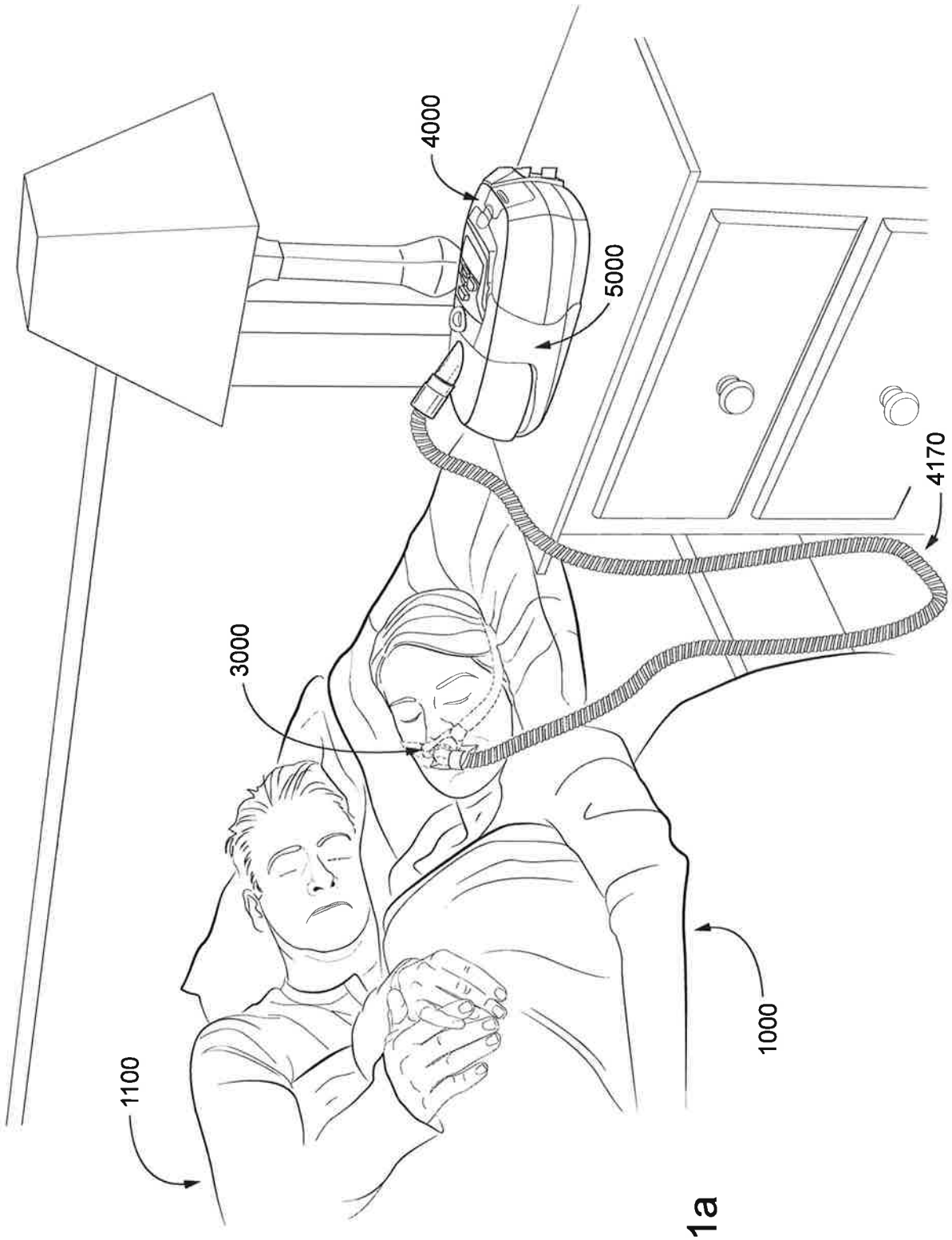


FIG. 1a

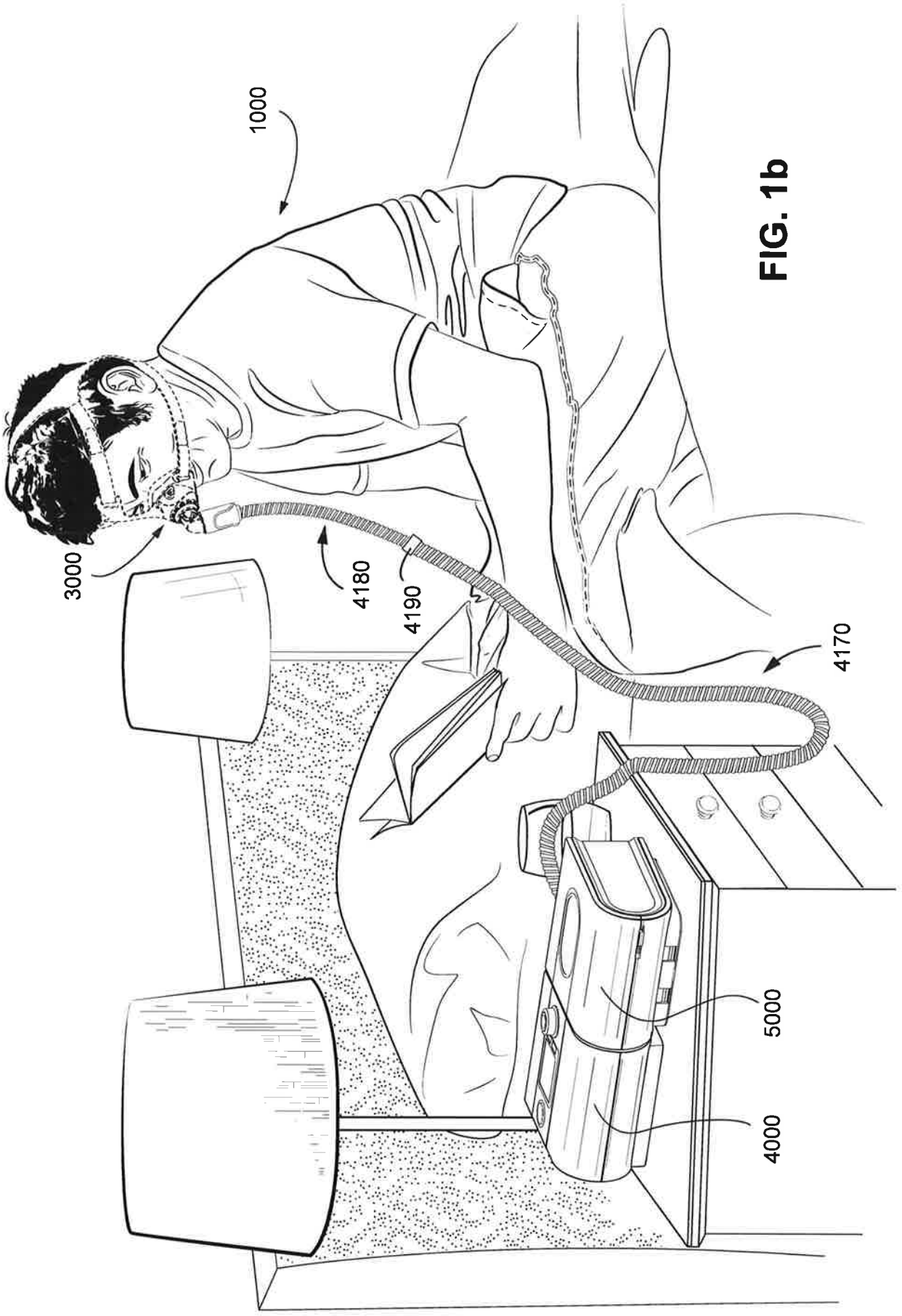


FIG. 1b



FIG. 1c

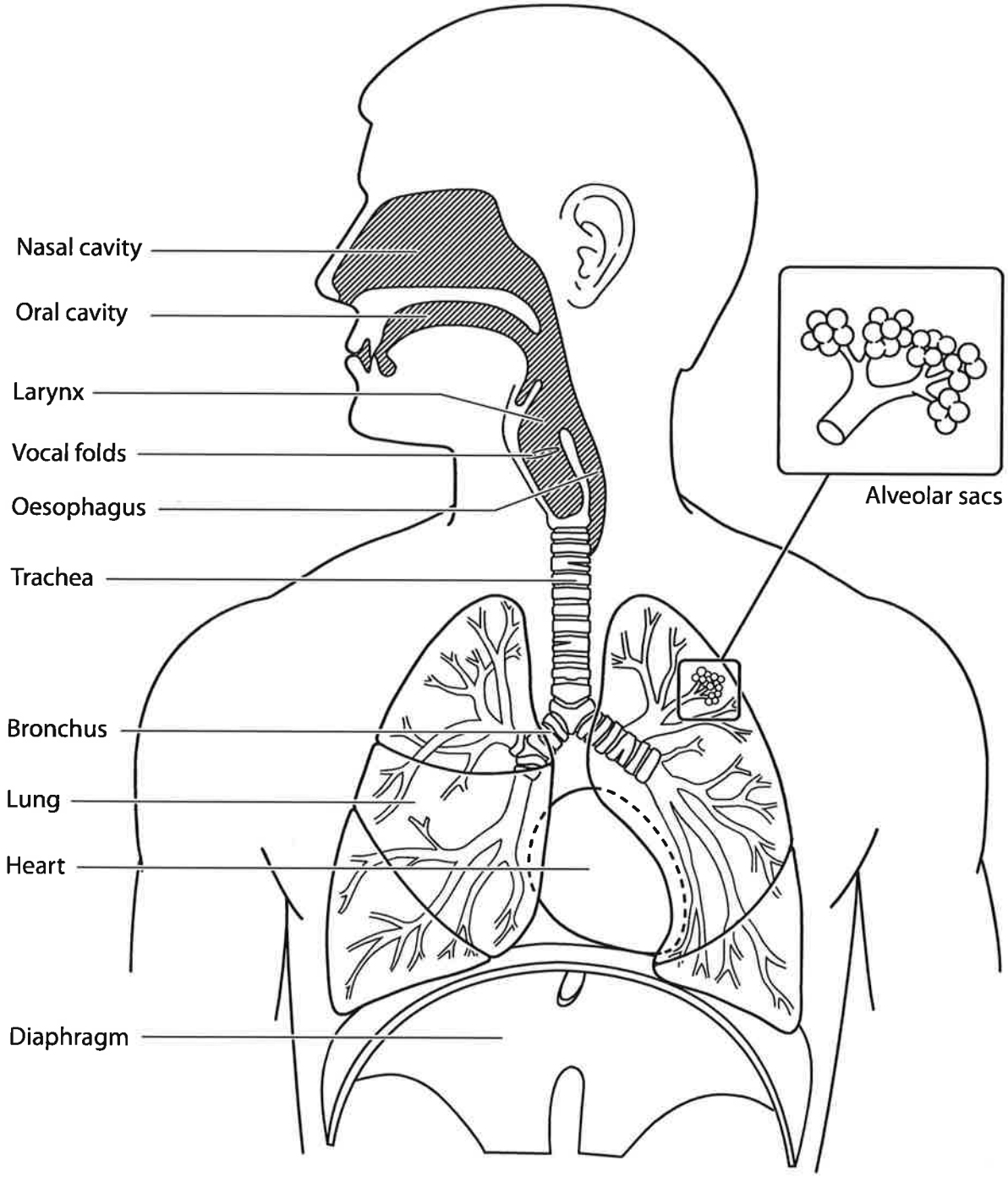

Nasal cavity
Oral cavity
Larynx
Vocal folds
Oesophagus
Trachea
Bronchus
Lung
Heart
Diaphragm
Alveolar sacs

FIG. 2a

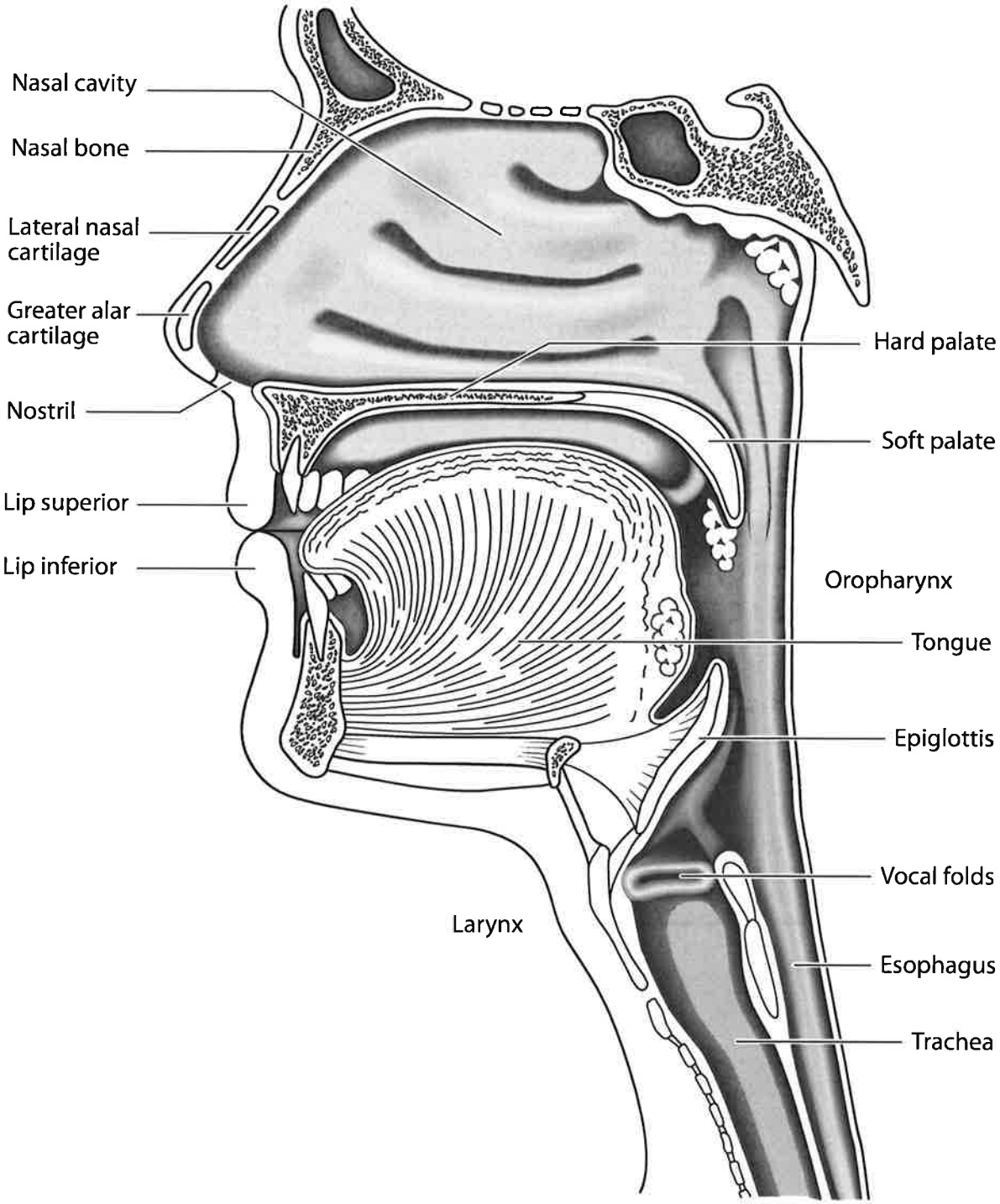

Nasal cavity
Nasal bone
Lateral nasal cartilage
Greater alar cartilage
