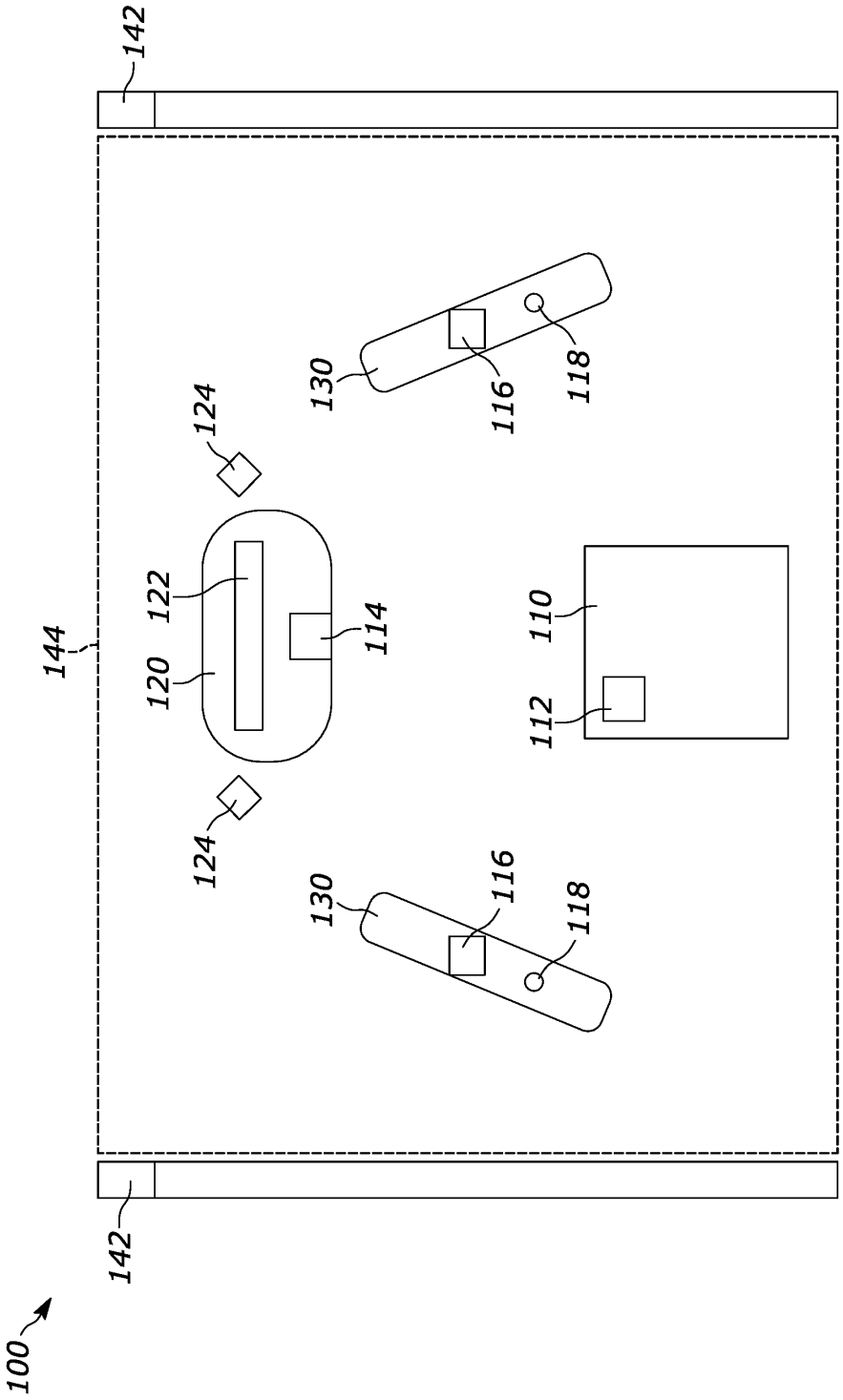

142
130
116
118
124
122
114
144
120
110
112
124
130
116
118
142
100

FIG. 1

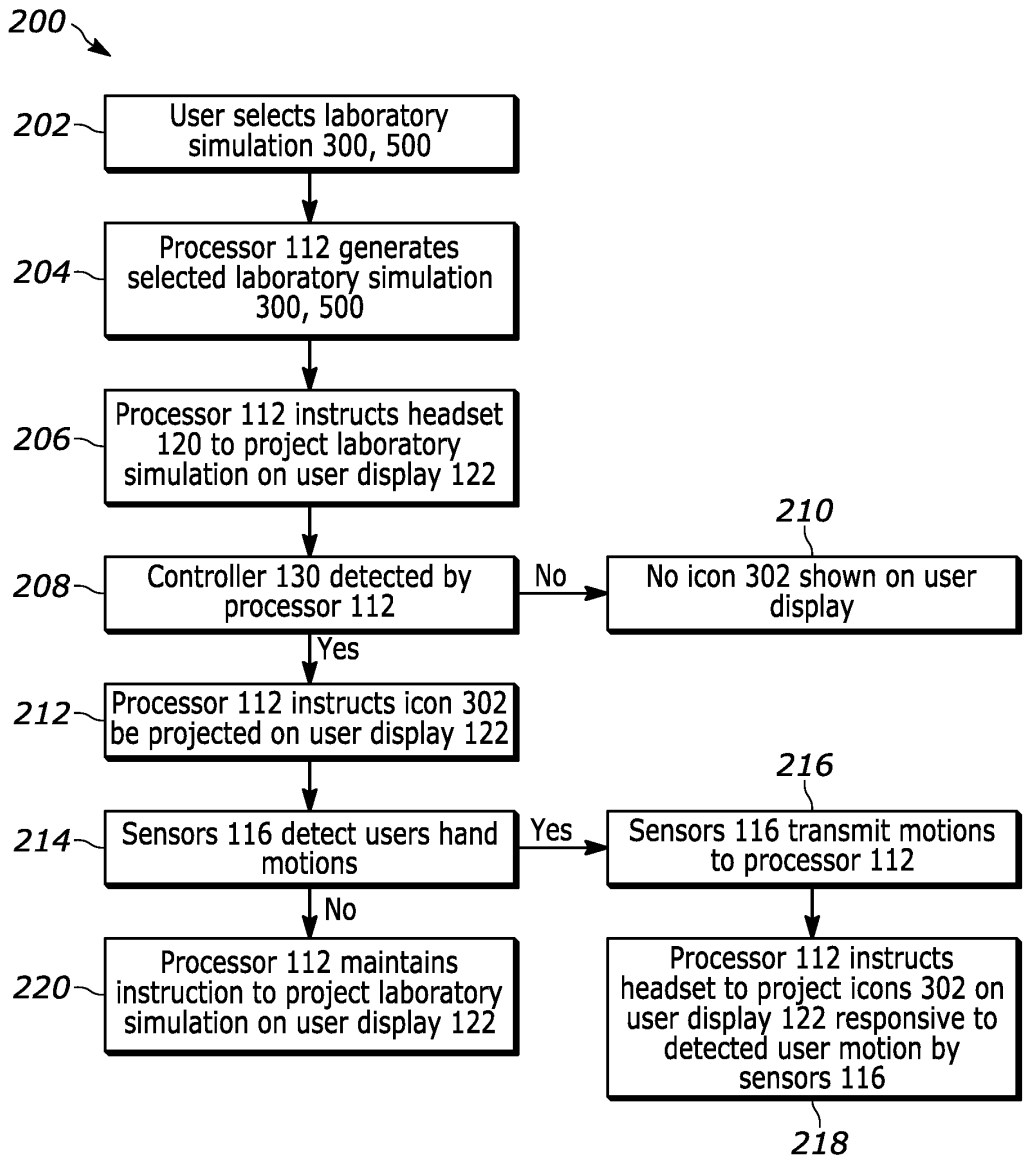

200
202
User selects laboratory simulation 300, 500
204
Processor 112 generates selected laboratory simulation 300, 500
206
Processor 112 instructs headset 120 to project laboratory simulation on user display 122
208
Controller 130 detected by processor 112
No
210
No icon 302 shown on user display
Yes
212
Processor 112 instructs icon 302 be projected on user display 122
214
Sensors 116 detect users hand motions
Yes
216
Sensors 116 transmit motions to processor 112
No
220
Processor 112 maintains instruction to project laboratory simulation on user display 122
Processor 112 instructs headset to project icons 302 on user display 122 responsive to detected user motion by sensors 116
218

FIG. 2

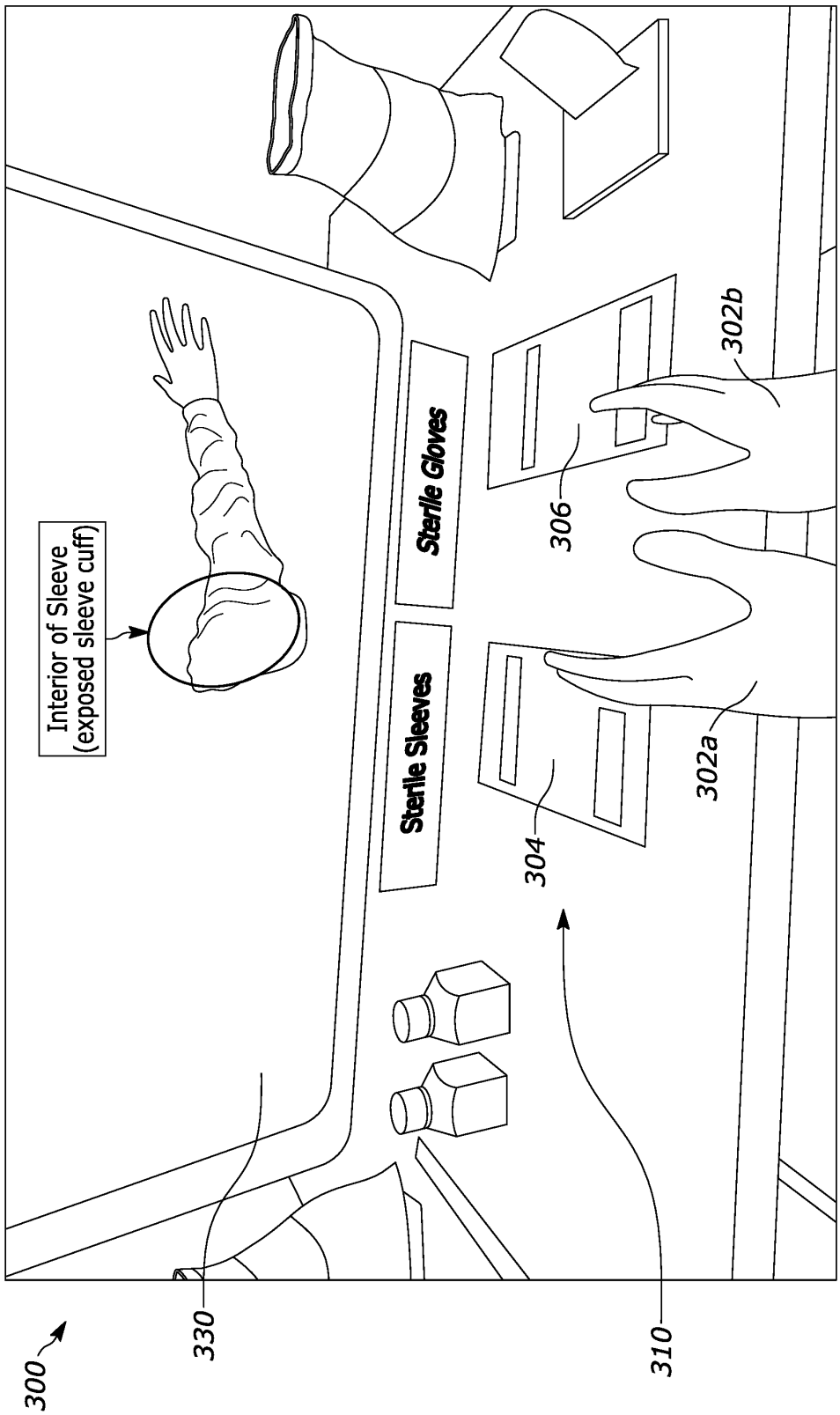

Interior of Sleeve
(exposed sleeve cuff)
Sterile Gloves
Sterile Sleeves
306
302b
304
302a
300
330
310

FIG. 3A

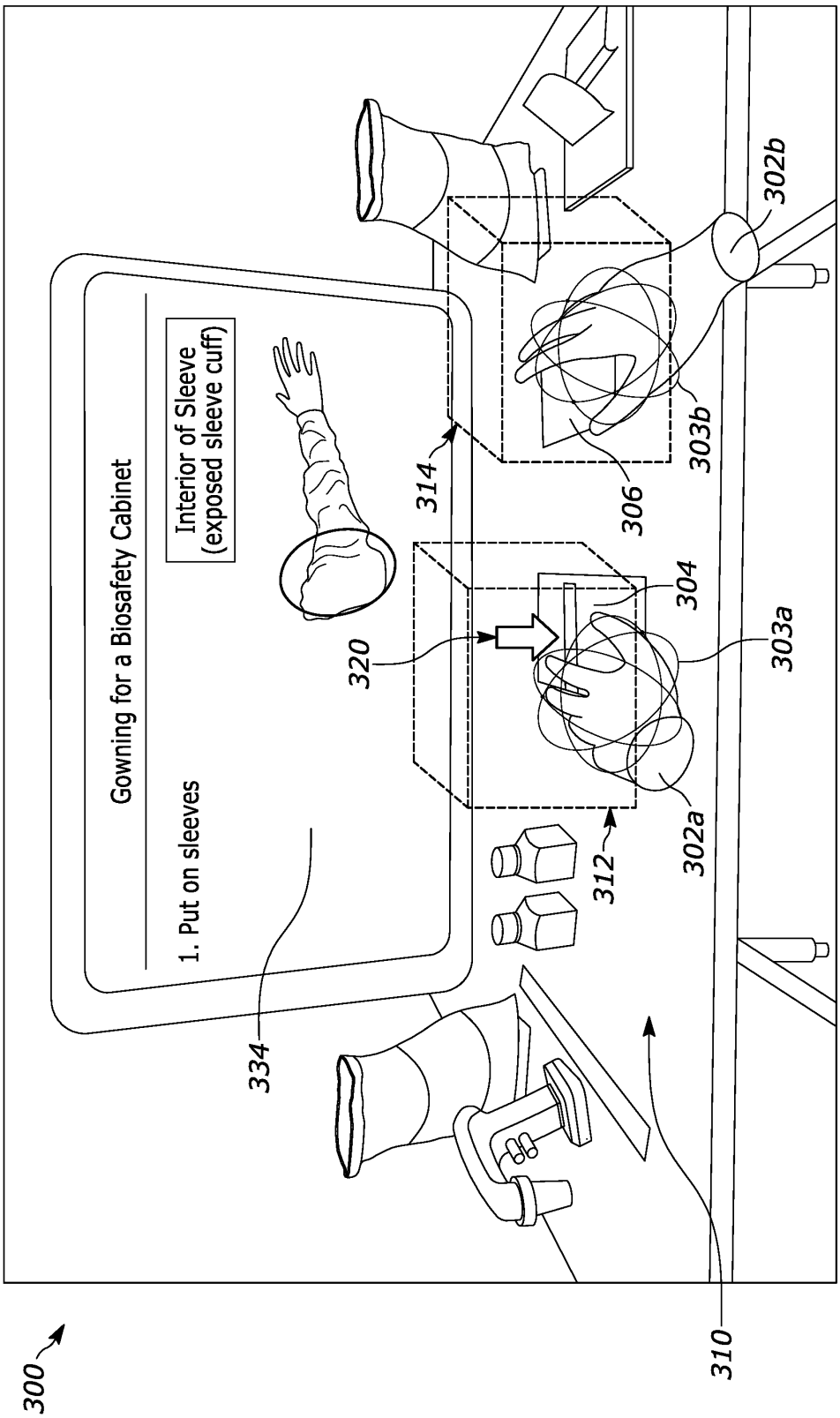

Gowning for a Biosafety Cabinet
1. Put on sleeves
Interior of Sleeve
(exposed sleeve cuff)
300
310
334
320
314
306
303b
302b
304
303a
302a
312

