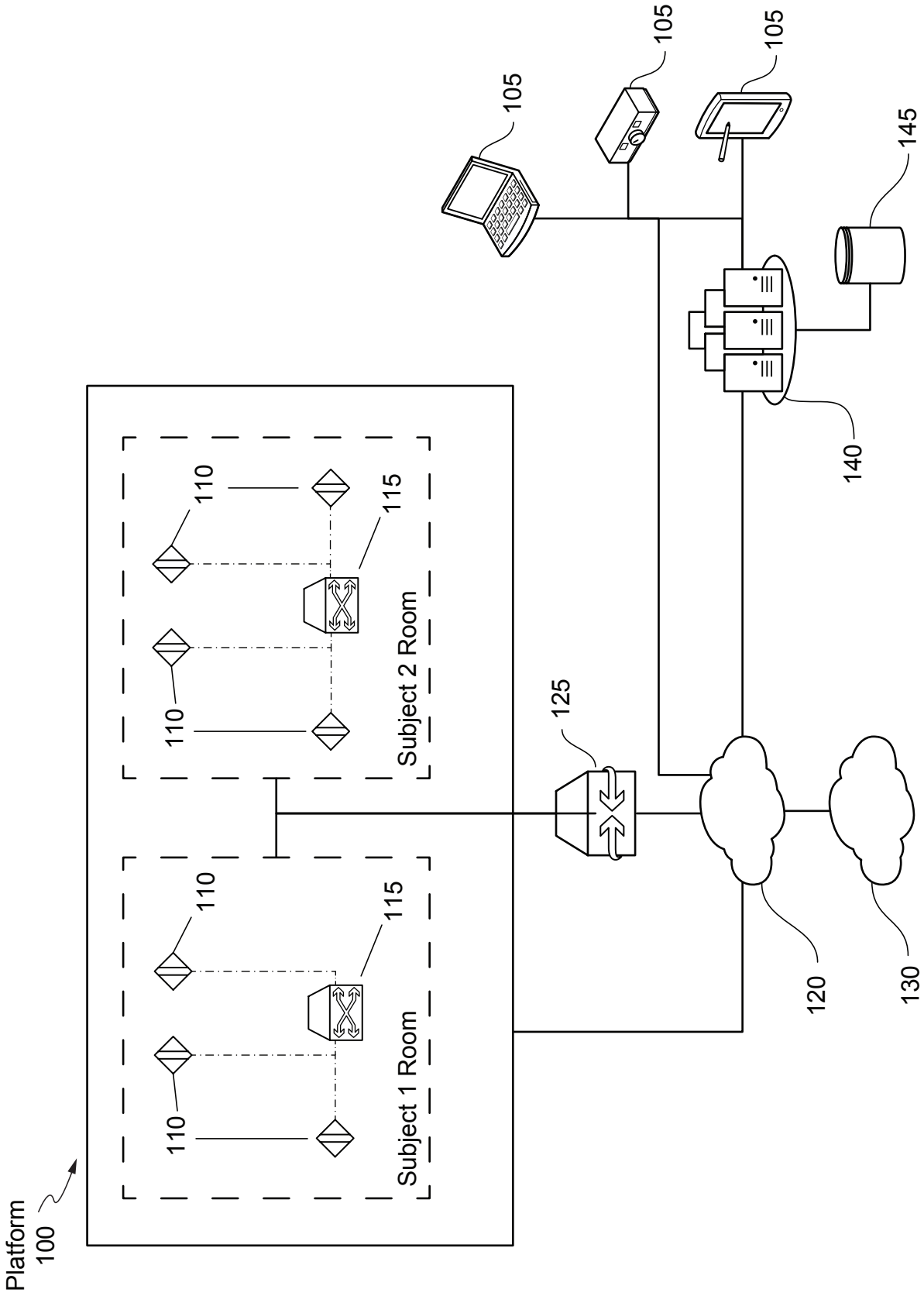

Platform
100
Subject 1 Room
Subject 2 Room
110
115
125
105
140
145
120
130

FIG. 1

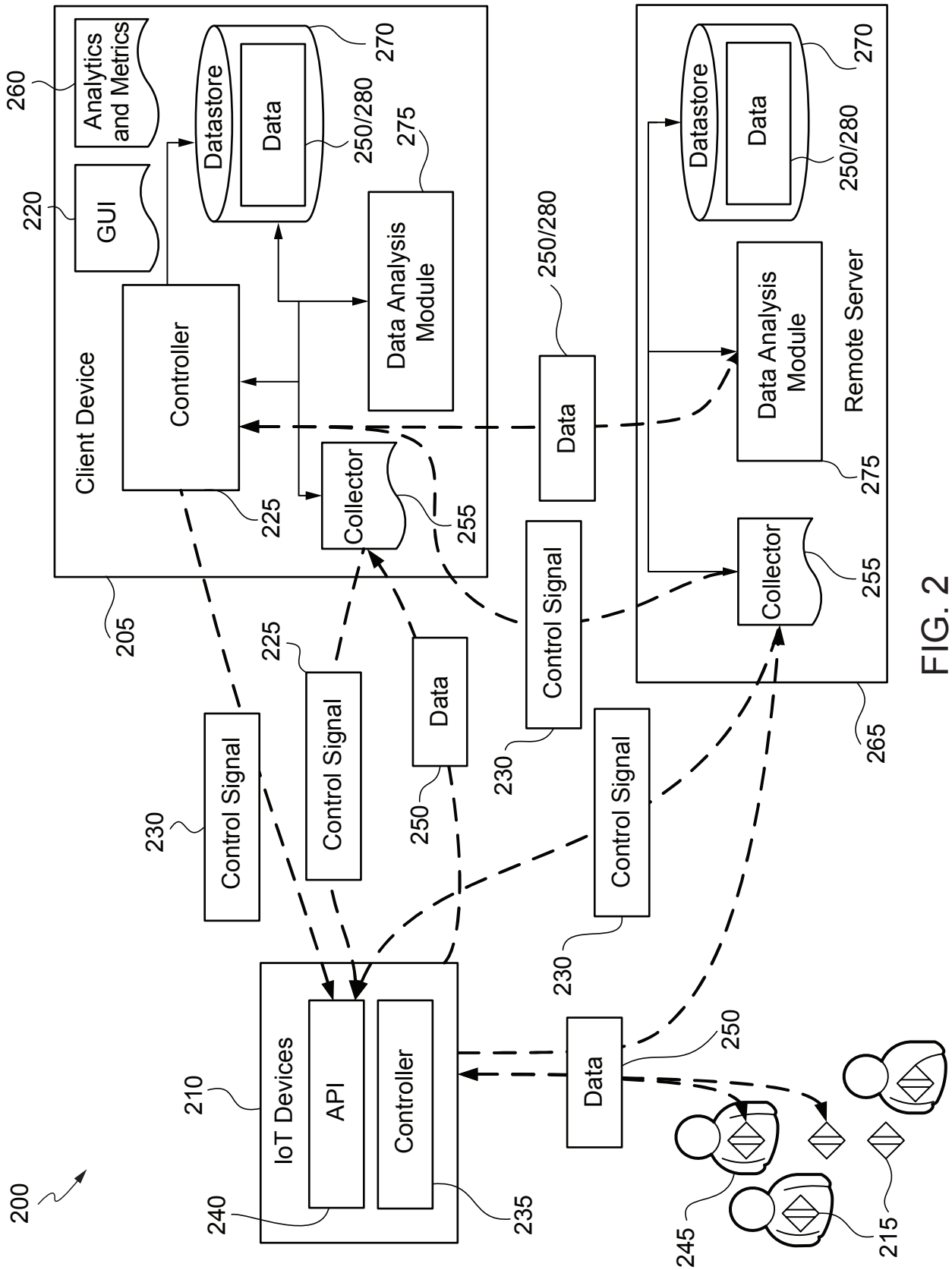

200
IoT Devices
210
API
240
Controller
235
Client Device
205
Analytics and Metrics
260
GUI
220
Datastore
Data
270
250/280
275
Data Analysis Module
Controller
225
Collector
255
Remote Server
265
Control Signal
230
Data
250
245
215

