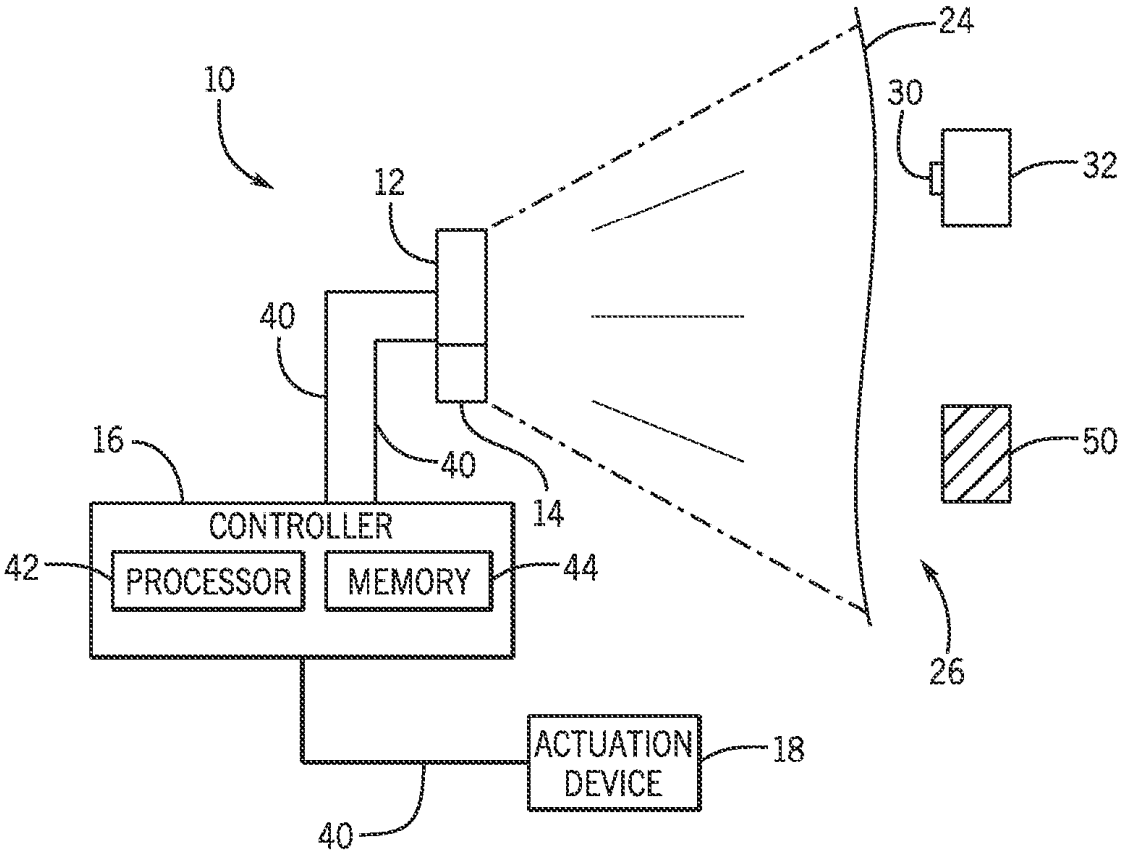

10
12
24
30
32
40
40
16
40
14
50
CONTROLLER
42
PROCESSOR
MEMORY
44
26
ACTUATION DEVICE
18
40

FIG. 1

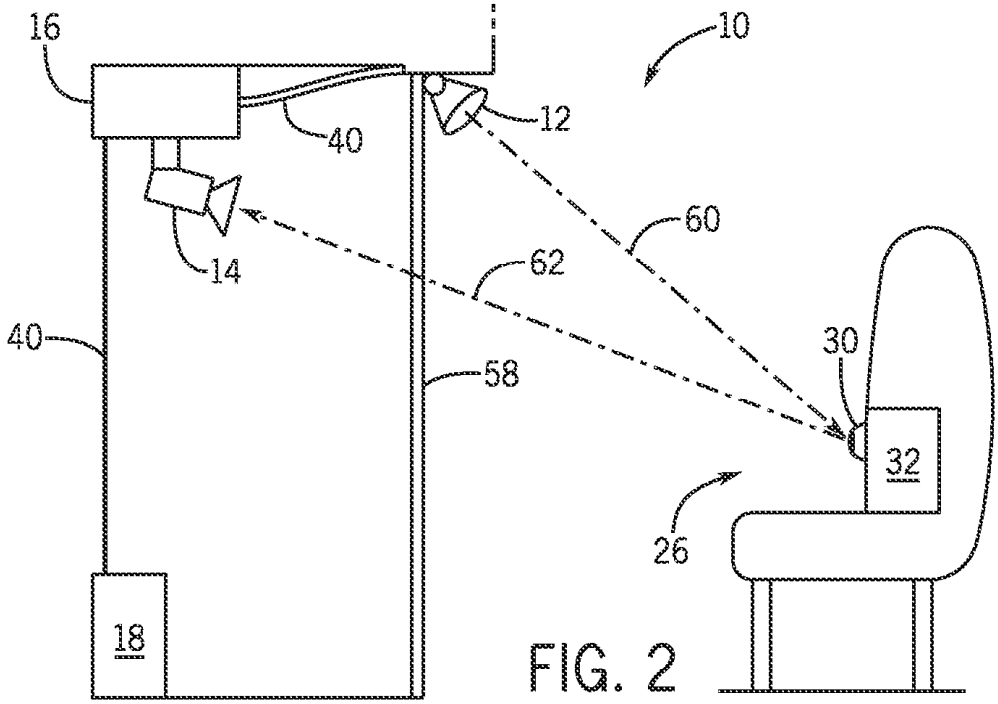

16
10
40
12
14
60
62
30
40
58
32
26
18

FIG. 2

