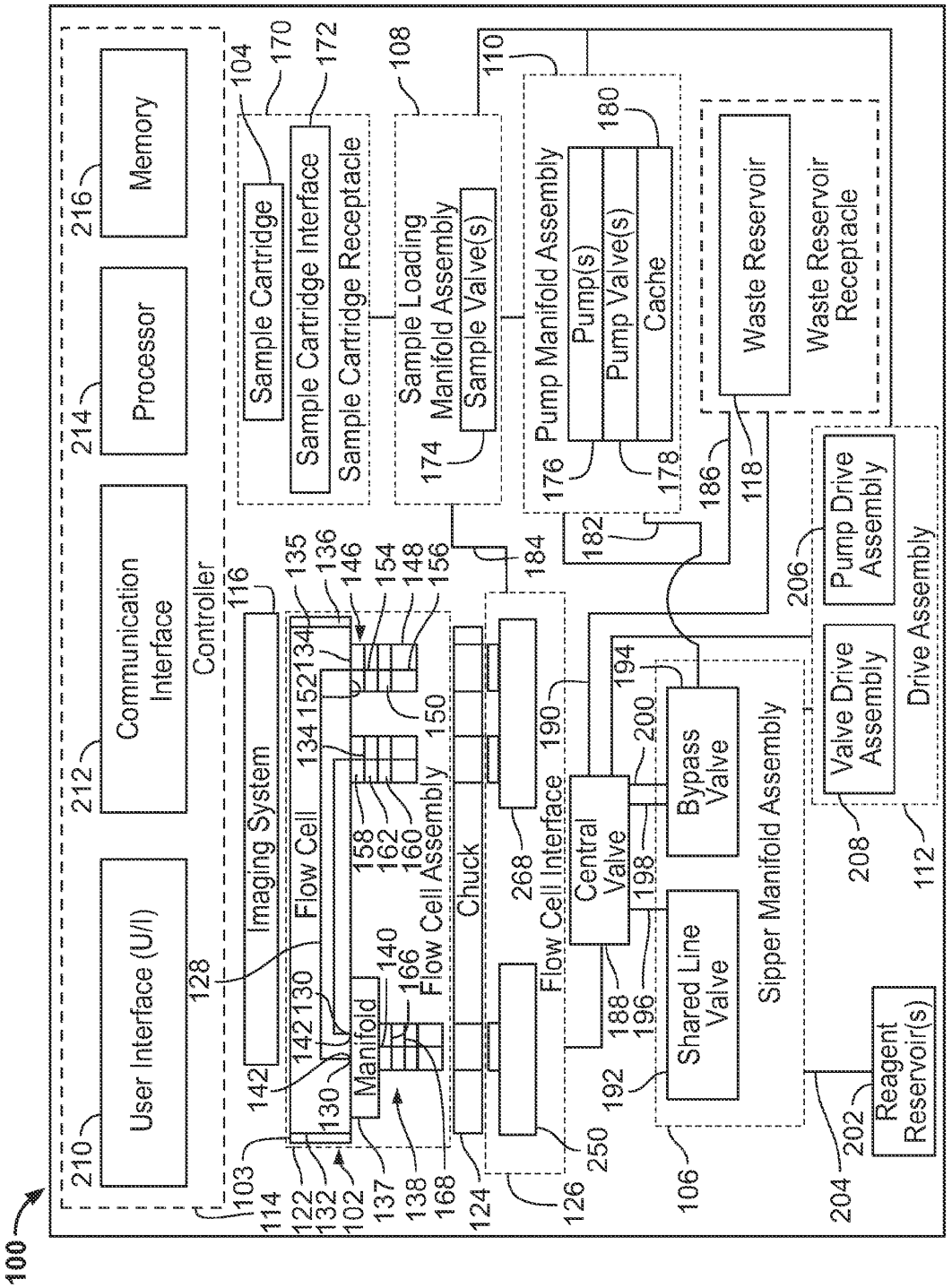

100
Controller
User Interface (U/I)
Communication Interface
Processor
Memory
210
212
214
216
128
Imaging System
116
Flow Cell
134
Flow Cell Assembly
150
Manifold
140
166
Chuck
124
Flow Cell Interface
190
268
Central Valve
194
200
Bypass Valve
198
Shared Line Valve
188
196
192
Sipper Manifold Assembly
106
Reagent Reservoir(s)
202
204
Valve Drive Assembly
208
Pump Drive Assembly
206
Drive Assembly
112
Waste Reservoir
118
Waste Reservoir Receptacle
186
Pump Manifold Assembly
176
Pump(s)
180
Pump Valve(s)
Cache
178
182
Sample Loading Manifold Assembly
174
Sample Valve(s)
110
Sample Cartridge Receptacle
172
Sample Cartridge Interface
170
Sample Cartridge
104
108
103
114
122
132
102
137
138
168
126
250
130
142
135
136
146
154
148
156
152
158
162
160
184