FIG. 2

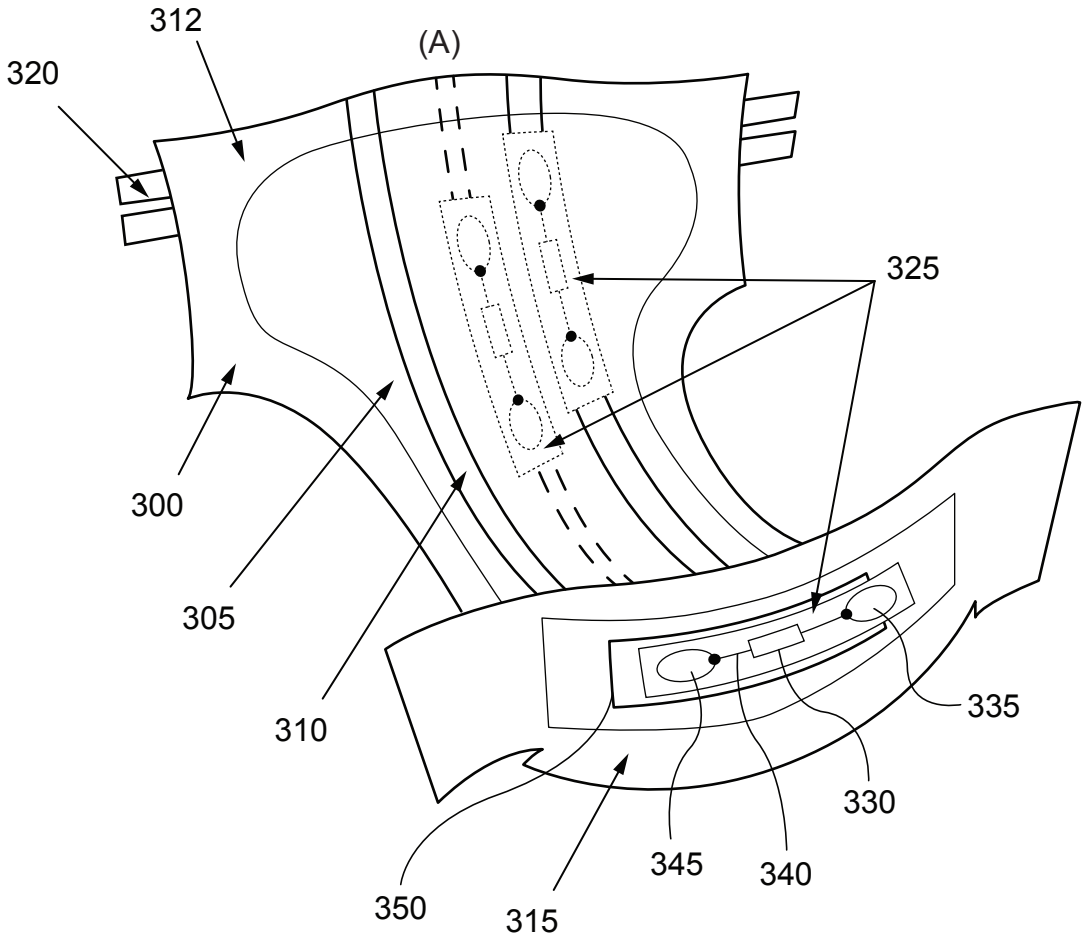



FIG. 3A

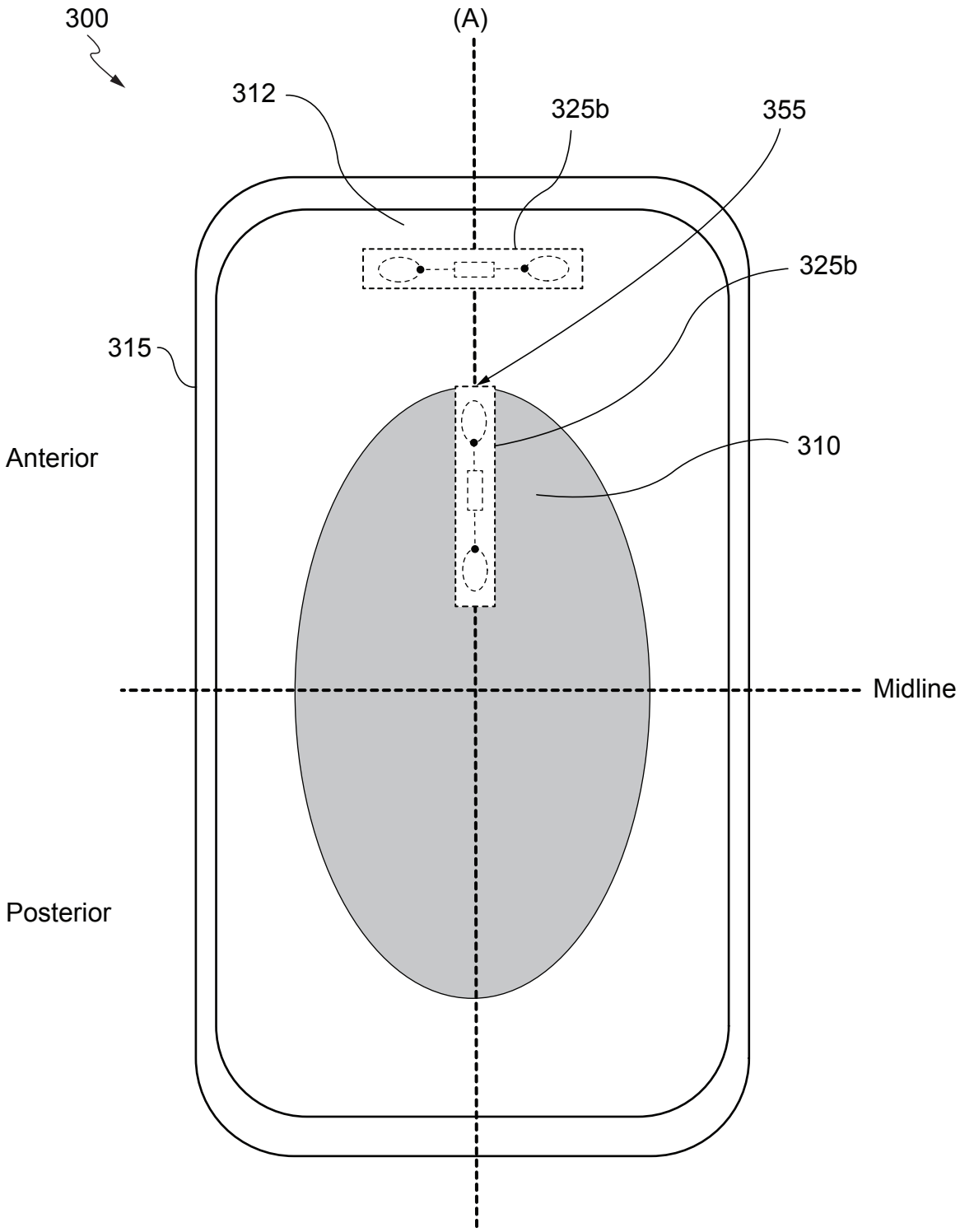



FIG. 3B

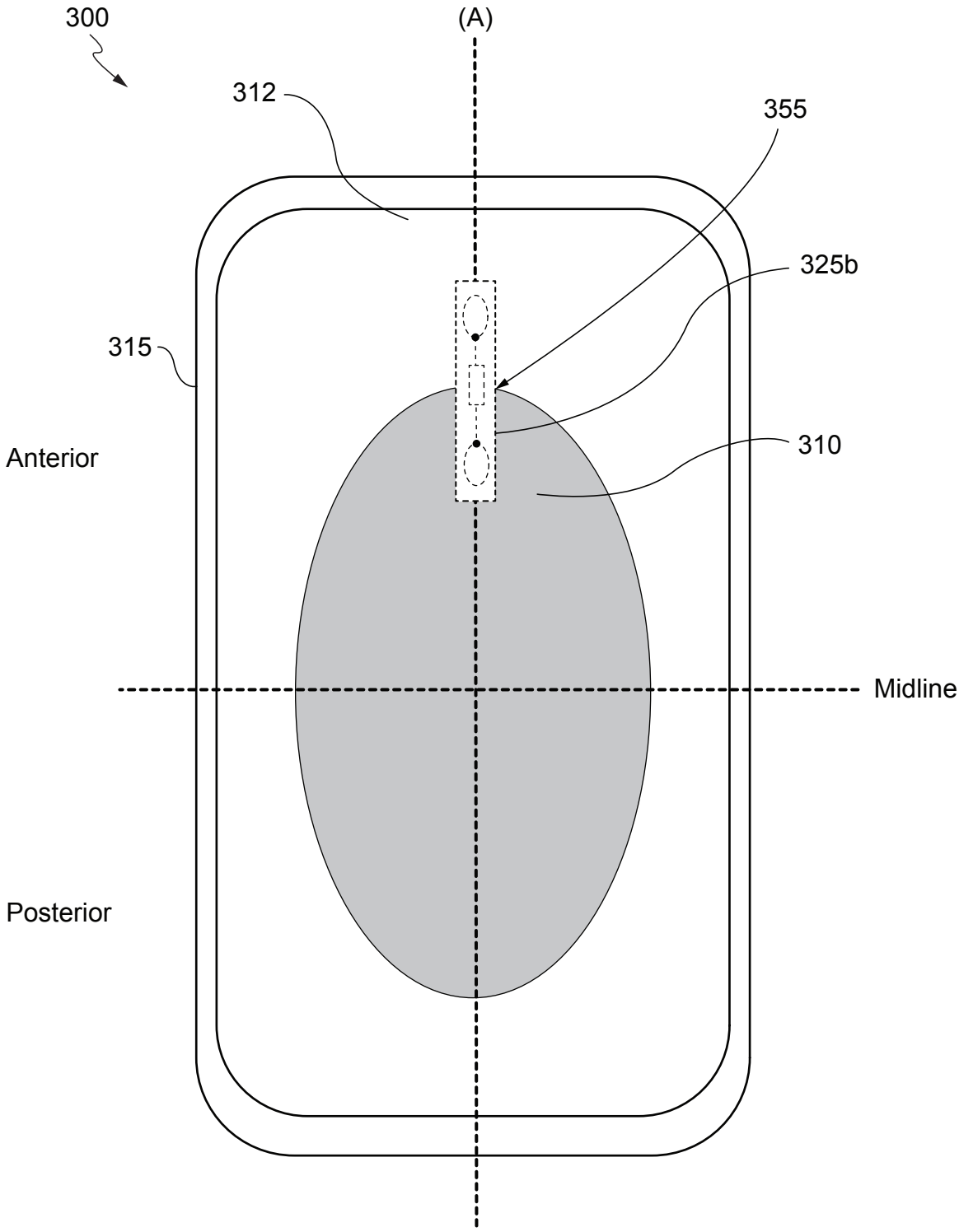



FIG. 3C

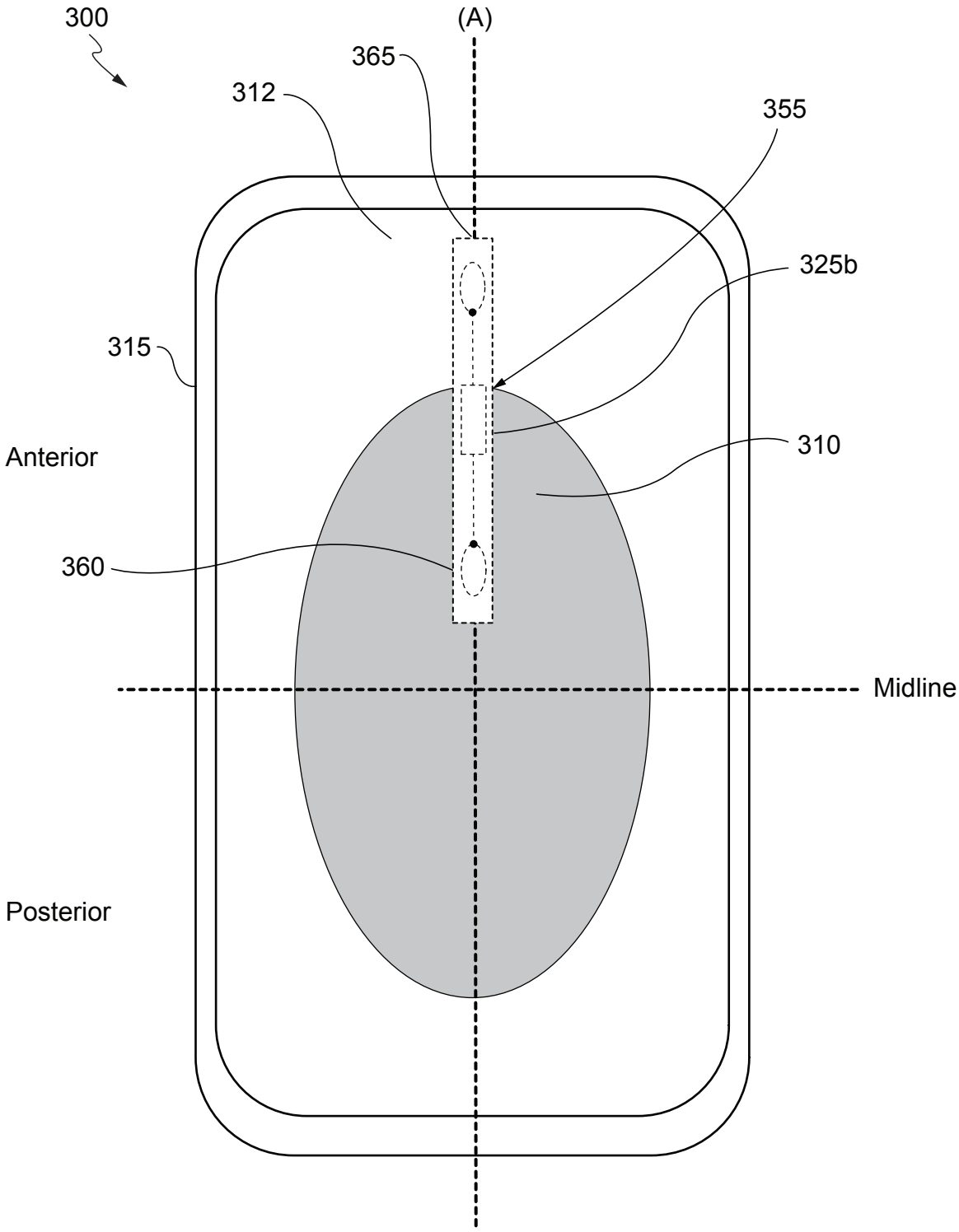

300
(A)
365
312
355
325b
315
Anterior
310
360
Midline
Posterior

FIG. 3D

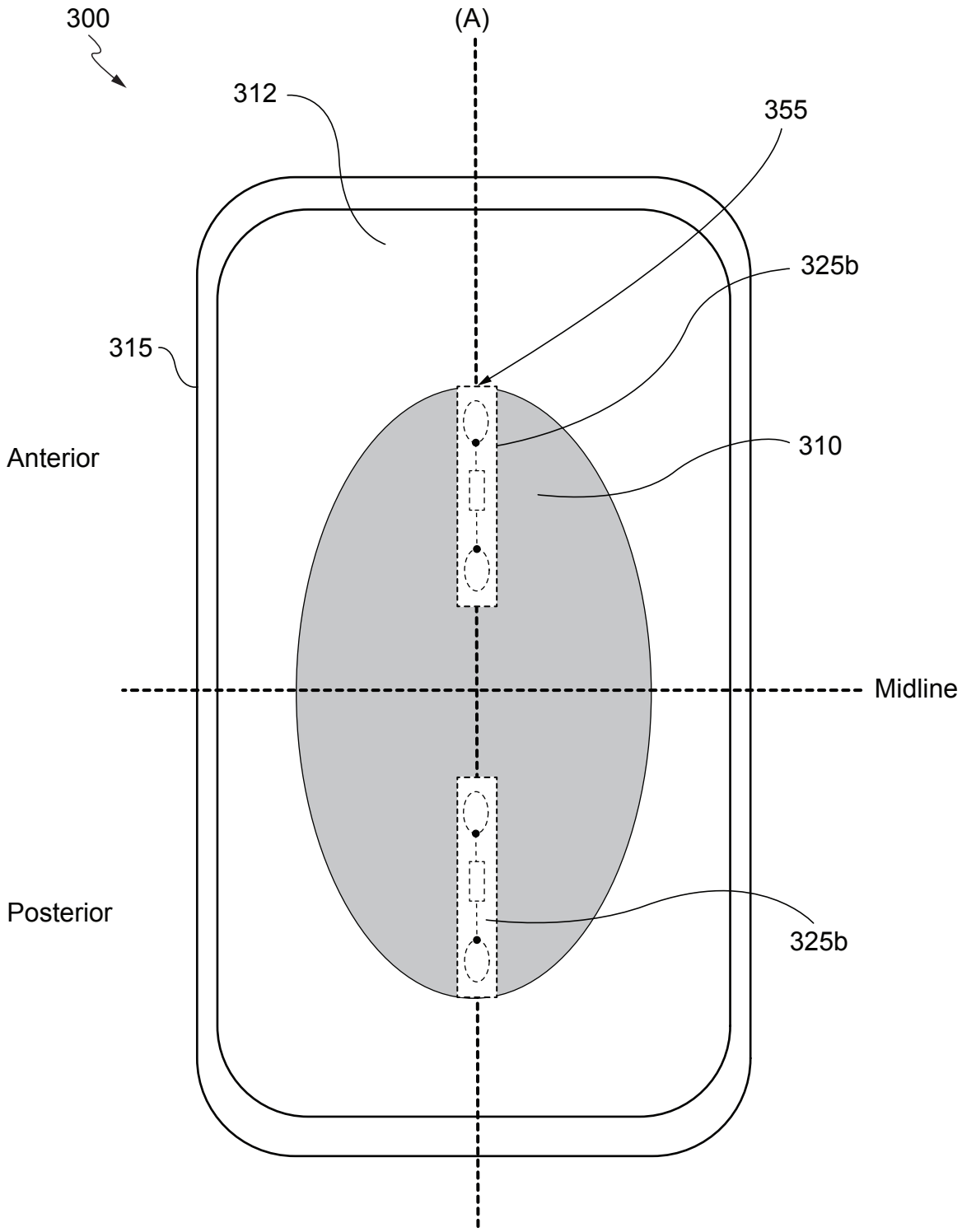



FIG. 3E

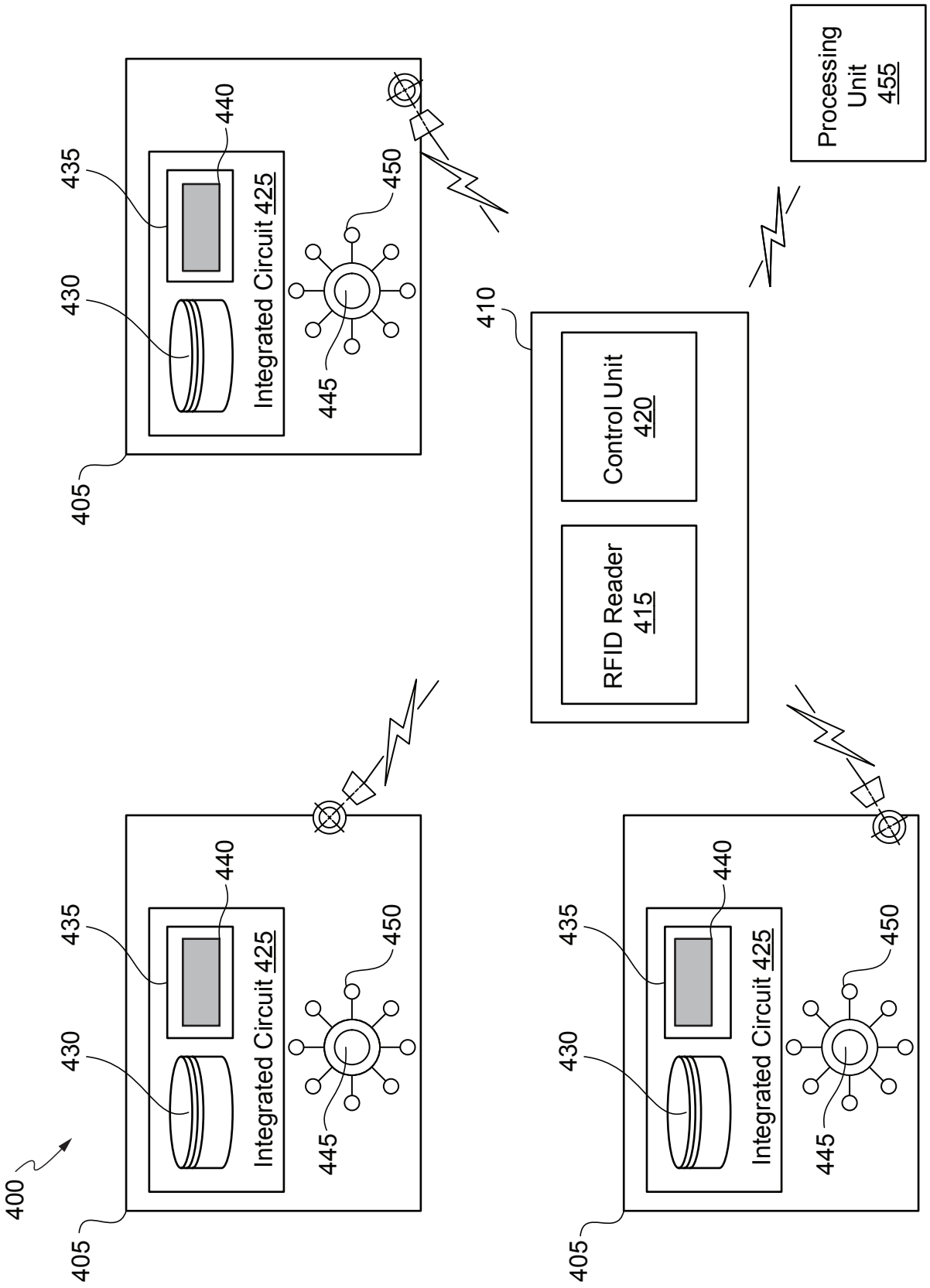

400
405
430
435
440
445
450
Integrated Circuit 425
410
RFID Reader 415
Control Unit 420
Processing Unit 455