FIG. 3B

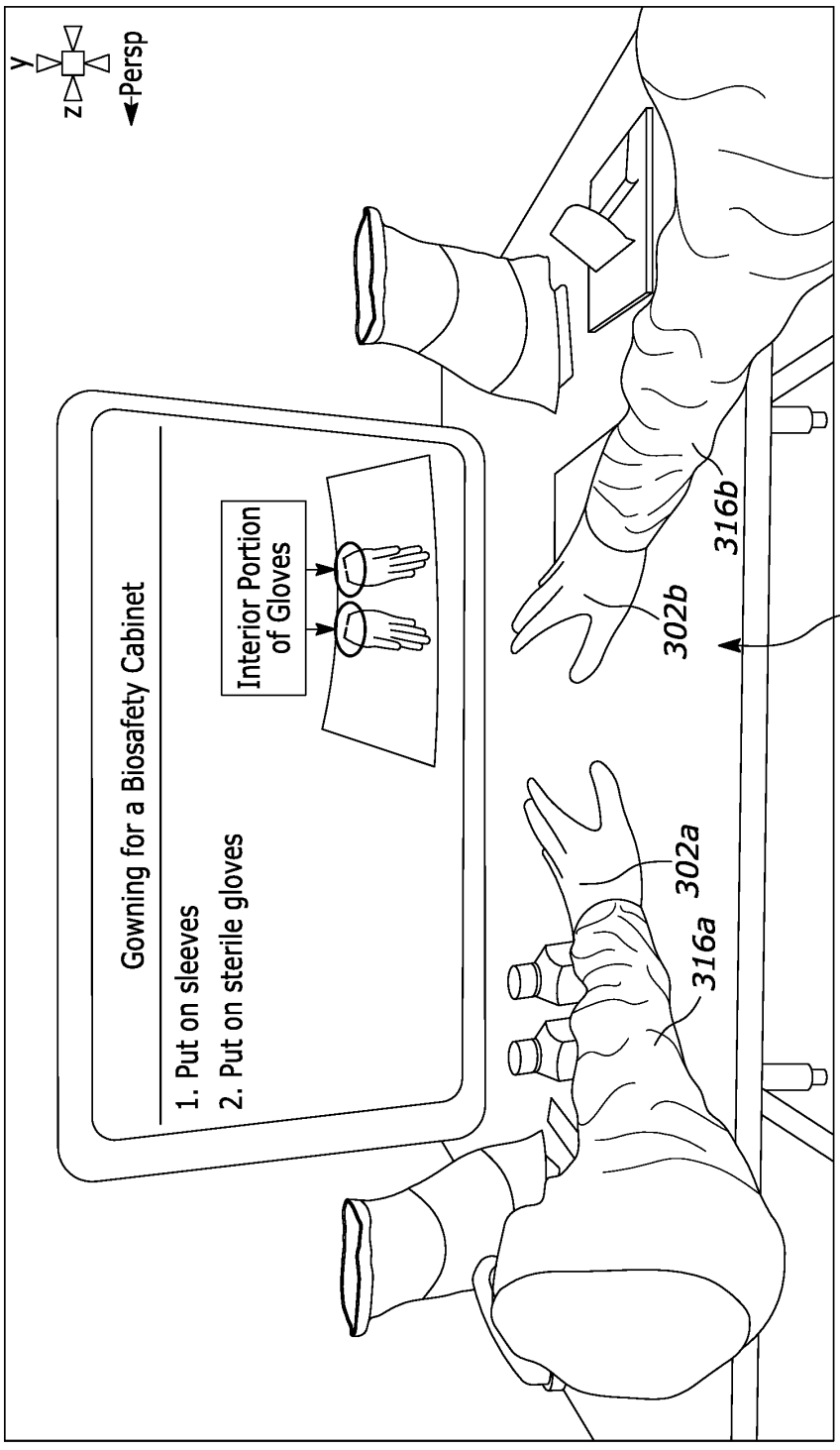

y
z
Persp
Gowning for a Biosafety Cabinet
1. Put on sleeves
2. Put on sterile gloves
Interior Portion of Gloves
316b
302b
310
302a
316a
300

FIG. 3C

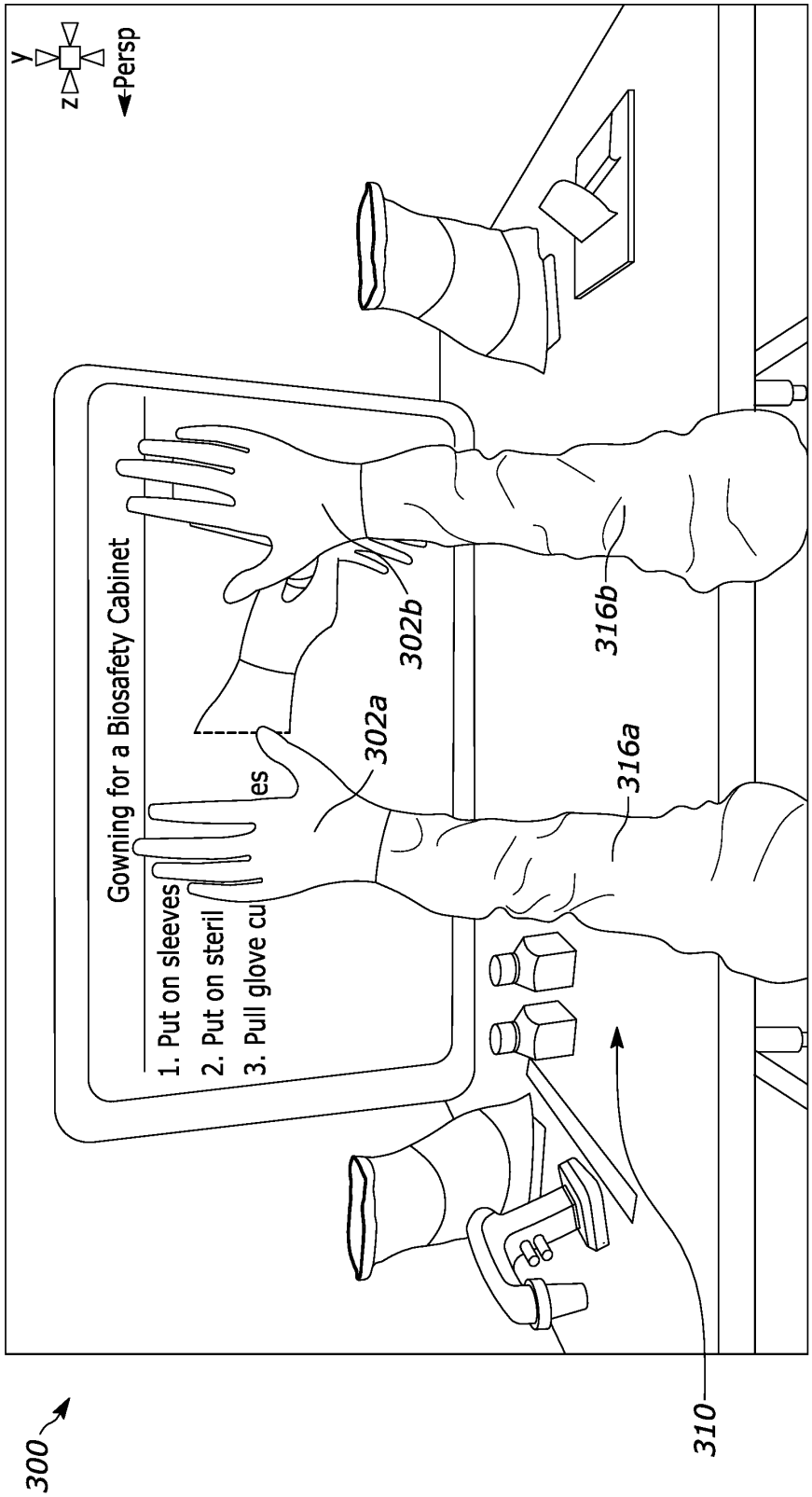

y
z
Persp
Gowning for a Biosafety Cabinet
1. Put on sleeves
2. Put on steril
es
3. Pull glove cu
302a
302b
316a
316b
310
300

FIG. 3D

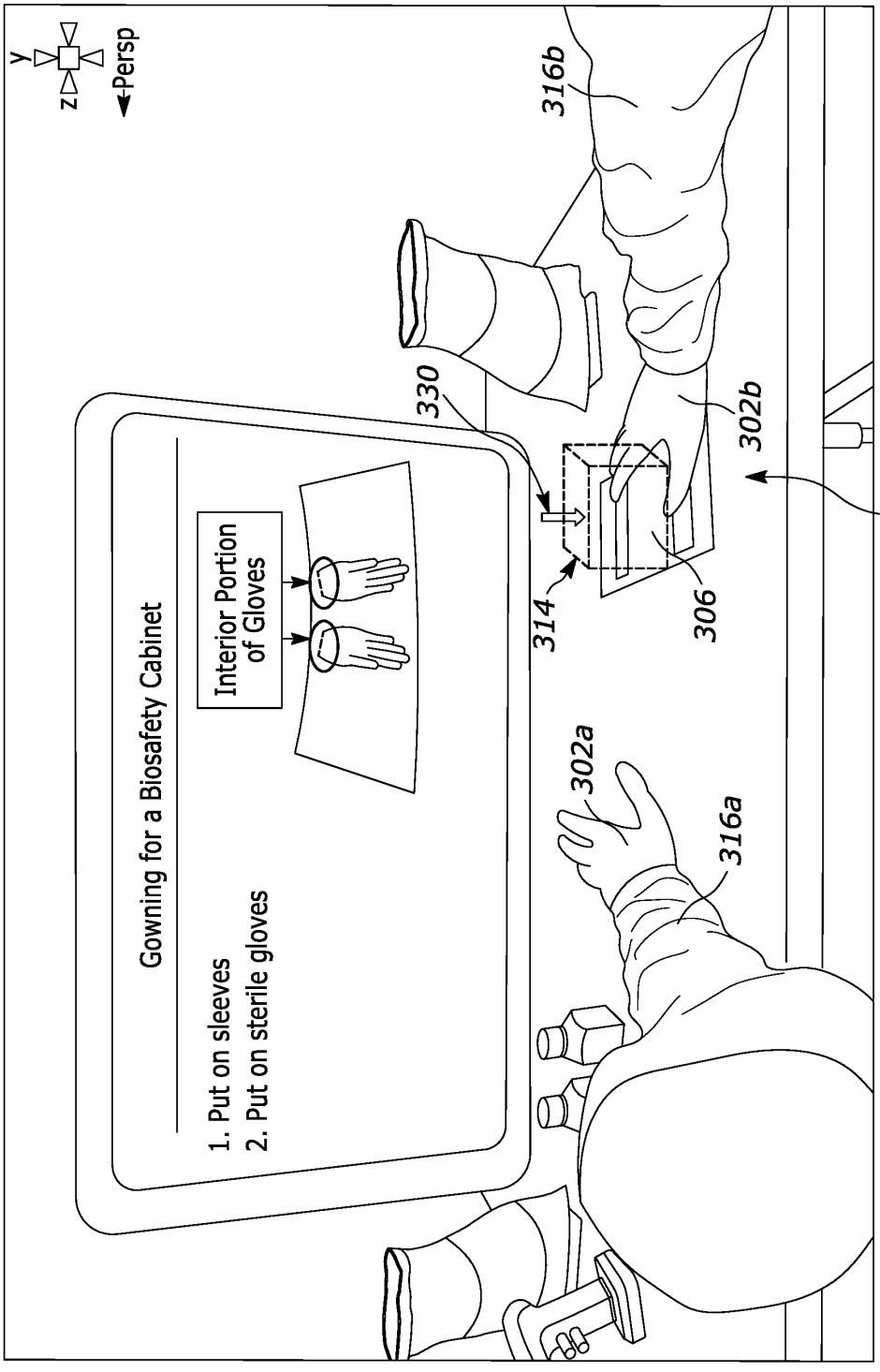

y
z
Persp
316b
330
302b
310
Gowning for a Biosafety Cabinet
1. Put on sleeves
2. Put on sterile gloves
Interior Portion of Gloves
314
306
302a
316a
300

FIG. 3E

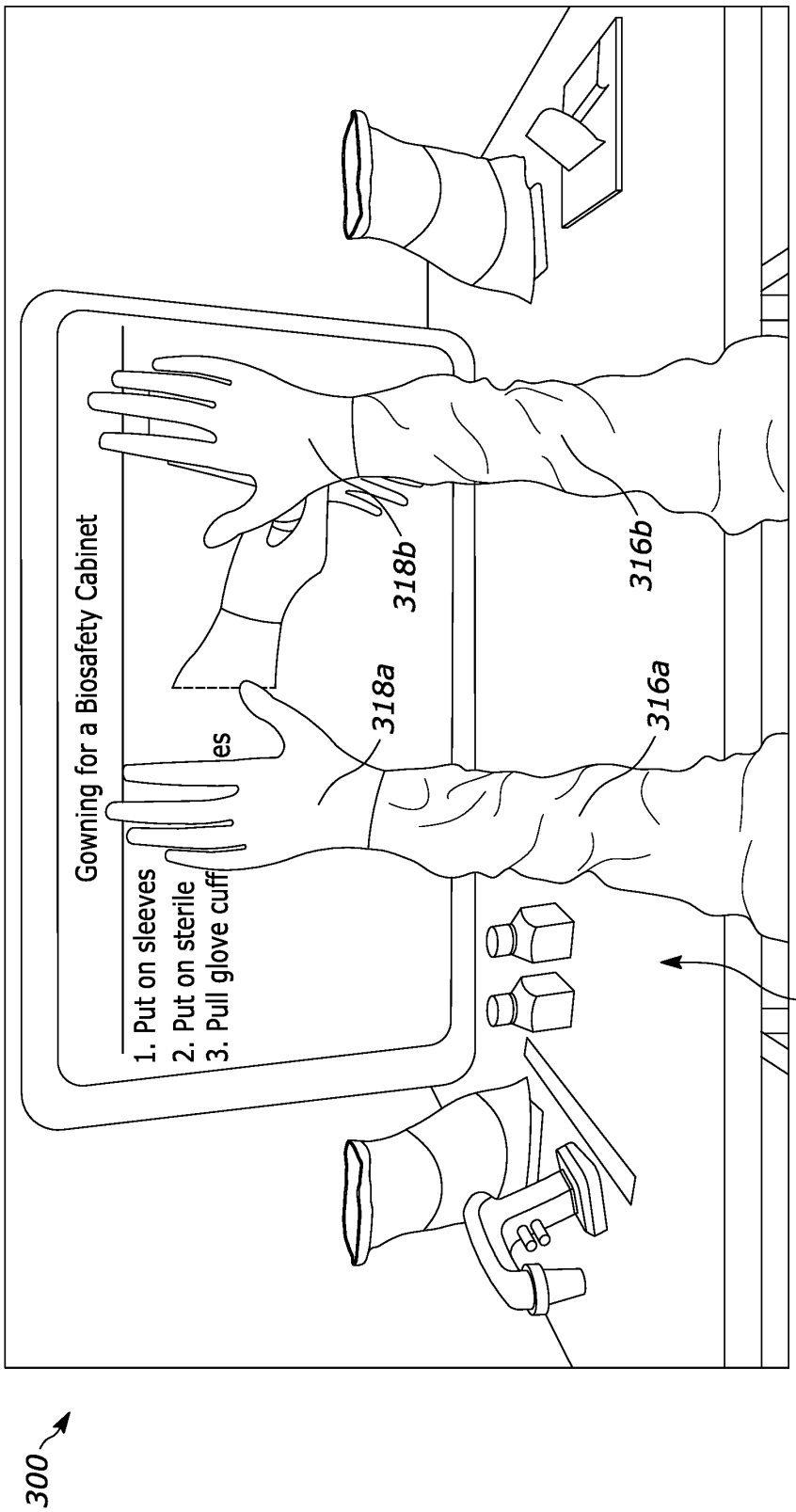

Gowning for a Biosafety Cabinet
1. Put on sleeves
2. Put on sterile
es
3. Pull glove cuff
318a
318b
316a
316b
310
300