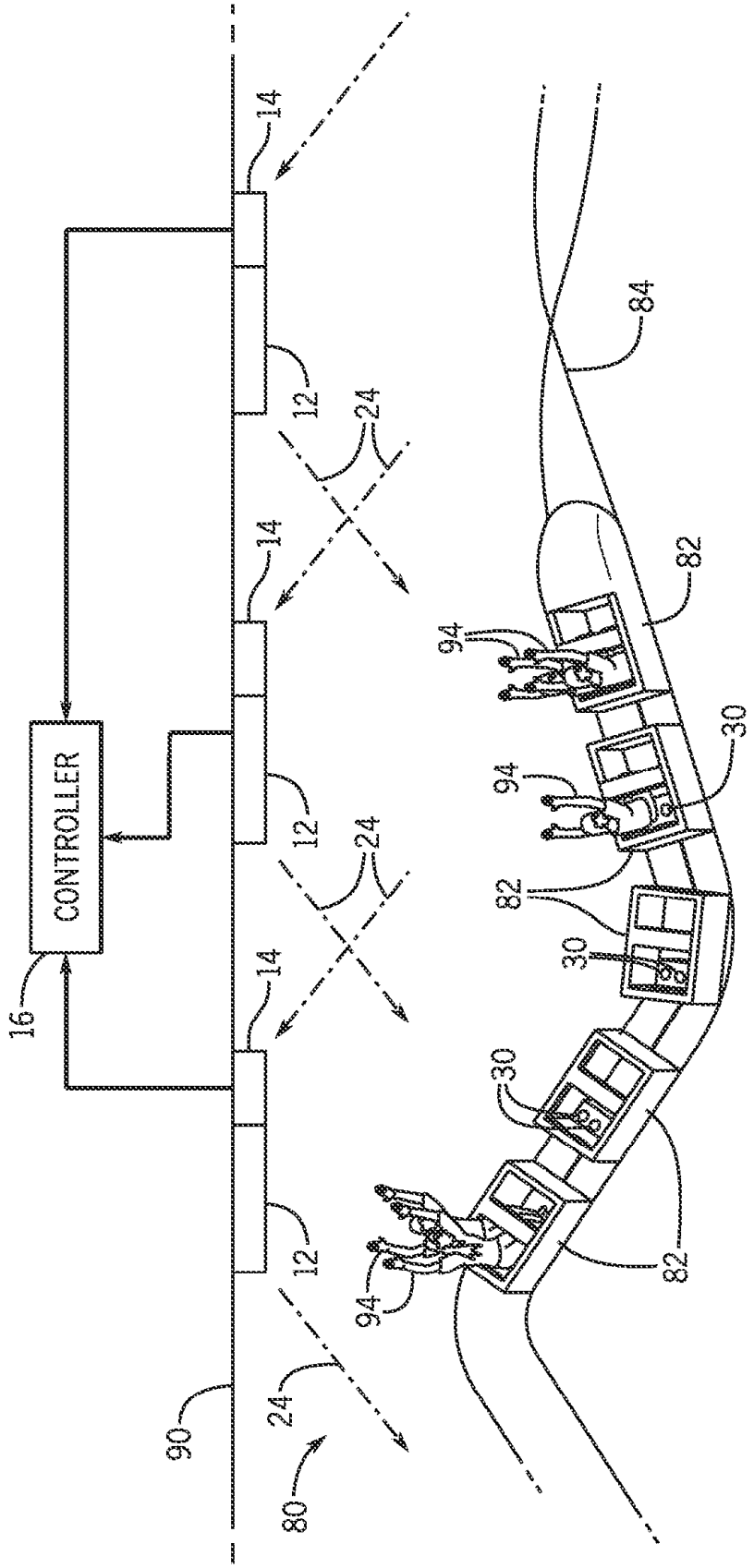


FIG. 3

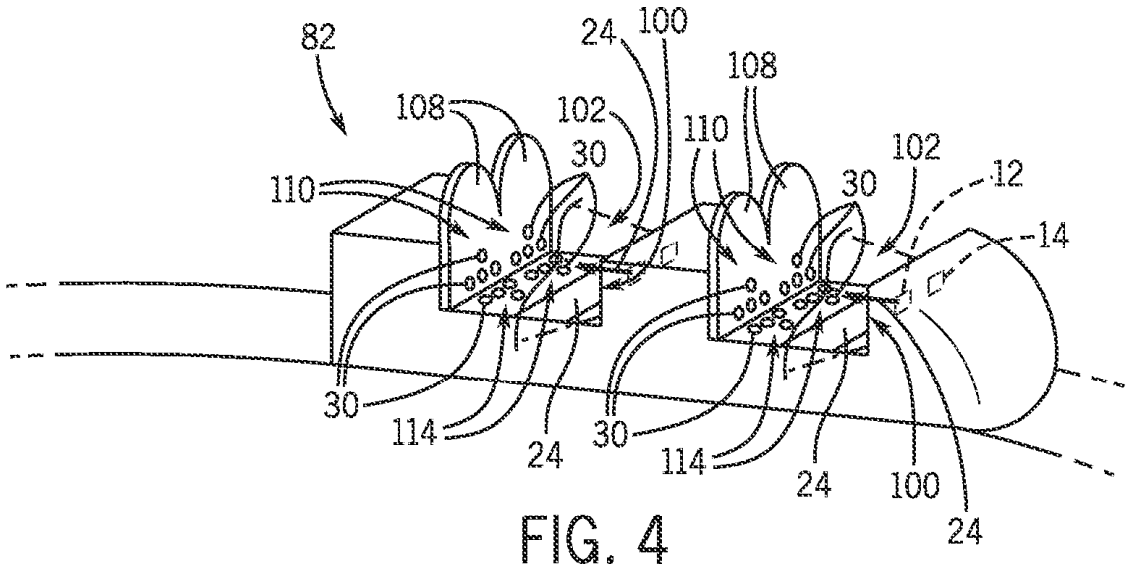

82
24
100
108
108
102
110
30
110
102
30
12
14
30
114
24
30
114
24
100
24

FIG. 4

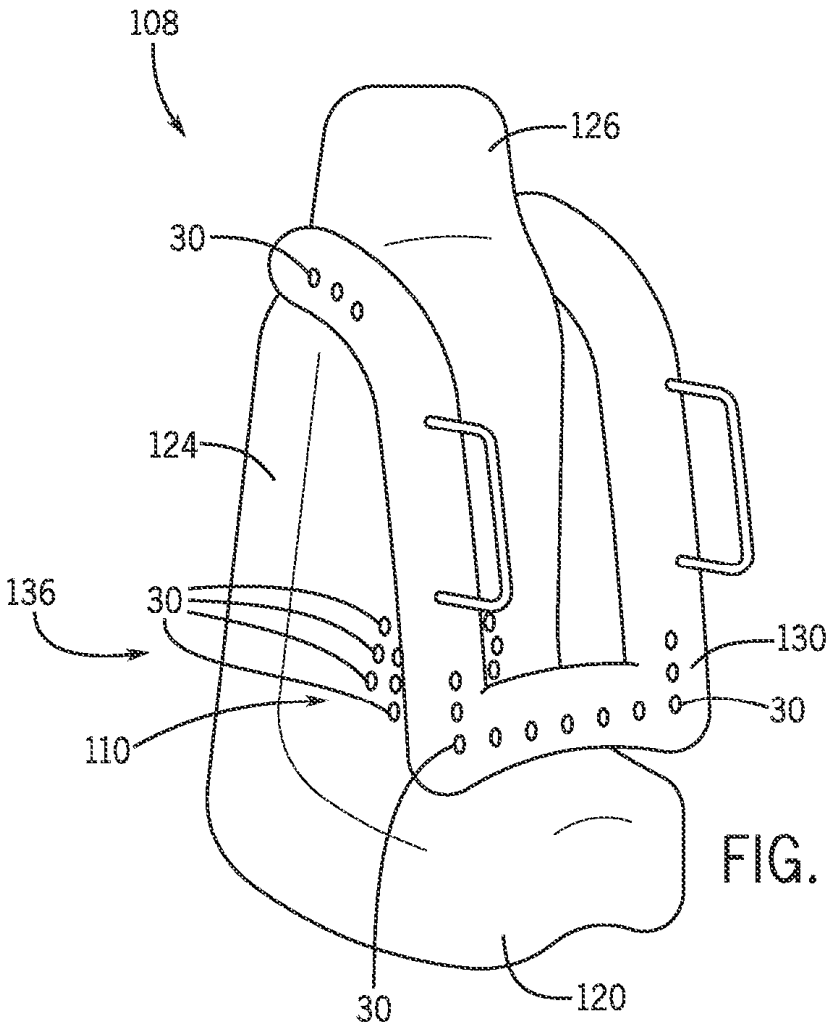

108
126
30
124
136