FIG. 4A

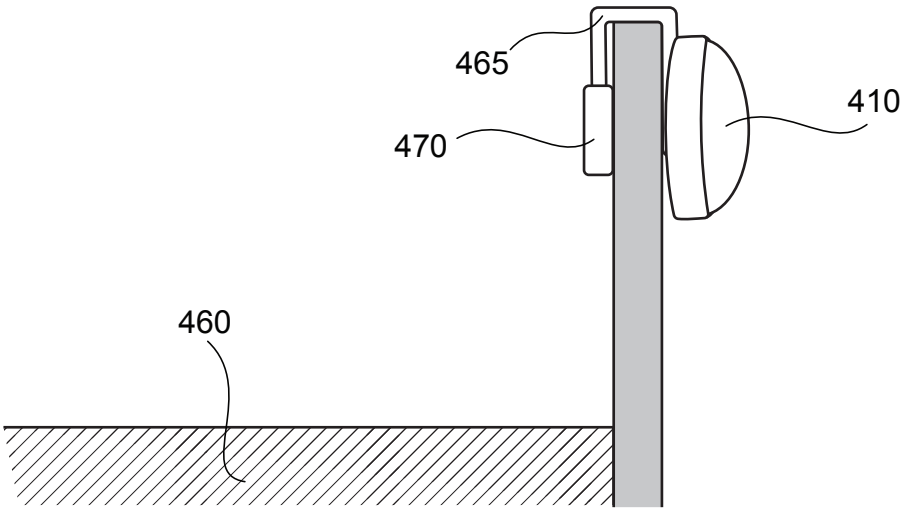



FIG. 4B

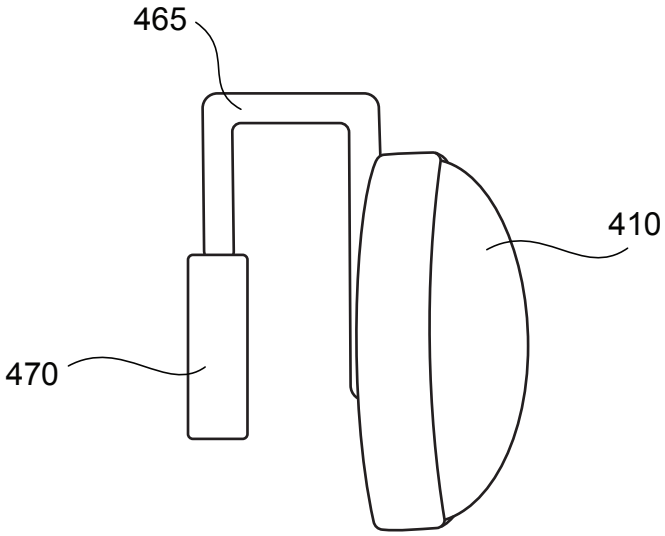



FIG. 4C

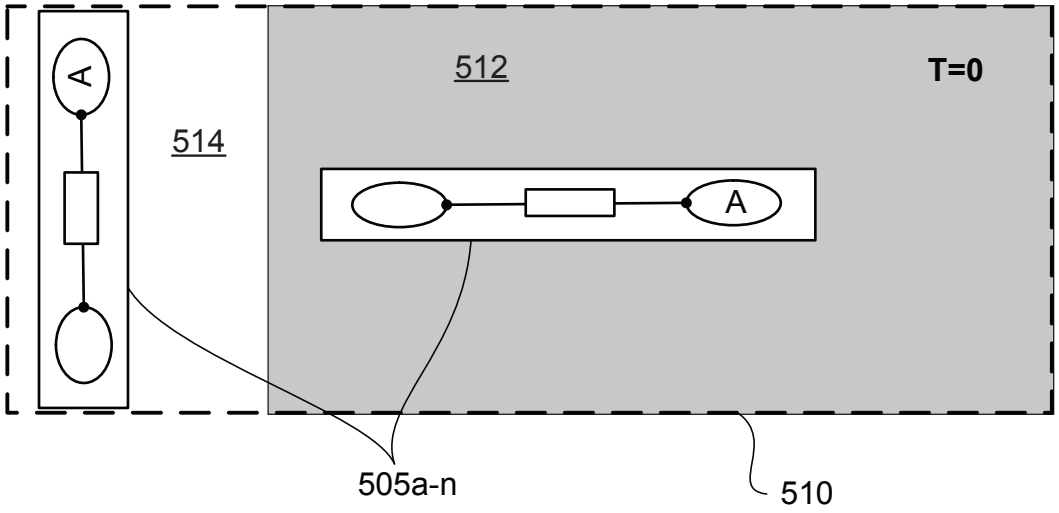



FIG. 5A

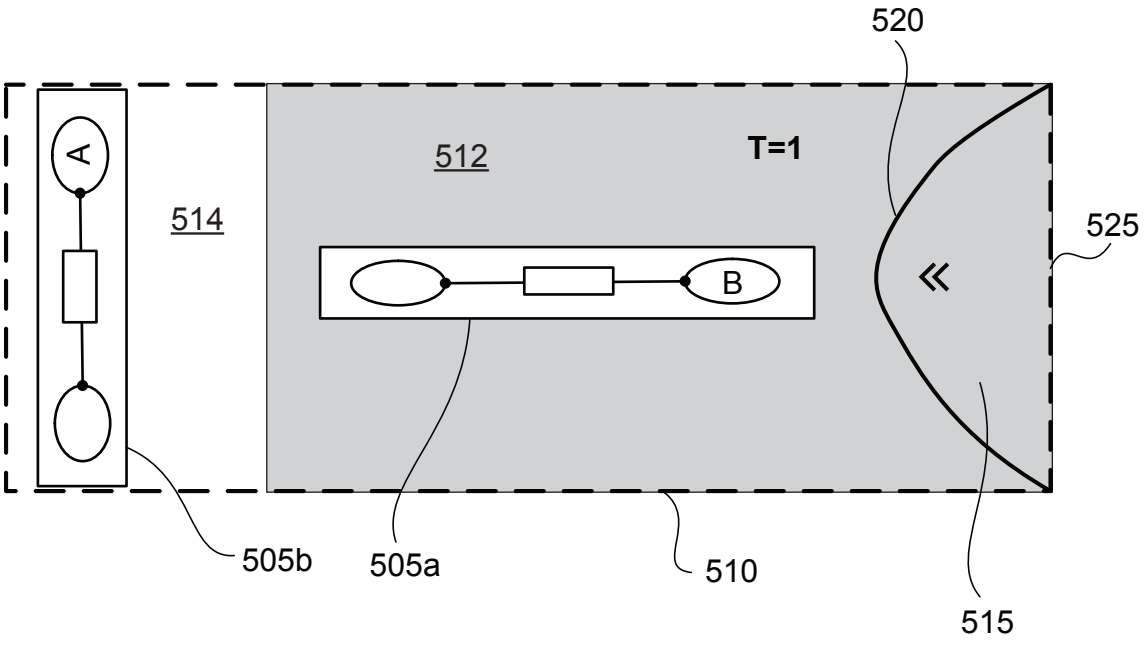



FIG. 5B

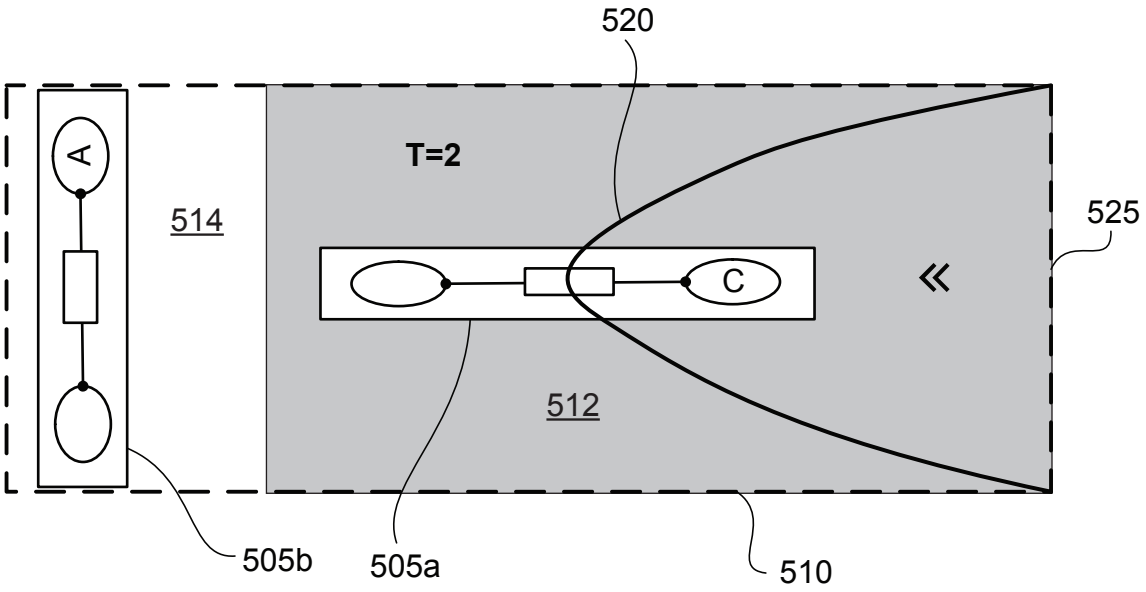

520
T=2
514
525
A
C
512
505b
505a
510

FIG. 5C

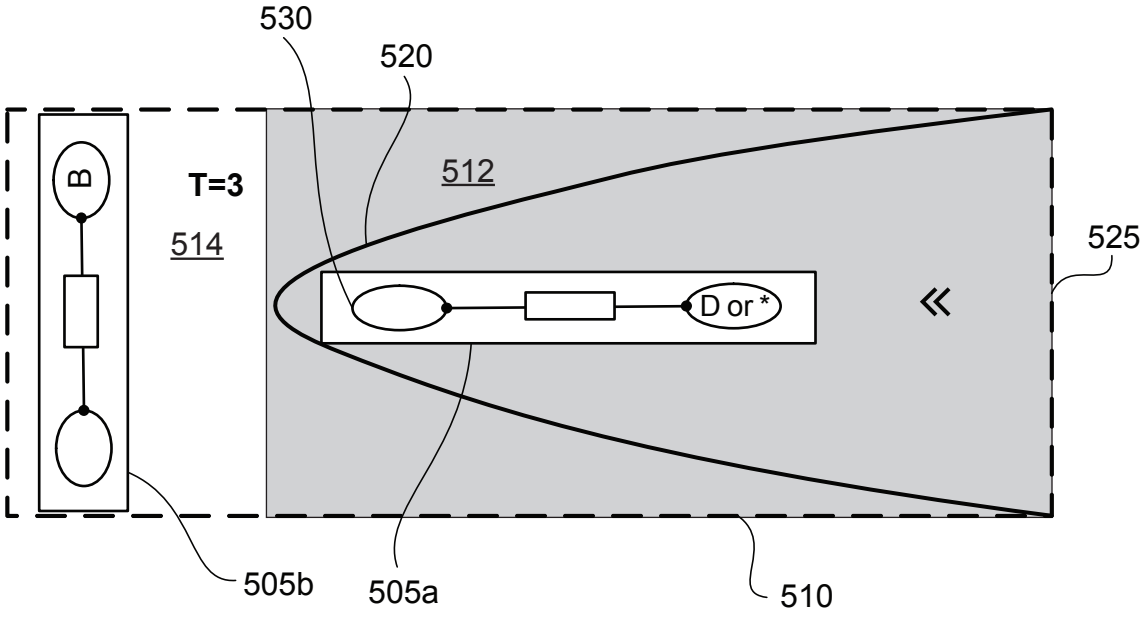

530
520
512
T=3
514
525
B
D or *
505b
505a
510

FIG. 5D

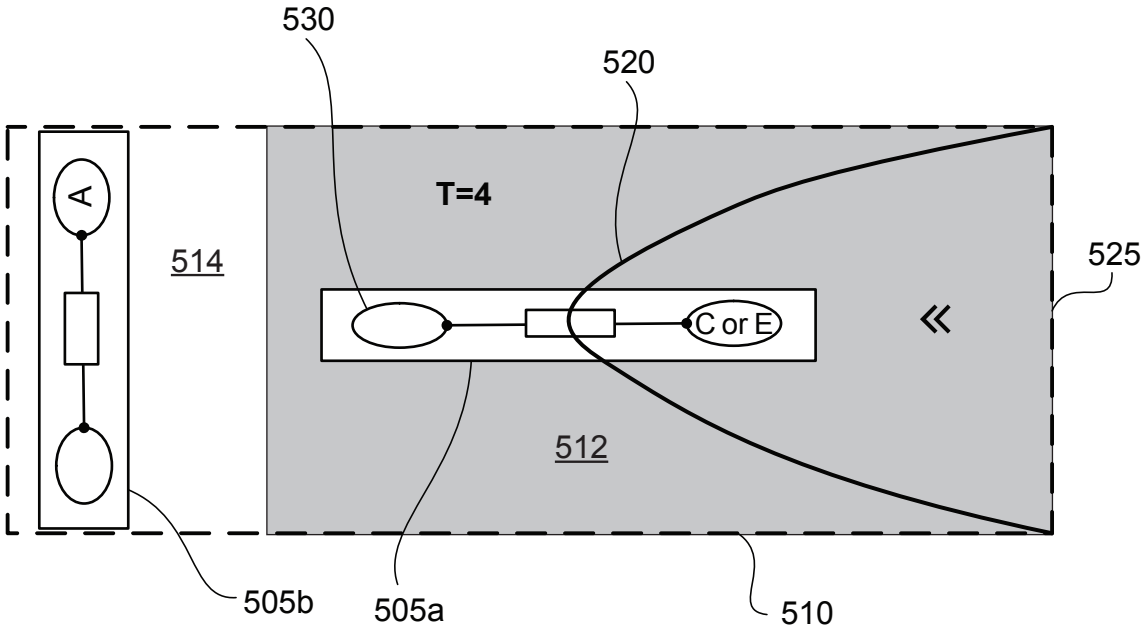

530
520
T=4
514
525
A
C or E
512
505b
505a
510

FIG. 5E

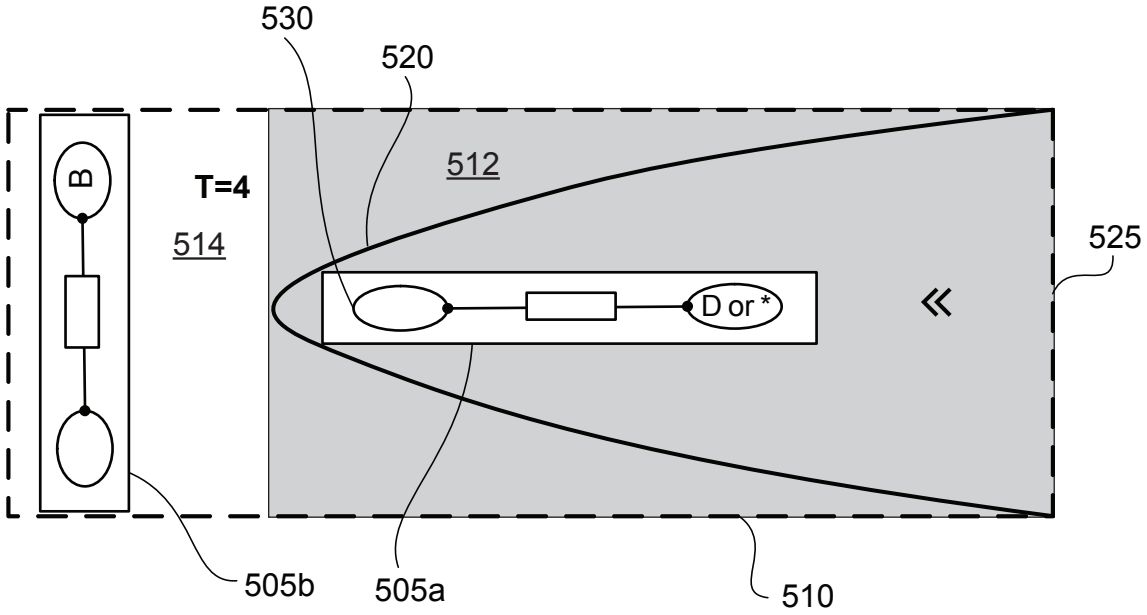

530
520
512
T=4
514
525
B
D or *
505b
505a
510

FIG. 5F

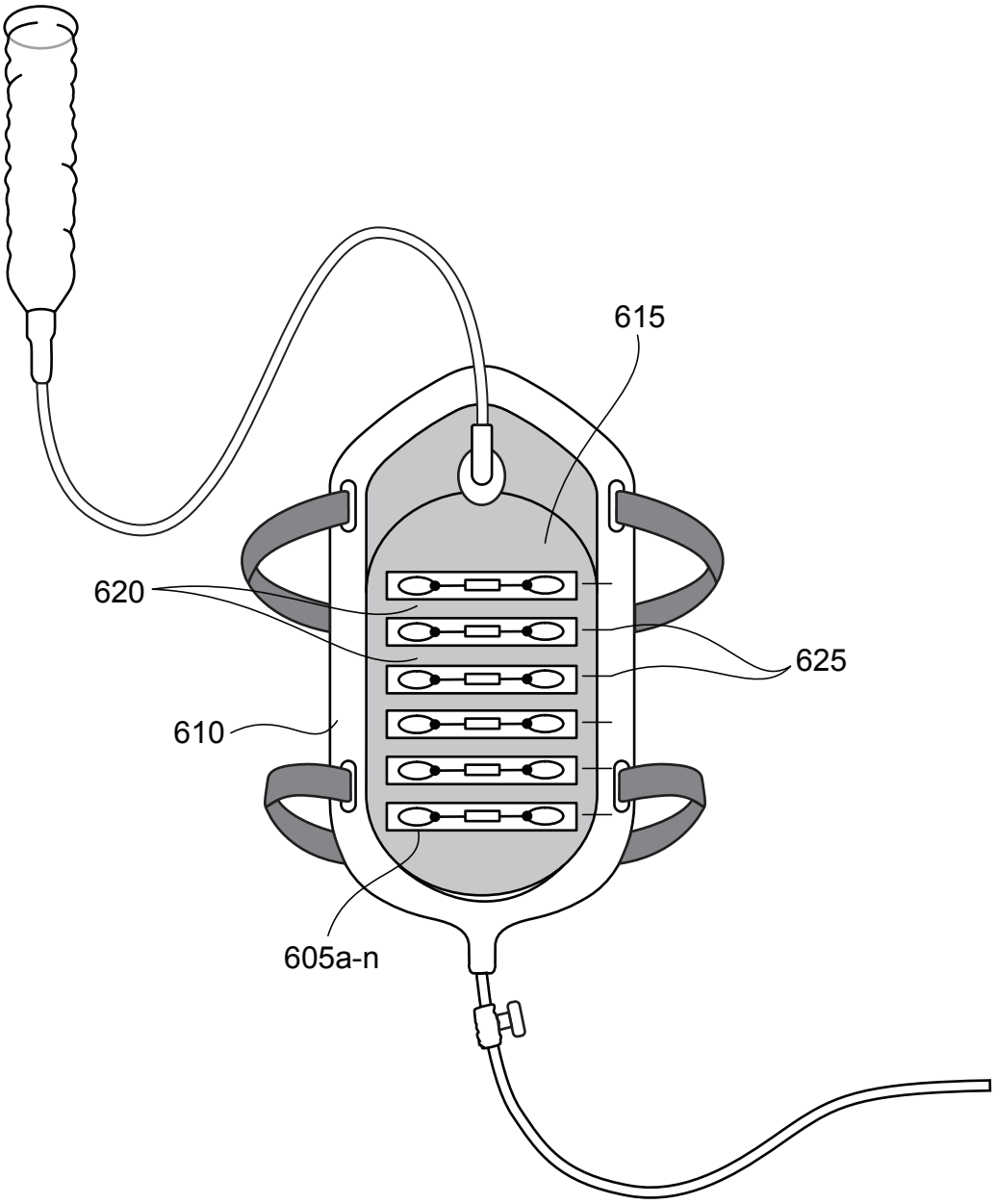



FIG. 6A

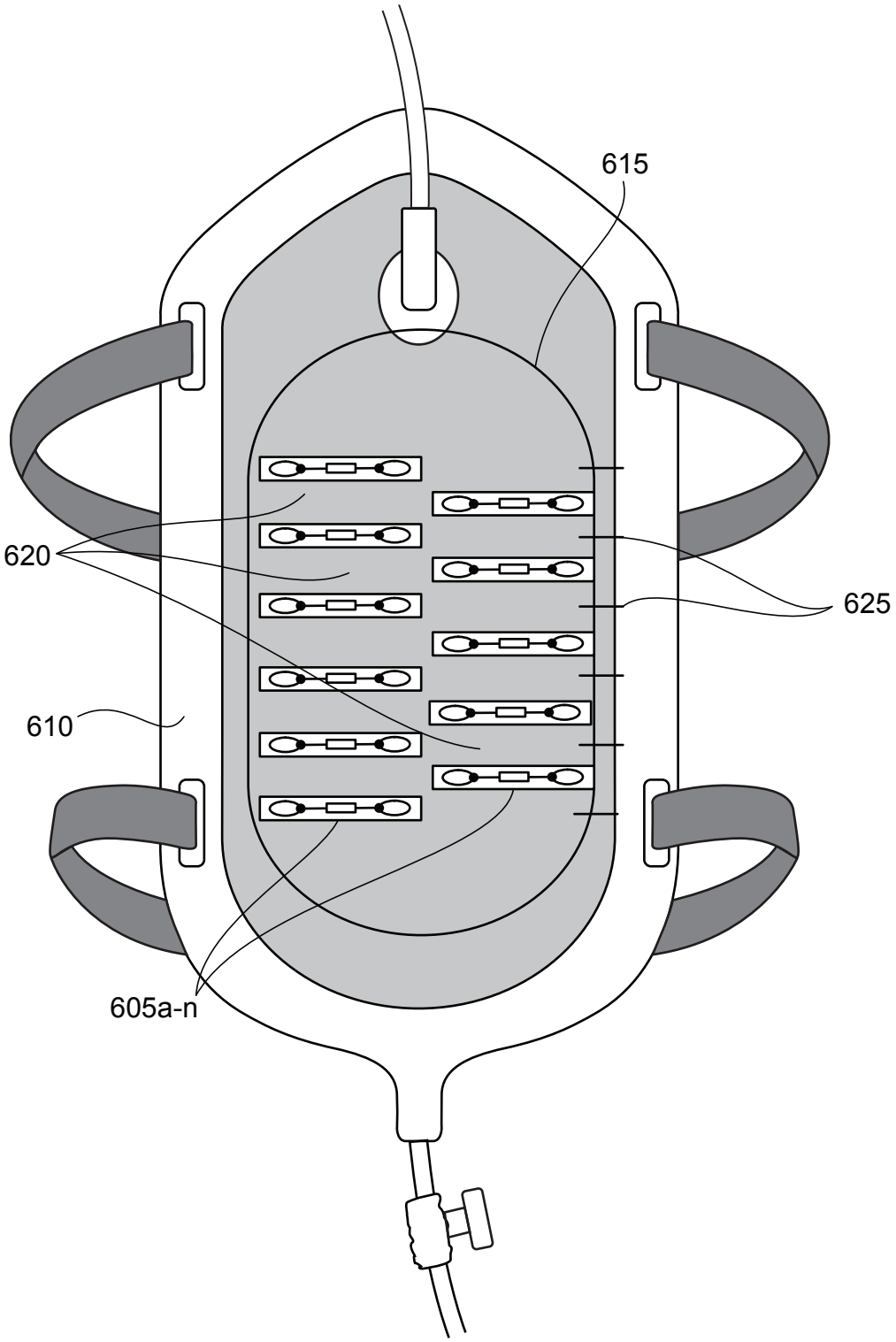



FIG. 6B

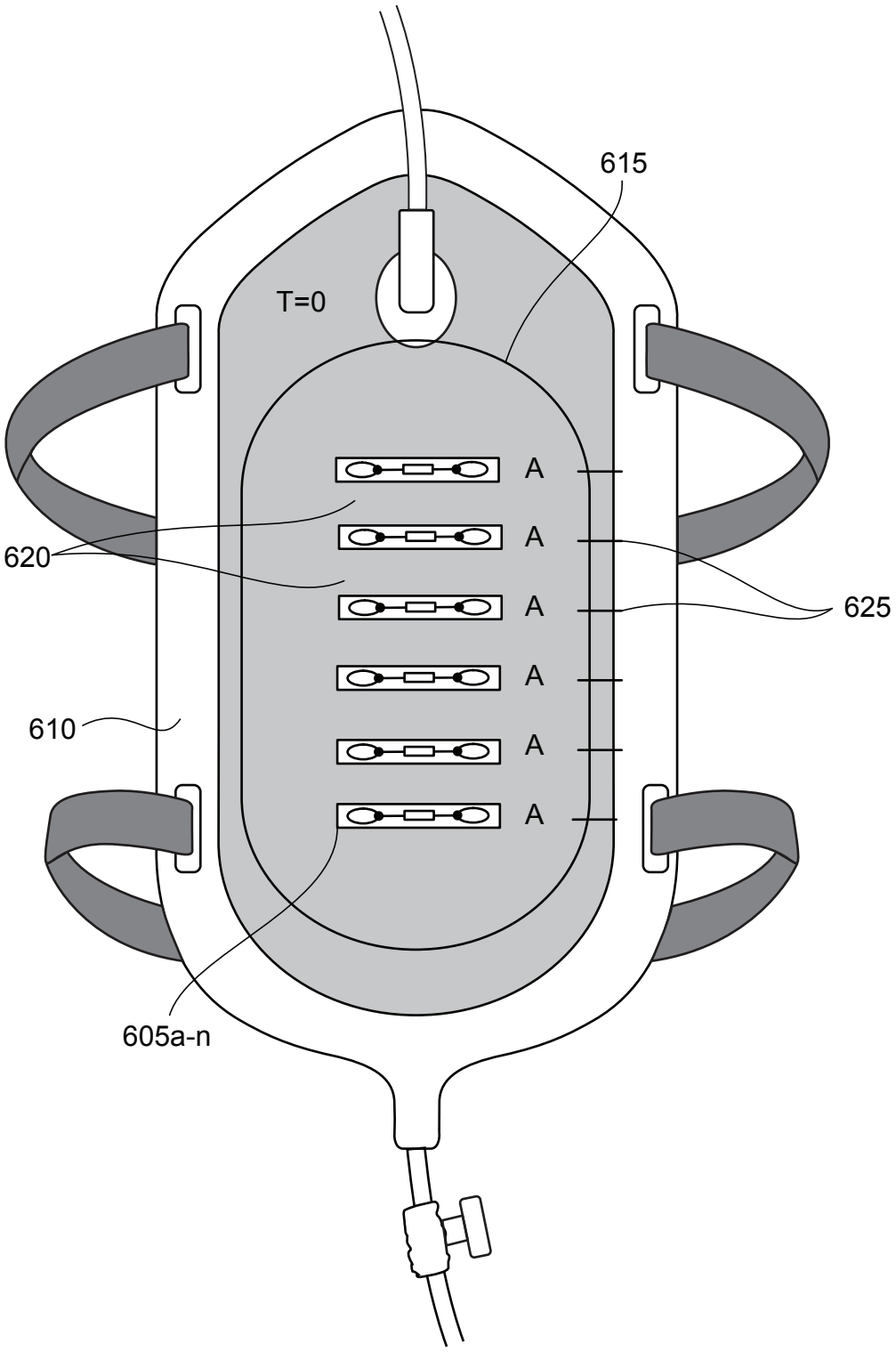



FIG. 6C

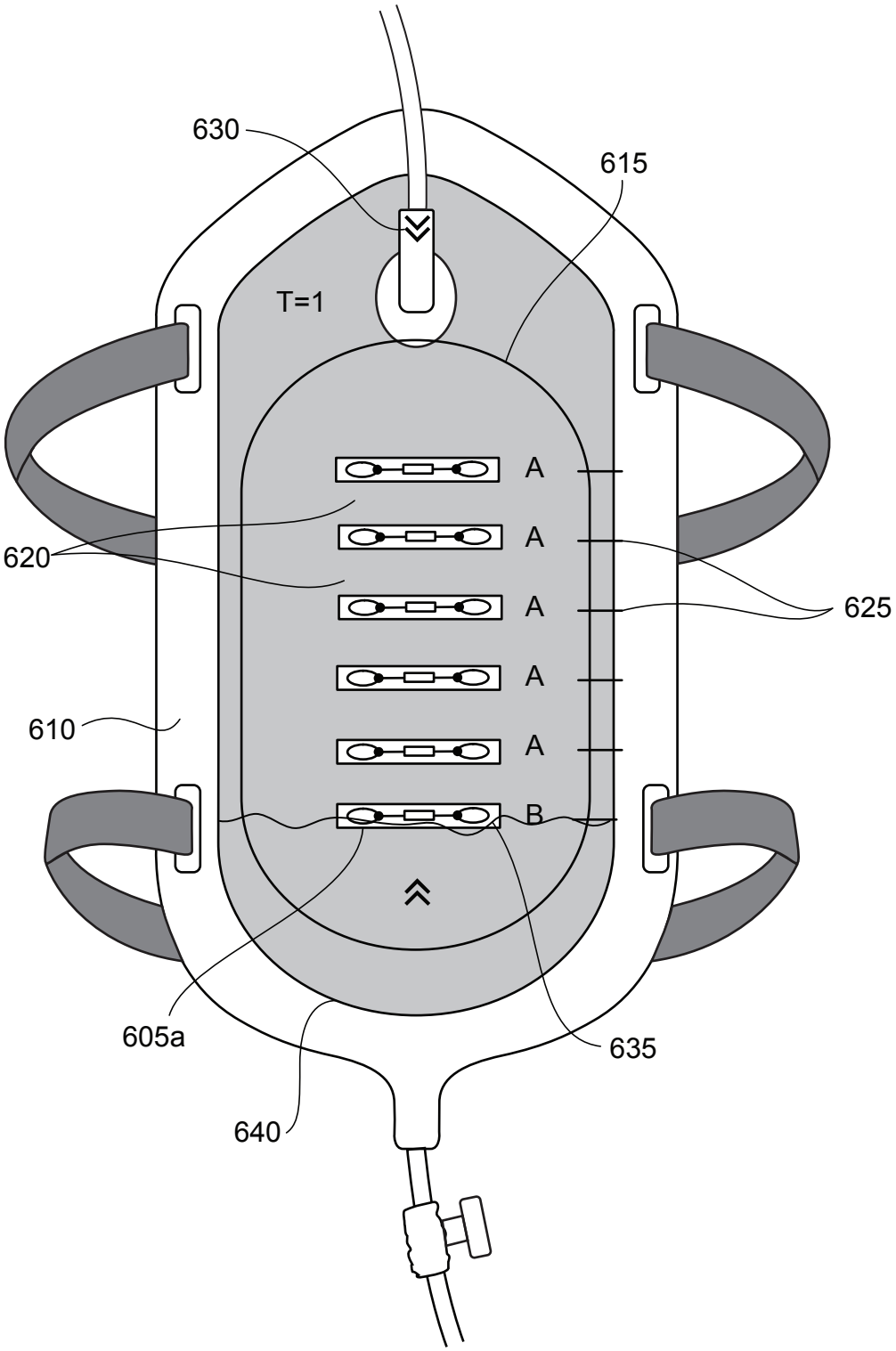



FIG. 6D

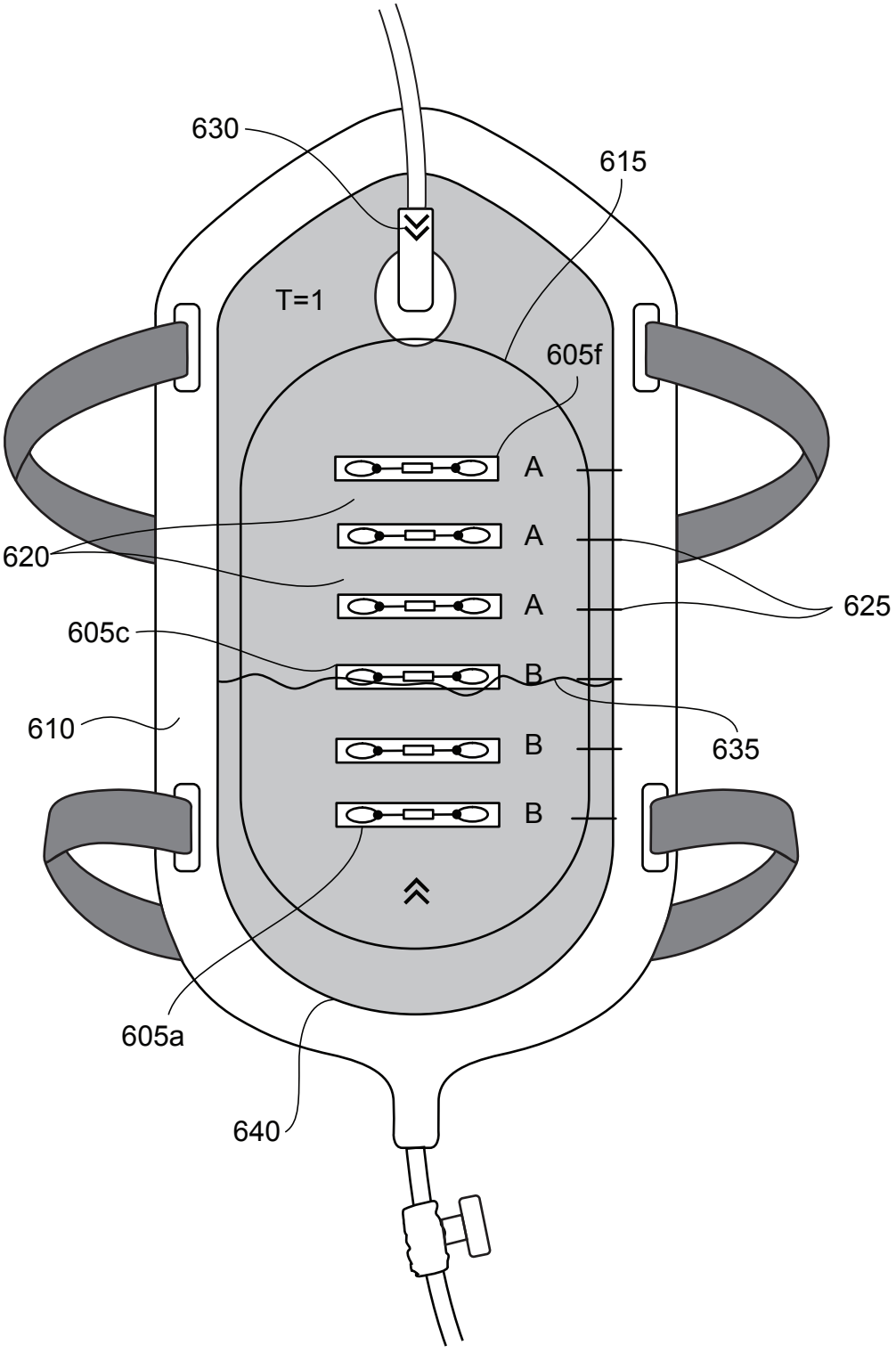



FIG. 6E

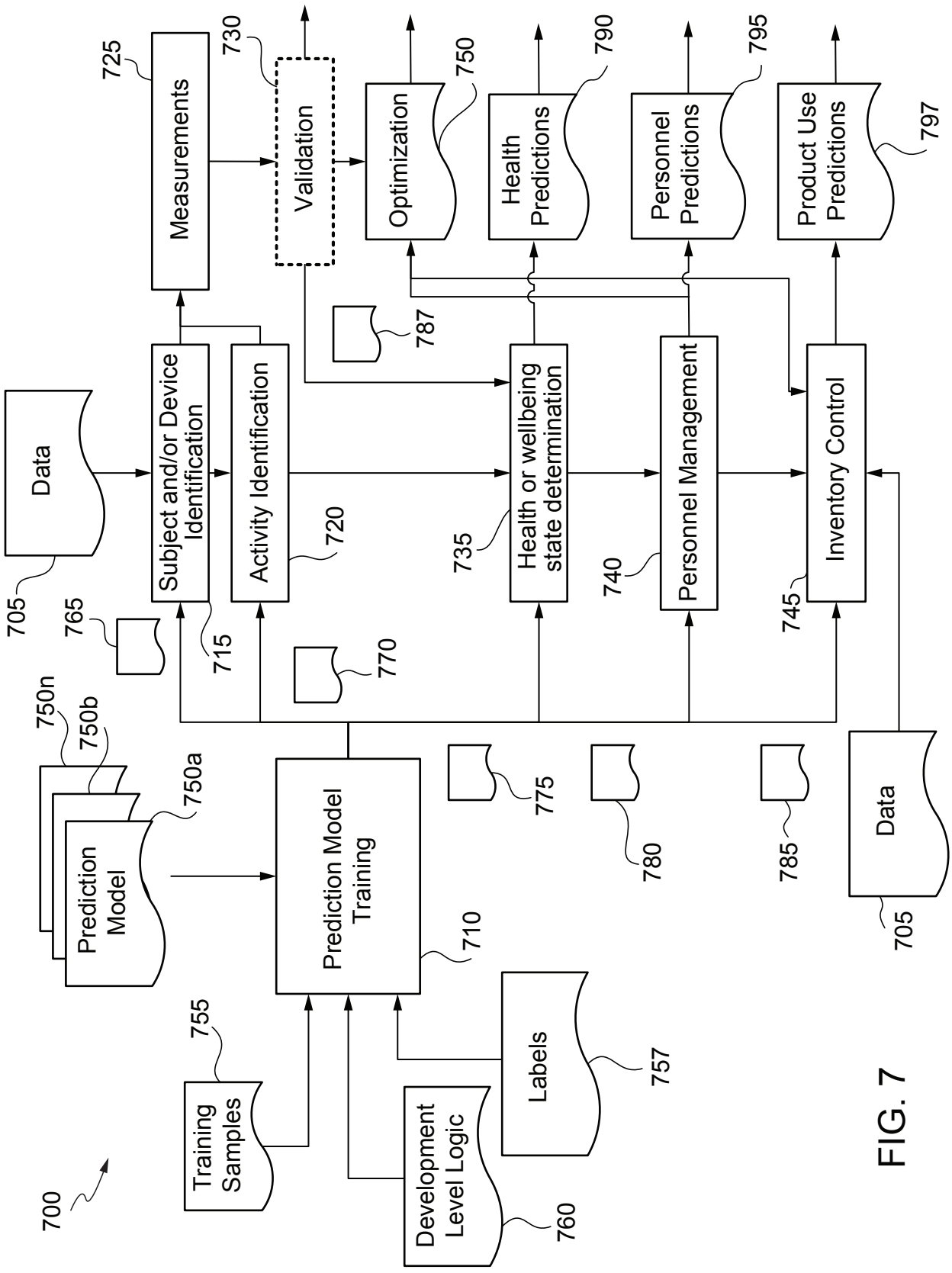

700
Training Samples
755
Development Level Logic
760
Labels
757
Prediction Model Training
710
Prediction Model
750a
750b
750n