Nostril
Lip superior
Lip inferior
Hard palate
Soft palate
Oropharynx
Tongue
Epiglottis
Vocal folds
Larynx
Esophagus
Trachea

FIG. 2b

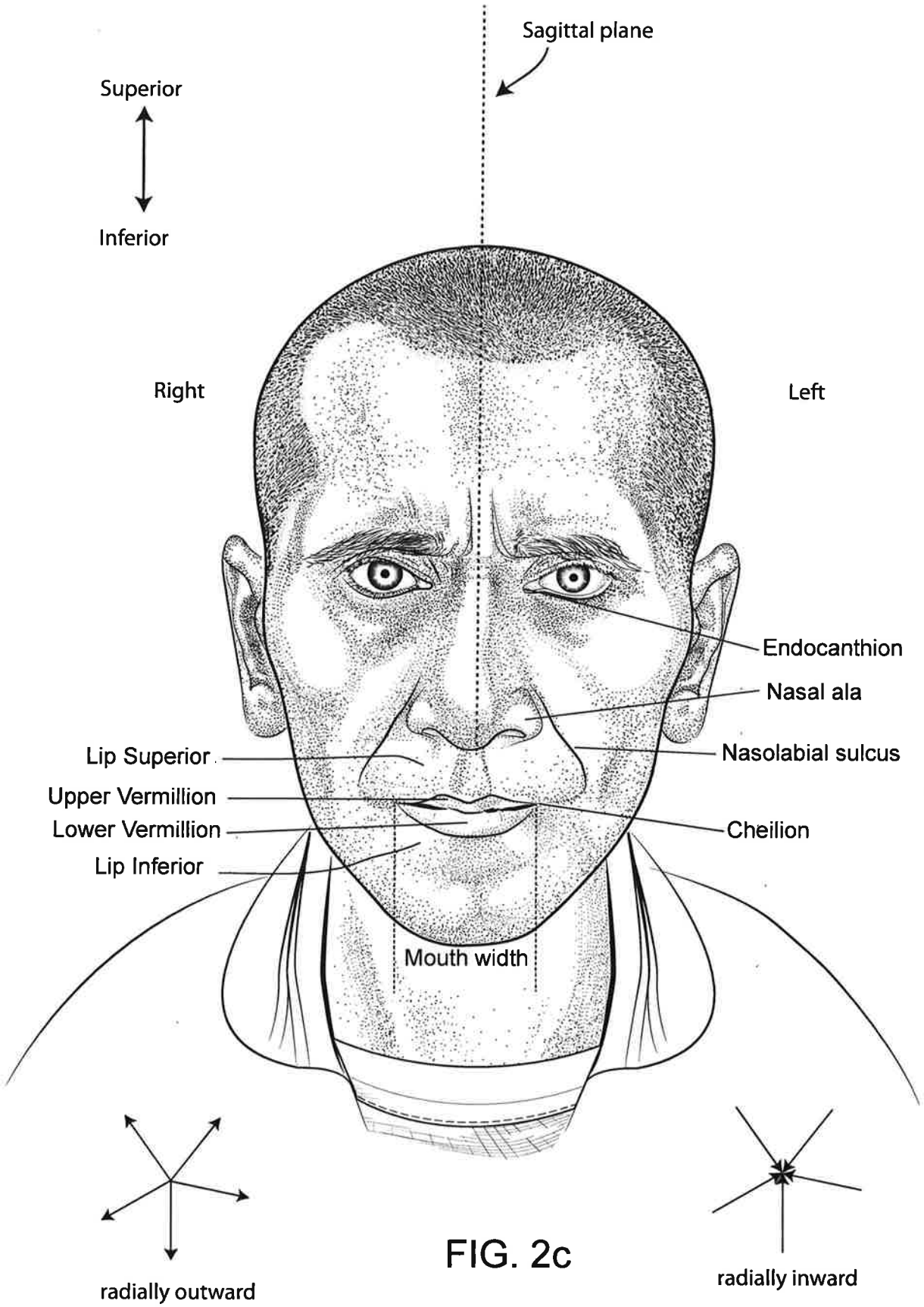

Sagittal plane
Superior
Inferior
Right
Left
Endocanthion
Nasal ala
Lip Superior
Nasolabial sulcus
Upper Vermillion
Lower Vermillion
Cheilion
Lip Inferior
Mouth width
radially outward
radially inward