30
130
110
30
30
120

FIG. 5

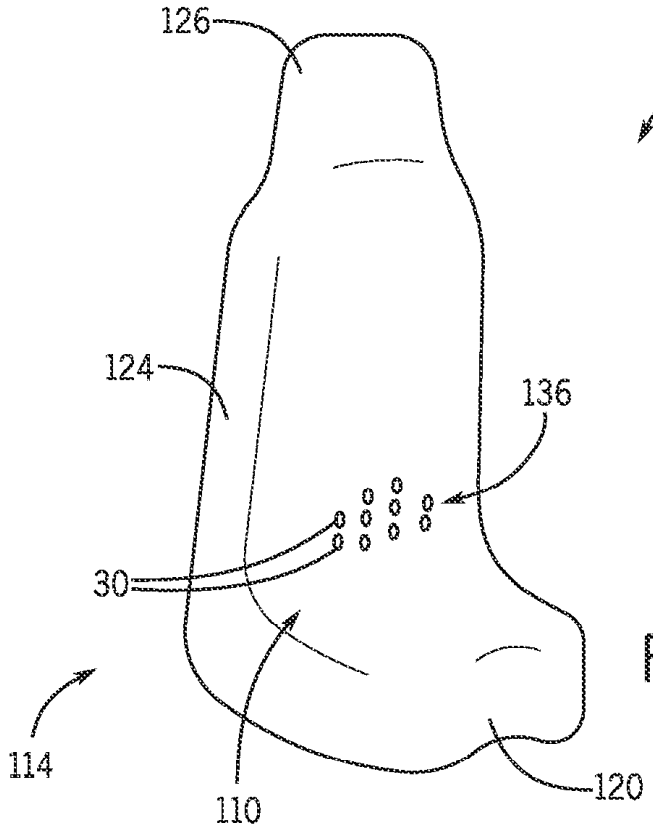


FIG. 6

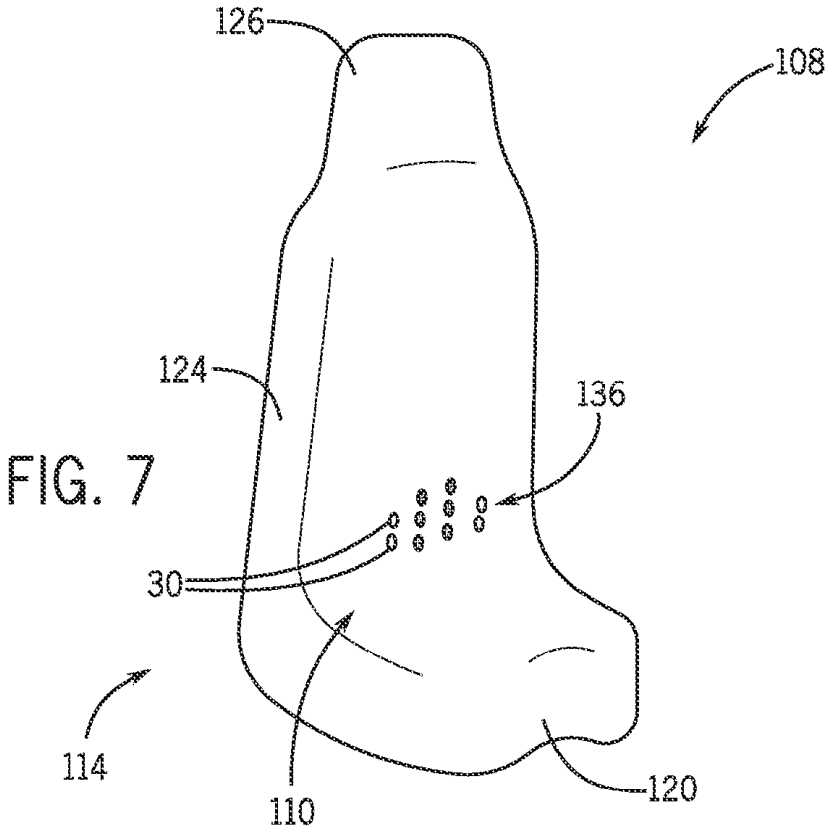


FIG. 7

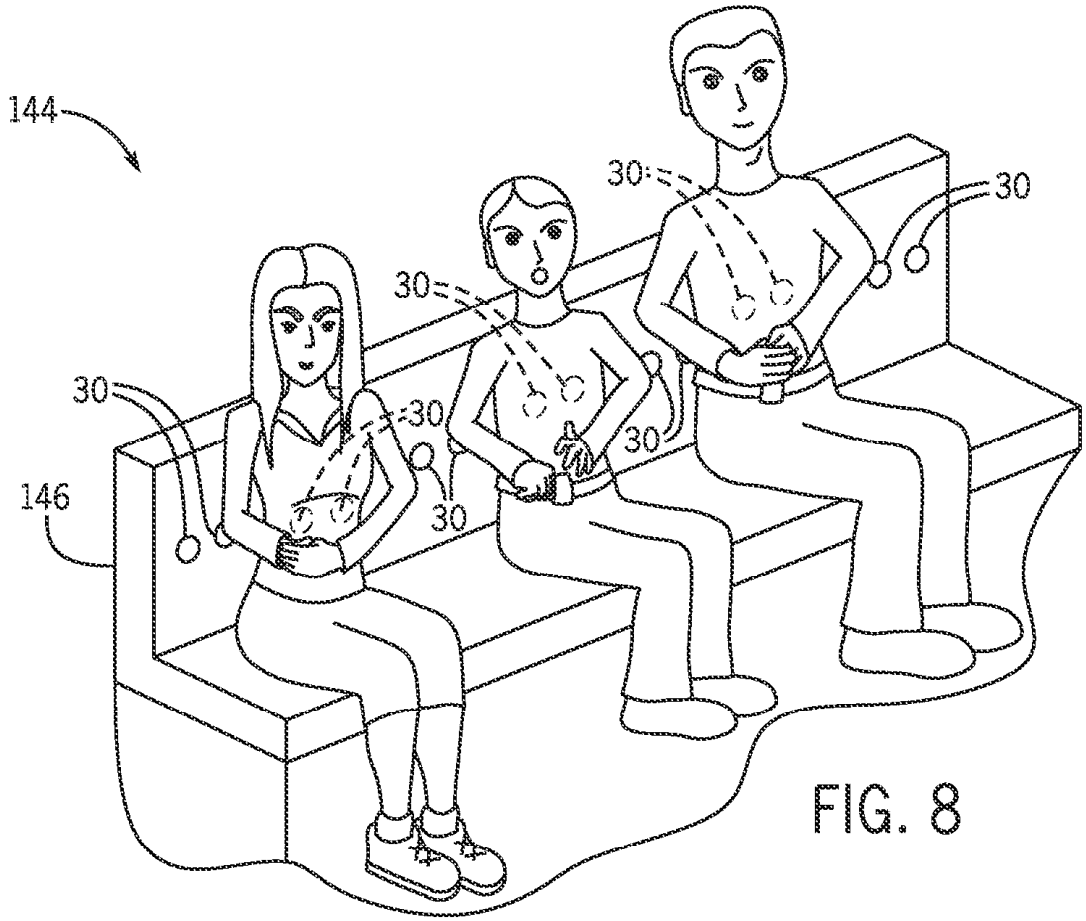


FIG. 8

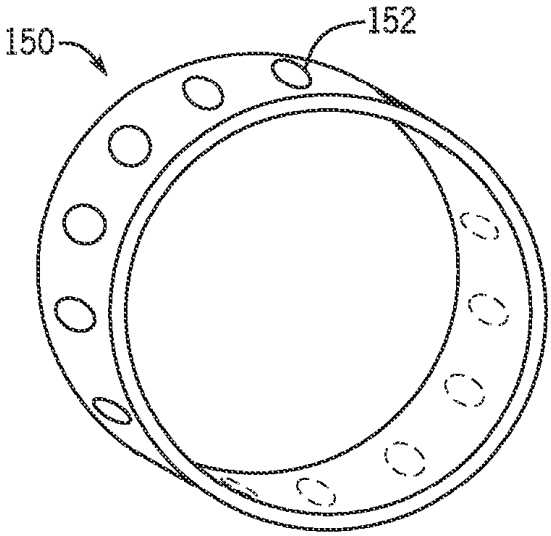


FIG. 9