Data
705
Subject and/or Device Identification
715
Activity Identification
720
Health or wellbeing state determination
735
Personnel Management
740
Inventory Control
745
Measurements
725
Validation
730
Optimization
750
Health Predictions
790
Personnel Predictions
795
Product Use Predictions
797
765
770
775
780
785
787
Data
705

FIG. 7

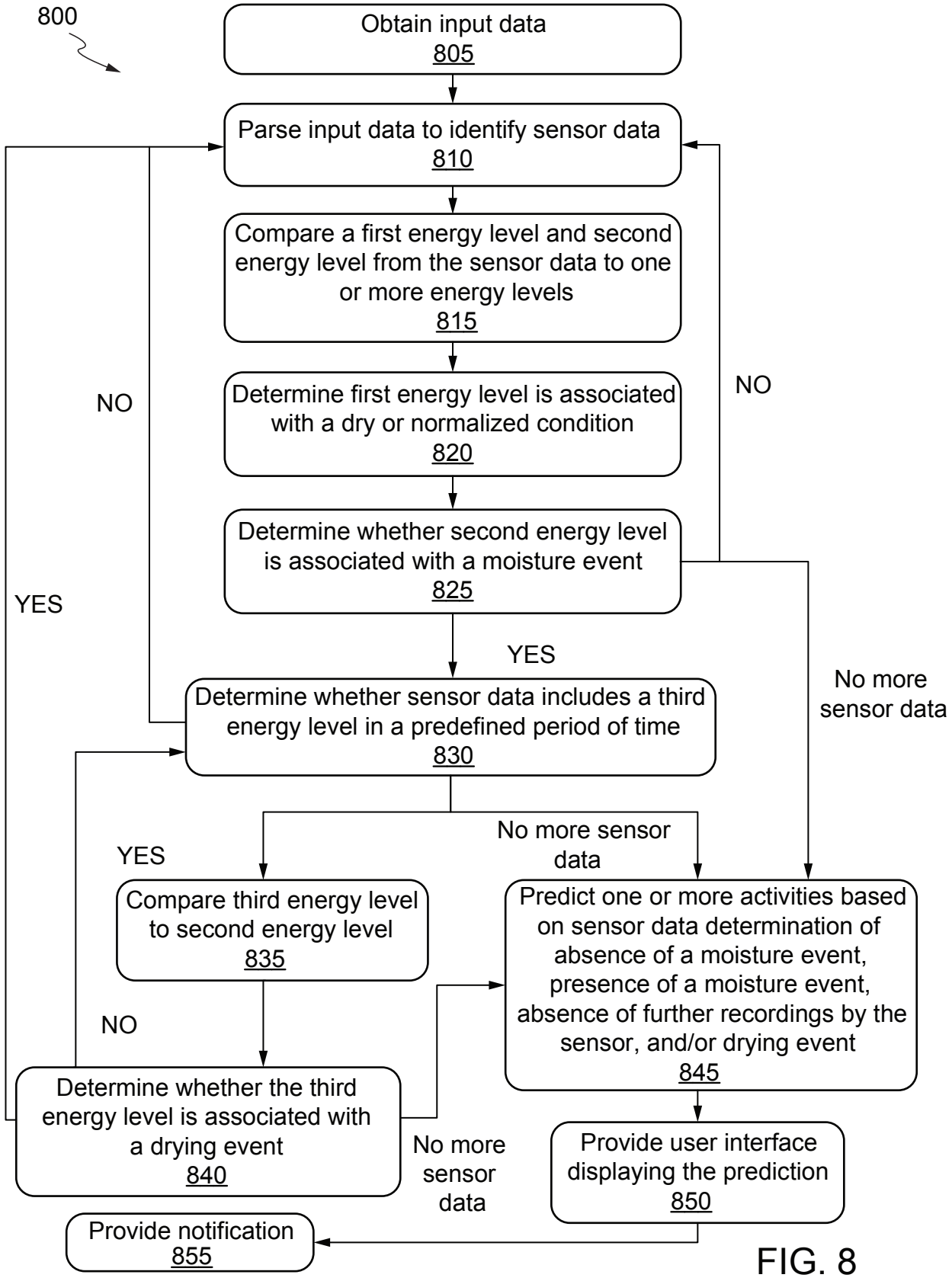

800
Obtain input data
805
Parse input data to identify sensor data
810
Compare a first energy level and second energy level from the sensor data to one or more energy levels
815
Determine first energy level is associated with a dry or normalized condition
820
Determine whether second energy level is associated with a moisture event
825
Determine whether sensor data includes a third energy level in a predefined period of time
830
Compare third energy level to second energy level
835
Determine whether the third energy level is associated with a drying event
840
Predict one or more activities based on sensor data determination of absence of a moisture event, presence of a moisture event, absence of further recordings by the sensor, and/or drying event