FIG. 2c

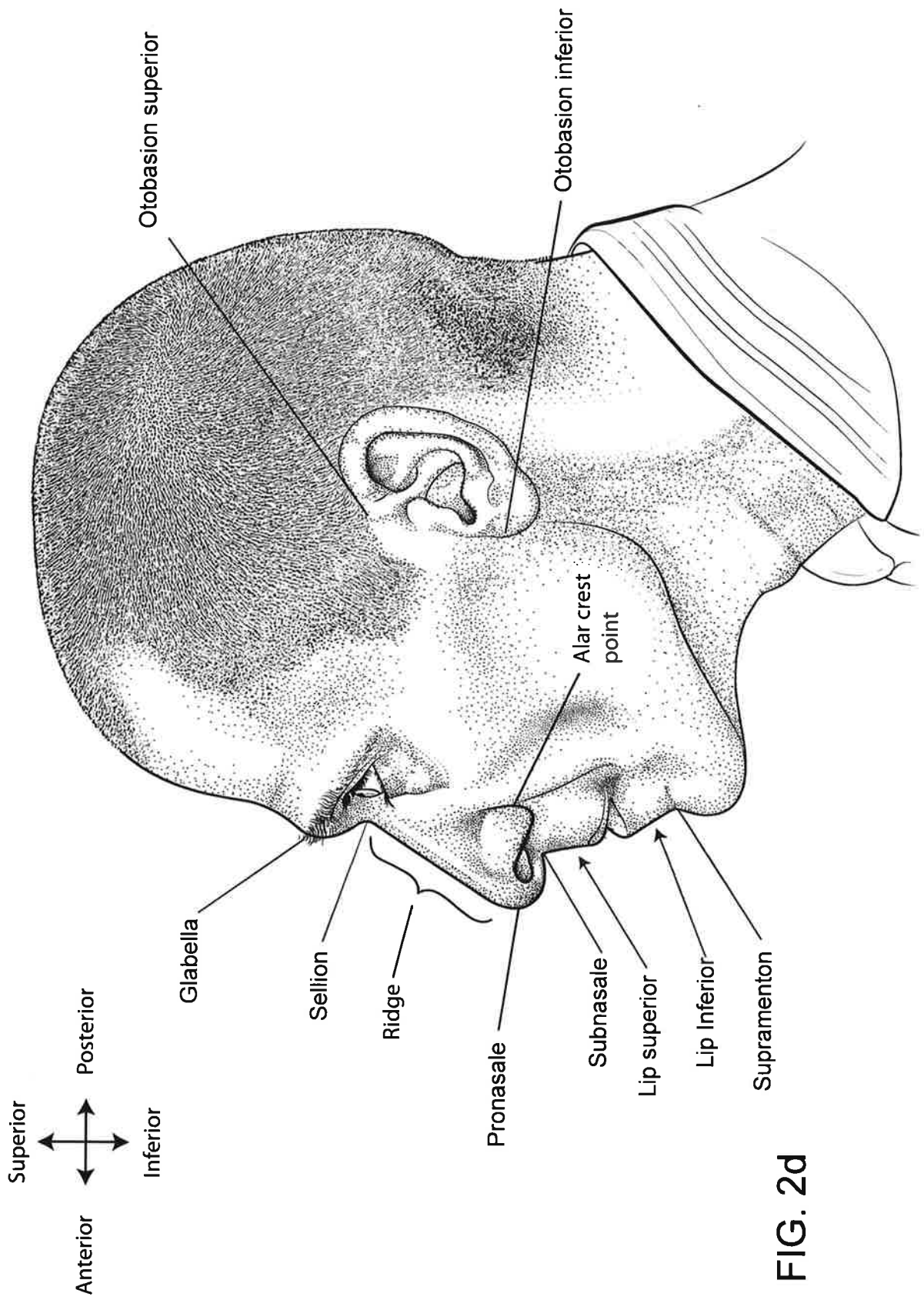

Superior
Posterior
Anterior
Inferior
Otobasion superior
Otobasion inferior
Glabella
Sellion
Ridge
Alar crest point
Pronasale
Subnasale
Lip superior
Lip Inferior
Supramenton

FIG. 2d

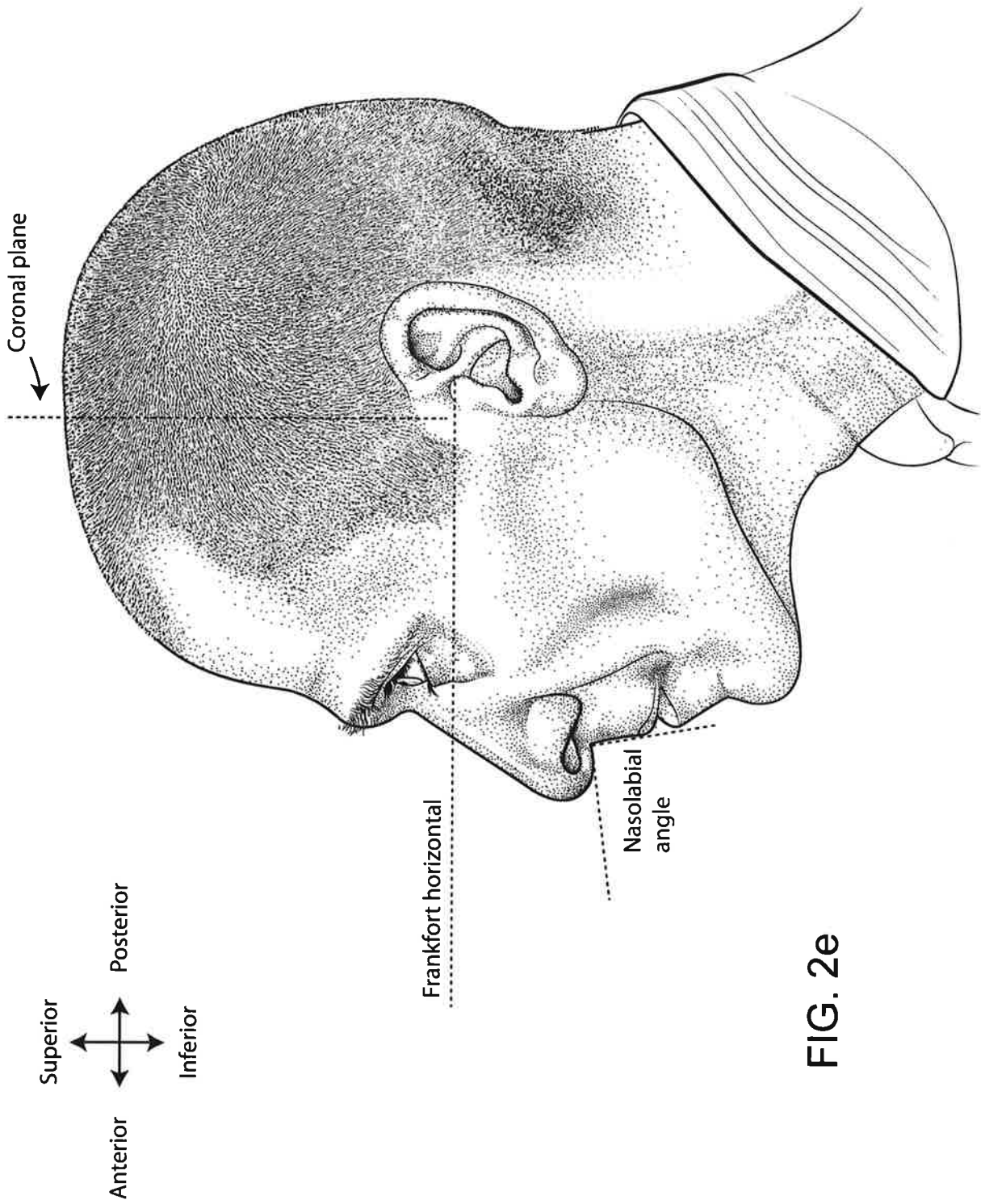

Coronal plane
Frankfort horizontal
Nasolabial angle
Superior
Inferior
Posterior
Anterior