FIG. 1

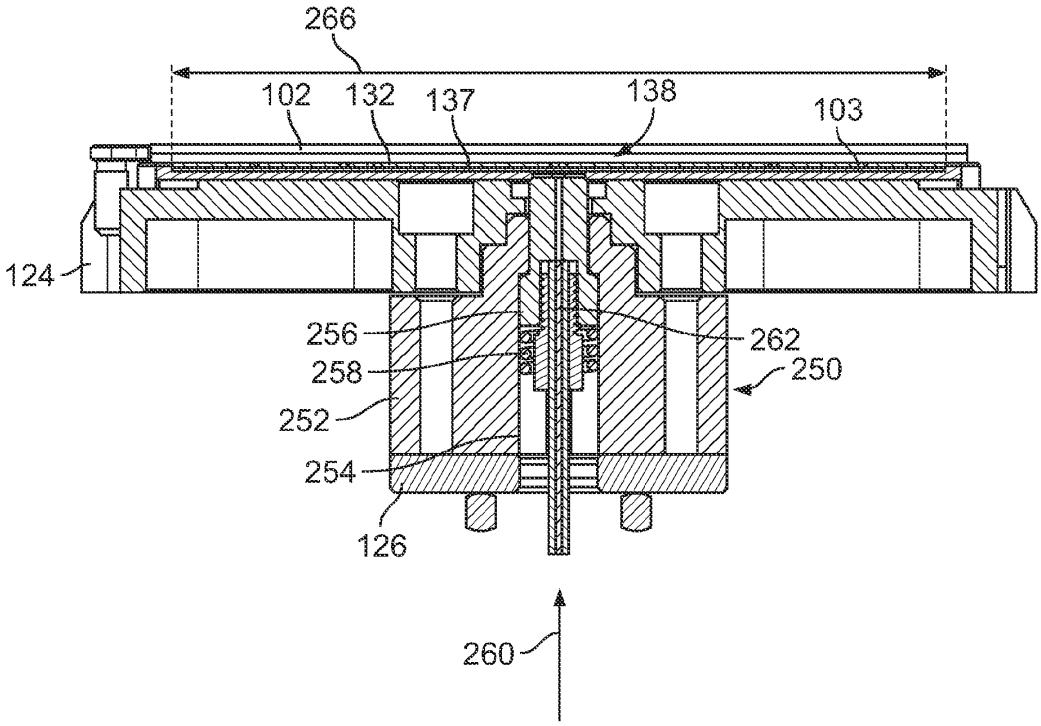


FIG. 2

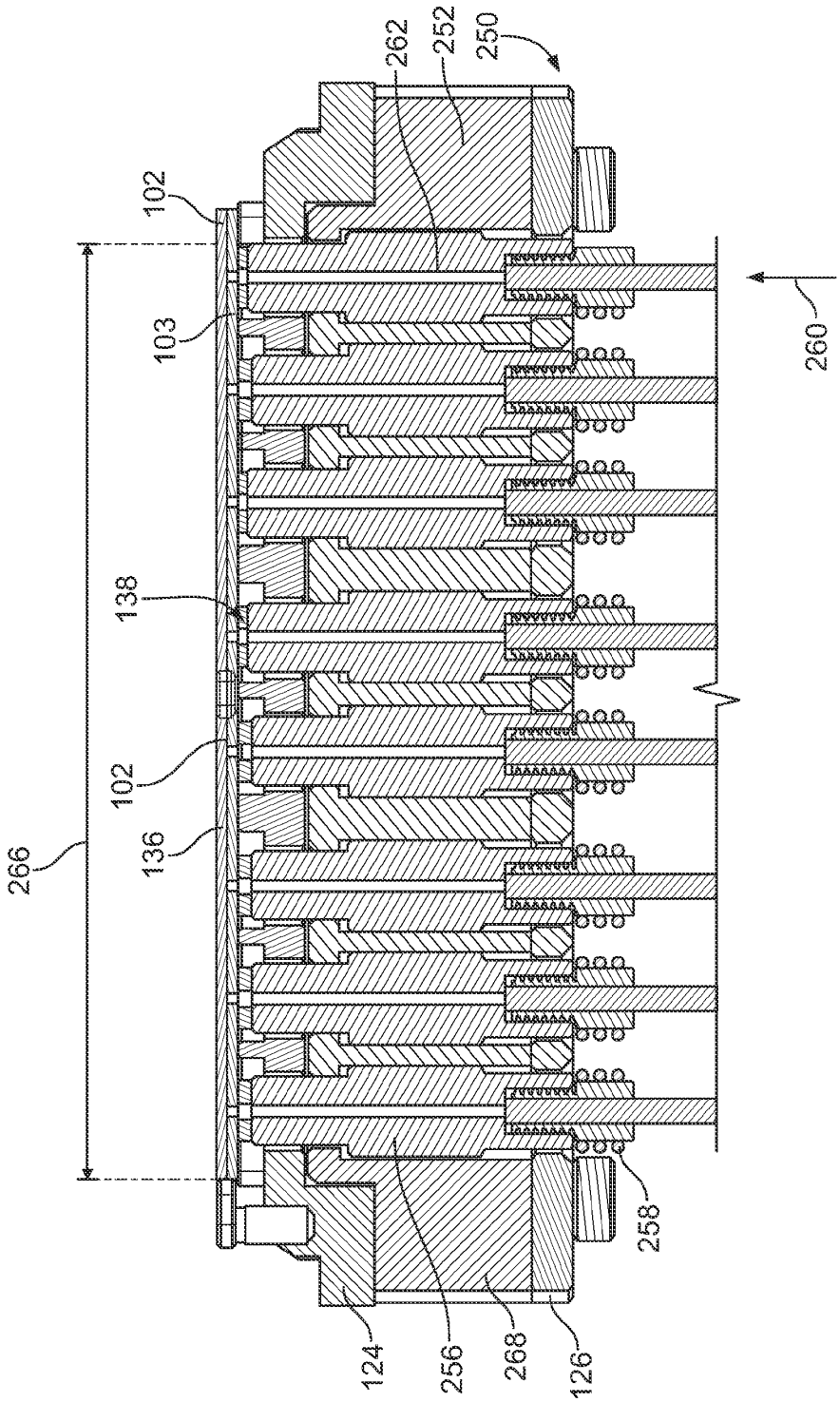


FIG. 3