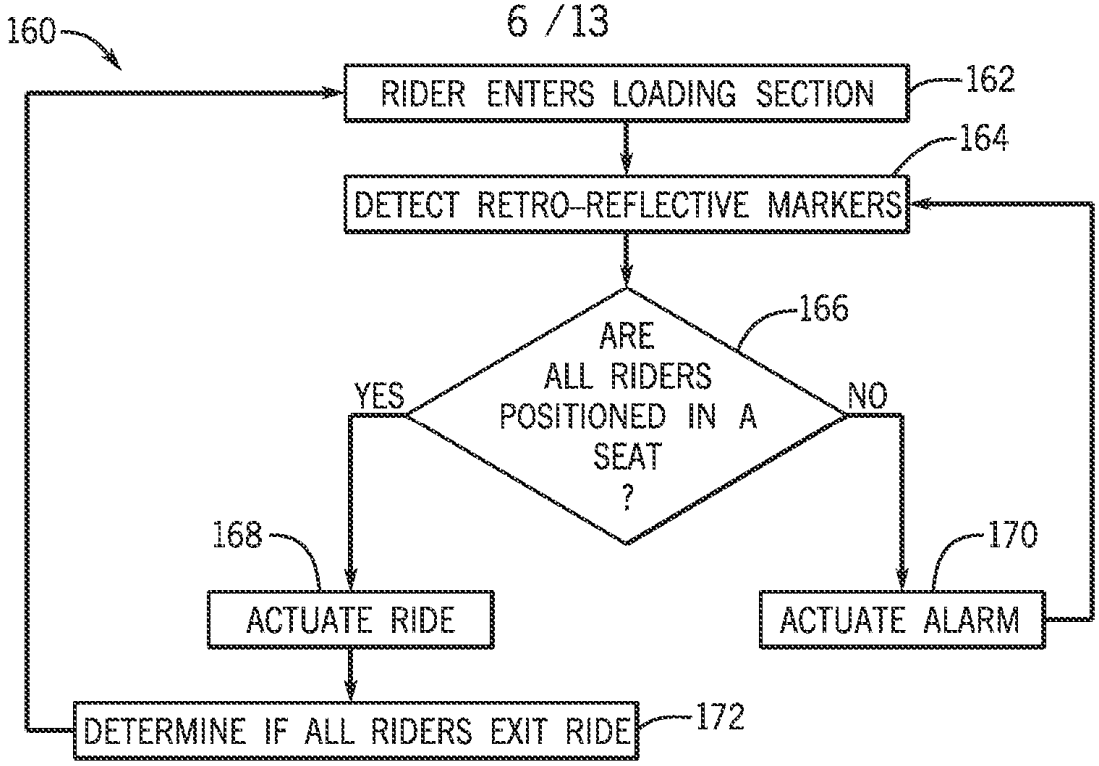

160
RIDER ENTERS LOADING SECTION
162
164
DETECT RETRO-REFLECTIVE MARKERS
166
ARE ALL RIDERS POSITIONED IN A SEAT ?
YES
NO
168
ACTUATE RIDE
170
ACTUATE ALARM
DETERMINE IF ALL RIDERS EXIT RIDE
172