845
Provide user interface displaying the prediction
850
Provide notification
855
NO
YES
NO
YES
No more sensor data
YES
No more sensor data
NO
No more sensor data

FIG. 8

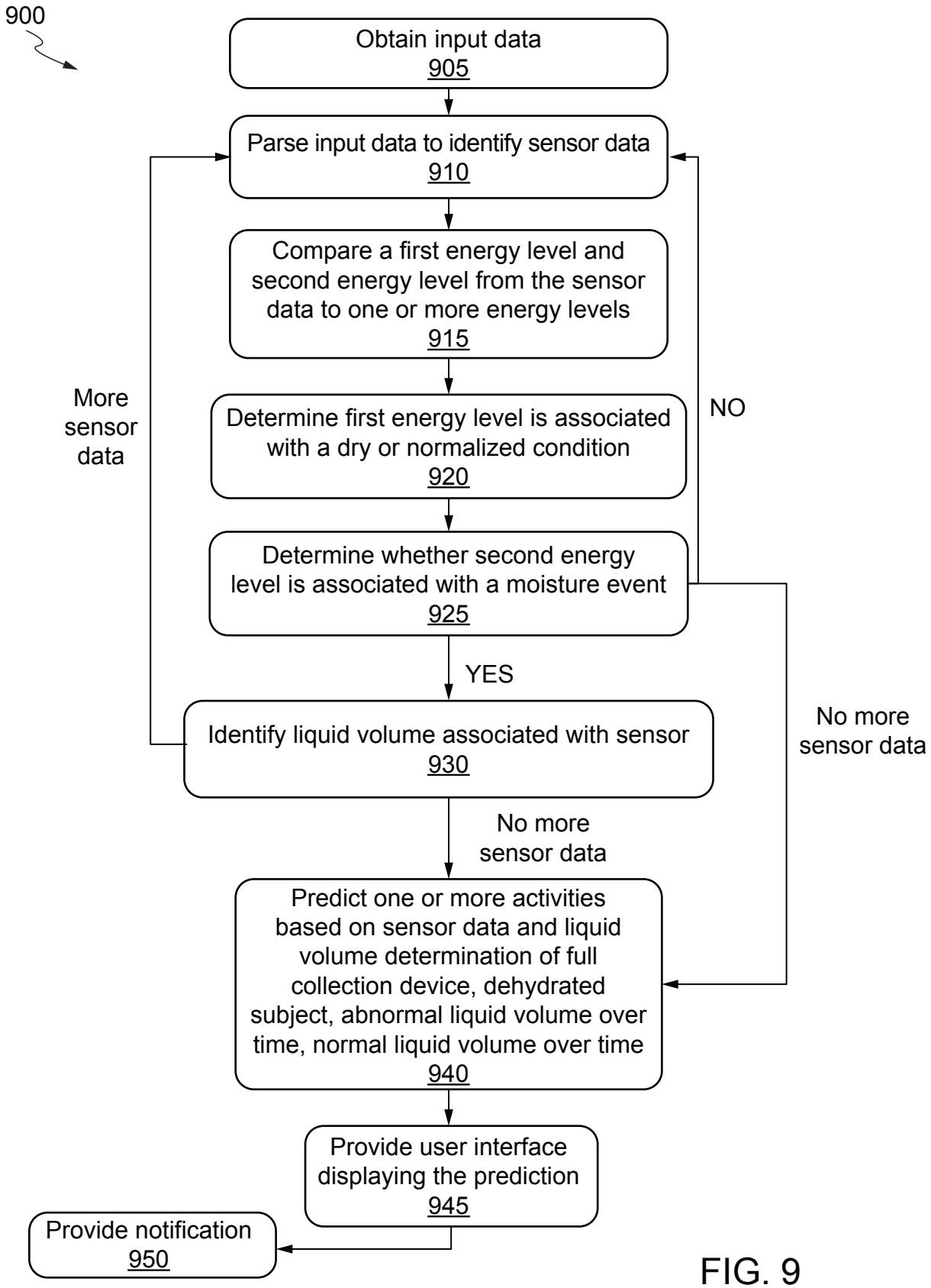

900
Obtain input data
905
Parse input data to identify sensor data
910
Compare a first energy level and second energy level from the sensor data to one or more energy levels
915
Determine first energy level is associated with a dry or normalized condition
920
Determine whether second energy level is associated with a moisture event
925
More sensor data
NO
YES
Identify liquid volume associated with sensor
930
No more sensor data
No more sensor data
Predict one or more activities based on sensor data and liquid volume determination of full collection device, dehydrated subject, abnormal liquid volume over time, normal liquid volume over time
940
Provide user interface displaying the prediction
945
Provide notification
950