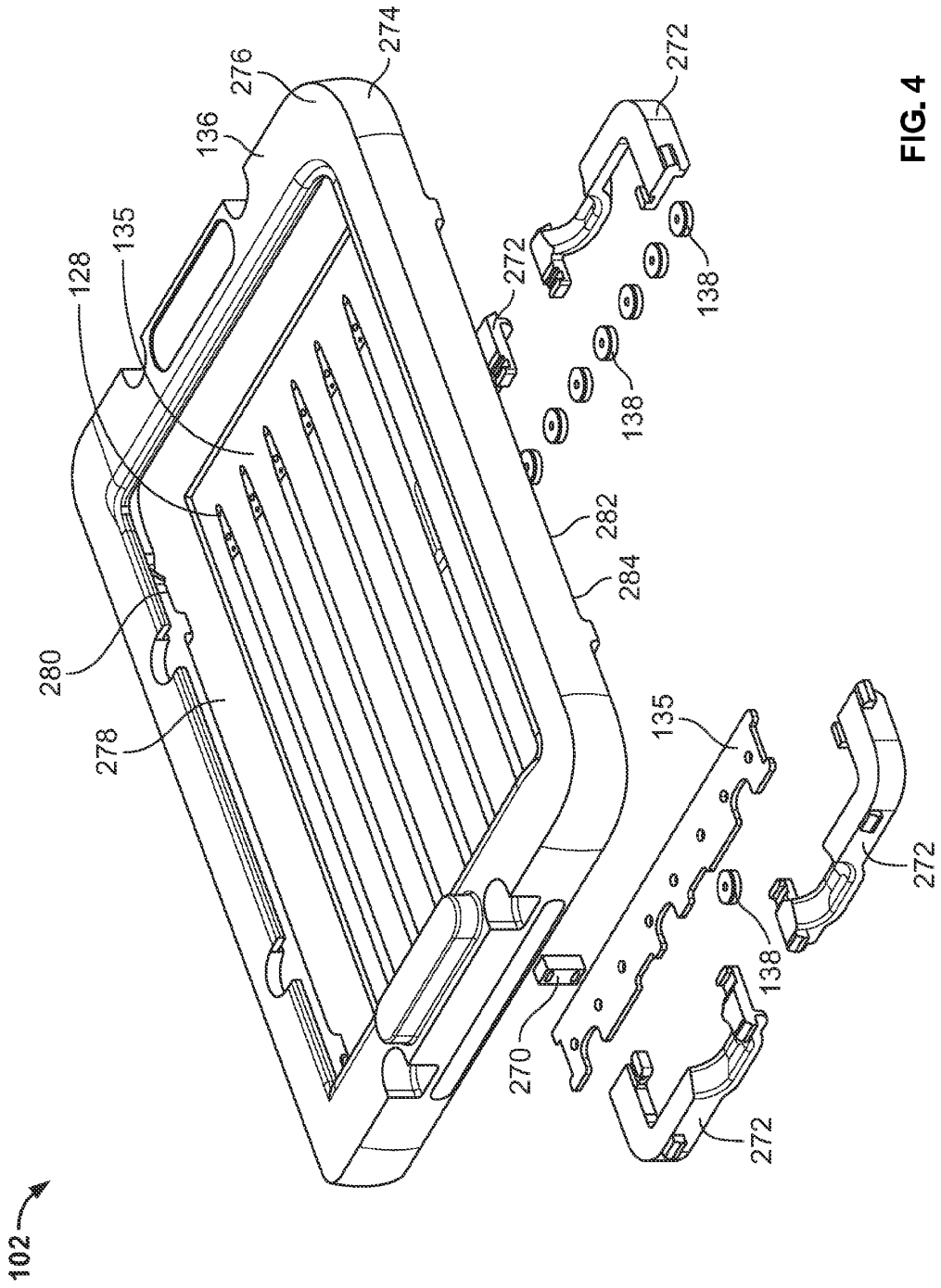

102
128
135
136
276
274
272
272
138
138
282
284
280
278
135
272
138
270
272

FIG. 4