FIG. 3F

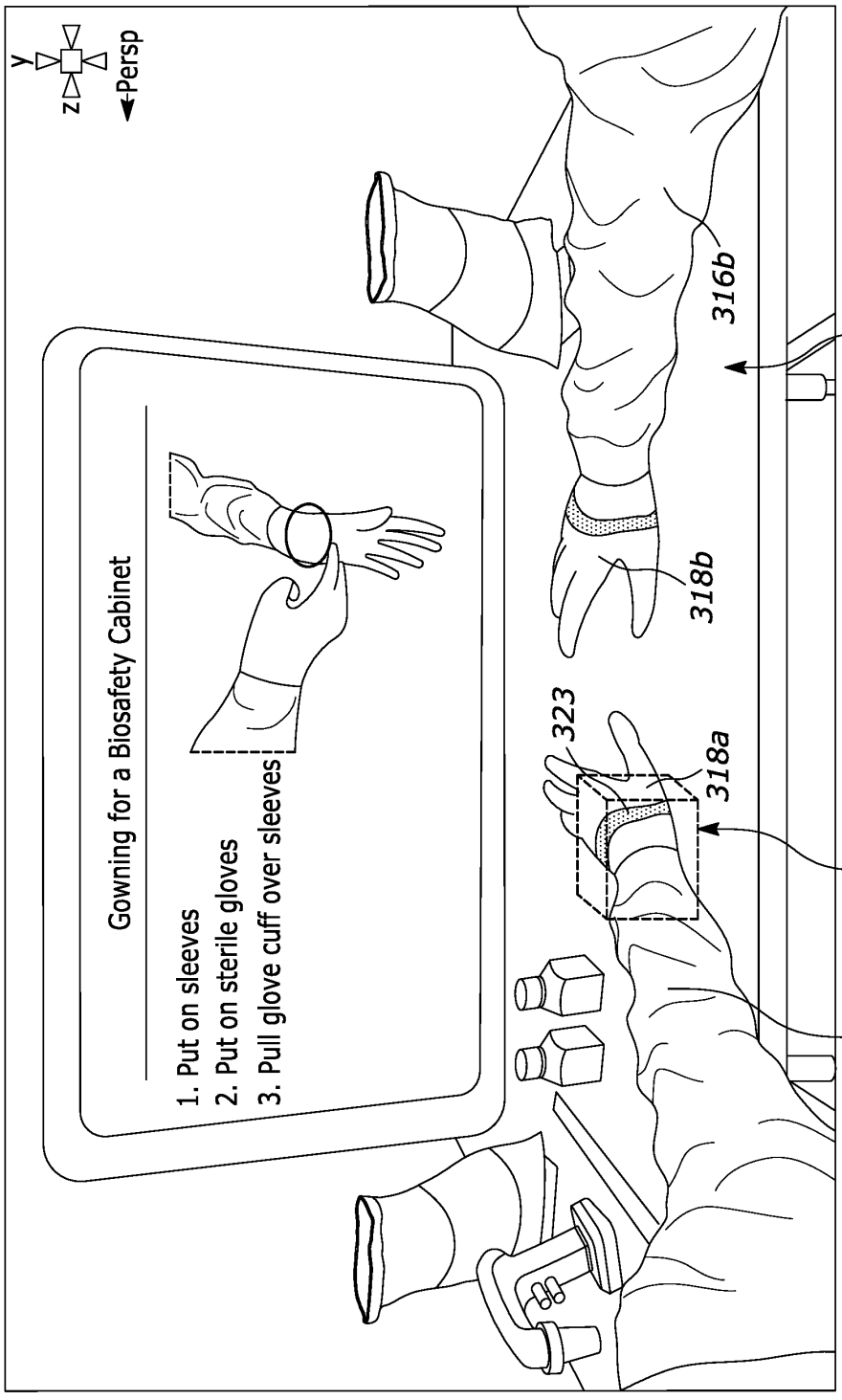

y
z
Persp
Gowning for a Biosafety Cabinet
1. Put on sleeves
2. Put on sterile gloves
3. Pull glove cuff over sleeves
316b
310
318b
323
318a
322
316a
300

FIG. 3G

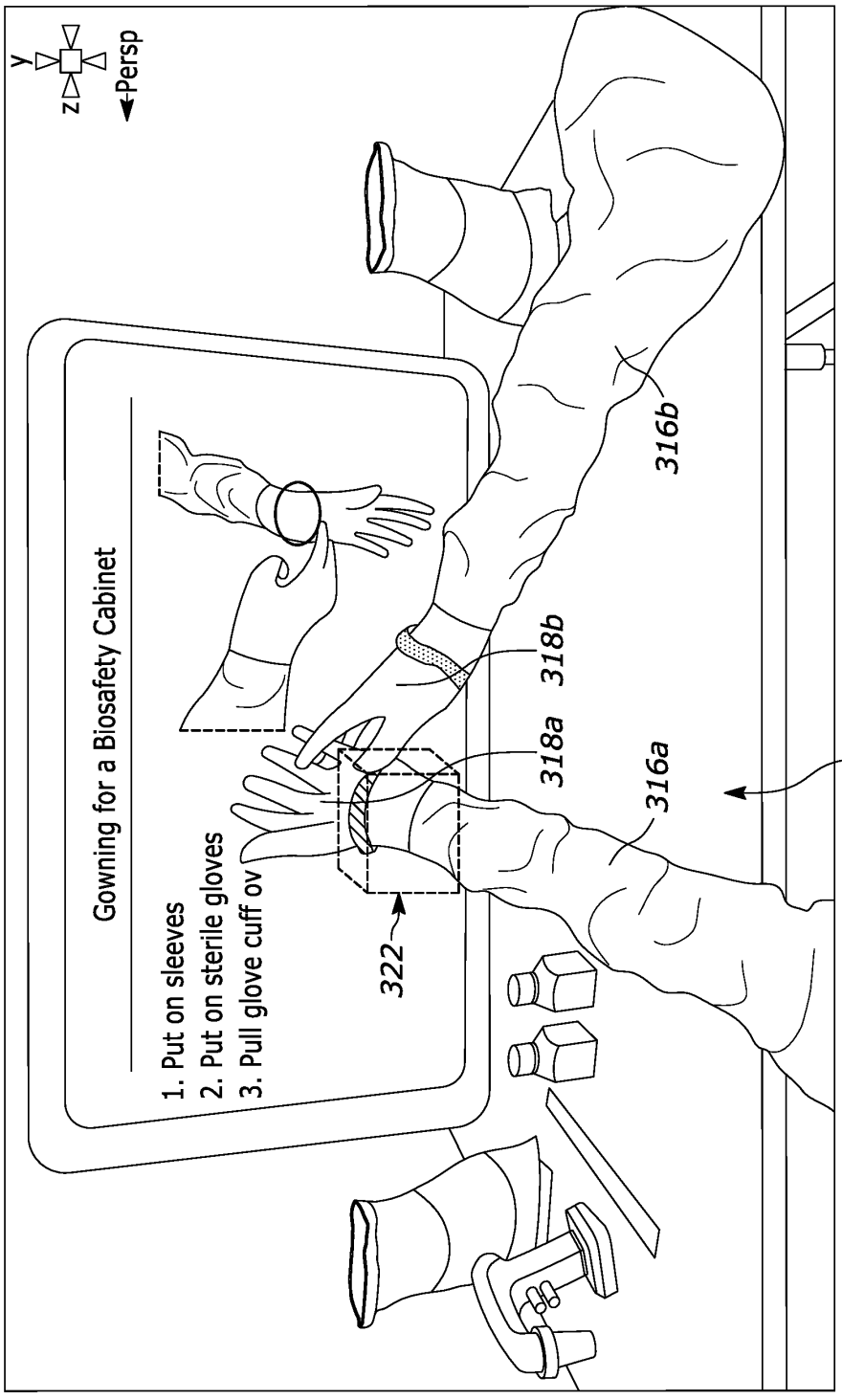

y
z
Persp
Gowning for a Biosafety Cabinet
1. Put on sleeves
2. Put on sterile gloves
3. Pull glove cuff ov
322
318a
318b
316a
316b
310
300

FIG. 3H

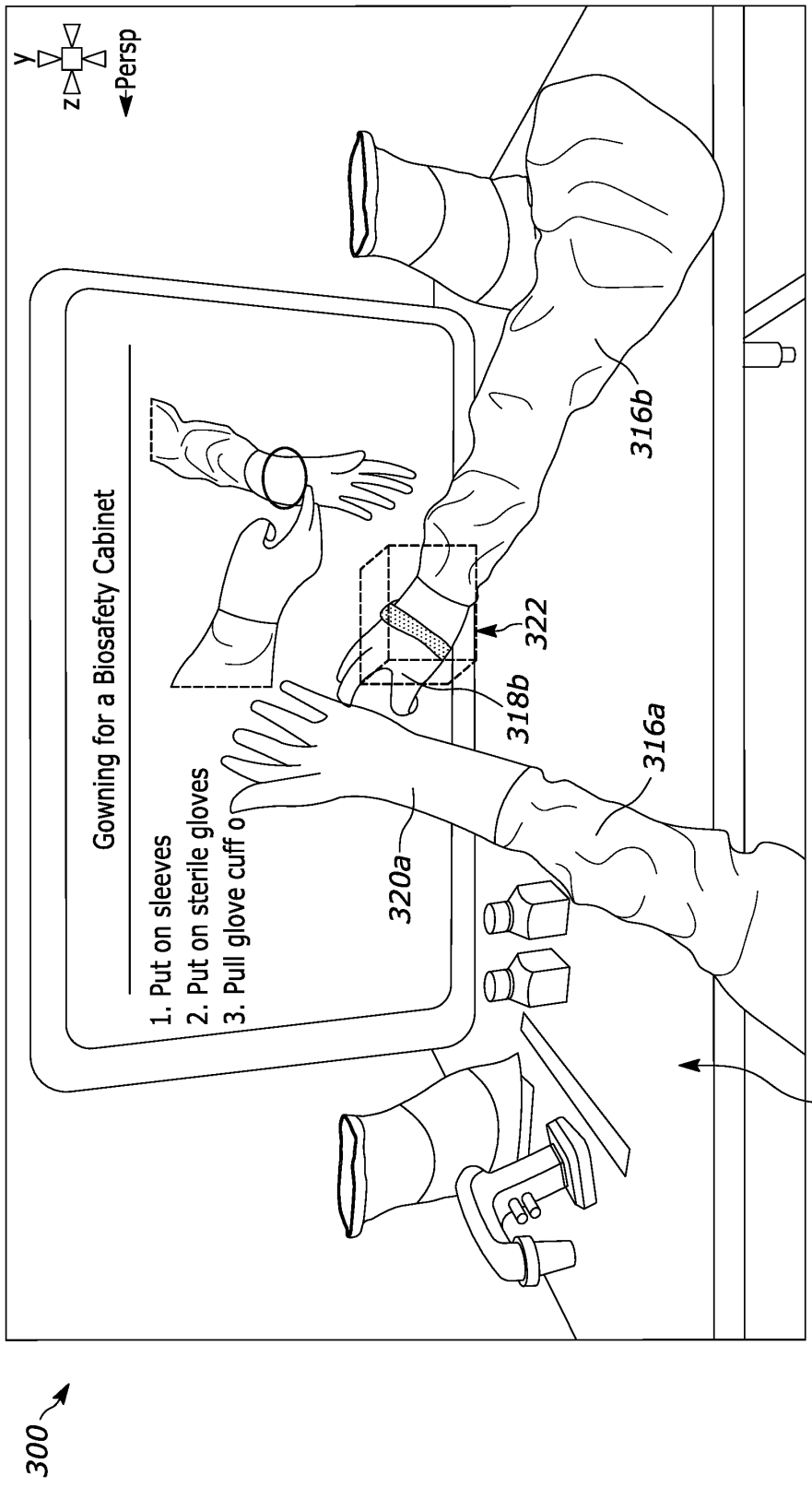

y
z
Persp
Gowning for a Biosafety Cabinet
1. Put on sleeves
2. Put on sterile gloves
3. Pull glove cuff o
316b
322
318b
316a
320a
310
300

FIG. 3I

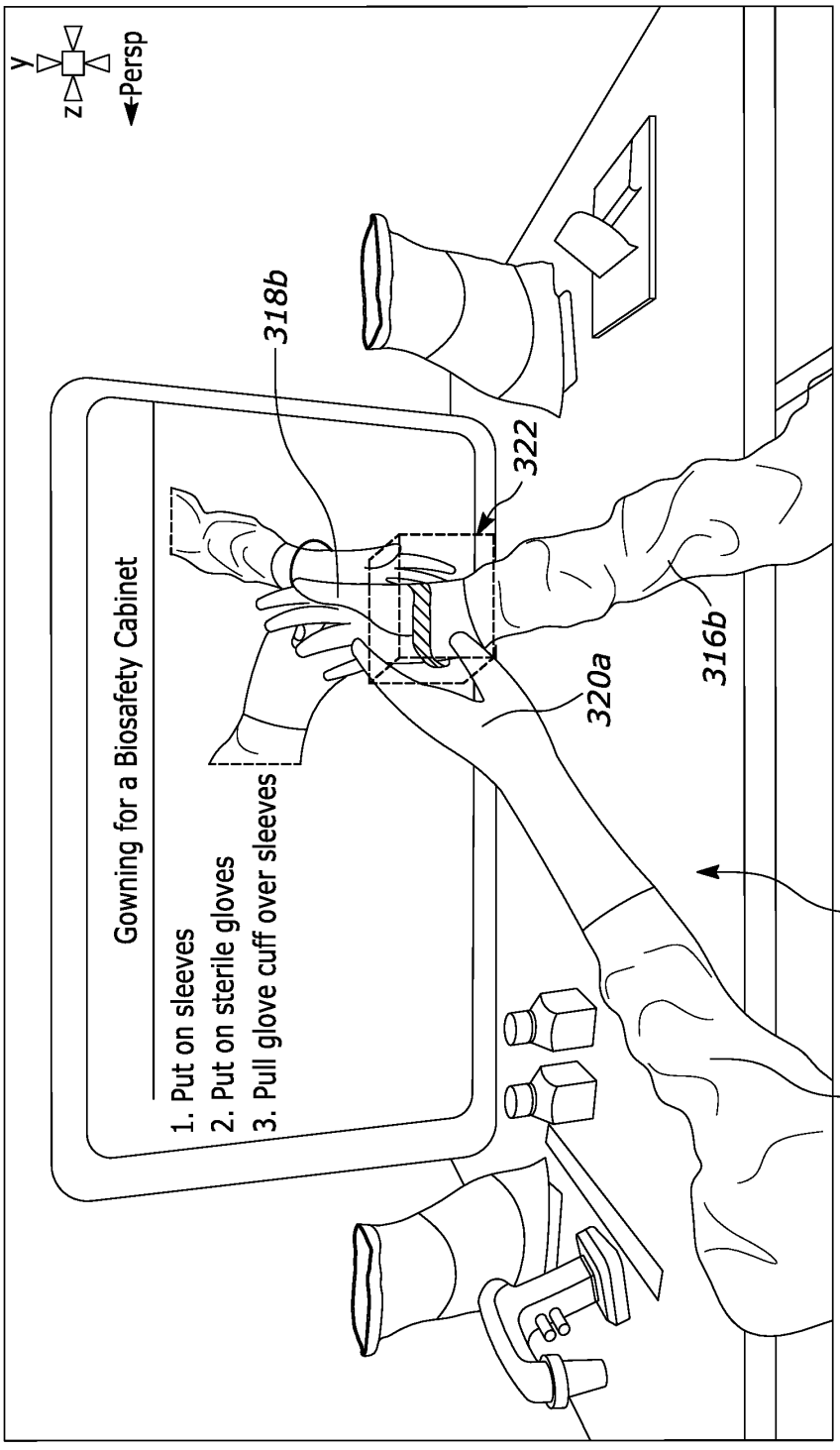

y
z
Persp
Gowning for a Biosafety Cabinet
1. Put on sleeves
2. Put on sterile gloves
3. Pull glove cuff over sleeves
318b
322
320a
316b
310
316a
300