FIG. 10

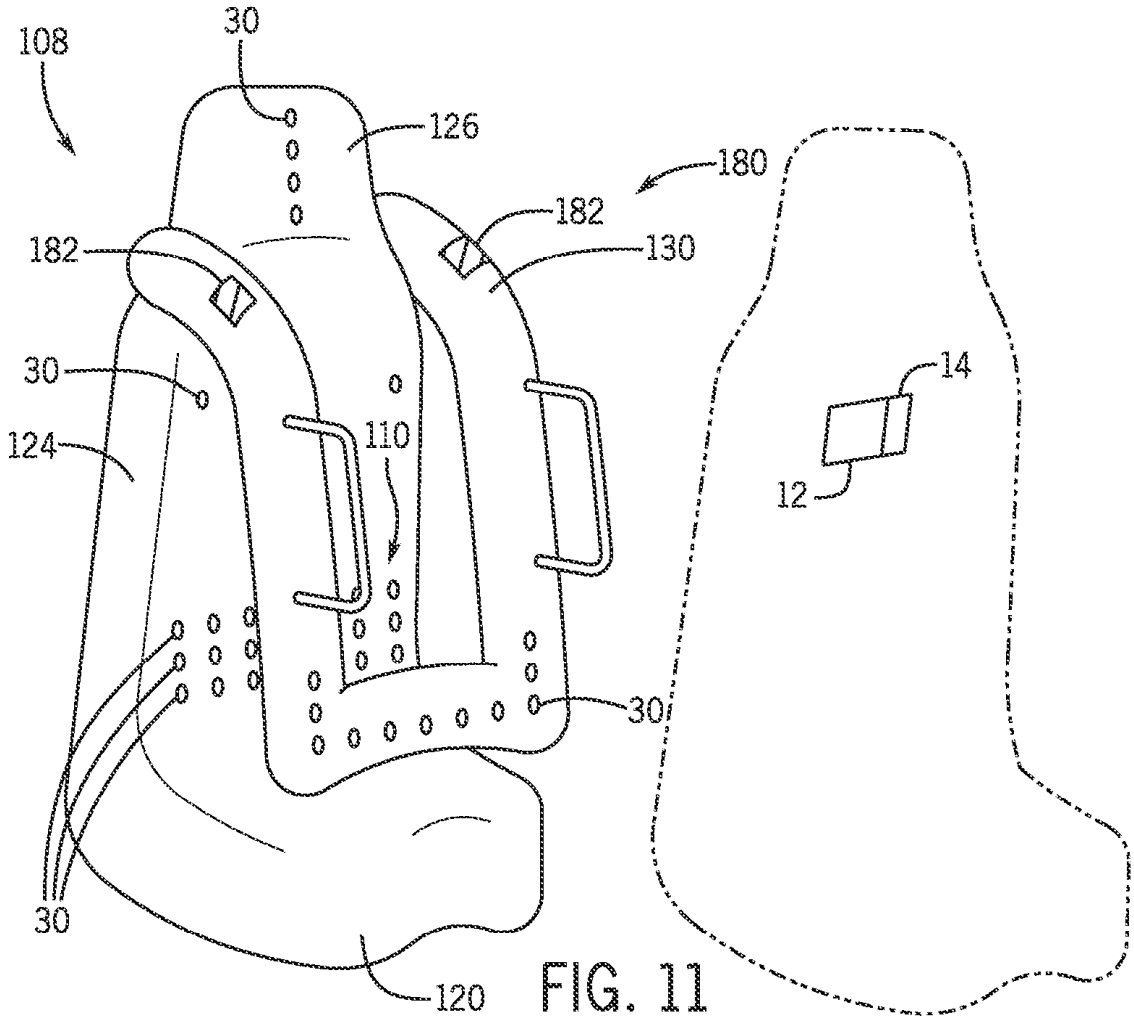

108
30
126
180
182
182
130
30
124
110
14
12
30
30
120

FIG. 11

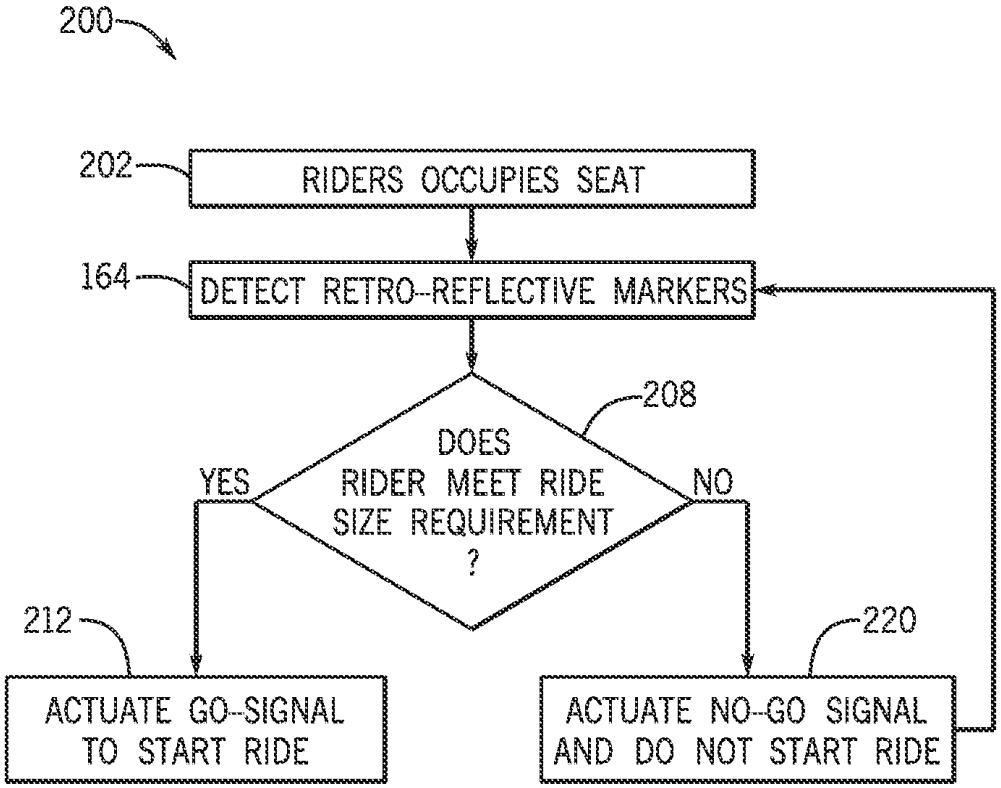

200
202
RIDERS OCCUPIES SEAT
164
DETECT RETRO-REFLECTIVE MARKERS
208
DOES RIDER MEET RIDE SIZE REQUIREMENT ?
YES
NO
212
ACTUATE GO-SIGNAL TO START RIDE
220
ACTUATE NO-GO SIGNAL AND DO NOT START RIDE