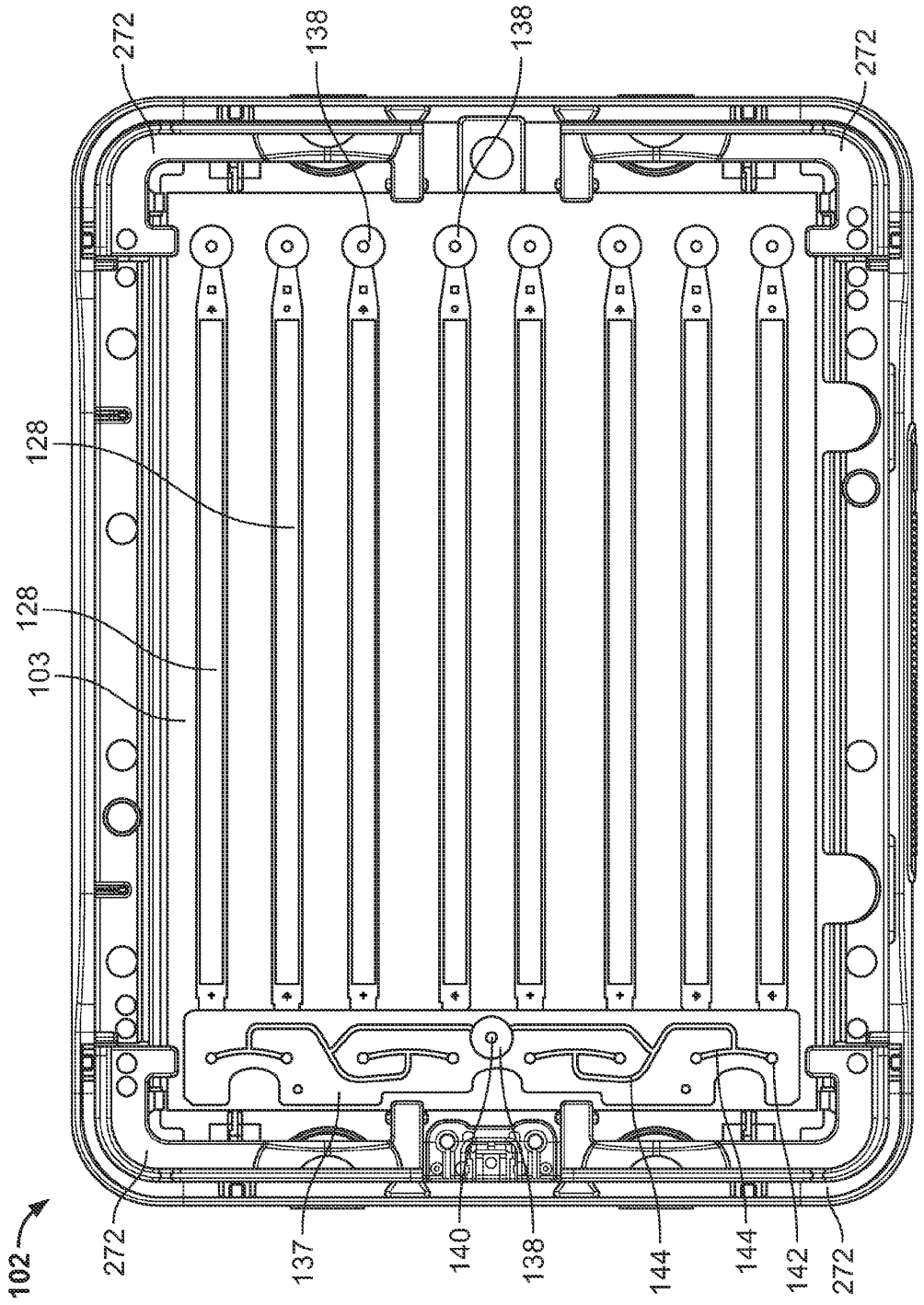


FIG. 5

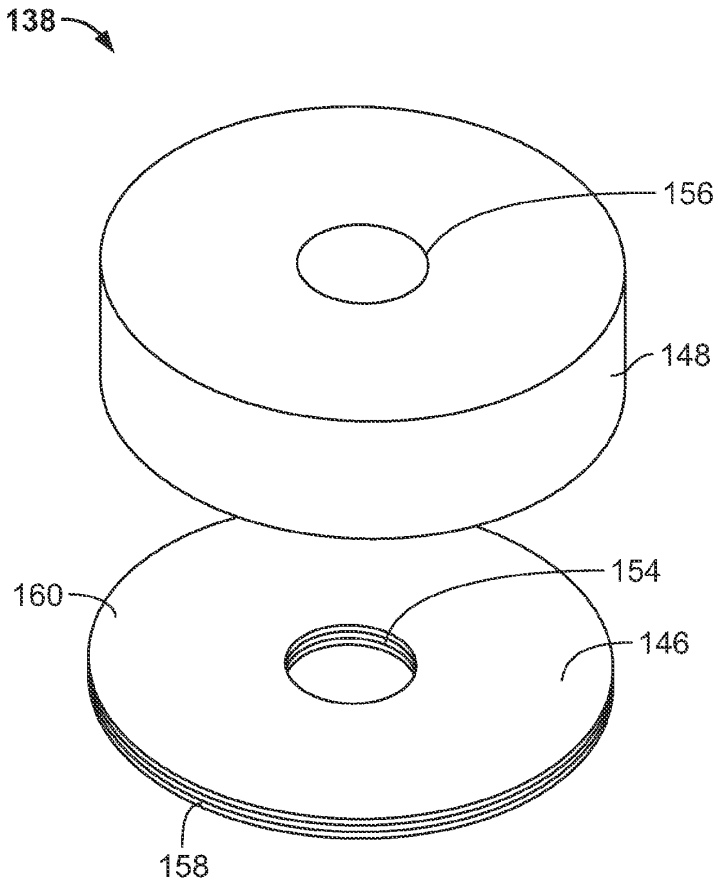


FIG. 6

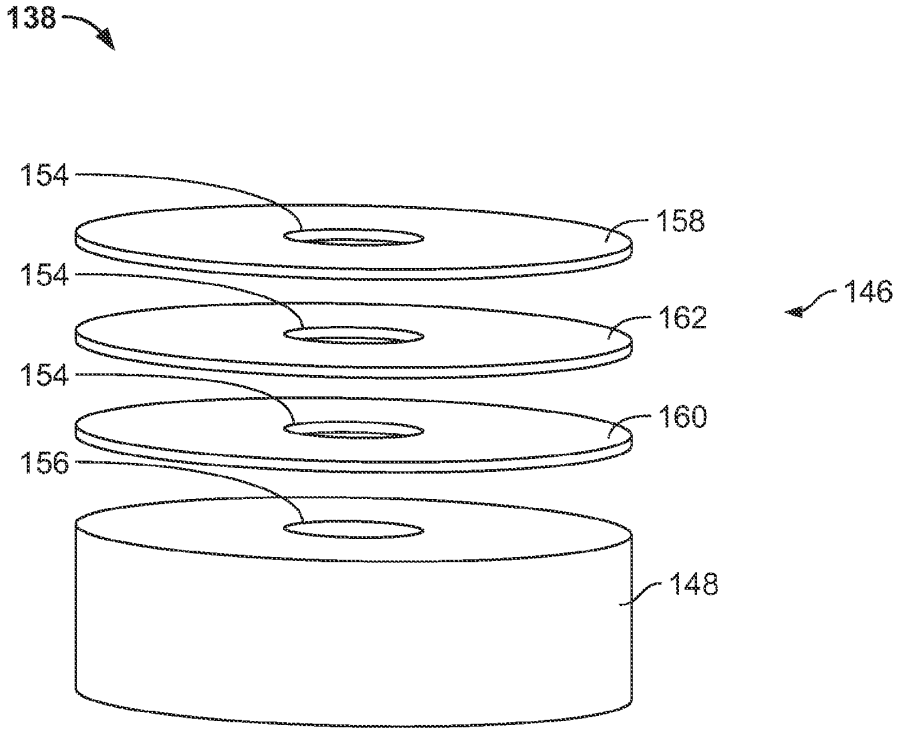