FIG. 3J

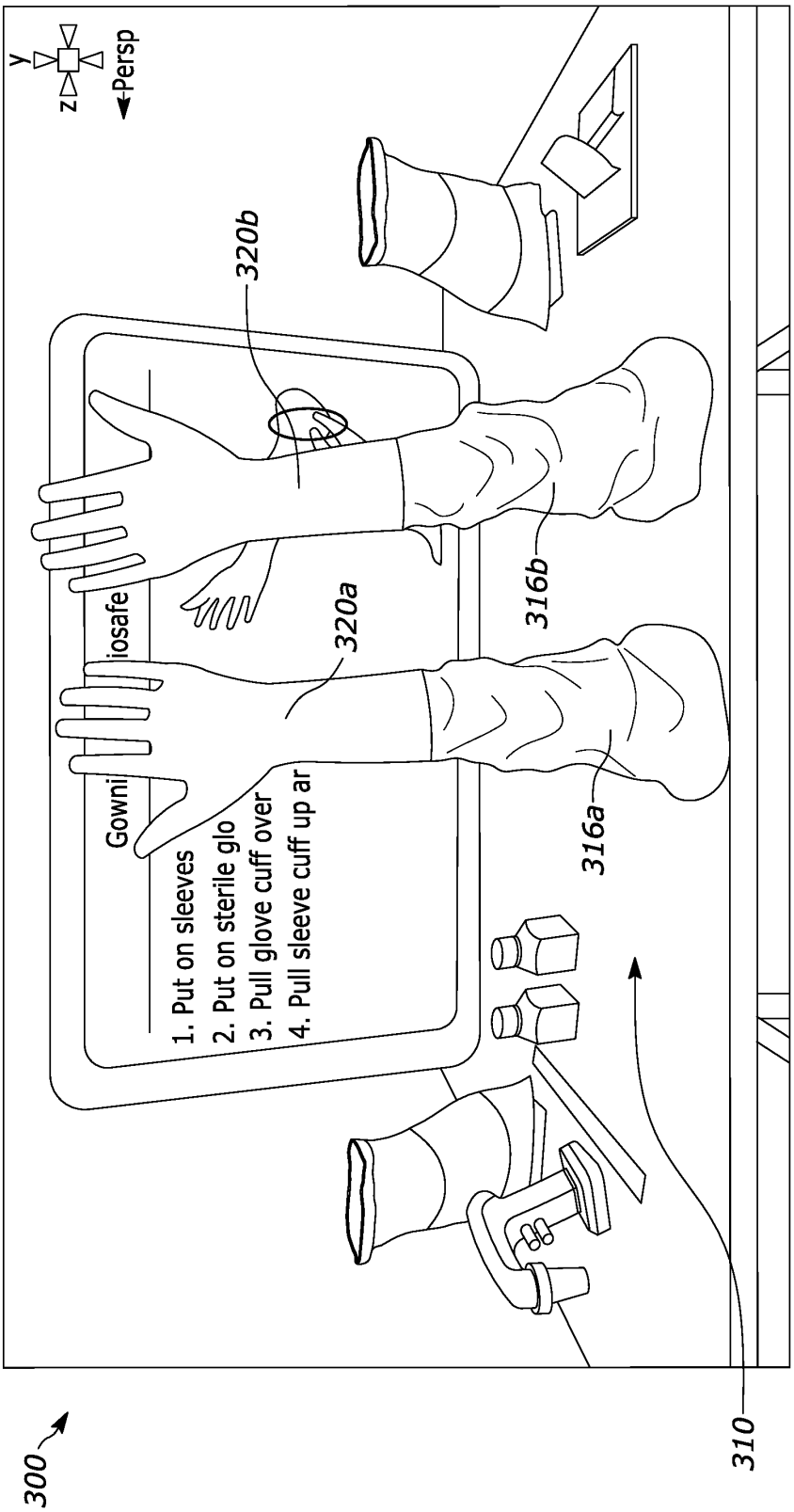

y
z
Persp
320b
iosafe
320a
316b
Gowni
1. Put on sleeves
2. Put on sterile glo
3. Pull glove cuff over
4. Pull sleeve cuff up ar
316a
300
310

FIG. 3K

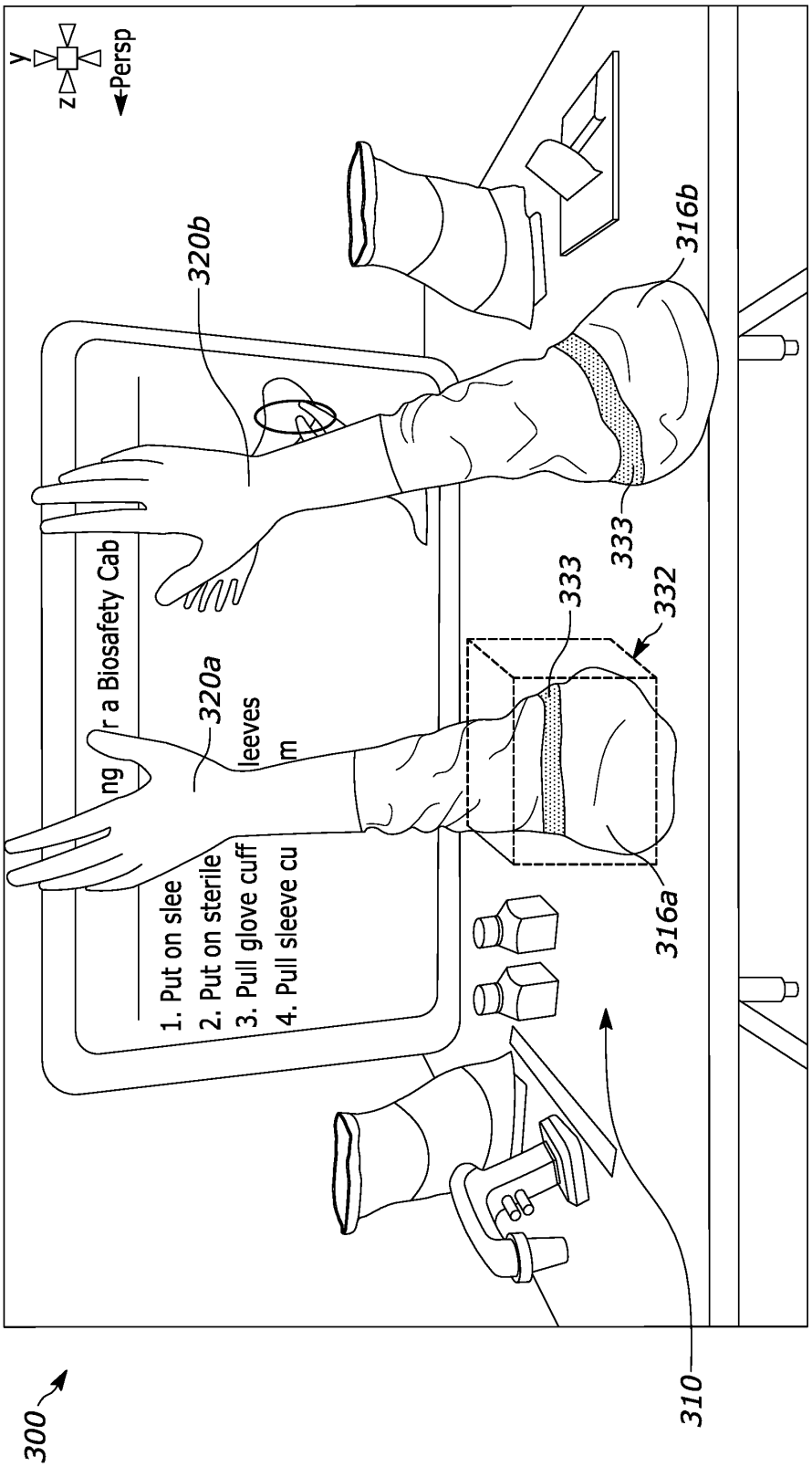

y
z
Persp
320b
316b
333
333
332
320a
316a
ng
r a Biosafety Cab
leeves
m
1. Put on slee
2. Put on sterile
3. Pull glove cuff
4. Pull sleeve cu
300
310

FIG. 3L

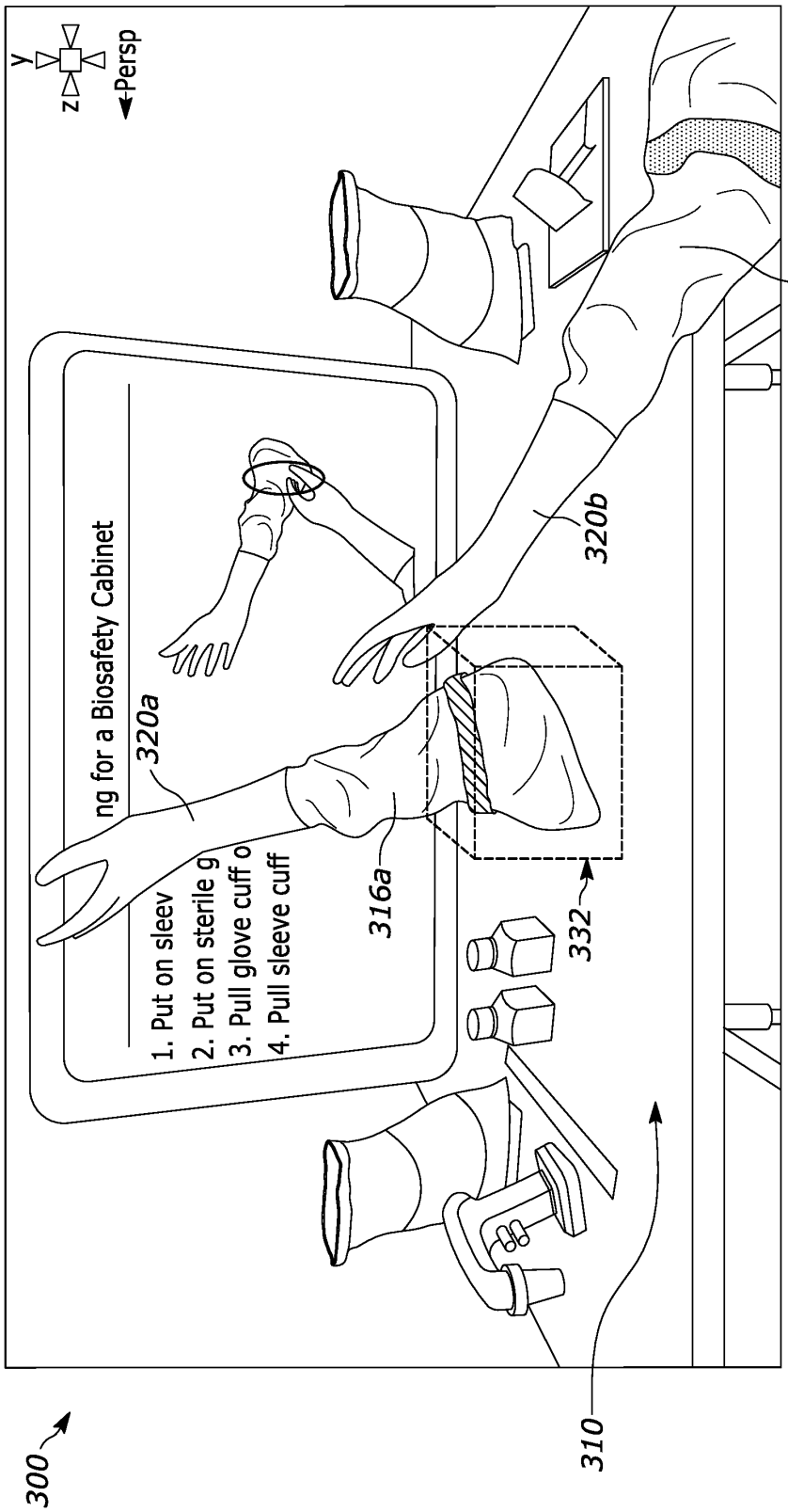

y
z
Persp
ng for a Biosafety Cabinet
1. Put on sleev
2. Put on sterile g
3. Pull glove cuff o
4. Pull sleeve cuff
320a
316a
332
320b
316b
310
300

FIG. 3M

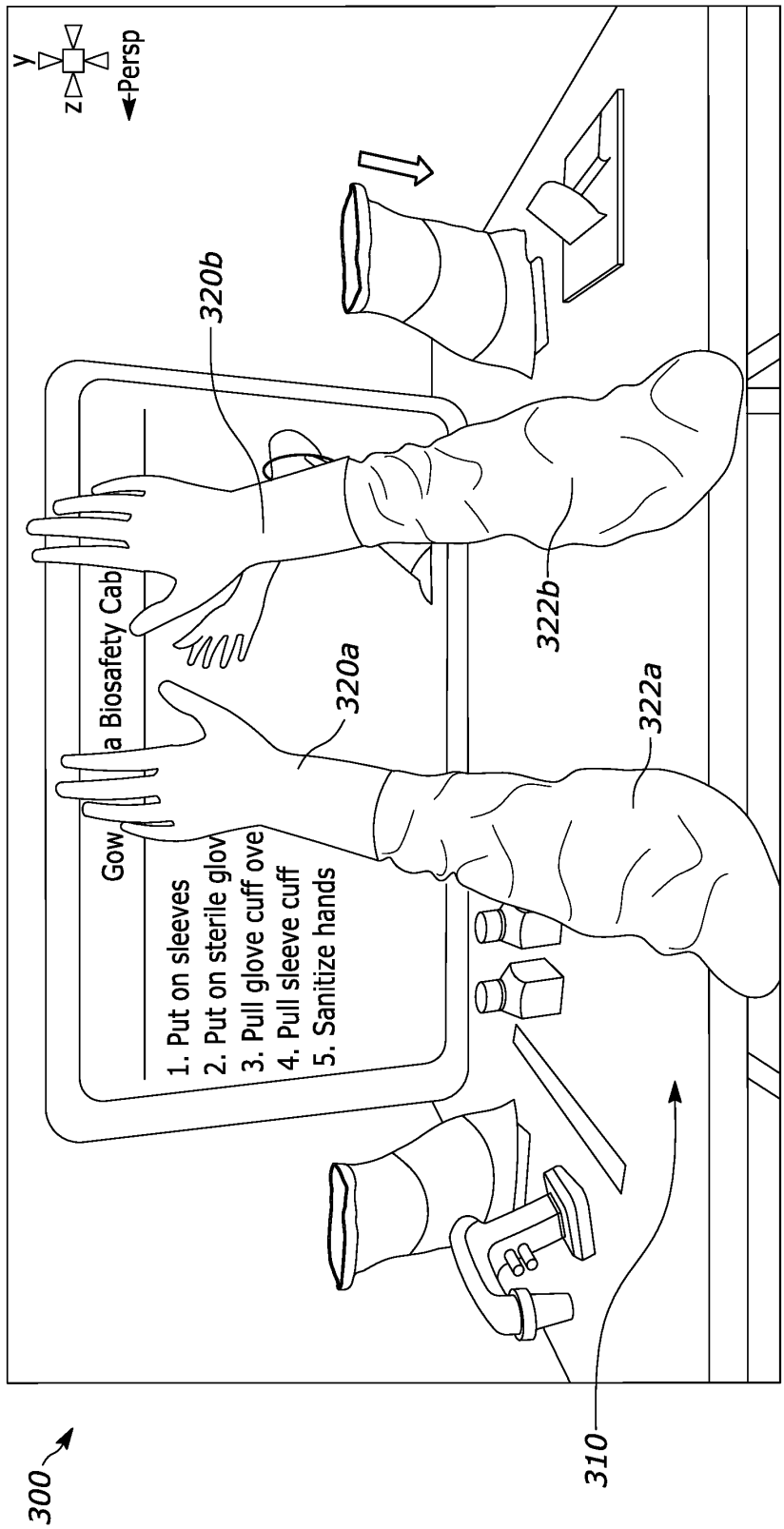

y
z
Persp
320b
a Biosafety Cab
Gow
1. Put on sleeves
2. Put on sterile glov
3. Pull glove cuff ove
4. Pull sleeve cuff
5. Sanitize hands
320a
322b
322a
300
310