FIG. 2e

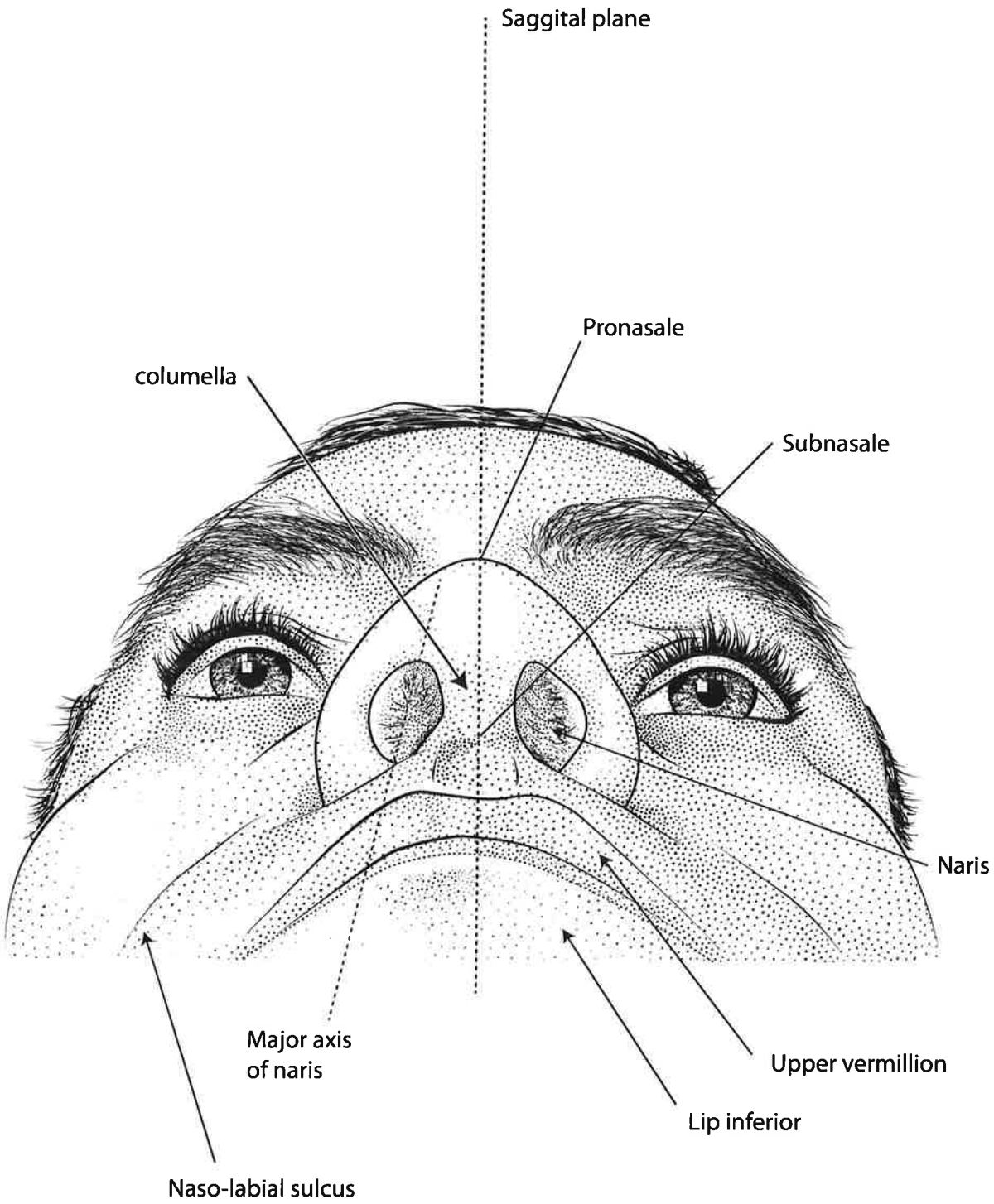

Saggital plane
Pronasale
columella
Subnasale
Naris
Major axis
of naris
Upper vermillion
Lip inferior
Naso-labial sulcus

FIG. 2f



FIG. 2g

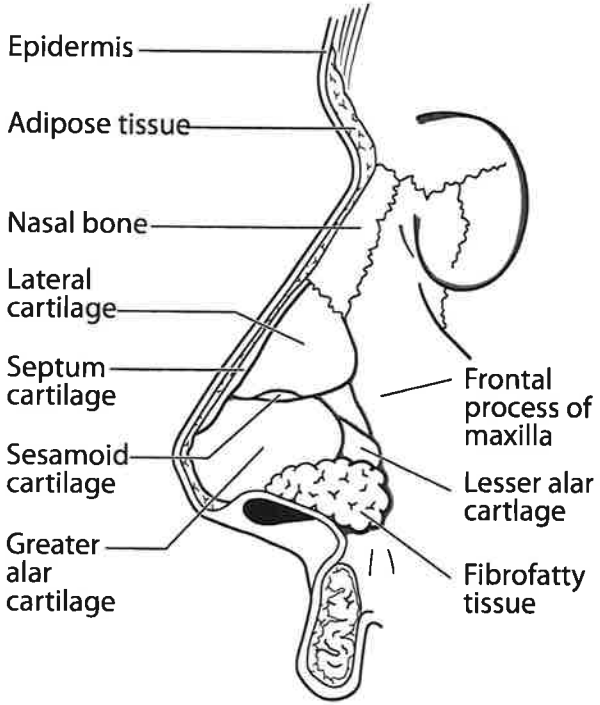


FIG. 2h

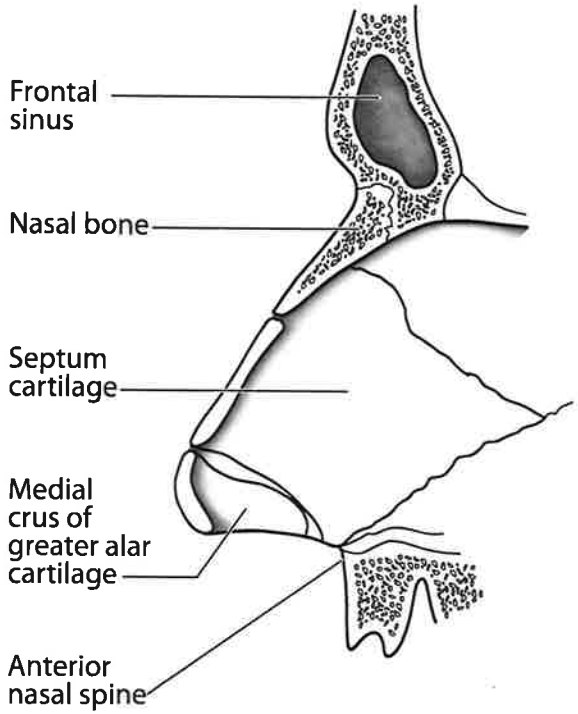


FIG. 2i

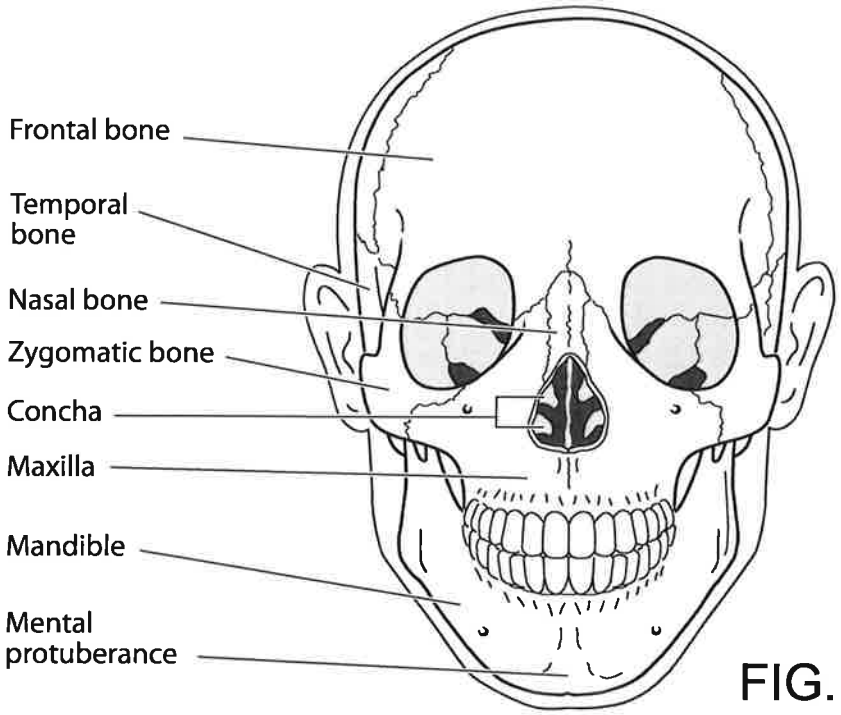

Frontal bone
Temporal bone
Nasal bone
Zygomatic bone
Concha
Maxilla
Mandible
Mental protuberance