FIG. 9

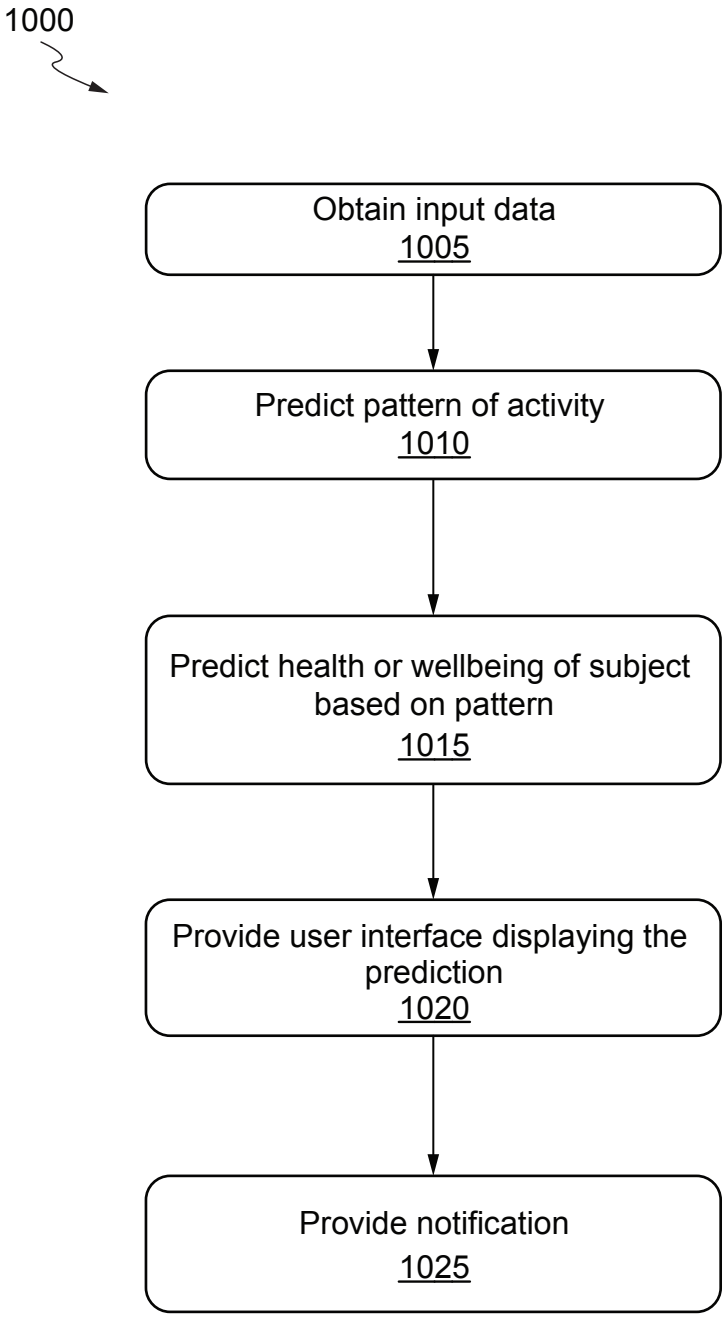

1000
Obtain input data
1005
Predict pattern of activity
1010
Predict health or wellbeing of subject based on pattern
1015
Provide user interface displaying the prediction
1020
Provide notification
1025

FIG. 10

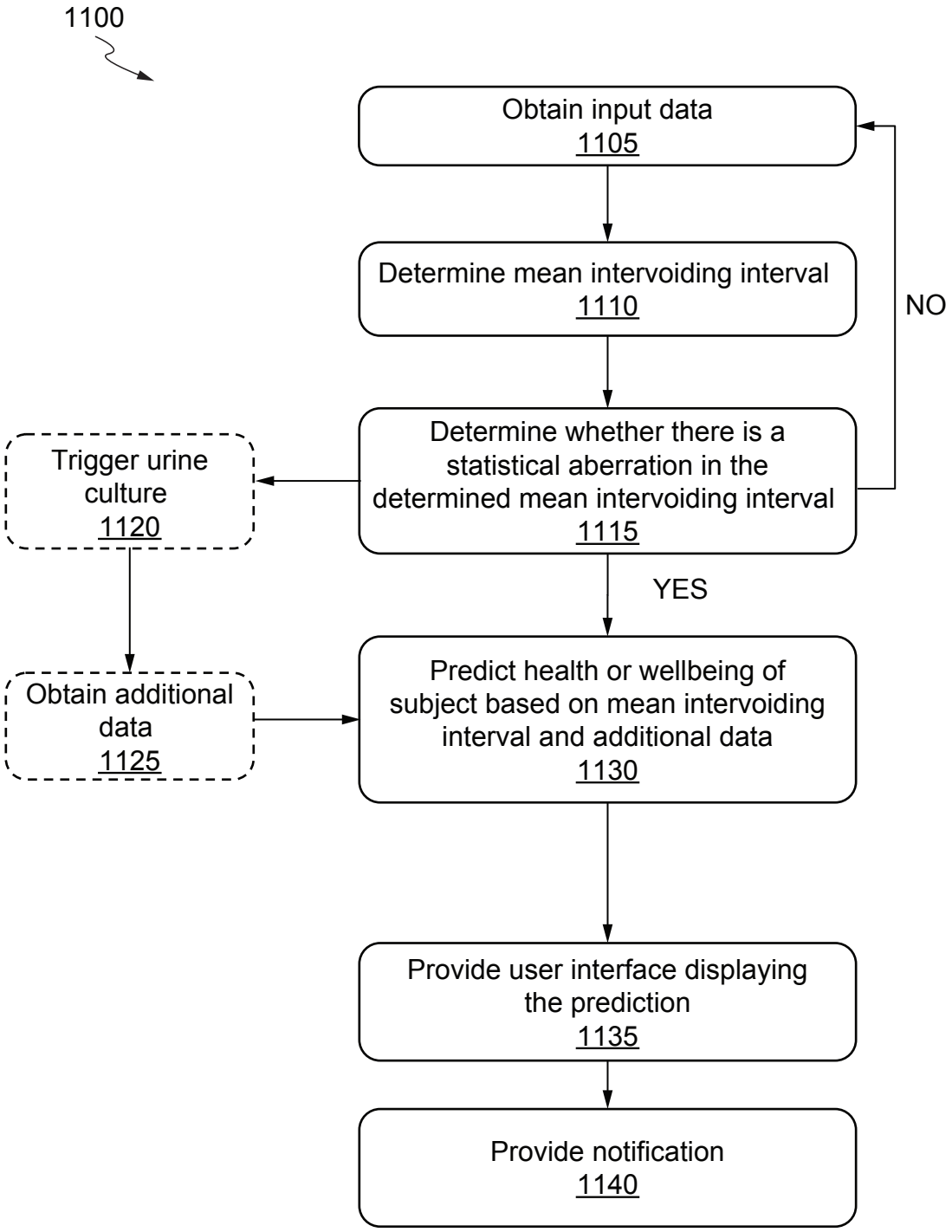

1100
Obtain input data
1105
Determine mean intervoiding interval
1110
NO
Determine whether there is a statistical aberration in the determined mean intervoiding interval
1115
Trigger urine culture
1120
YES
Obtain additional data
1125
Predict health or wellbeing of subject based on mean intervoiding interval and additional data
1130
Provide user interface displaying the prediction
1135
Provide notification
1140

FIG. 11

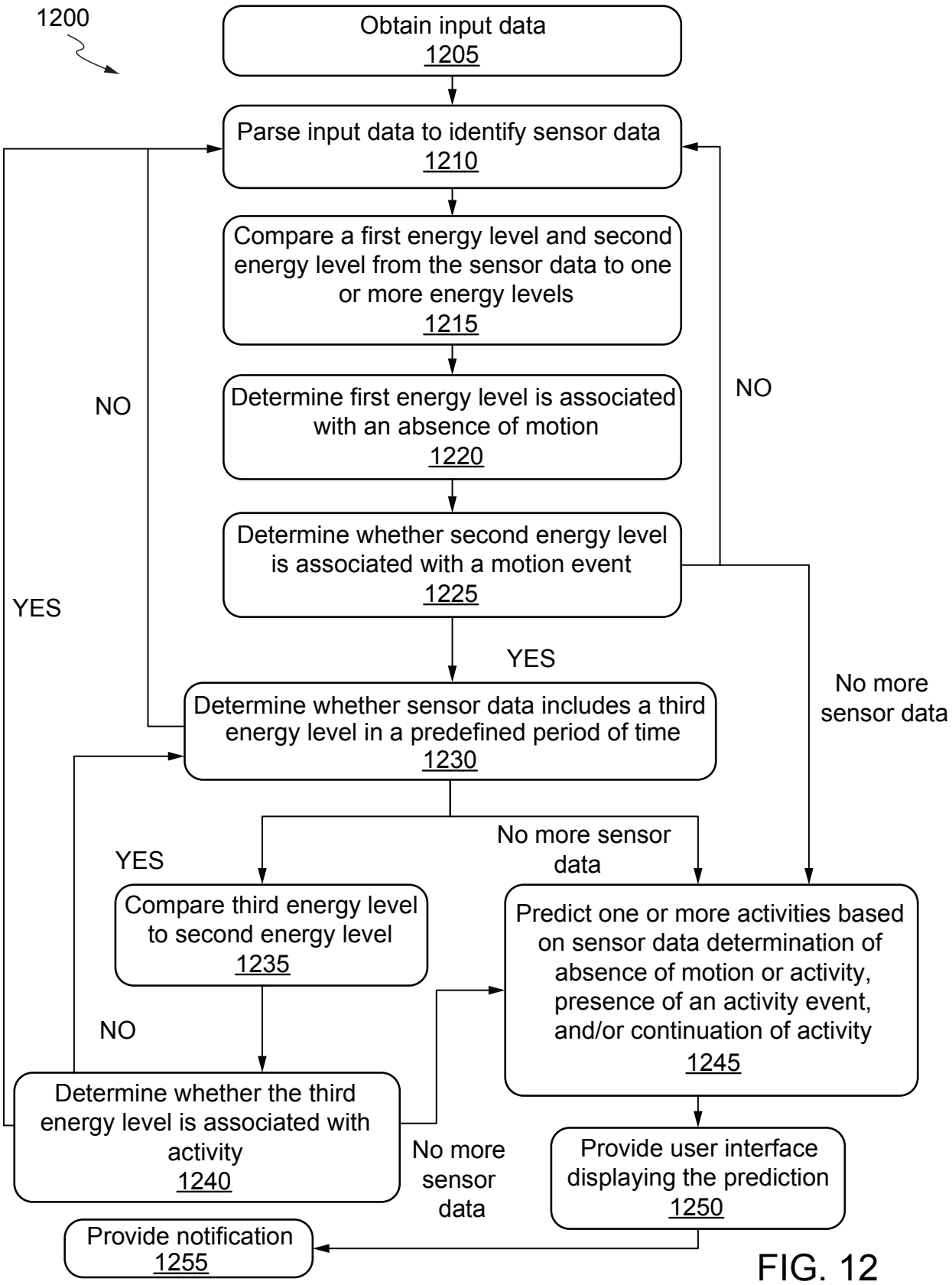

1200
Obtain input data
1205
Parse input data to identify sensor data
1210
Compare a first energy level and second energy level from the sensor data to one or more energy levels
1215
Determine first energy level is associated with an absence of motion
1220
Determine whether second energy level is associated with a motion event
1225
NO
YES
NO
YES
No more sensor data
Determine whether sensor data includes a third energy level in a predefined period of time
1230
YES
No more sensor data
Compare third energy level to second energy level
1235
NO
Predict one or more activities based on sensor data determination of absence of motion or activity, presence of an activity event, and/or continuation of activity
1245
Determine whether the third energy level is associated with activity
1240
No more sensor data
Provide user interface displaying the prediction
1250
Provide notification
1255

FIG. 12

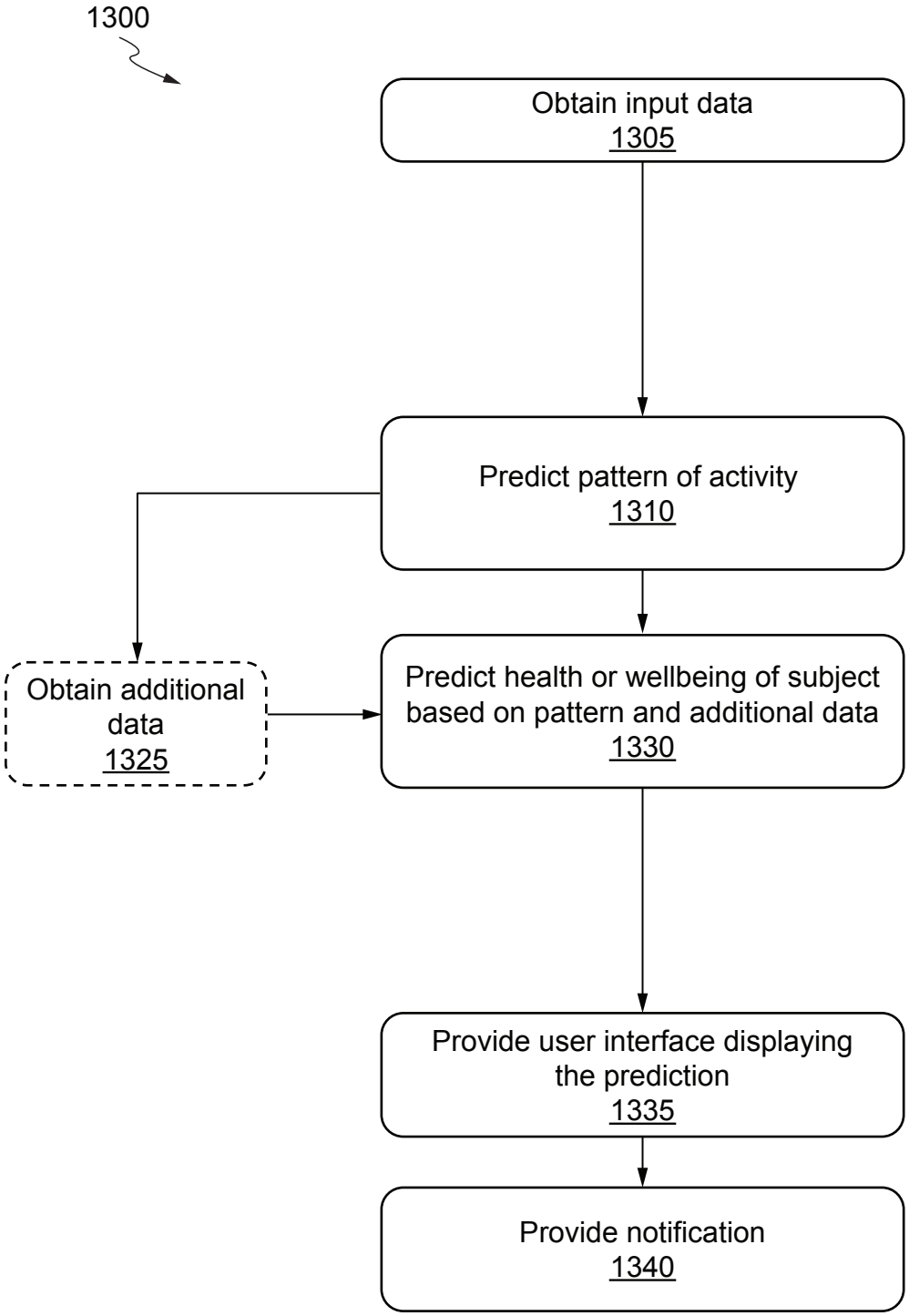

1300
Obtain input data
1305
Predict pattern of activity
1310
Obtain additional data
1325
Predict health or wellbeing of subject based on pattern and additional data
1330
Provide user interface displaying the prediction
1335
Provide notification
1340