FIG. 3N

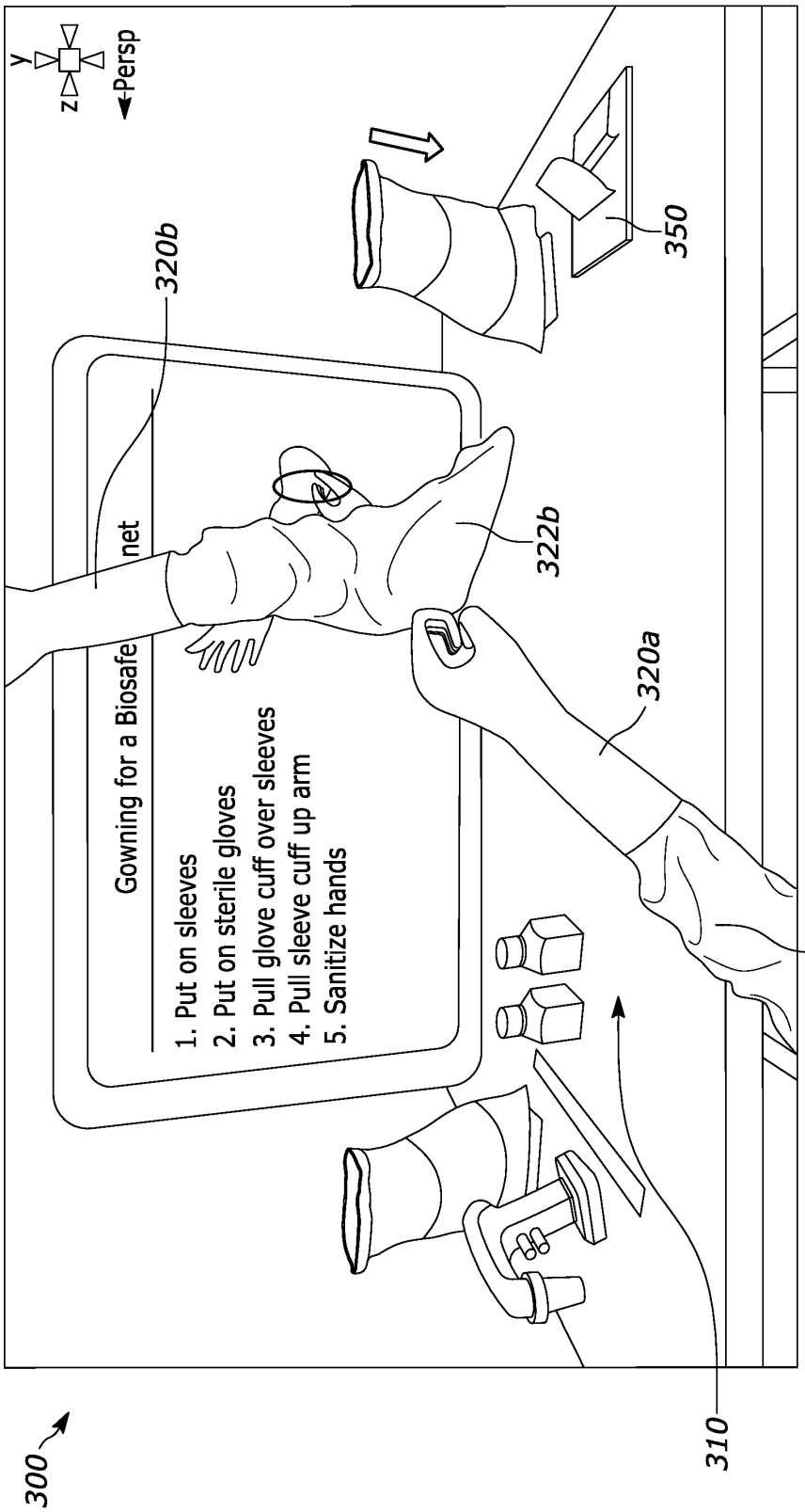

y
z
Persp
320b
350
net
322b
320a
Gowning for a Biosafe
1. Put on sleeves
2. Put on sterile gloves
3. Pull glove cuff over sleeves
4. Pull sleeve cuff up arm
5. Sanitize hands
322a
310
300

FIG. 3O

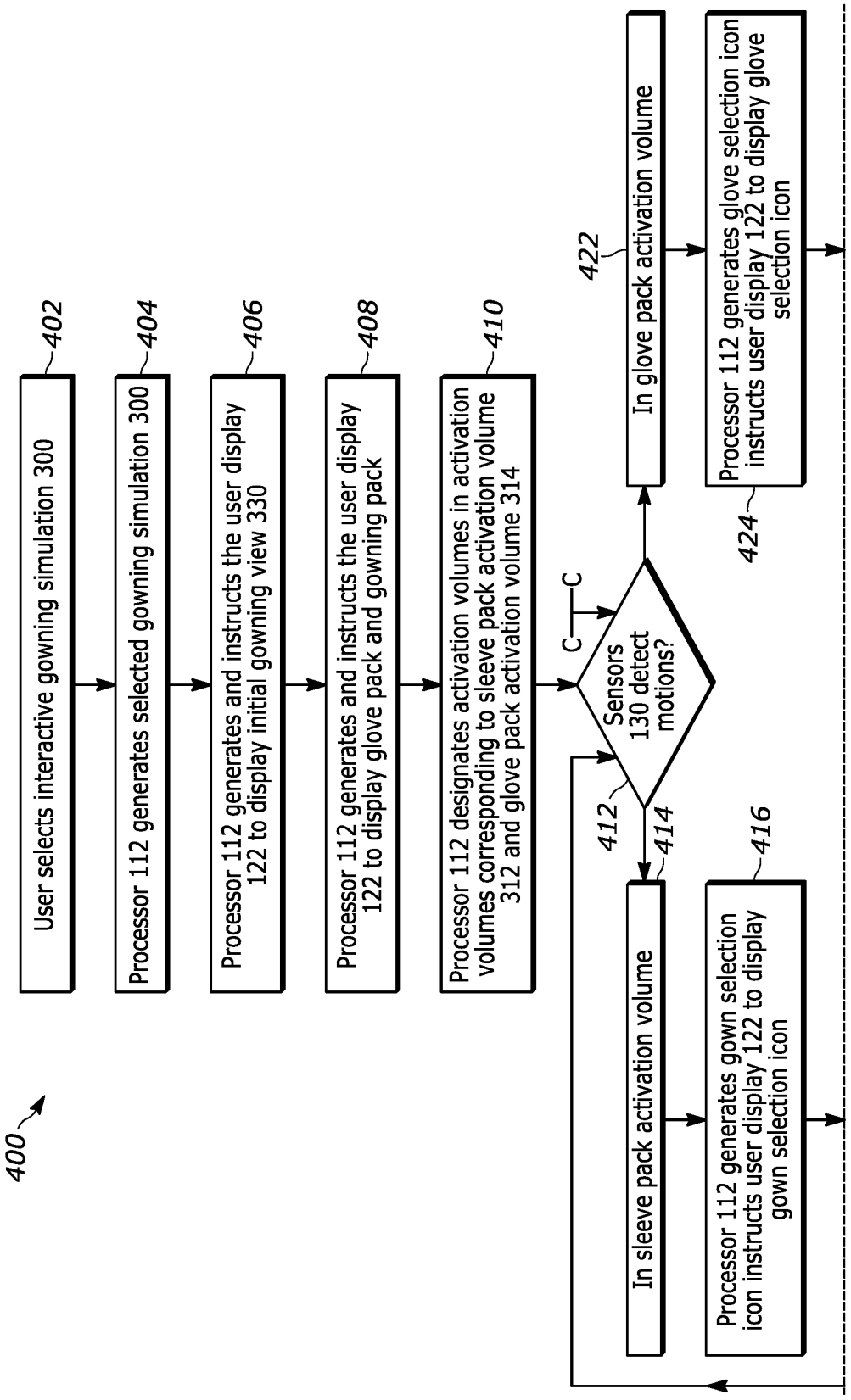

400
User selects interactive gowning simulation 300
402
Processor 112 generates selected gowning simulation 300
404
Processor 112 generates and instructs the user display 122 to display initial gowning view 330
406
Processor 112 generates and instructs the user display 122 to display glove pack and gowning pack
408
Processor 112 designates activation volumes in activation volumes corresponding to sleeve pack activation volume 312 and glove pack activation volume 314
410
C
C
Sensors 130 detect motions?
412
In sleeve pack activation volume
414
Processor 112 generates gown selection icon instructs user display 122 to display gown selection icon
416
In glove pack activation volume
422
Processor 112 generates glove selection icon instructs user display 122 to display glove selection icon
424

FIG. 4A

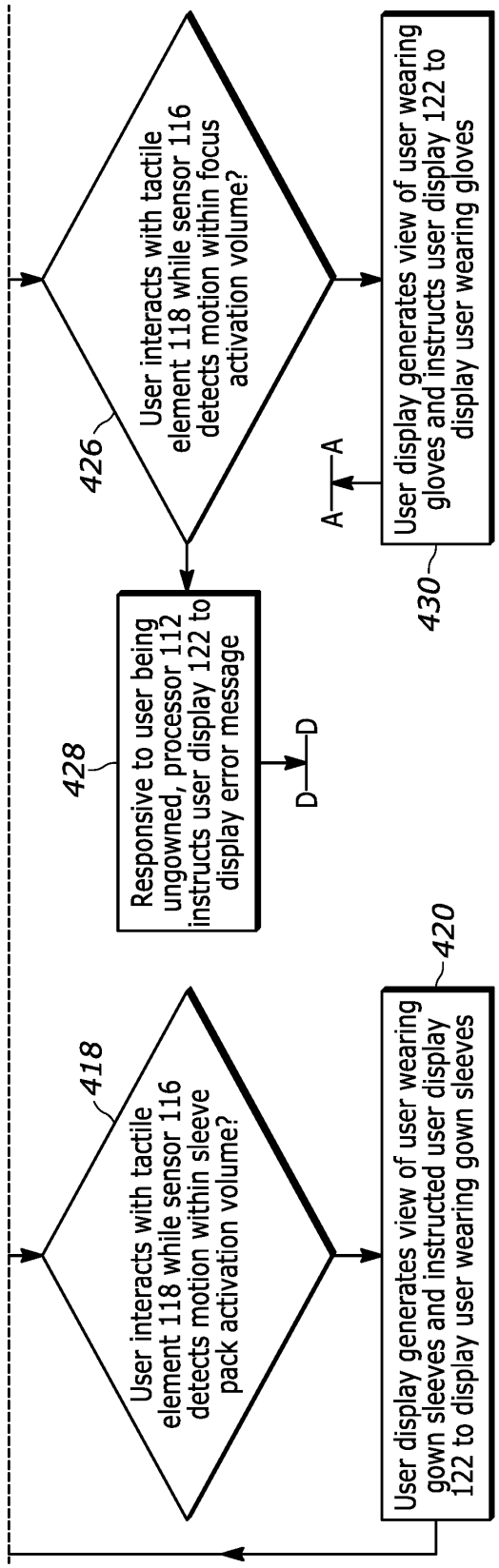


FIG. 4A (Continued)

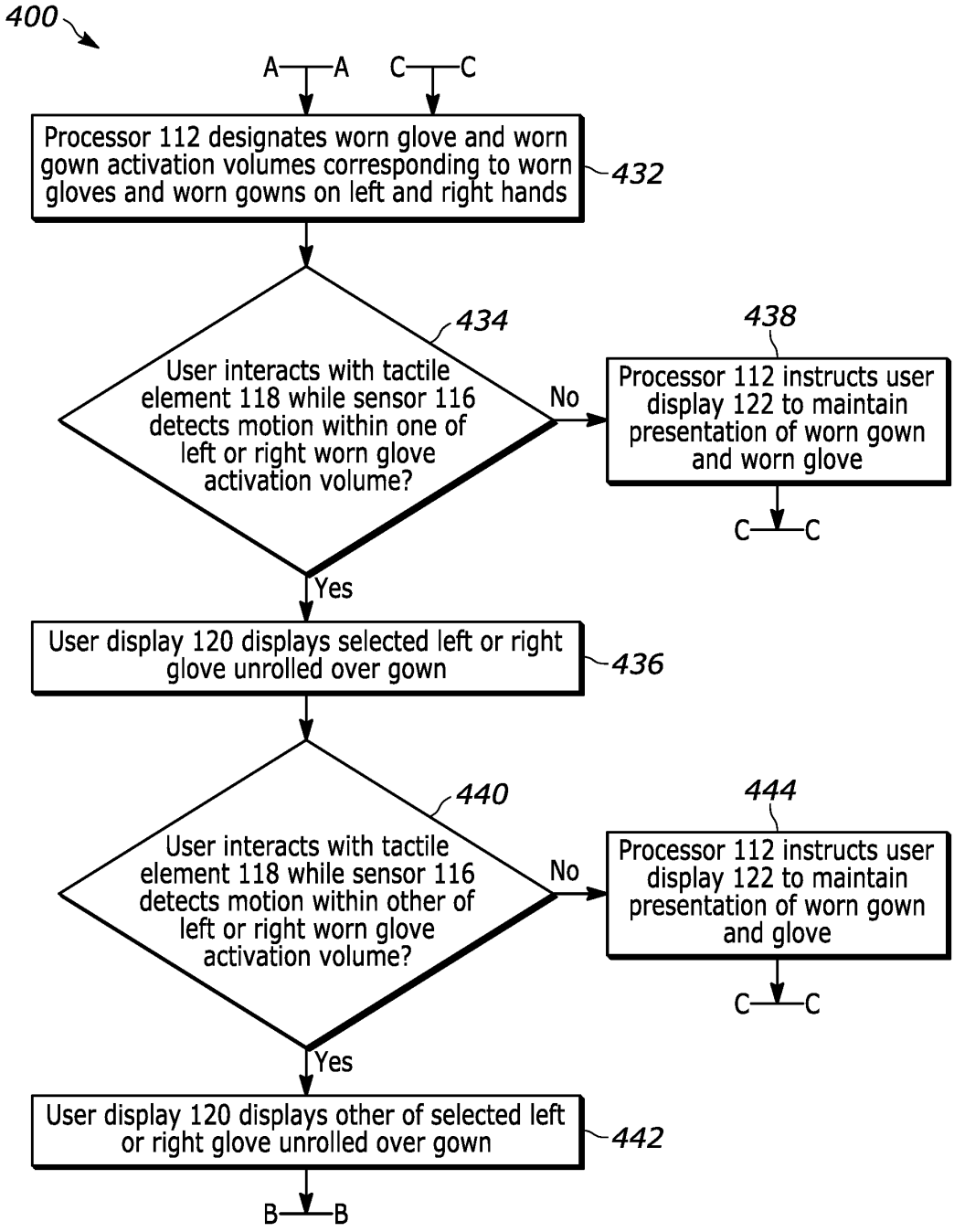

400
A
A
C
C
Processor 112 designates worn glove and worn gown activation volumes corresponding to worn gloves and worn gowns on left and right hands
432
434
User interacts with tactile element 118 while sensor 116 detects motion within one of left or right worn glove activation volume?
No
438
Processor 112 instructs user display 122 to maintain presentation of worn gown and worn glove
C
C
Yes
User display 120 displays selected left or right glove unrolled over gown
436
440
User interacts with tactile element 118 while sensor 116 detects motion within other of left or right worn glove activation volume?
No
444
Processor 112 instructs user display 122 to maintain presentation of worn gown and glove
C
C
Yes
User display 120 displays other of selected left or right glove unrolled over gown
442
B
B

FIG. 4B

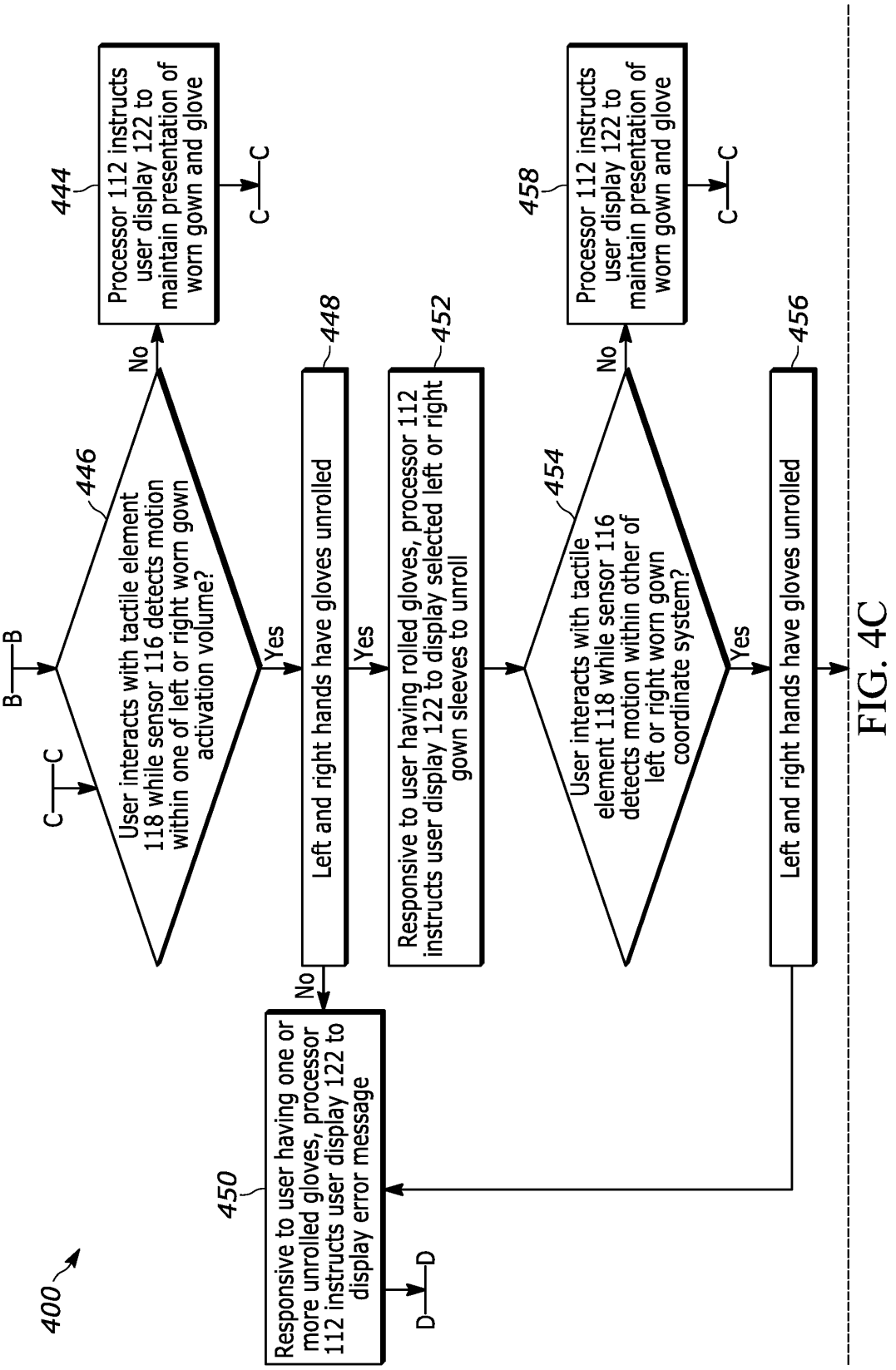

400
B
B
C
C
446
User interacts with tactile element 118 while sensor 116 detects motion within one of left or right worn gown activation volume?
No
444
Processor 112 instructs user display 122 to maintain presentation of worn gown and glove
C
C
Yes
448
Left and right hands have gloves unrolled
No
450
Responsive to user having one or more unrolled gloves, processor 112 instructs user display 122 to display error message
D
D
Yes
452
Responsive to user having rolled gloves, processor 112 instructs user display 122 to display selected left or right gown sleeves to unroll
454
User interacts with tactile element 118 while sensor 116 detects motion within other of left or right worn gown coordinate system?
No
458
Processor 112 instructs user display 122 to maintain presentation of worn gown and glove
C
C
Yes
456
Left and right hands have gloves unrolled