FIG. 2j

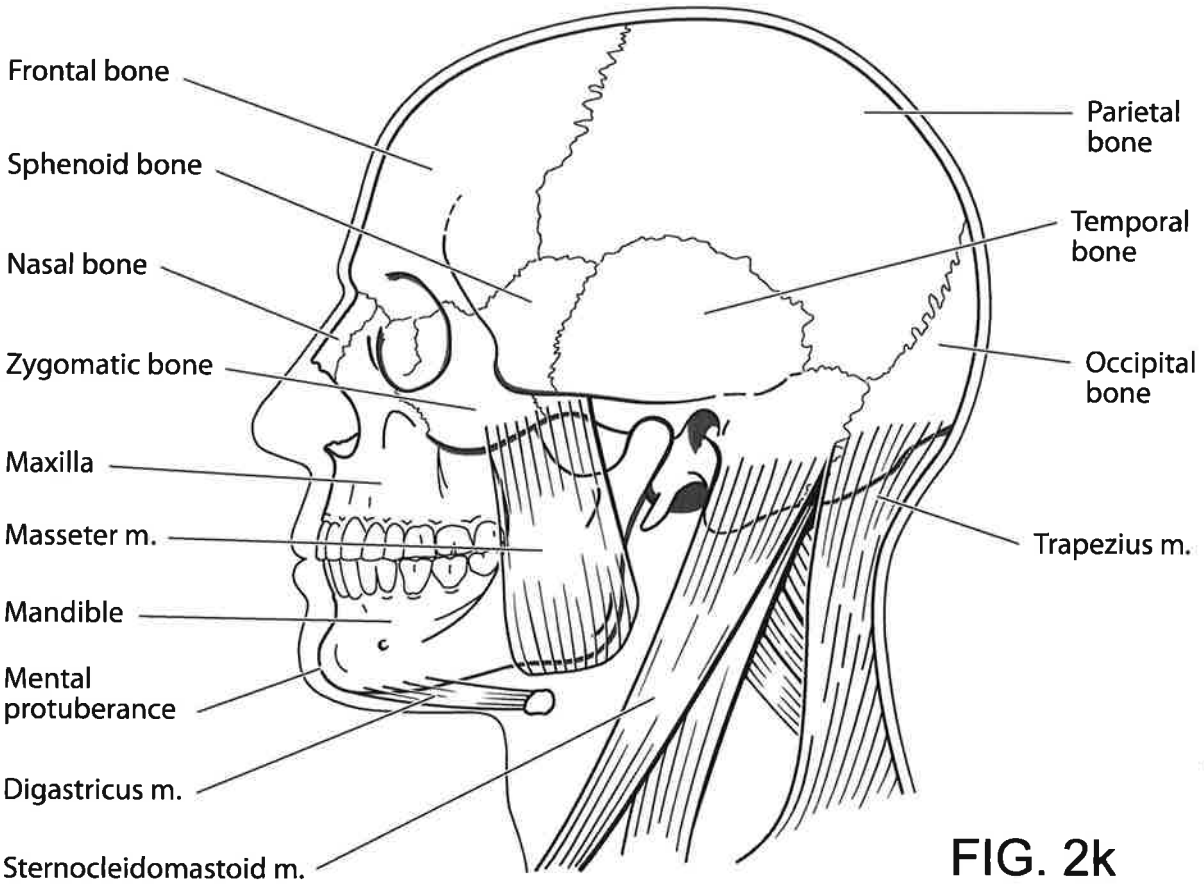

Frontal bone
Sphenoid bone
Nasal bone
Zygomatic bone
Maxilla
Masseter m.
Mandible
Mental protuberance
Digastricus m.
Sternocleidomastoid m.
Parietal bone
Temporal bone
Occipital bone
Trapezius m.

FIG. 2k

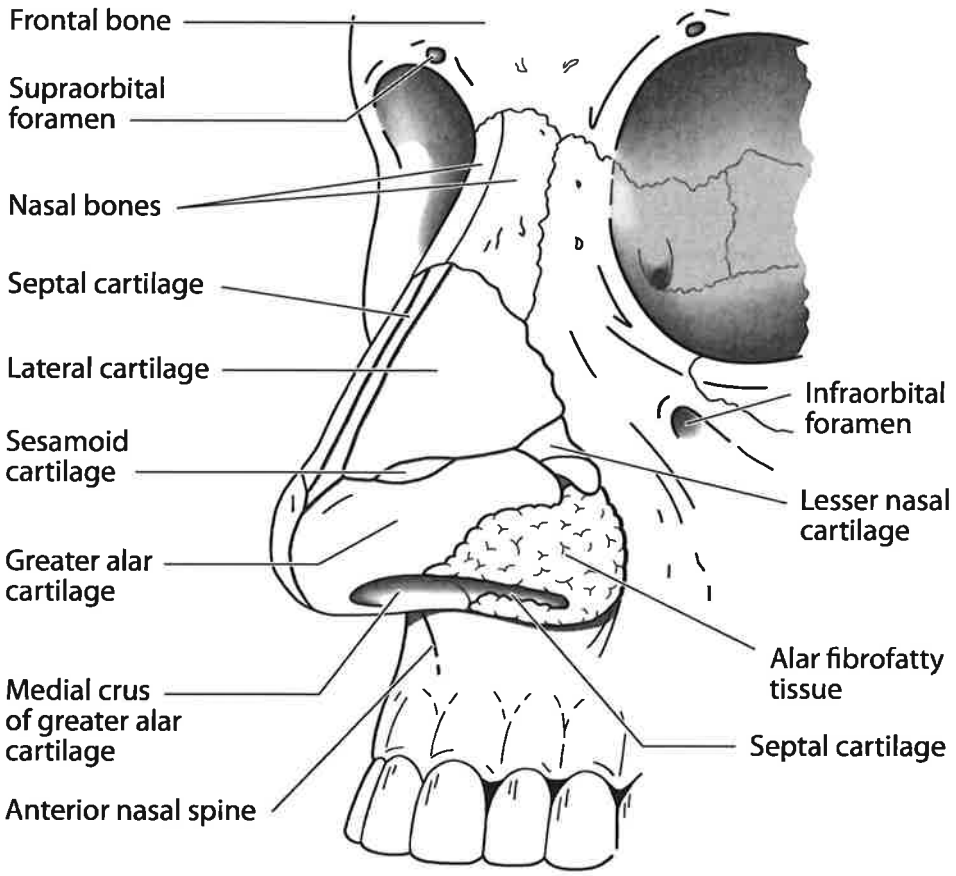

Frontal bone
Supraorbital foramen
Nasal bones
Septal cartilage
Lateral cartilage
Sesamoid cartilage
Greater alar cartilage
Medial crus of greater alar cartilage
Anterior nasal spine
Infraorbital foramen
Lesser nasal cartilage
Alar fibrofatty tissue
Septal cartilage