FIG. 7

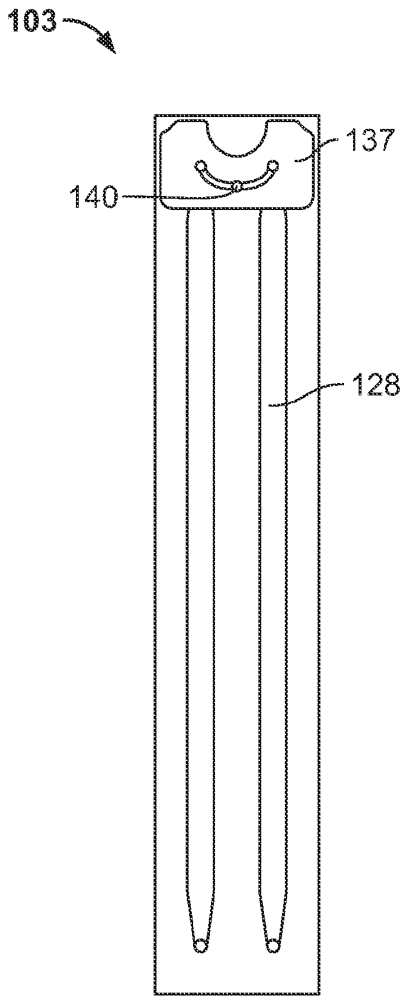


FIG. 8

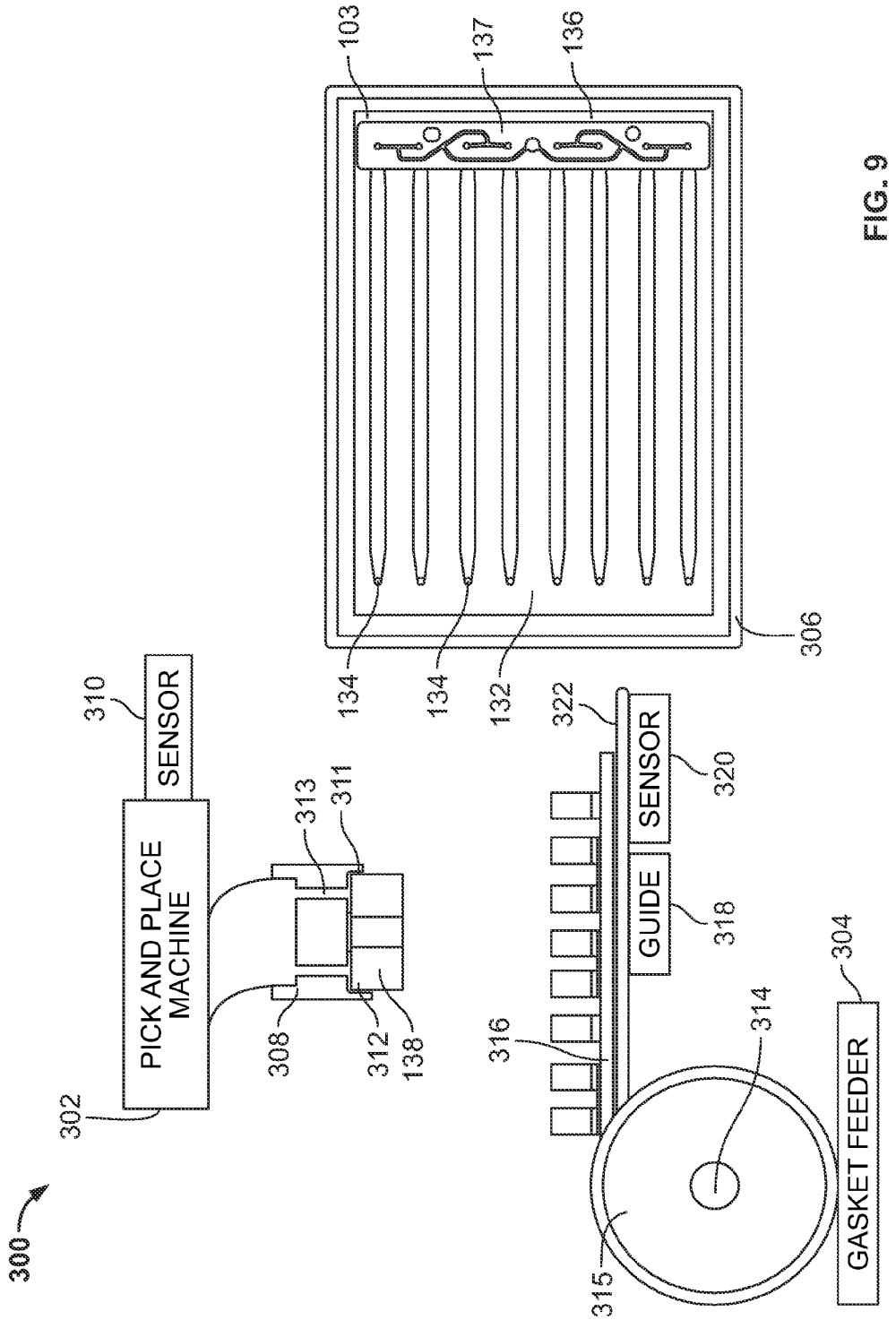

300
PICK AND PLACE MACHINE
302
SENSOR
310
313
311
308
312
138
103
137
136
134
134
132
306
322
SENSOR
320
GUIDE
318
304
316
314
315
GASKET FEEDER