FIG. 13

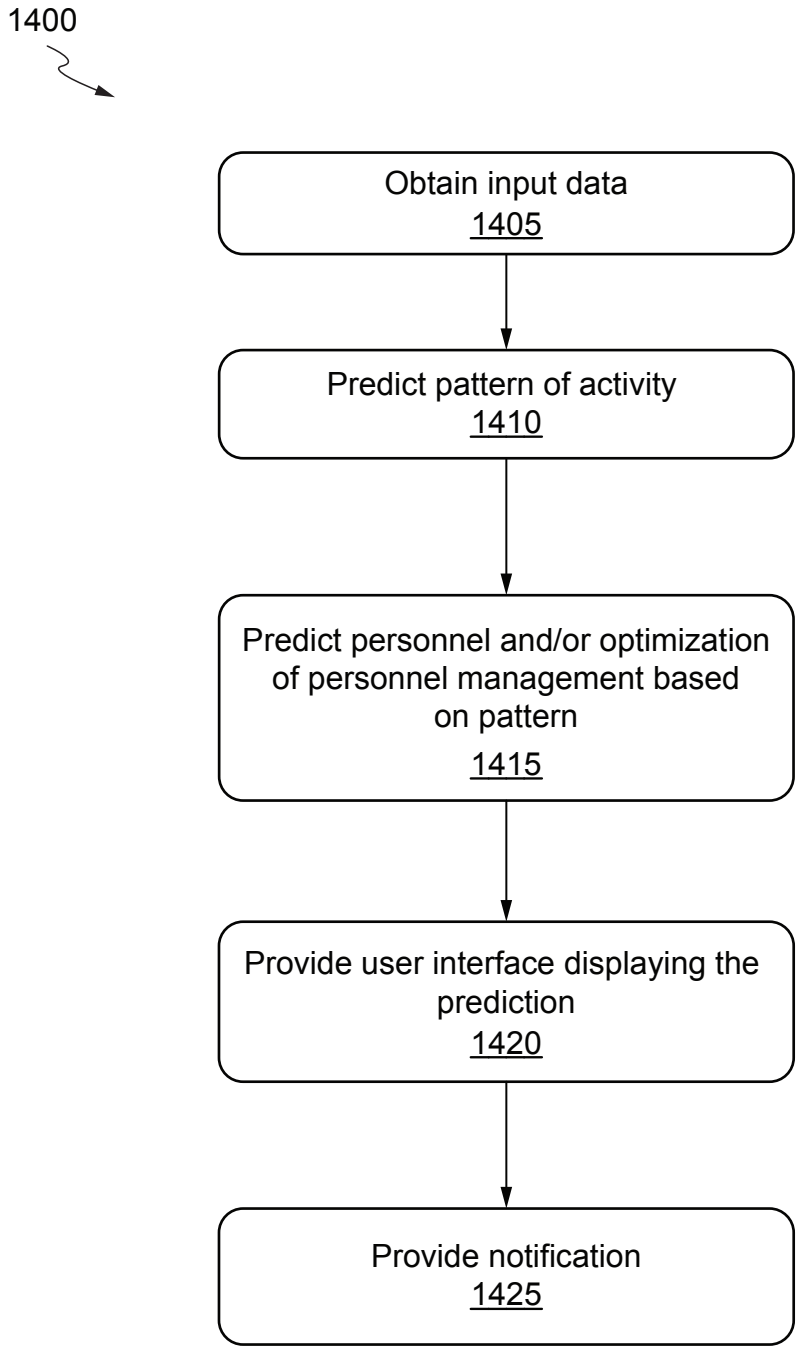

1400
Obtain input data
1405
Predict pattern of activity
1410
Predict personnel and/or optimization of personnel management based on pattern
1415
Provide user interface displaying the prediction
1420
Provide notification
1425

FIG. 14

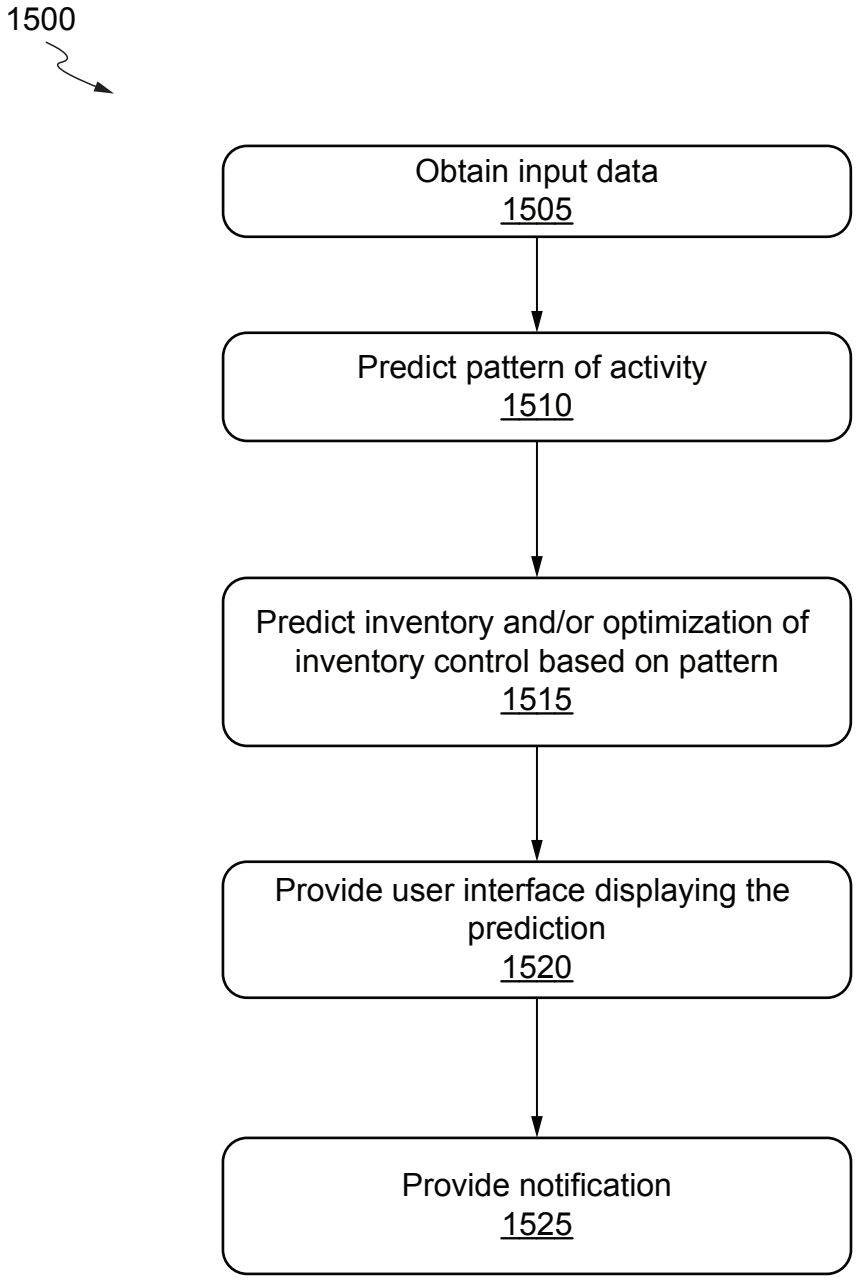

1500
Obtain input data
1505
Predict pattern of activity
1510
Predict inventory and/or optimization of inventory control based on pattern
1515
Provide user interface displaying the prediction
1520
Provide notification
1525

FIG. 15

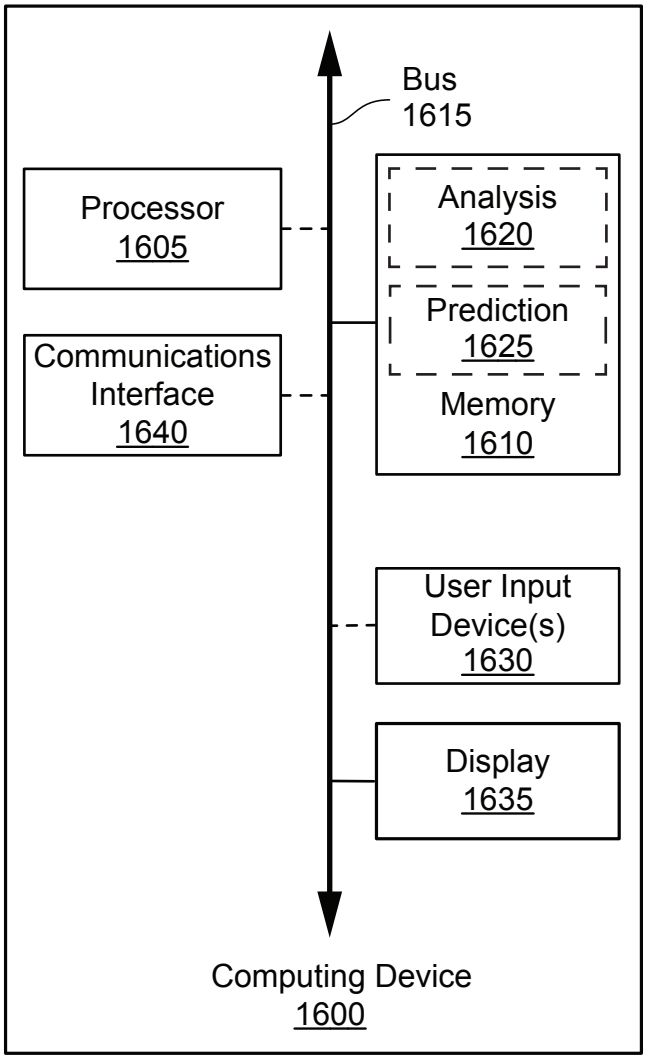

Bus
1615
Processor
1605
Analysis
1620
Prediction
1625
Communications
Interface
1640
Memory
1610
User Input
Device(s)
1630
Display
1635
Computing Device
1600