FIG. 2I

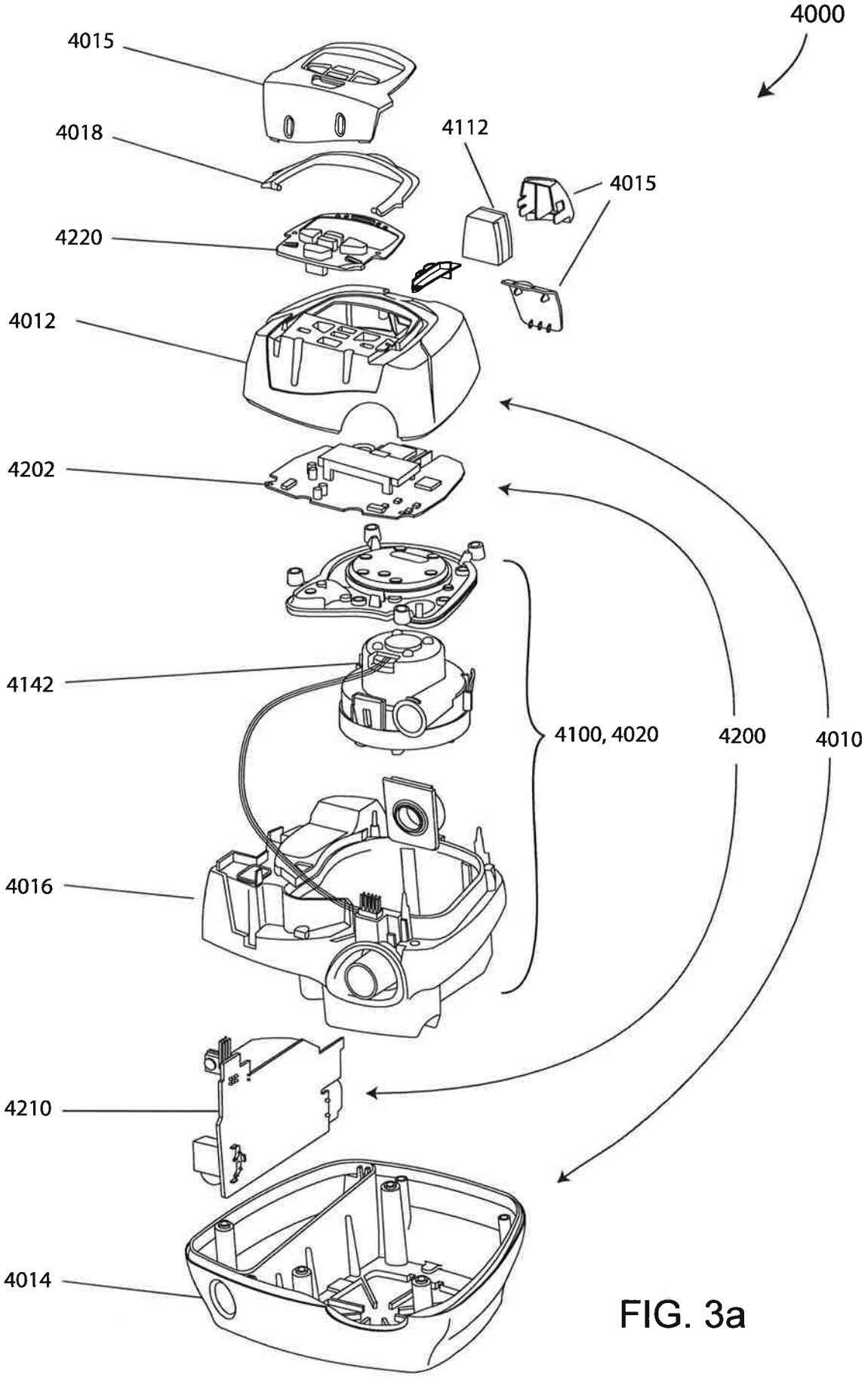

4000
4015
4018
4112
4015
4220
4012
4202
4142
4100, 4020
4200
4010
4016
4210
4014

FIG. 3a

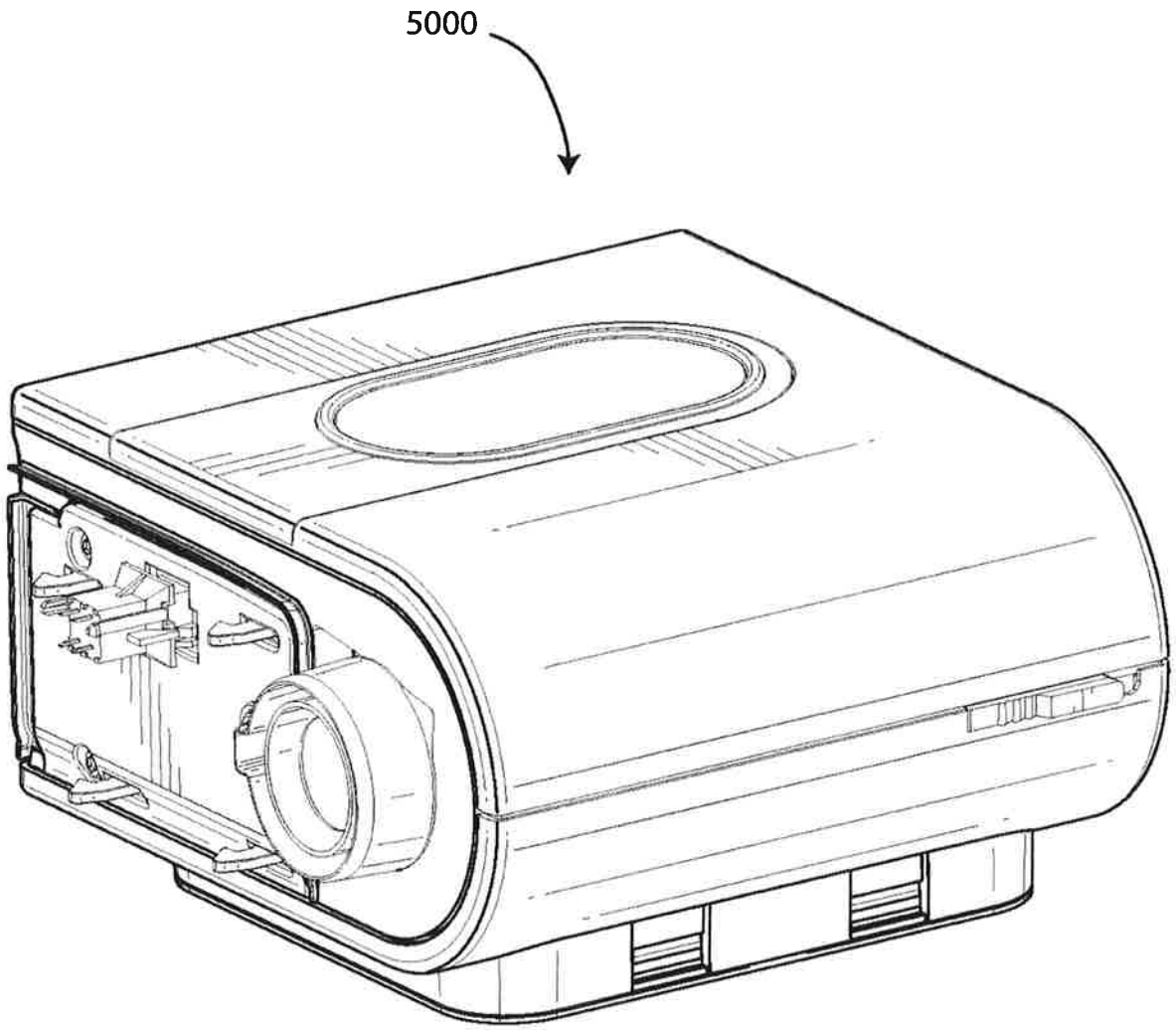


FIG. 3b

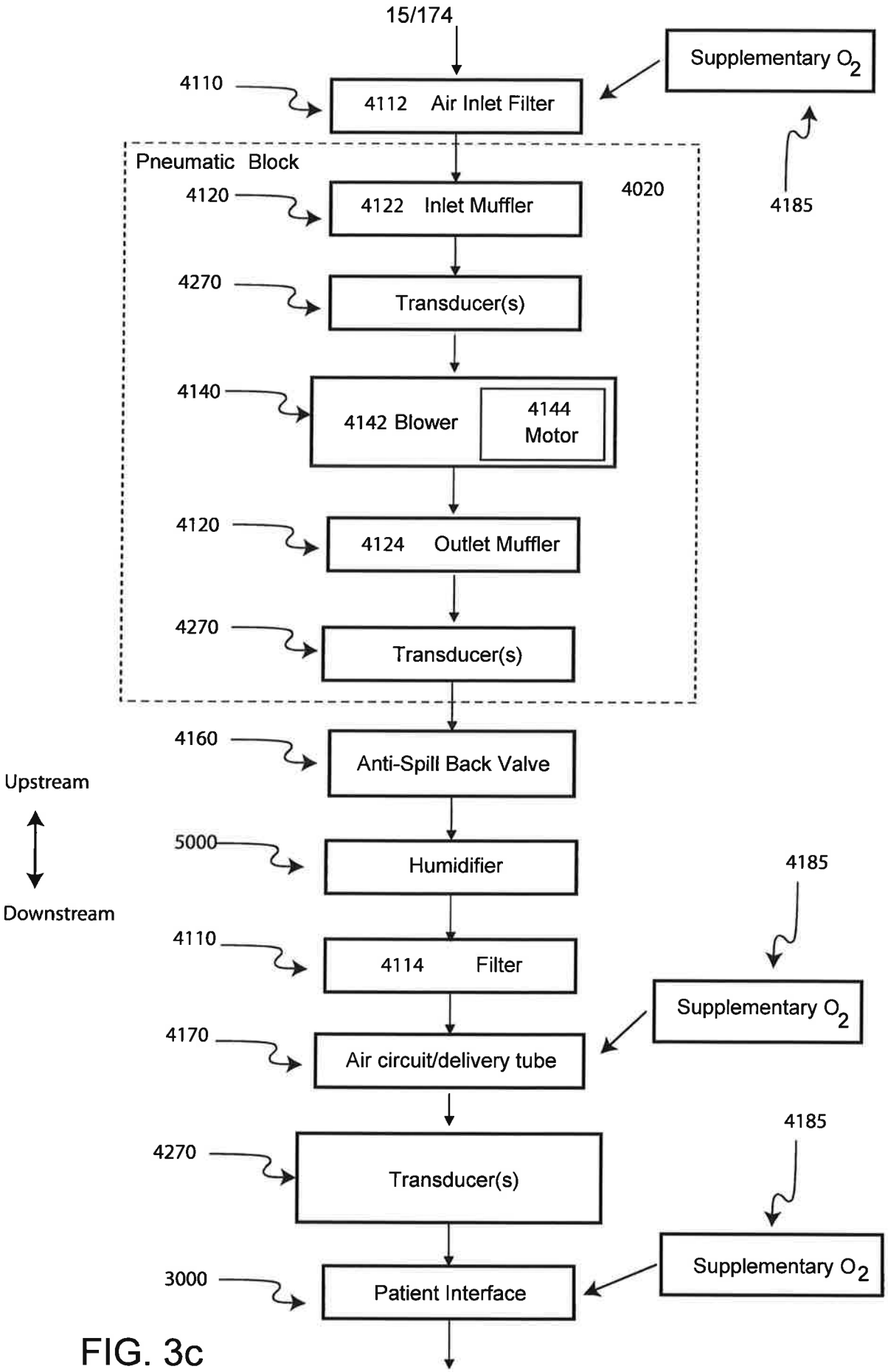

15/174
4110
4112 Air Inlet Filter
Supplementary O_2
4185
Pneumatic Block
4020
4120
4122 Inlet Muffler
4270
Transducer(s)
4140
4142 Blower
4144 Motor
4120
4124 Outlet Muffler
4270
Transducer(s)
4160
Anti-Spill Back Valve
Upstream
Downstream
5000
Humidifier
4185
4110
4114 Filter
Supplementary O_2
4170
Air circuit/delivery tube
4185
4270
Transducer(s)
Supplementary O_2
3000
Patient Interface