FIG. 9

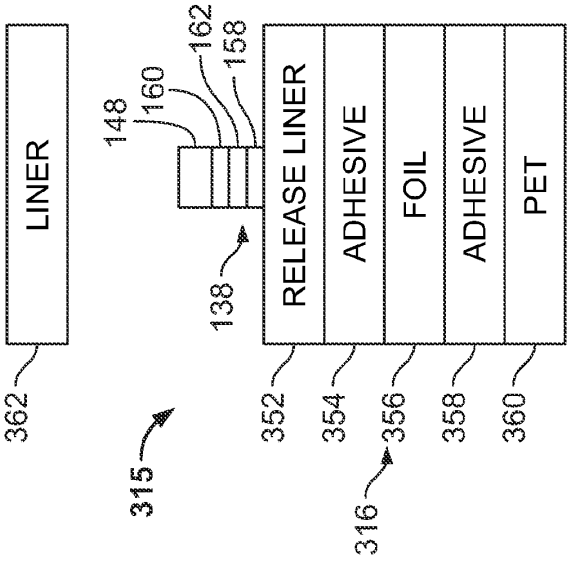

LINER
RELEASE LINER
ADHESIVE
FOIL
ADHESIVE
PET
148
160
162
158
138
315
316
362
352
354
356
358
360

FIG. 11

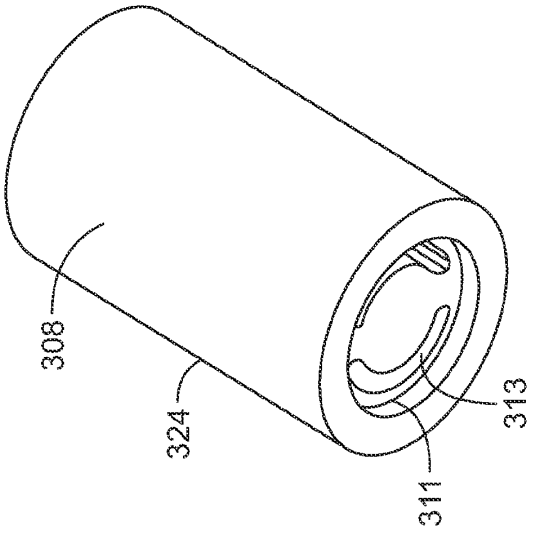

308
324
311
313

FIG. 10

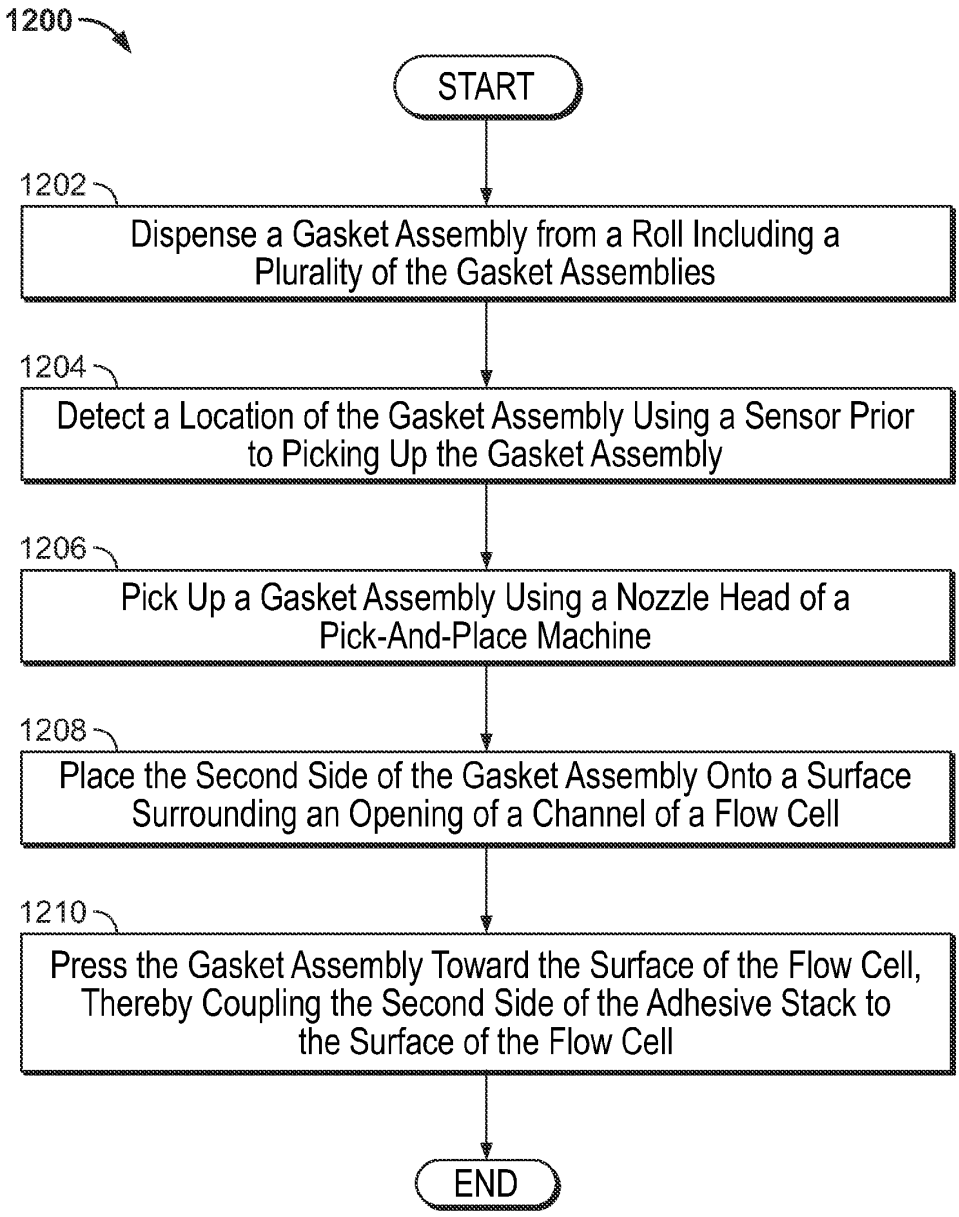

1200
START
1202
Dispense a Gasket Assembly from a Roll Including a Plurality of the Gasket Assemblies
1204
Detect a Location of the Gasket Assembly Using a Sensor Prior to Picking Up the Gasket Assembly
1206
Pick Up a Gasket Assembly Using a Nozzle Head of a Pick-And-Place Machine
1208
Place the Second Side of the Gasket Assembly Onto a Surface Surrounding an Opening of a Channel of a Flow Cell
1210
Press the Gasket Assembly Toward the Surface of the Flow Cell, Thereby Coupling the Second Side of the Adhesive Stack to the Surface of the Flow Cell
END

FIG. 12