FIG. 4C

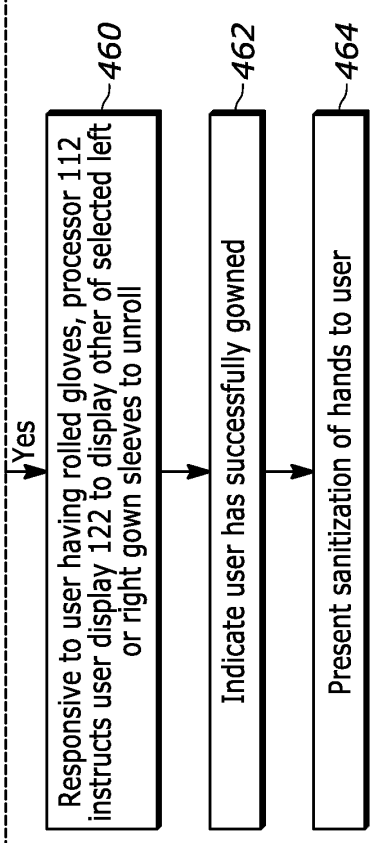


FIG. 4C (Continued)

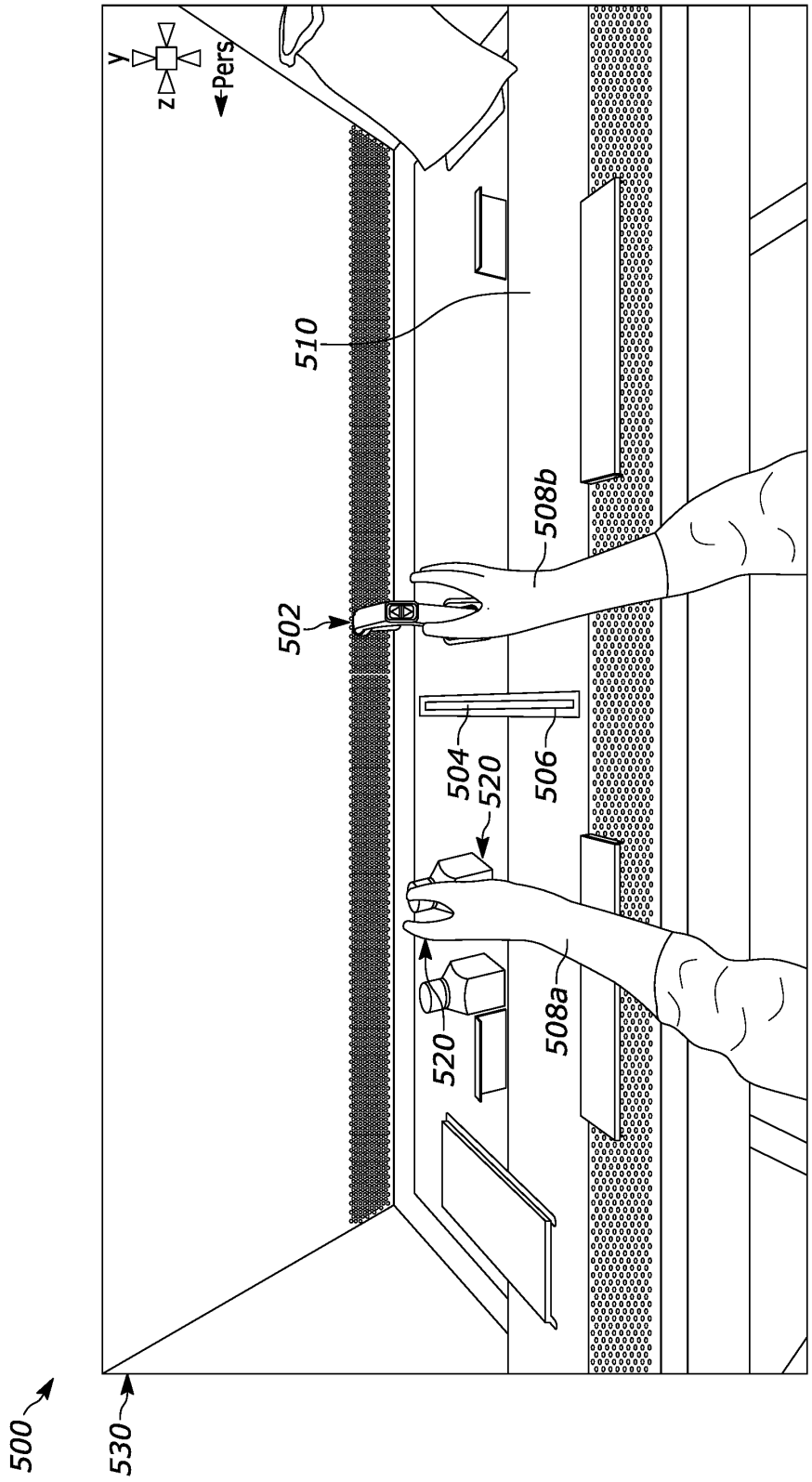


FIG. 5A

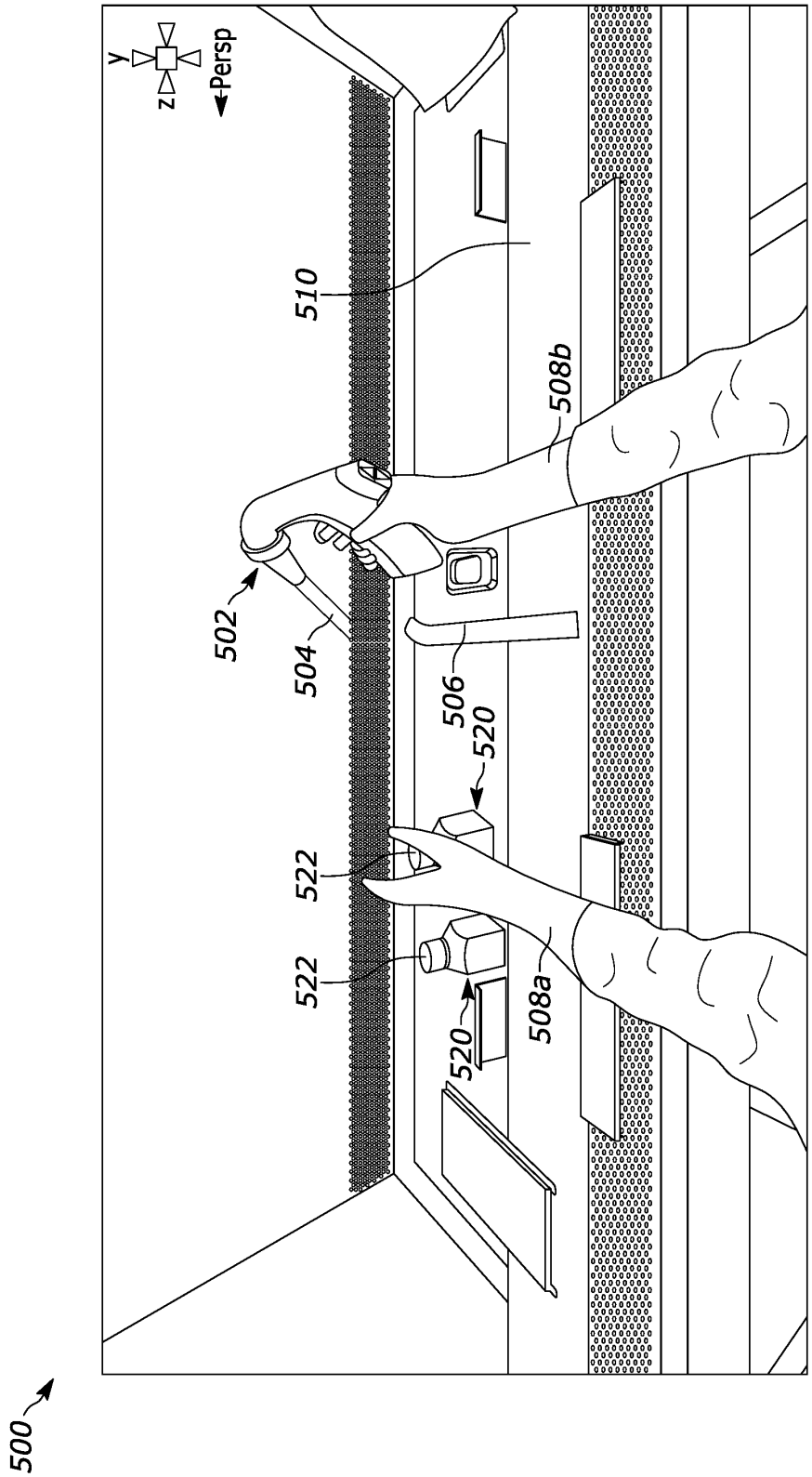


FIG. 5B

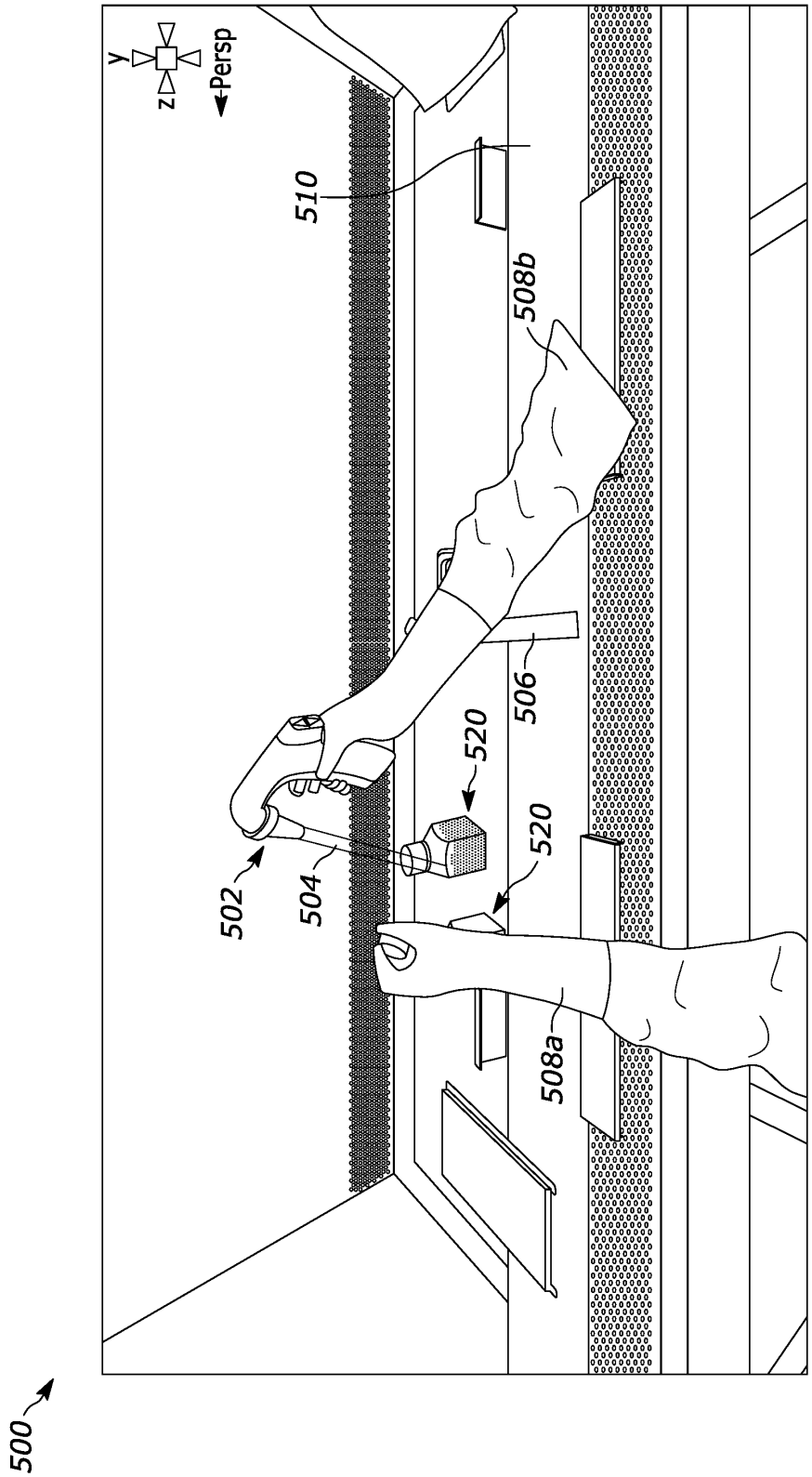


FIG. 5C

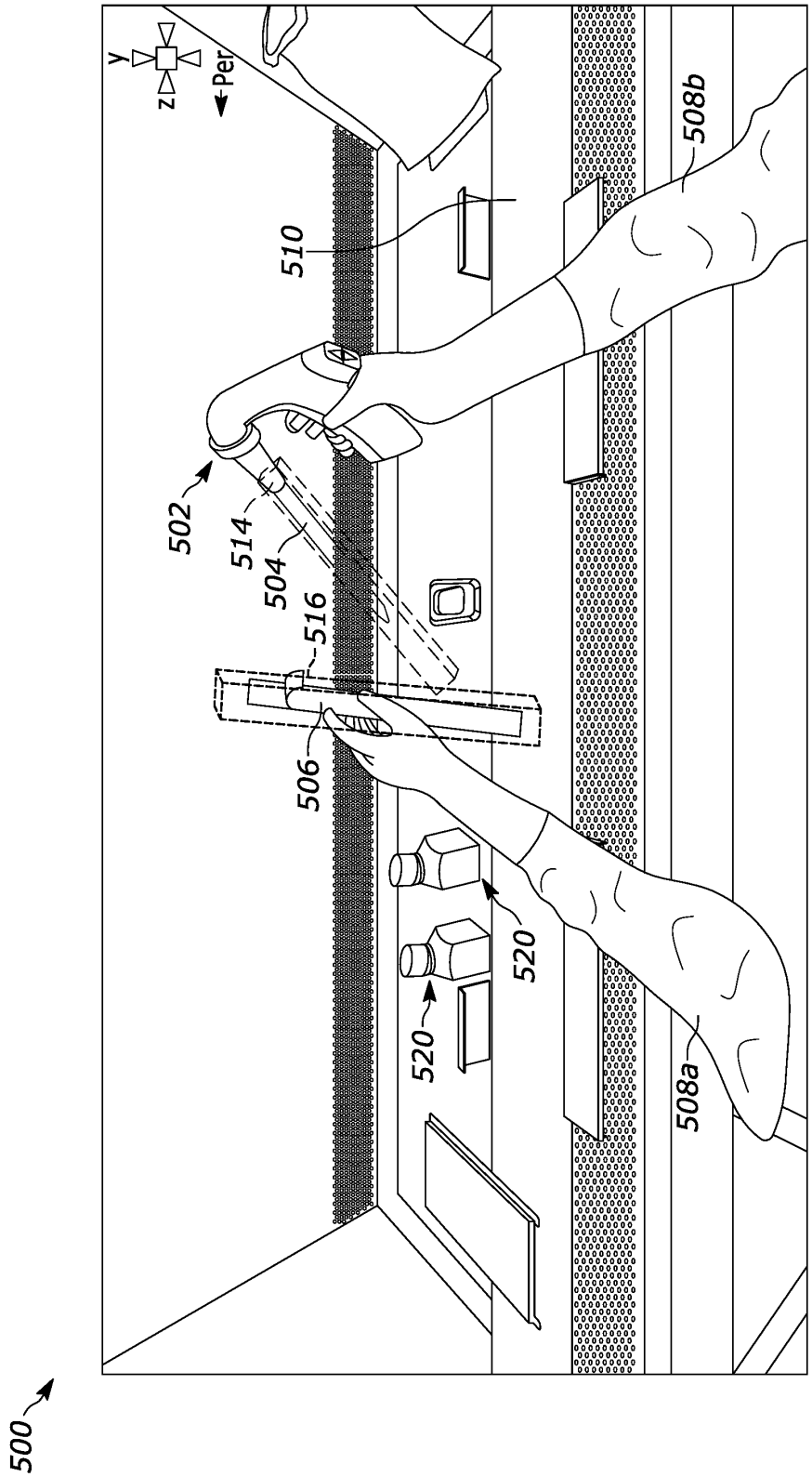


FIG. 5D

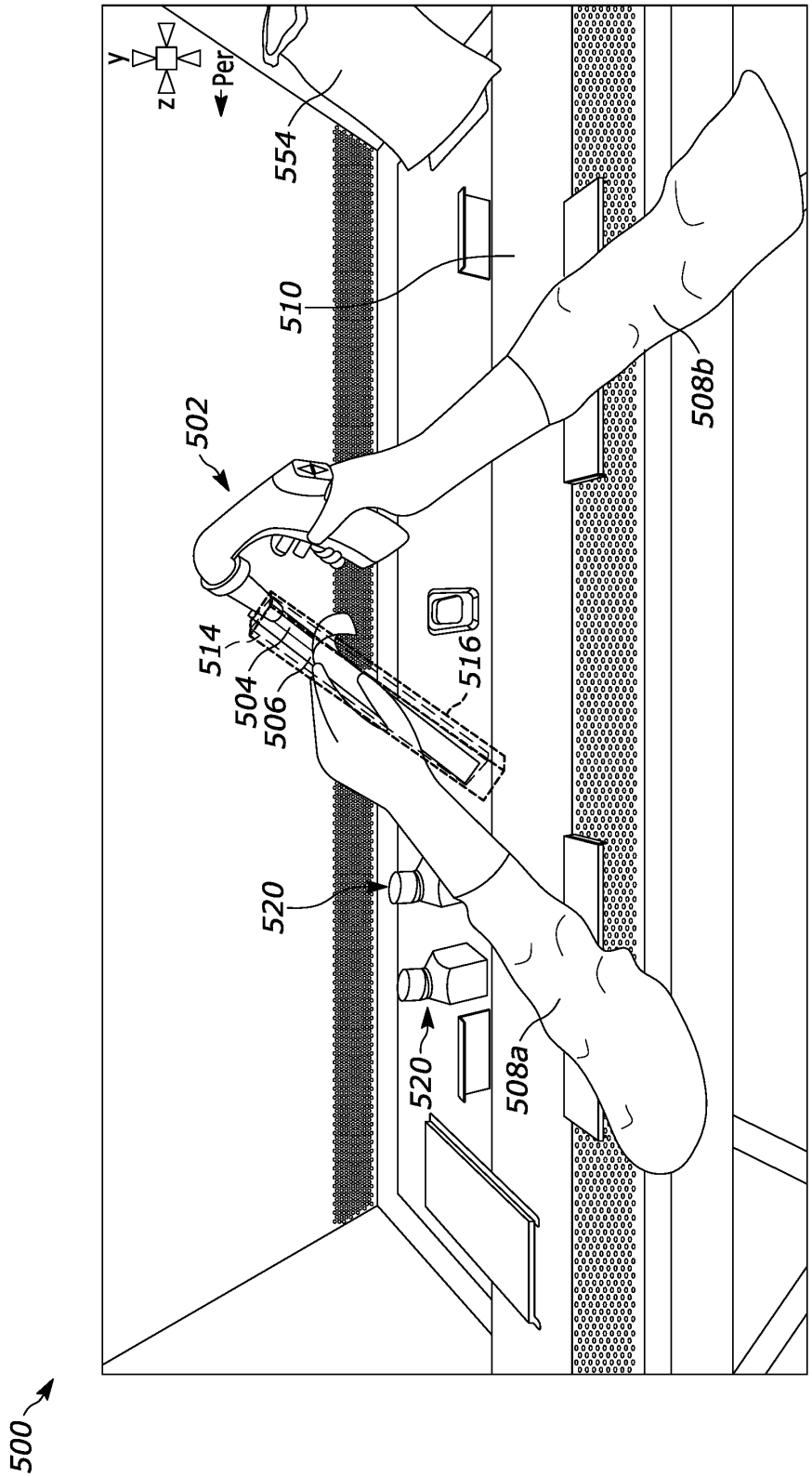


FIG. 5E

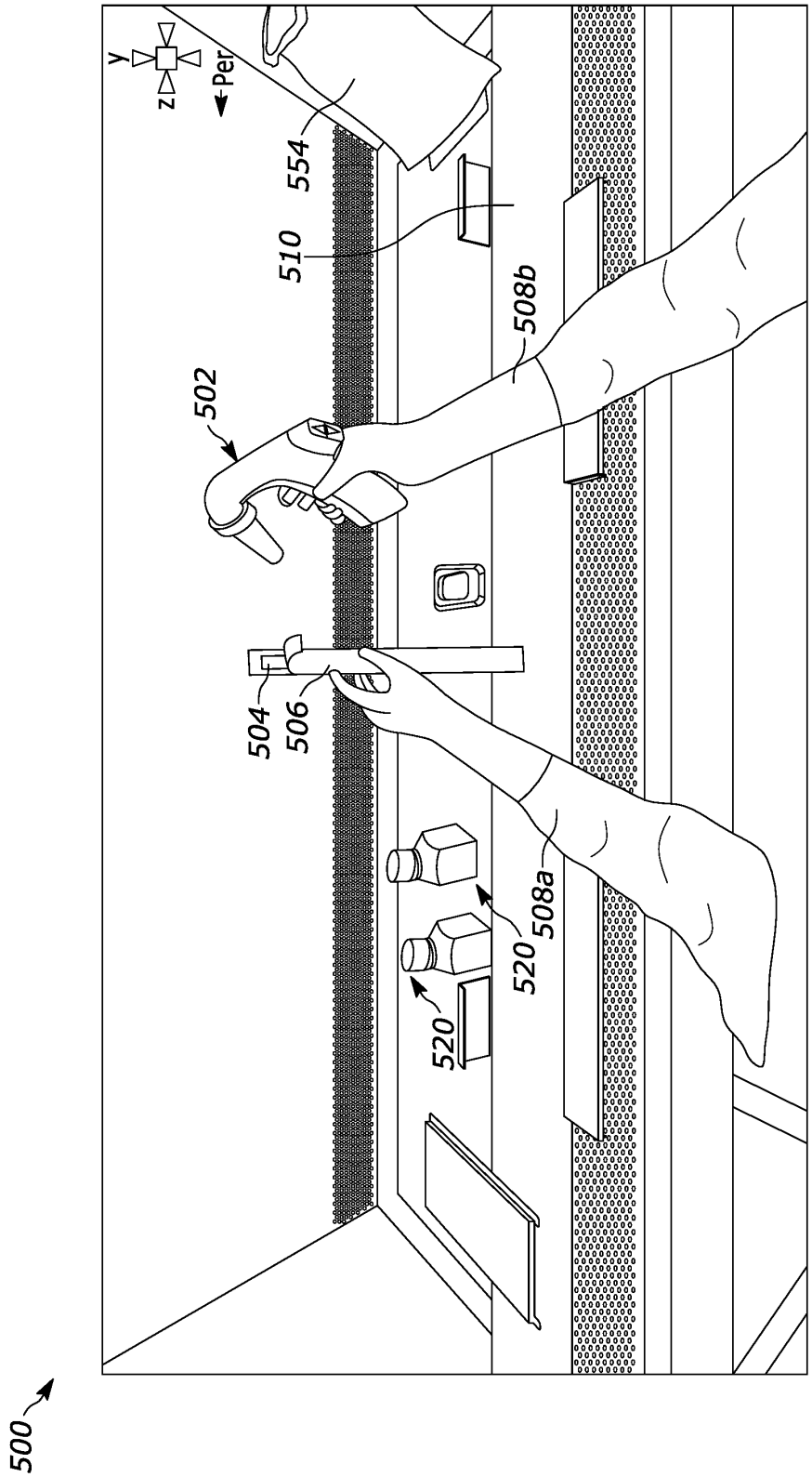


FIG. 5F

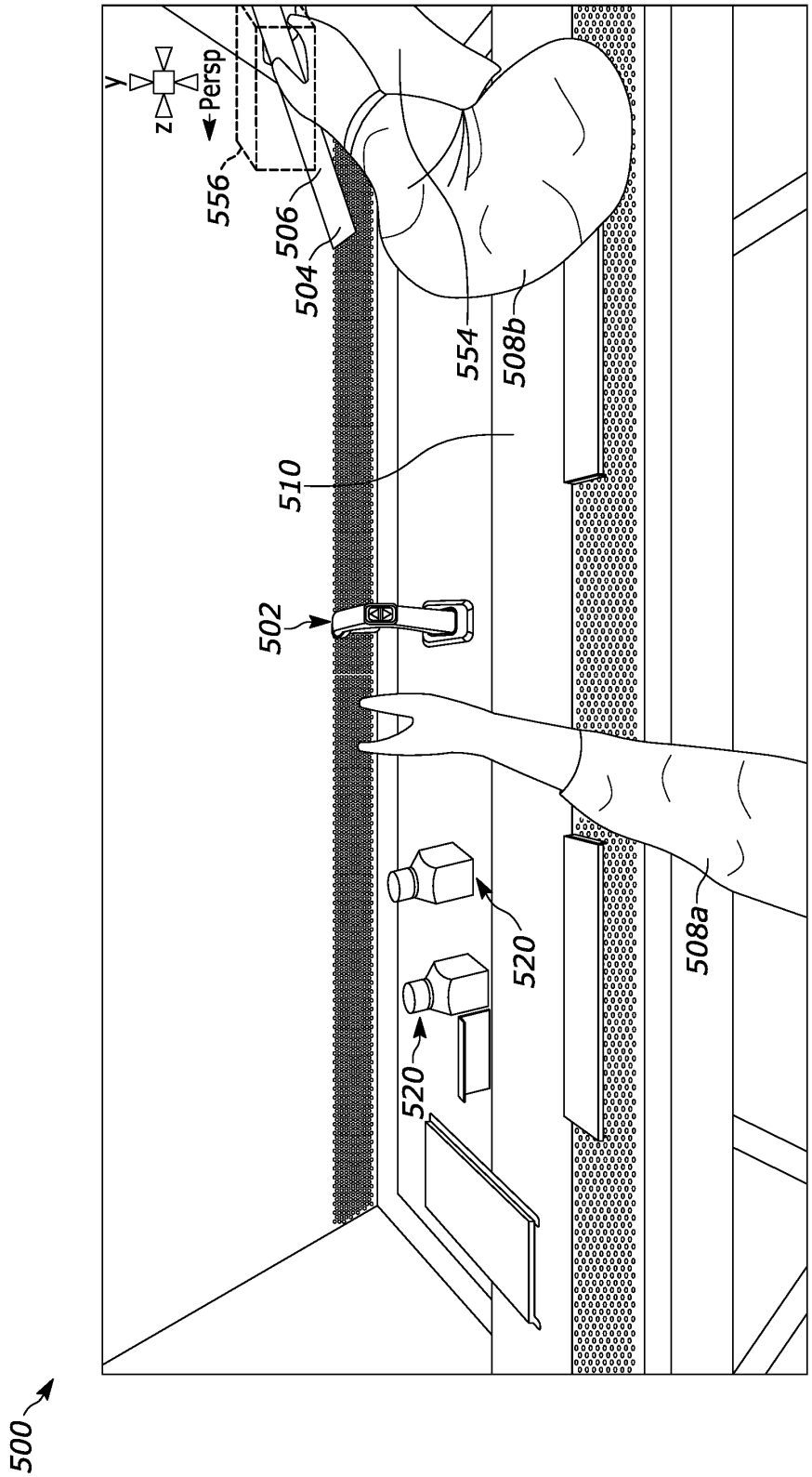


FIG. 5G

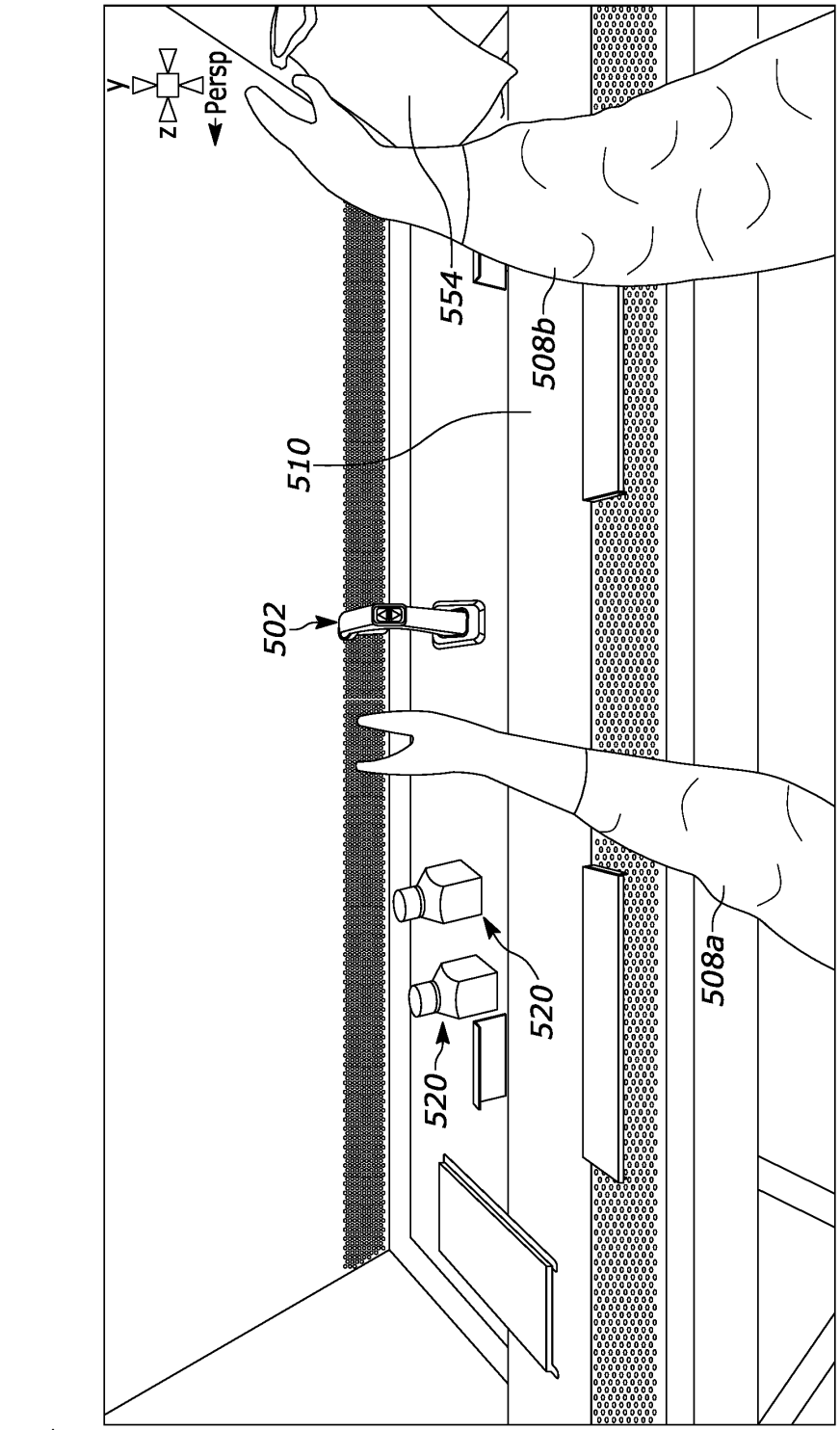


FIG. 5H

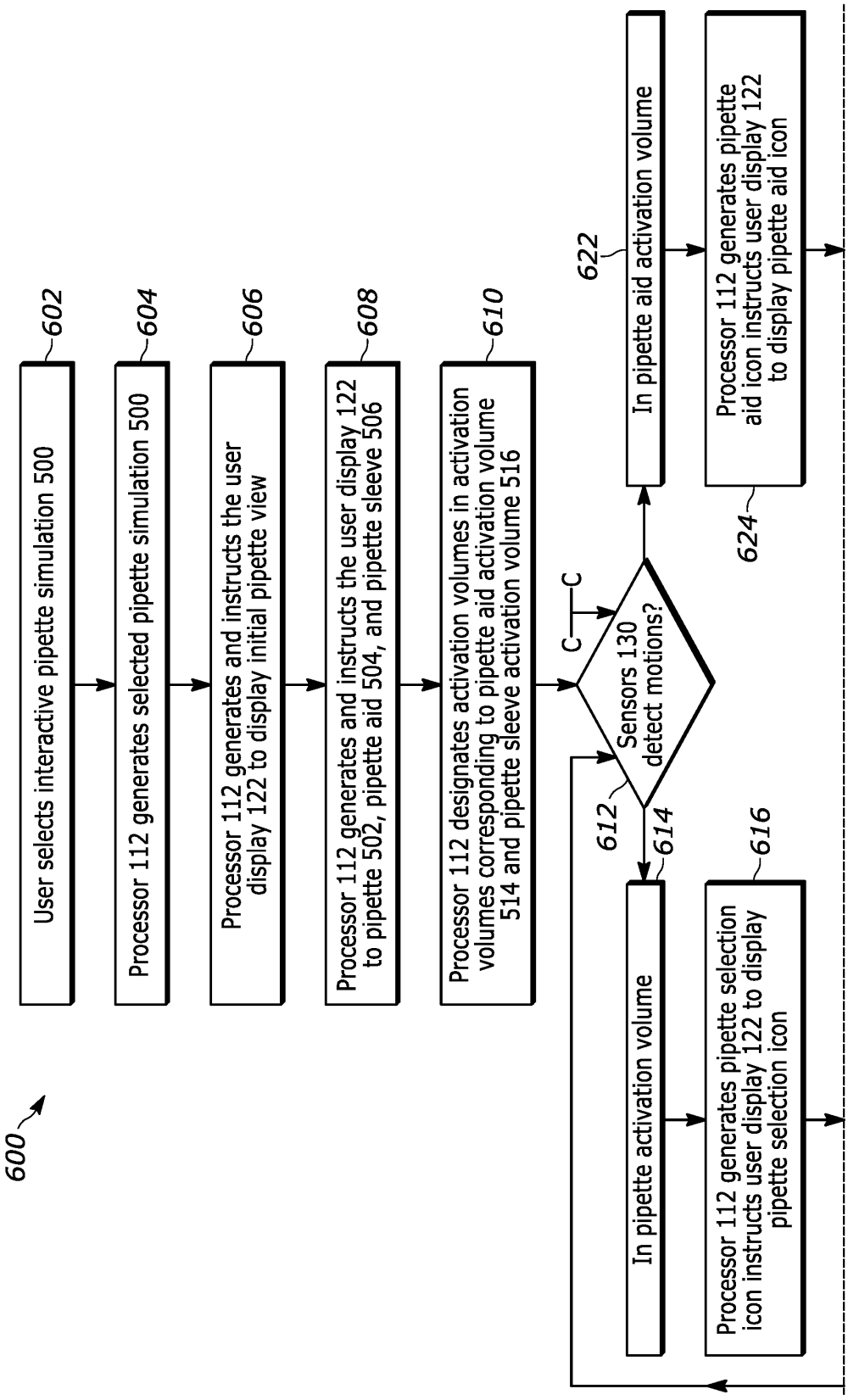

600
602
User selects interactive pipette simulation 500
604
Processor 112 generates selected pipette simulation 500
606
Processor 112 generates and instructs the user display 122 to display initial pipette view
608
Processor 112 generates and instructs the user display 122 to pipette 502, pipette aid 504, and pipette sleeve 506
610
Processor 112 designates activation volumes in activation volumes corresponding to pipette aid activation volume 514 and pipette sleeve activation volume 516