FIG. 3c

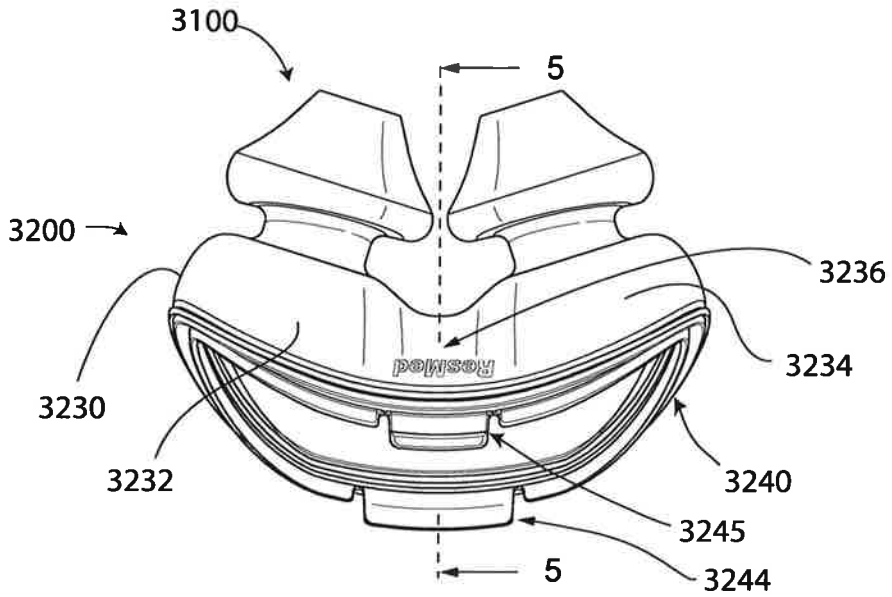

3100
5
3200
3236
3234
3230
3232
3240
3245
5
3244

FIG. 4

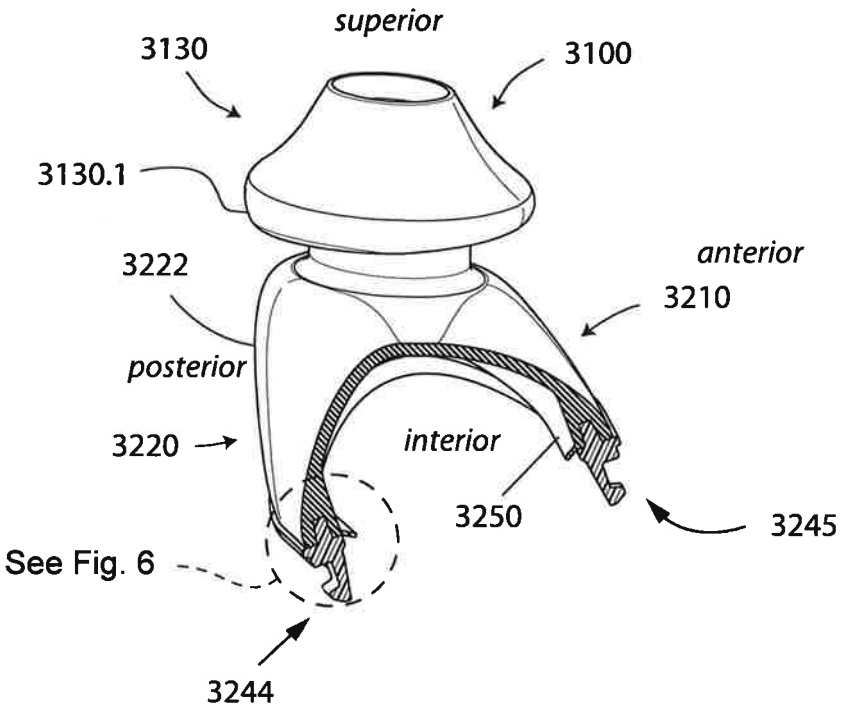

superior
3130
3100
3130.1
anterior
3222
3210
posterior
3220
interior
3250
3245
See Fig. 6
3244