FIG. 12

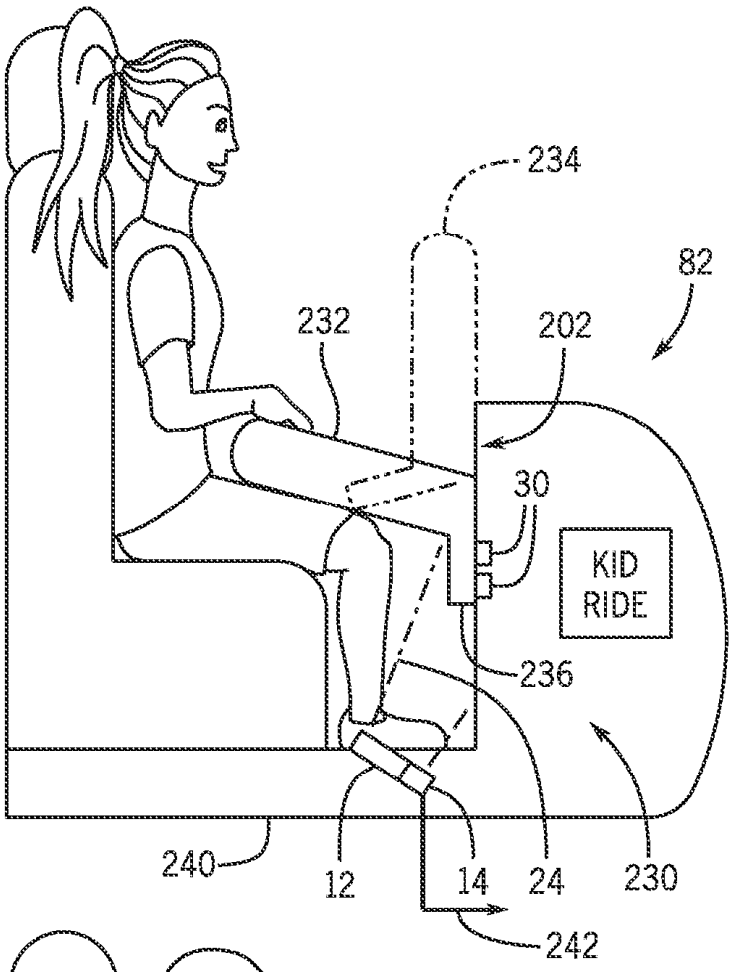

234
82
232
202
30
KID
RIDE
236
240
12
14
24
230
242

FIG. 13

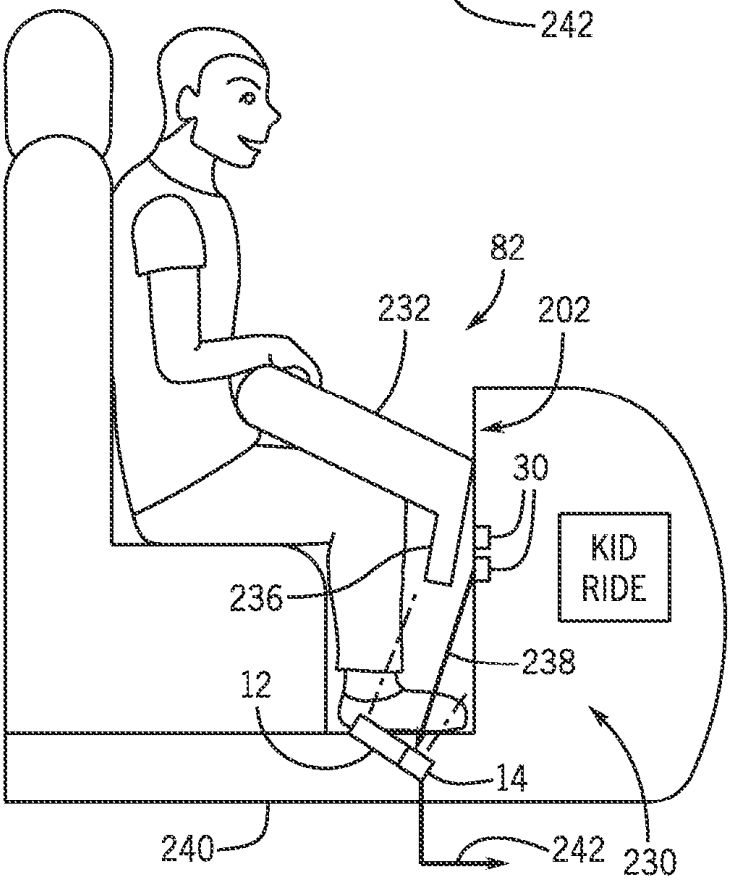

82
232
202
30
KID
RIDE
236
238
12
14
240
242
230

FIG. 14

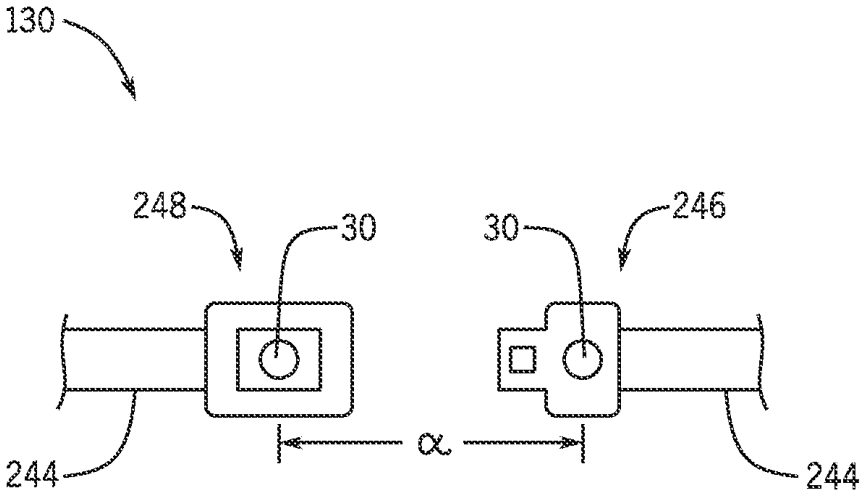


FIG. 15