C
C
612
Sensors 130 detect motions?
614
In pipette activation volume
616
Processor 112 generates pipette selection icon instructs user display 122 to display pipette selection icon
622
In pipette aid activation volume
624
Processor 112 generates pipette aid icon instructs user display 122 to display pipette aid icon

FIG. 6A

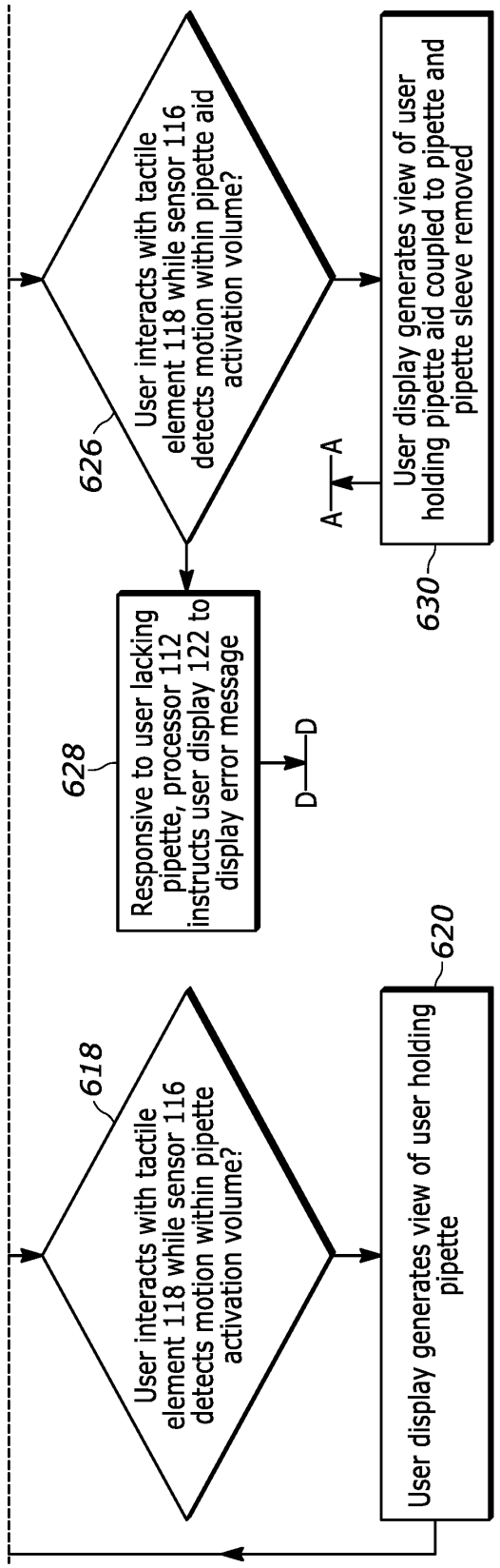


FIG. 6A (Continued)

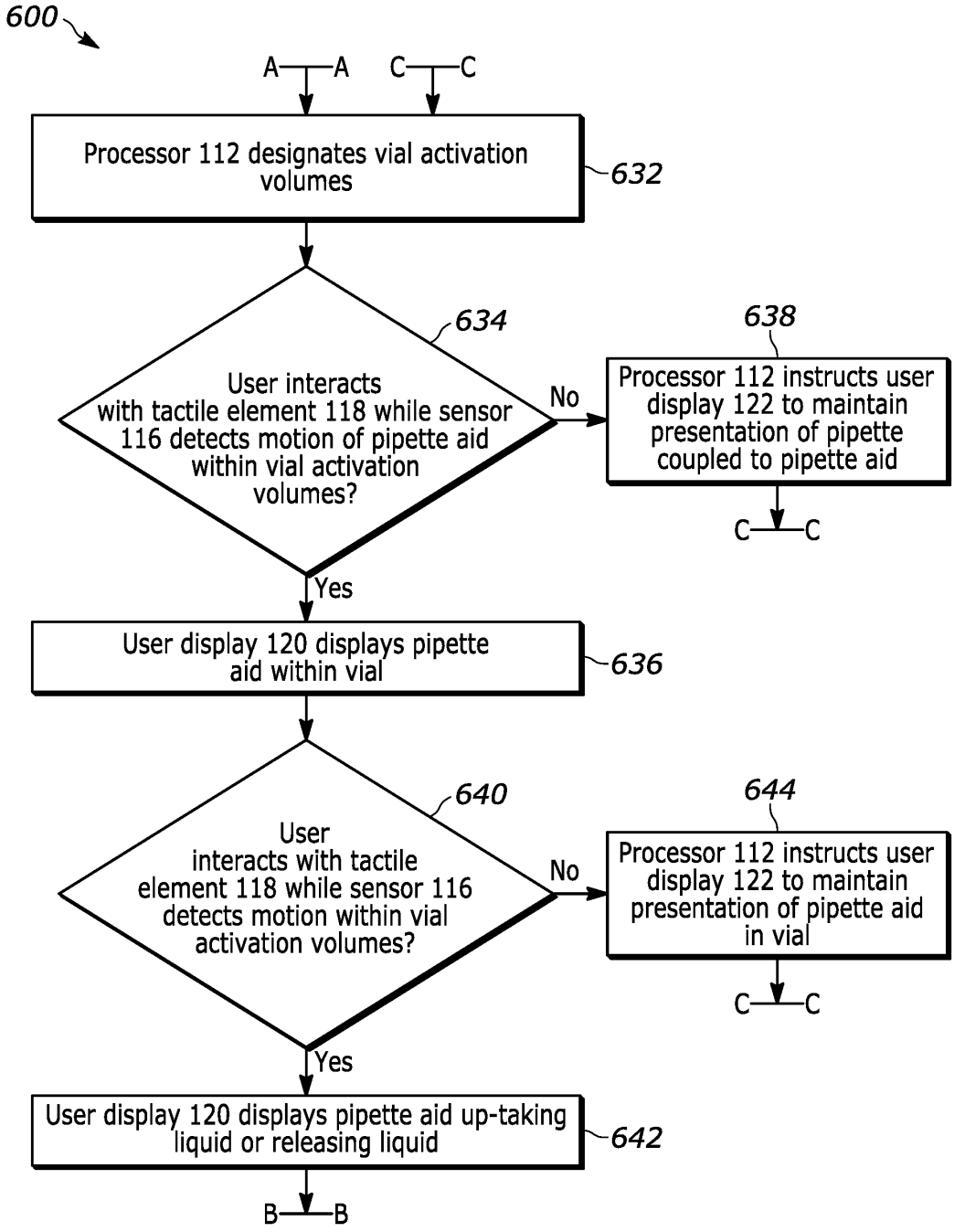

600
A
A
C
C
Processor 112 designates vial activation volumes
632
634
User interacts with tactile element 118 while sensor 116 detects motion of pipette aid within vial activation volumes?
No
638
Processor 112 instructs user display 122 to maintain presentation of pipette coupled to pipette aid
C
C
Yes
User display 120 displays pipette aid within vial
636
640
User interacts with tactile element 118 while sensor 116 detects motion within vial activation volumes?
No
644