FIG. 16

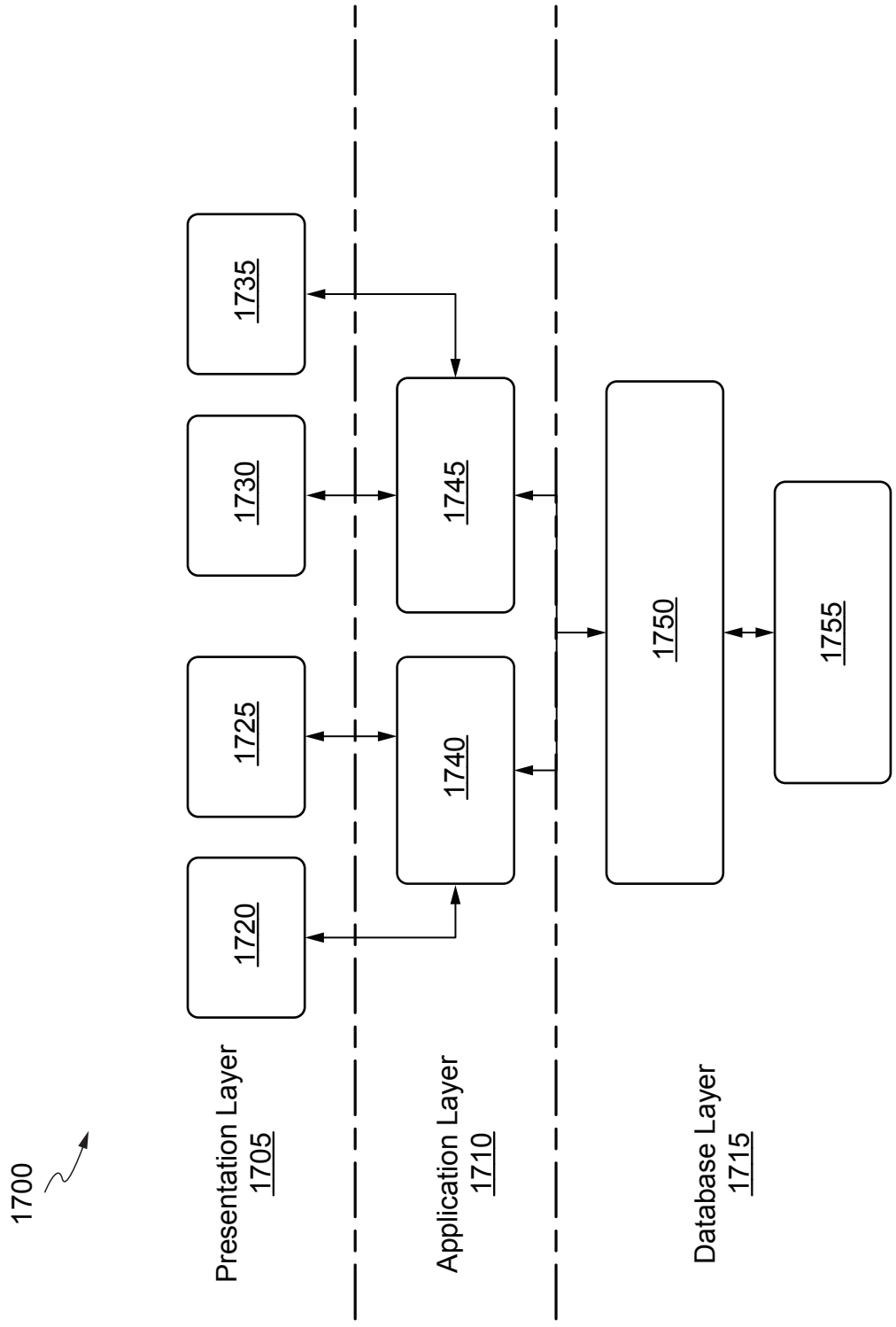

1700
Presentation Layer
1705
Application Layer
1710
Database Layer
1715
1720
1725
1730
1735
1740
1745
1750
1755

FIG. 17

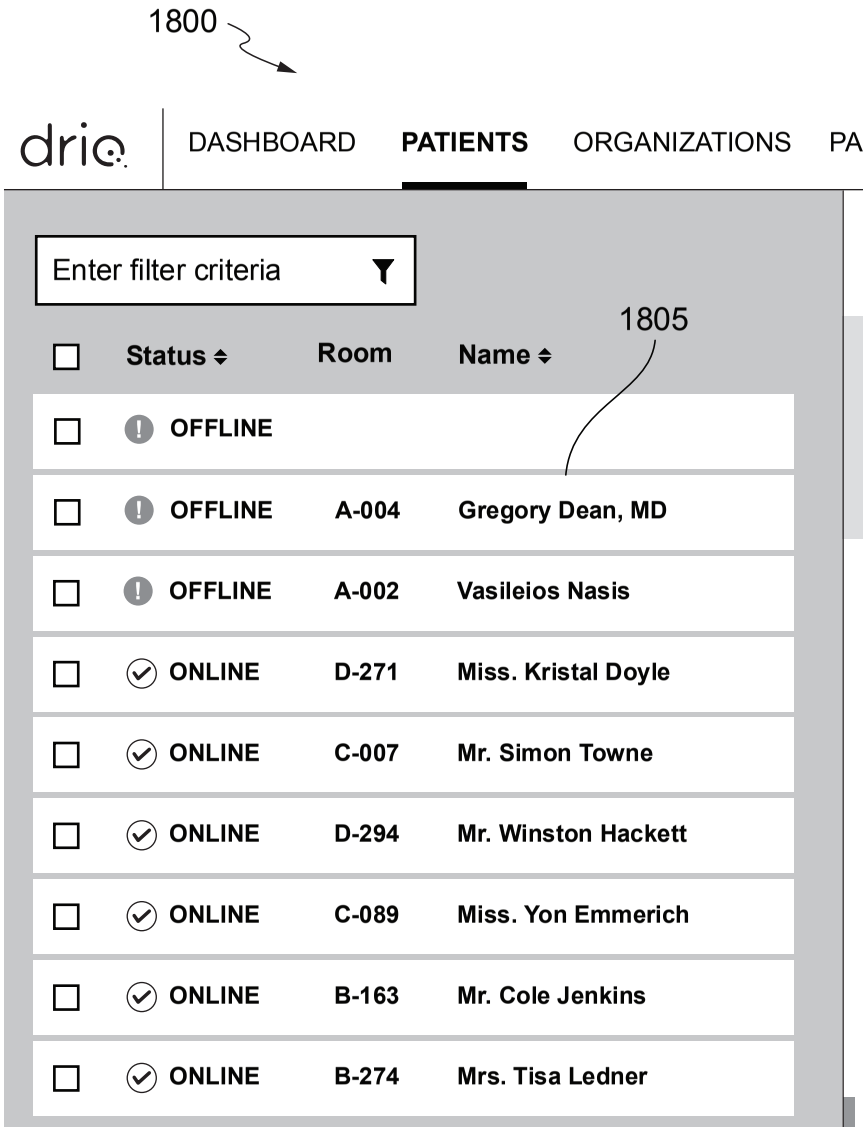



FIG. 18A

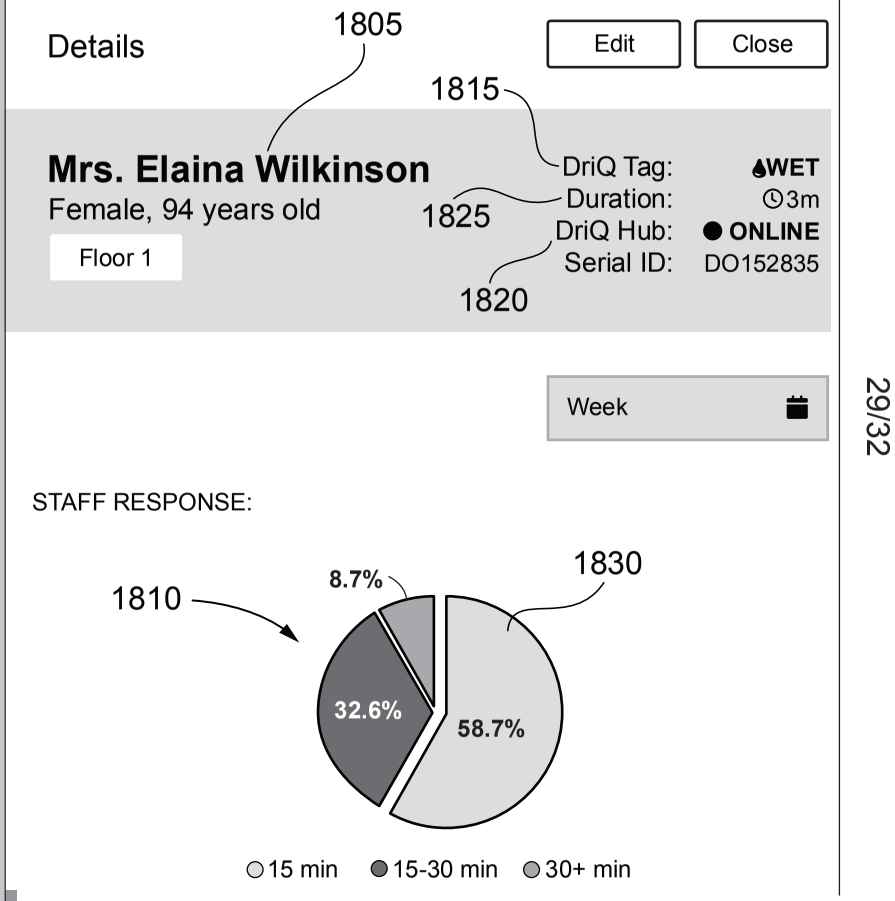



FIG. 18B

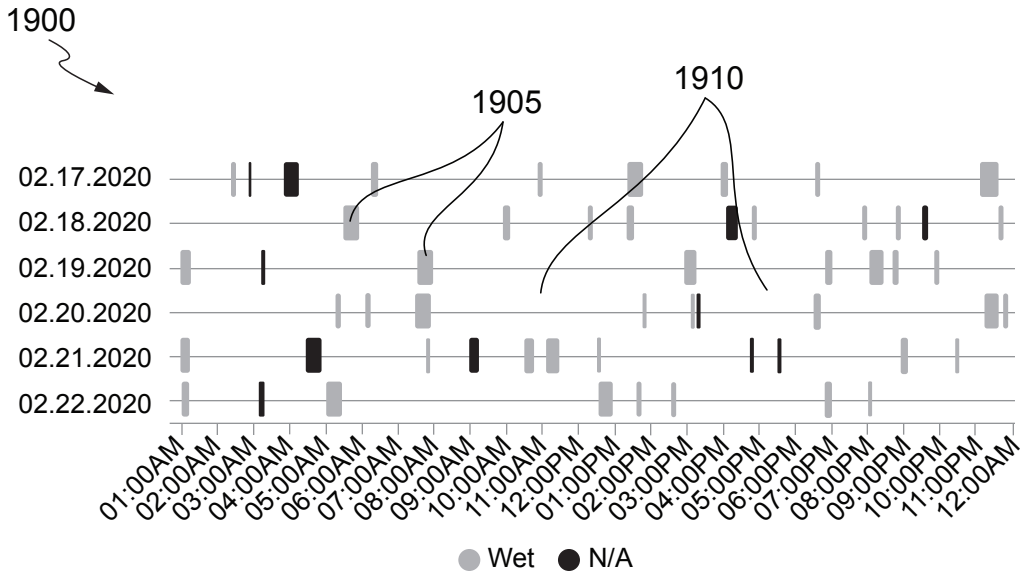



FIG. 19A

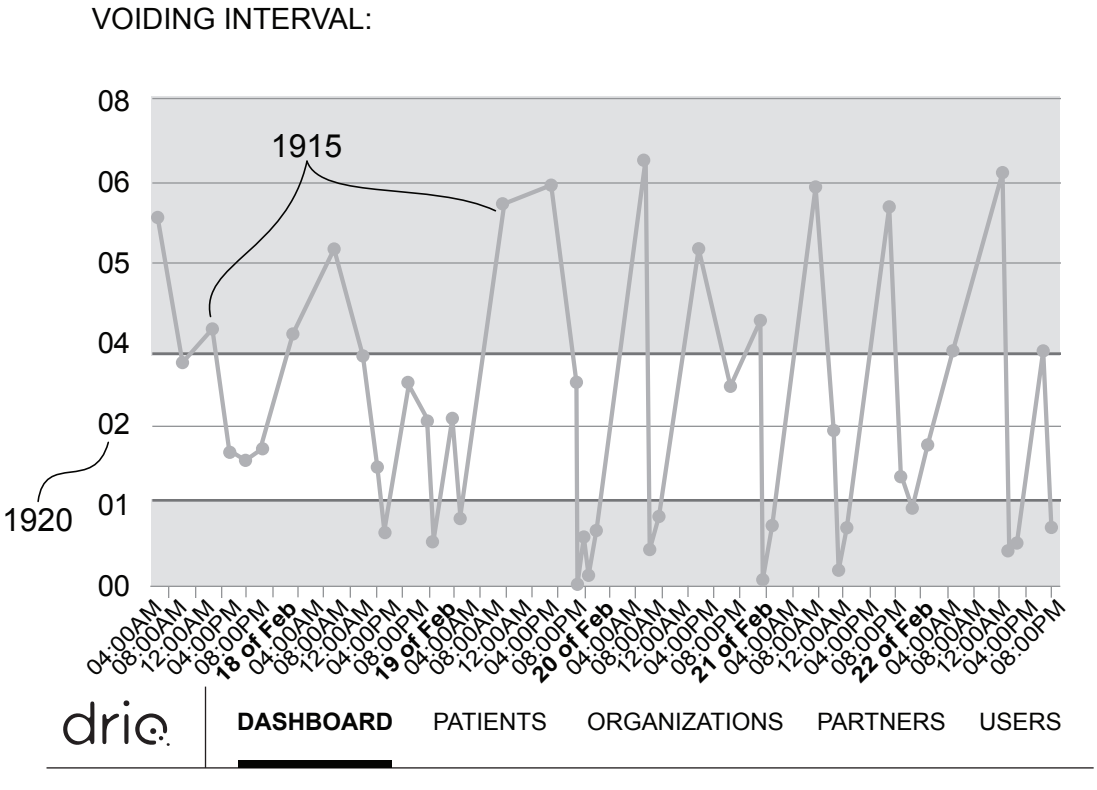



FIG. 19B

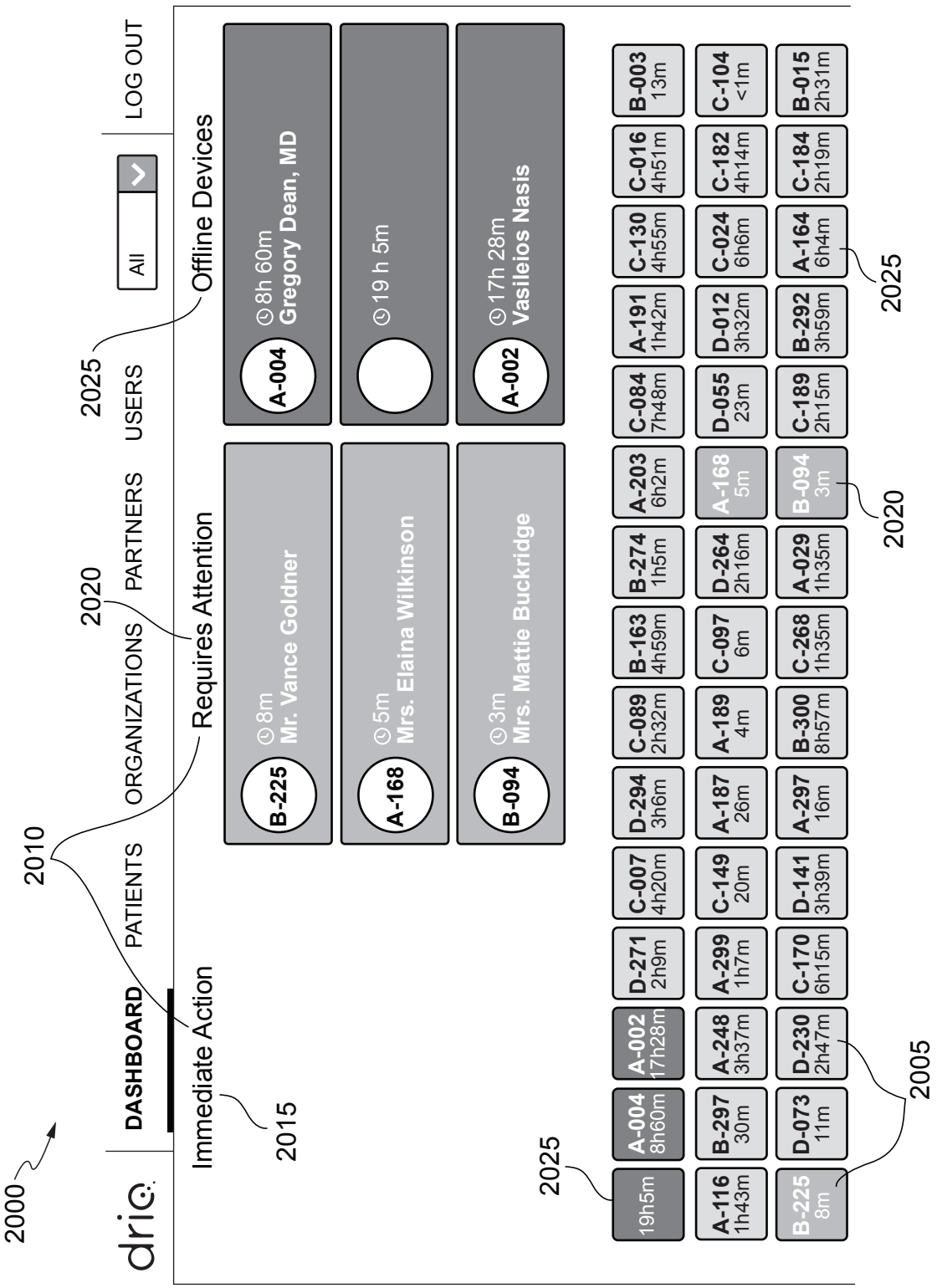

2000
dria
DASHBOARD
PATIENTS
ORGANIZATIONS
PARTNERS
USERS
LOG OUT
All
2010
2020
2025
Immediate Action
Requires Attention
Offline Devices
2015
2025
8m
Mr. Vance Goldner
B-225
5m
Mrs. Elaina Wilkinson
A-168
3m
Mrs. Mattie Buckridge
B-094
8h 60m
Gregory Dean, MD
A-004
19 h 5m
17h 28m
Vasileios Nasis
A-002
19h5m
A-004 8h60m
A-116 1h43m
B-297 30m
D-073 11m
A-002 17h28m
A-248 3h37m
D-230 2h47m
B-225 8m
D-271 2h9m
A-299 1h7m
C-170 6h15m
C-007 4h20m
C-149 20m
D-141 3h39m
D-294 3h6m
A-187 26m
A-297 16m
C-089 2h32m
A-189 4m
B-300 8h57m
B-163 4h59m
C-097 6m
C-268 1h35m
B-274 1h5m
D-264 2h16m
A-029 1h35m
A-203 6h2m
A-168 5m
B-094 3m
2020
C-084 7h48m
D-055 23m
C-189 2h15m
A-191 1h42m
D-012 3h32m
B-292 3h59m
C-130 4h55m
C-024 6h6m
A-164 6h4m
2025
C-016 4h51m
C-182 4h14m
C-184 2h19m
B-003 13m
C-104 <1m
B-015 2h31m
2005

FIG. 20

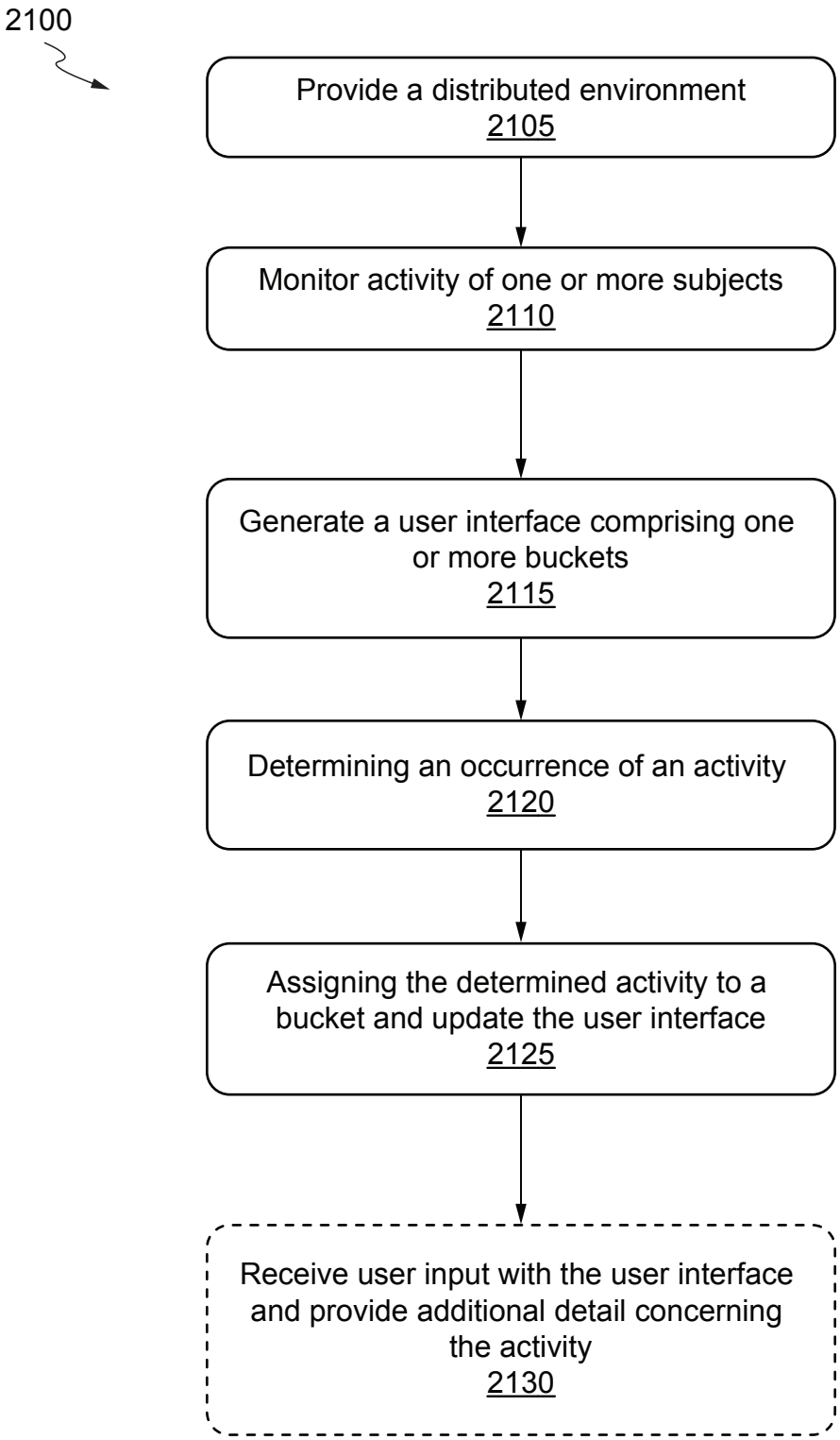

2100
Provide a distributed environment
2105
Monitor activity of one or more subjects
2110
Generate a user interface comprising one or more buckets
2115
Determining an occurrence of an activity
2120
Assigning the determined activity to a bucket and update the user interface
2125
Receive user input with the user interface and provide additional detail concerning the activity
2130

FIG. 21