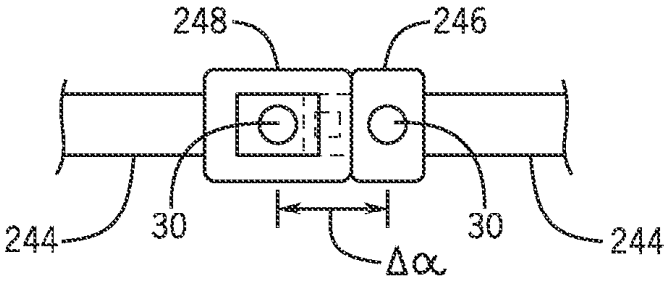


FIG. 16

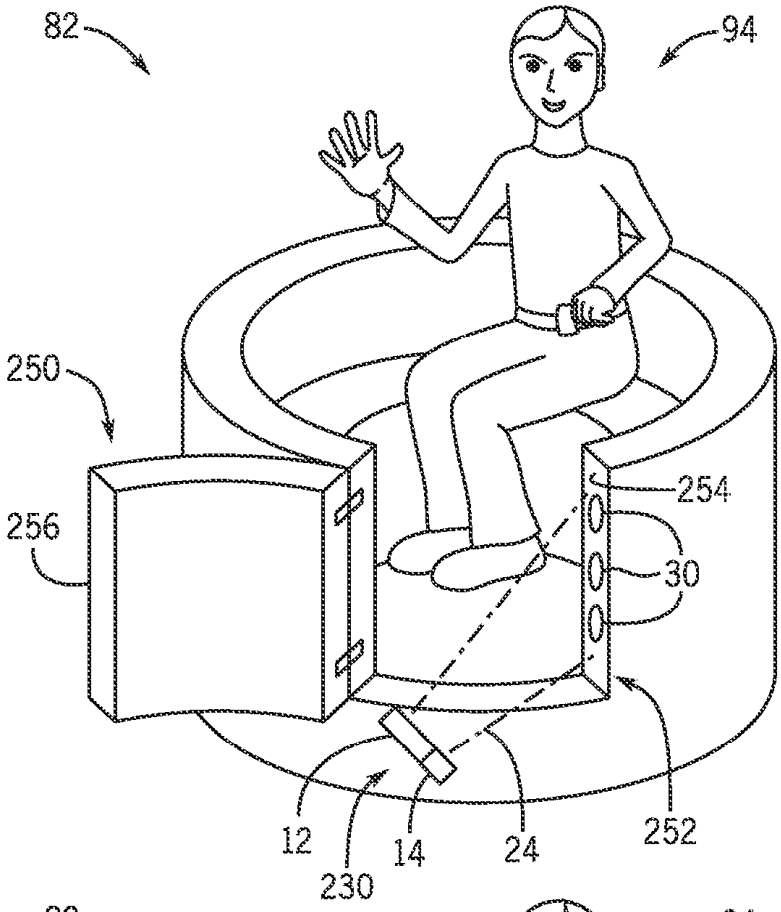


FIG. 17

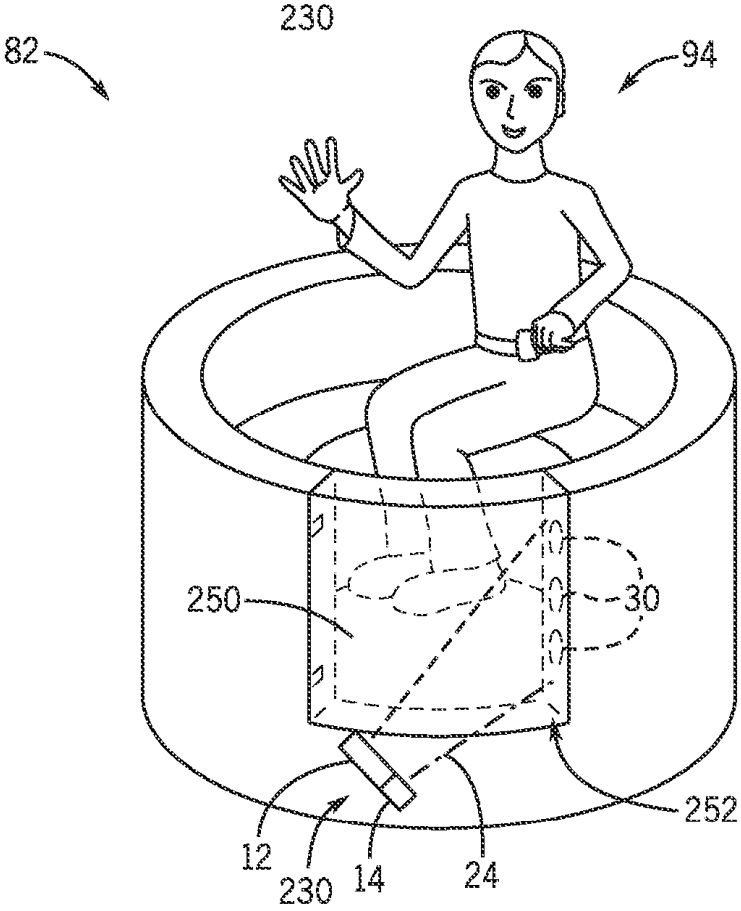


FIG. 18

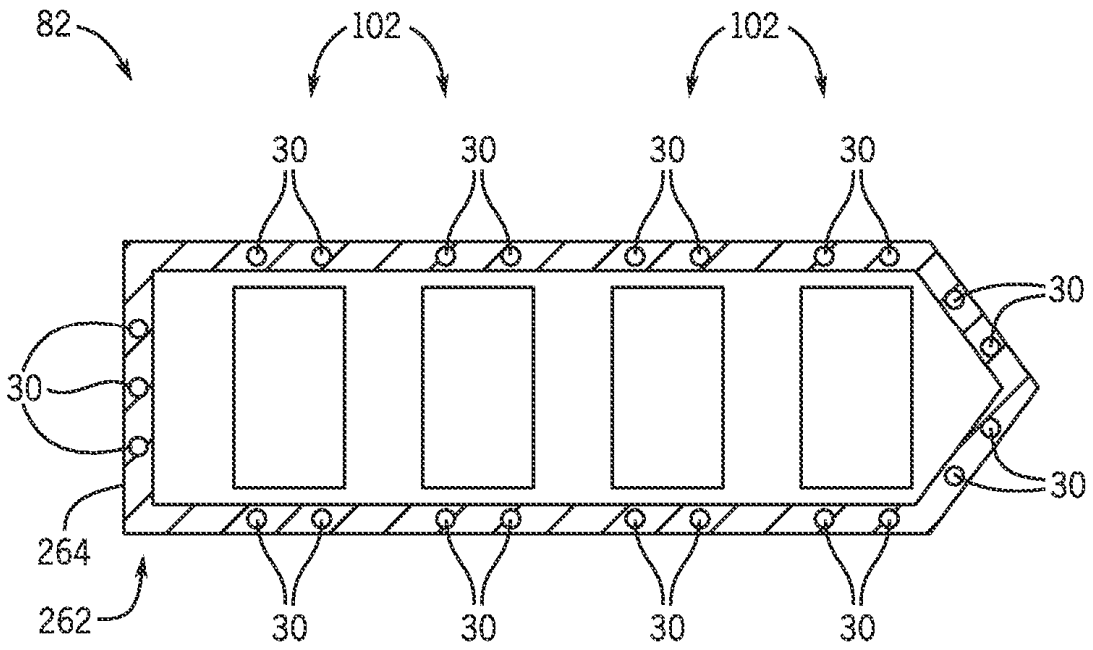

82
102
102
30
30
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30
30
30
30
30
264
262
30
30
30
30