Processor 112 instructs user display 122 to maintain presentation of pipette aid in vial
C
C
Yes
User display 120 displays pipette aid up-taking liquid or releasing liquid
642
B
B

FIG. 6B

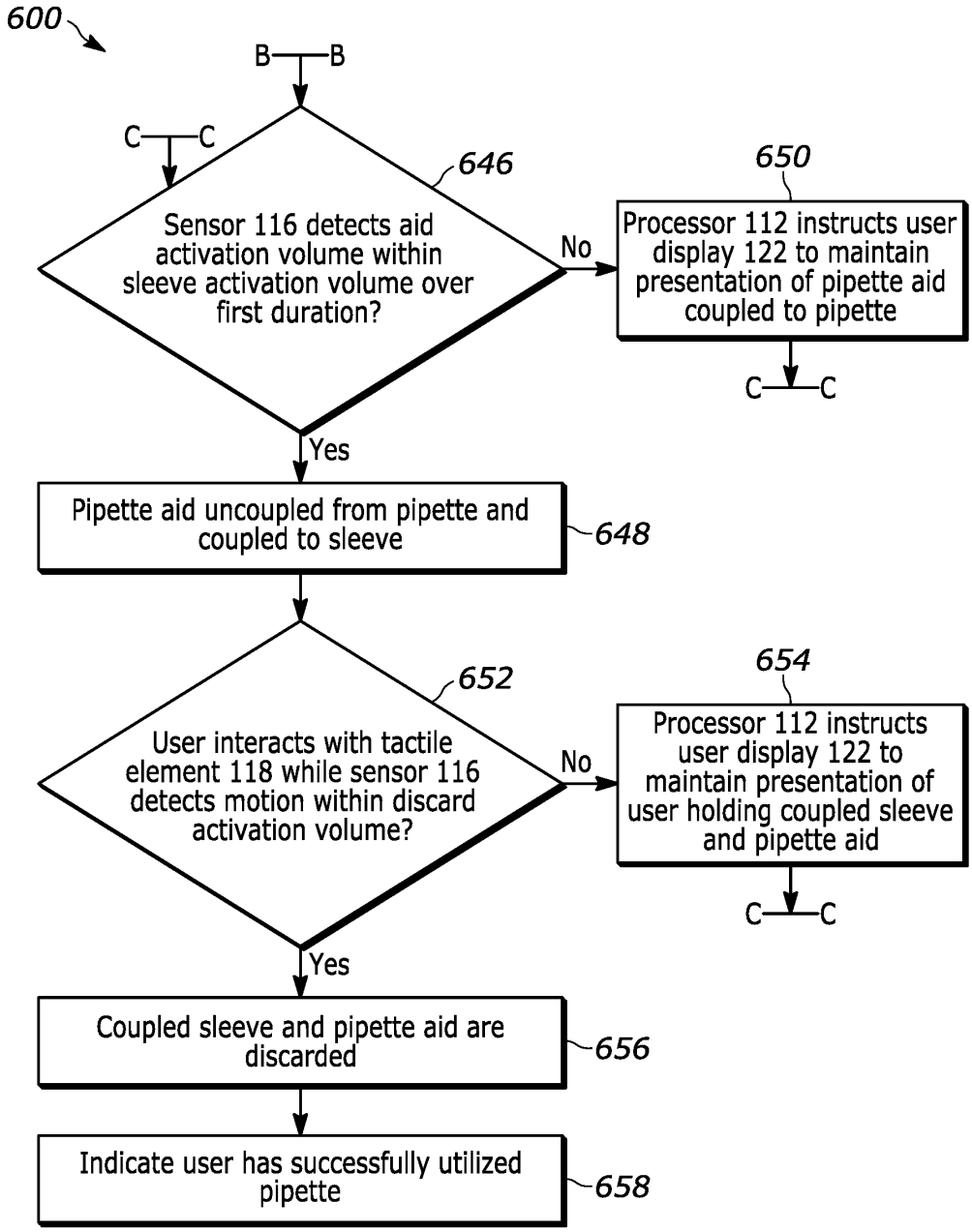

600
B
B
C
C
646
Sensor 116 detects aid activation volume within sleeve activation volume over first duration?
No
650
Processor 112 instructs user display 122 to maintain presentation of pipette aid coupled to pipette
C
C
Yes
Pipette aid uncoupled from pipette and coupled to sleeve
648
652
User interacts with tactile element 118 while sensor 116 detects motion within discard activation volume?
No
654
Processor 112 instructs user display 122 to maintain presentation of user holding coupled sleeve and pipette aid
C
C
Yes
Coupled sleeve and pipette aid are discarded
656
Indicate user has successfully utilized pipette
658

FIG. 6C

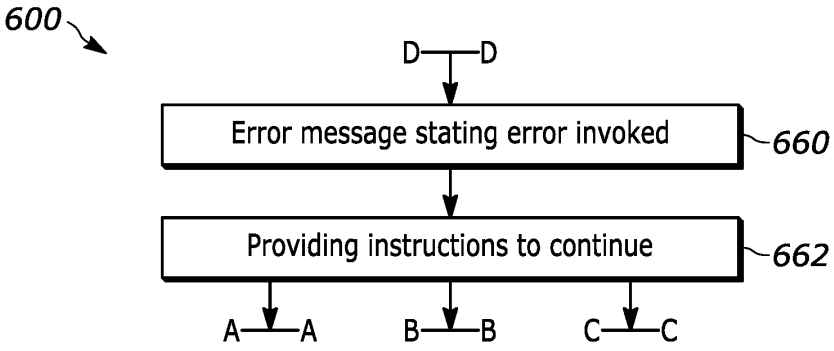

600
D
D
Error message stating error invoked
660
Providing instructions to continue
662
A
A
B
B
C
C

FIG. 6D