FIG. 19

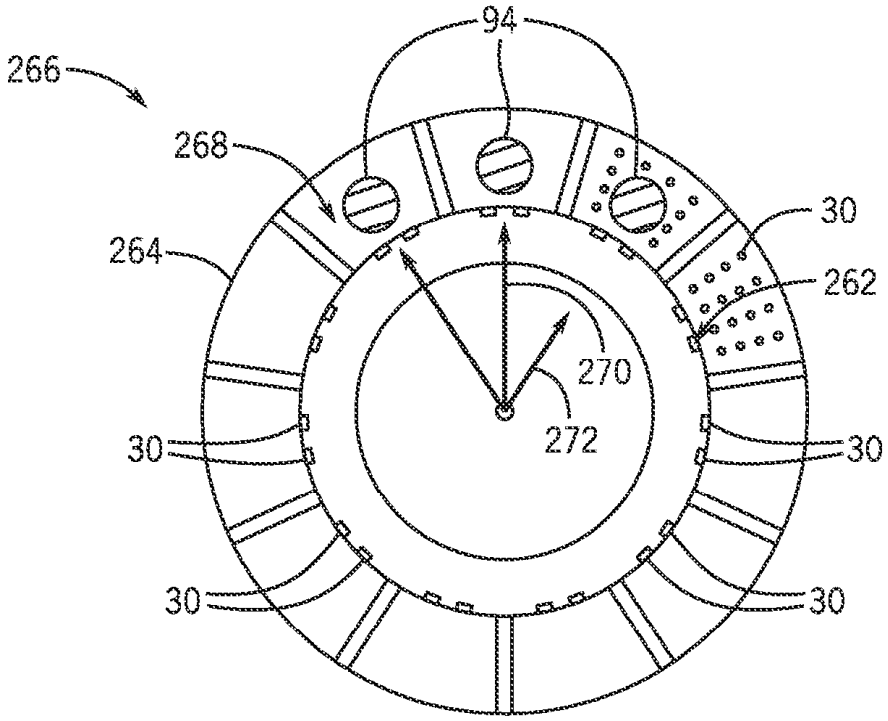

94
266
268
264
30
262
270
272
30
30
30
30

FIG. 20

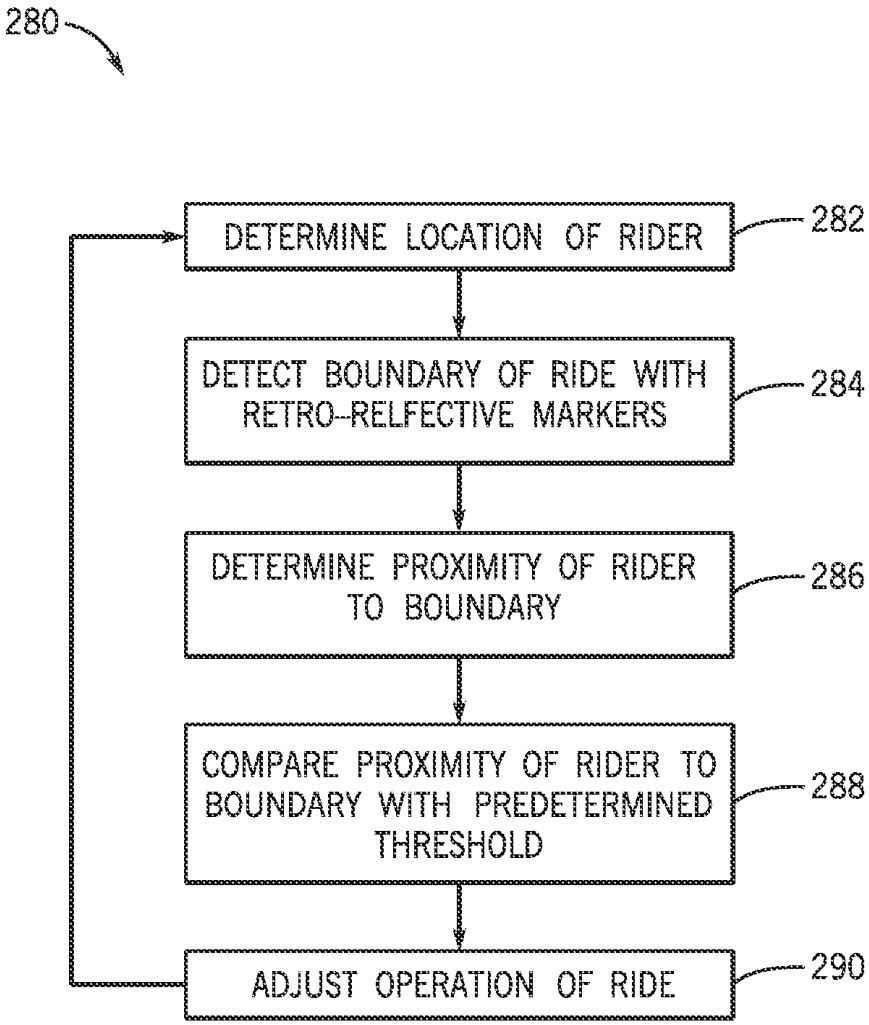

280
DETERMINE LOCATION OF RIDER
282
DETECT BOUNDARY OF RIDE WITH RETRO-RELFECTIVE MARKERS
284
DETERMINE PROXIMITY OF RIDER TO BOUNDARY
286
COMPARE PROXIMITY OF RIDER TO BOUNDARY WITH PREDETERMINED THRESHOLD
288
ADJUST OPERATION OF RIDE
290

FIG. 21

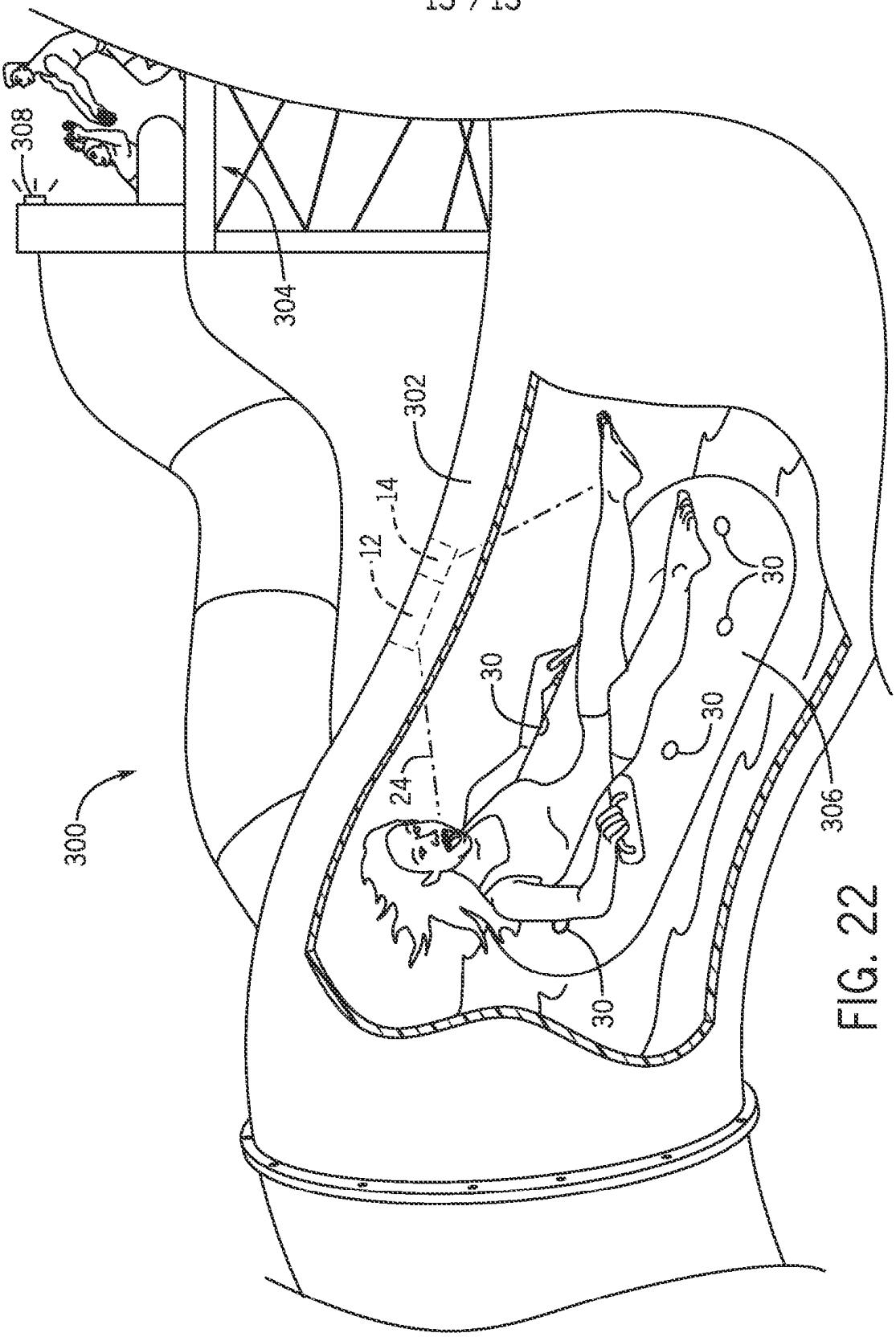


FIG. 22