FIG. 5

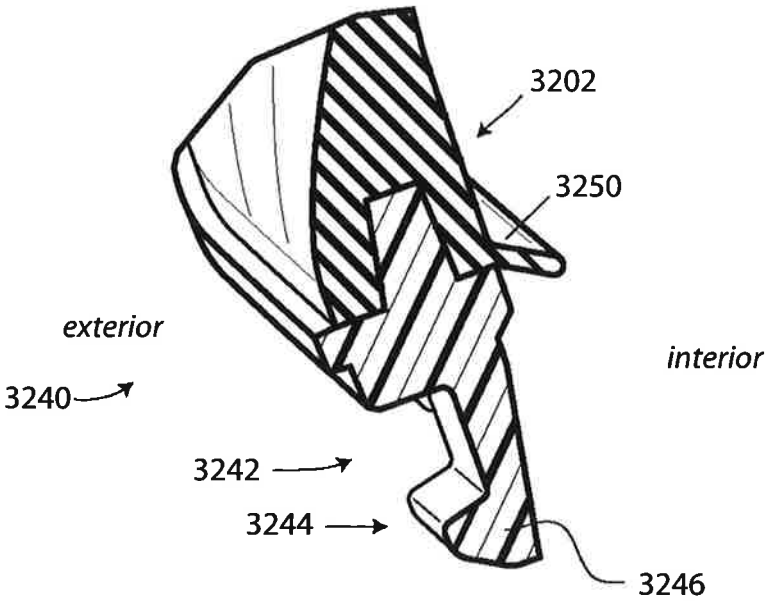

3202
3250
exterior
interior
3240
3242
3244
3246

FIG. 6

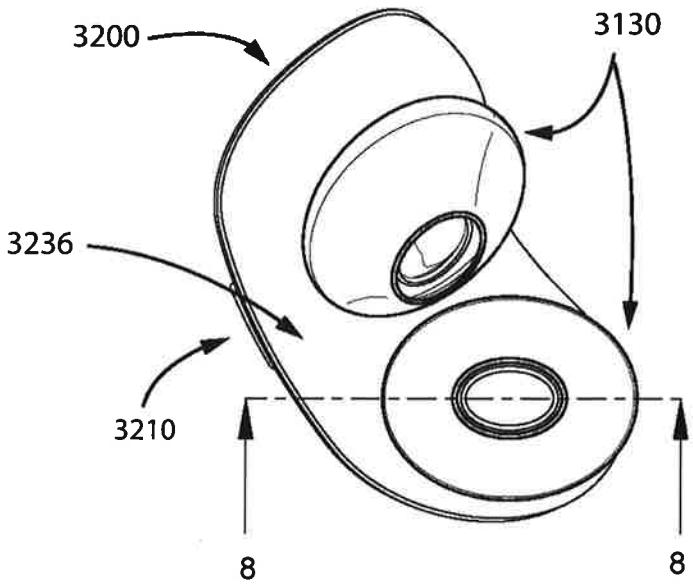

3200
3130
3236
3210
8
8

FIG. 7

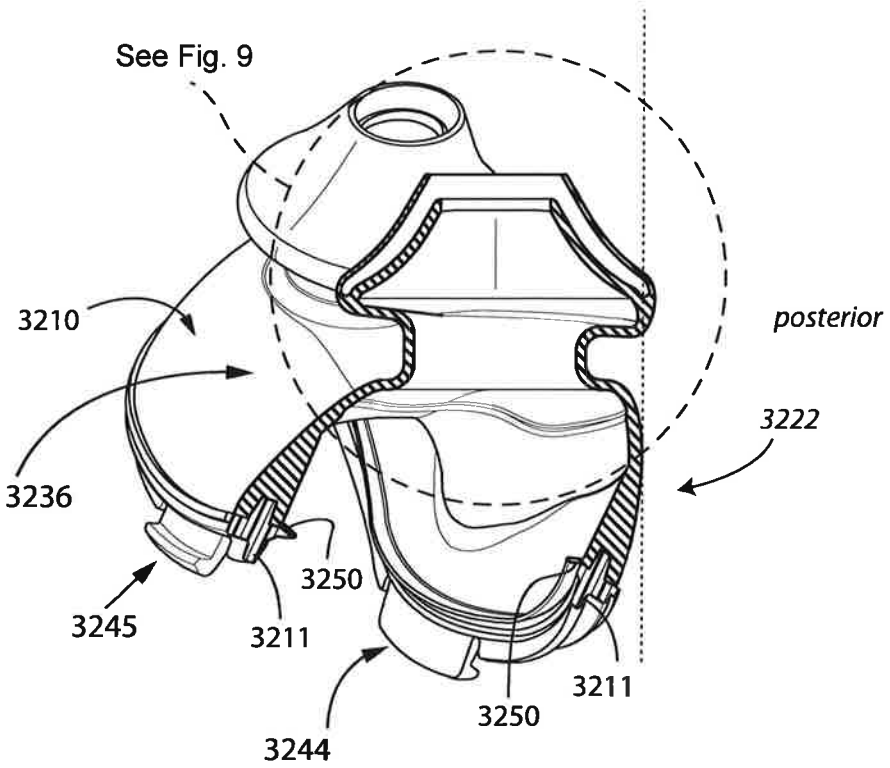

See Fig. 9
3210
posterior
3222
3236
3250
3245
3211
3211
3250
3244

FIG. 8

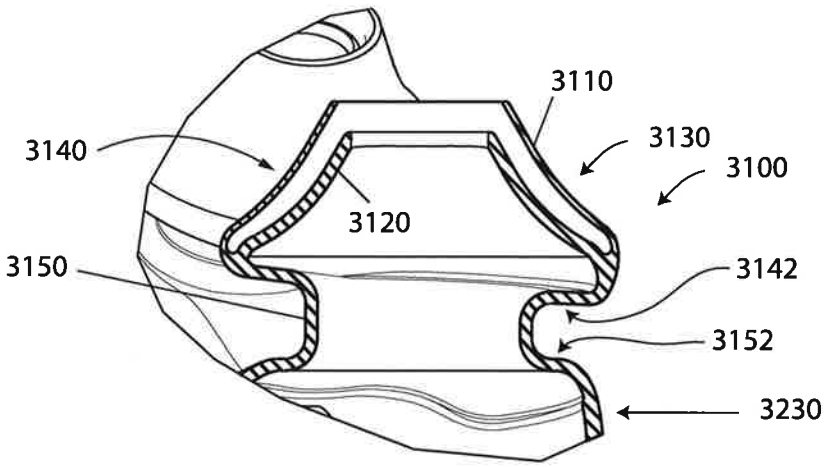

3110
3140
3130
3100
3120
3150
3142
3152
3230

FIG. 9

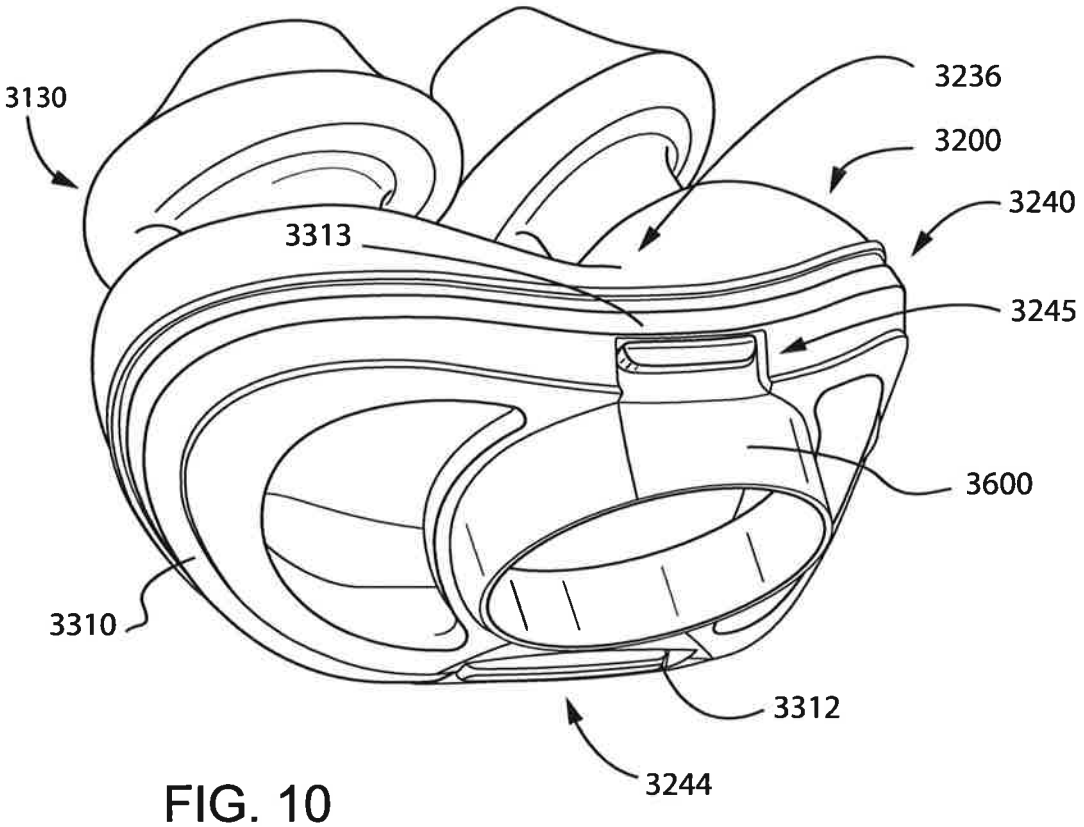

3130
3236
3200
3240
3313
3245
3600
3310
3312
3244

FIG. 10

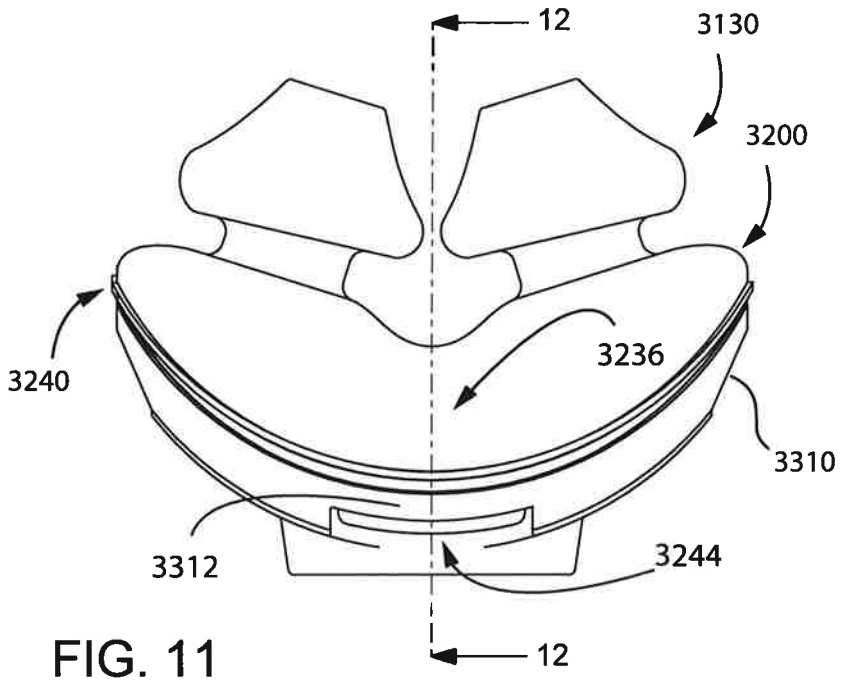

12
3130
3200
3240
3236
3310
3312
3244
12

FIG. 11

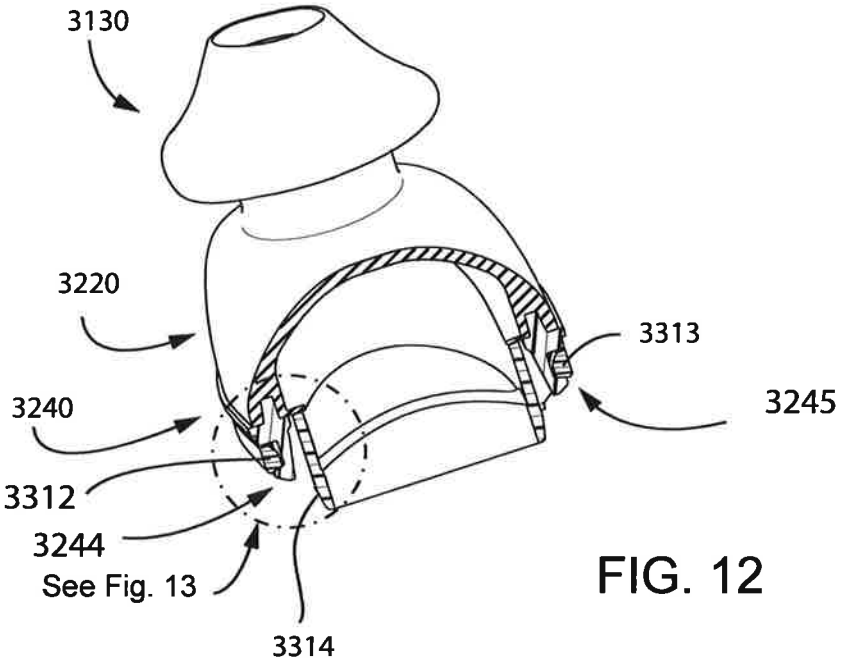

3130
3220
3313
3240
3245
3312
3244
See Fig. 13
3314

FIG. 12

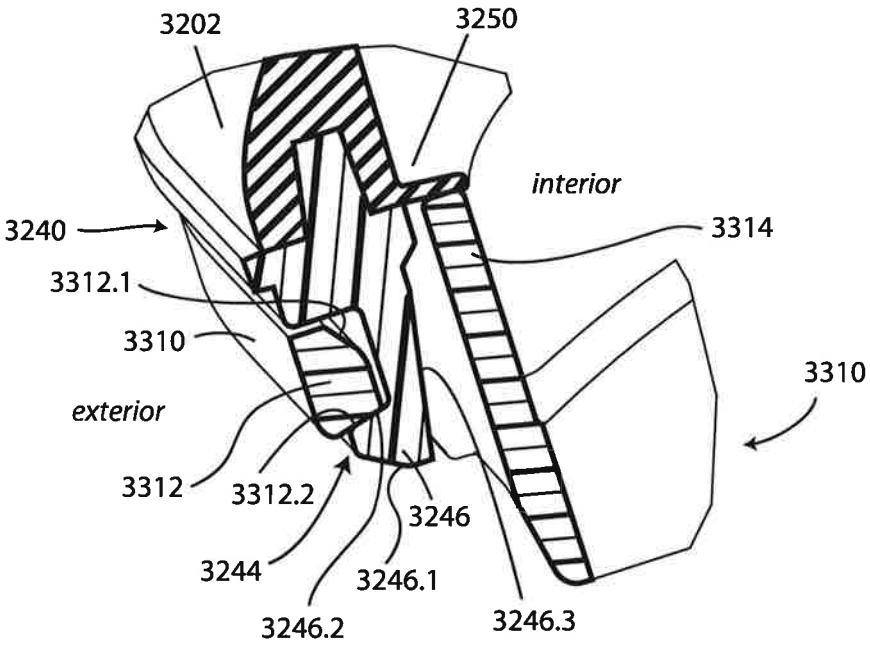

3202
3250
interior
3240
3314
3312.1
3310
3310
exterior
3312
3312.2
3246
3244
3246.1
3246.2
3246.3

FIG. 13

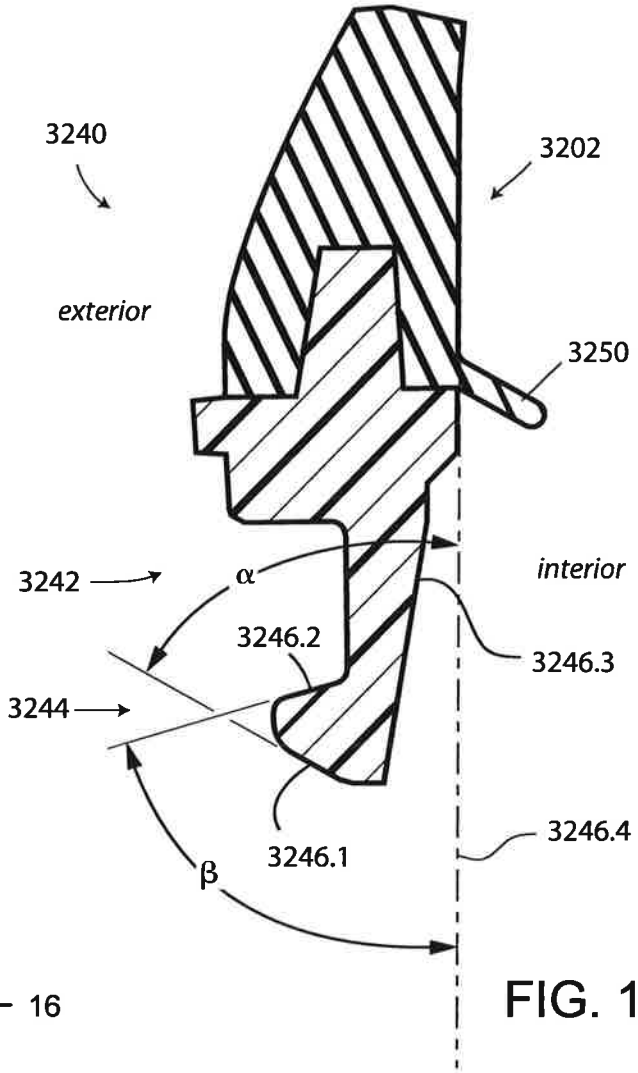

3240
3202
exterior
3250
interior
3242
α
3246.2
3246.3
3244
3246.4
3246.1
β

FIG. 14

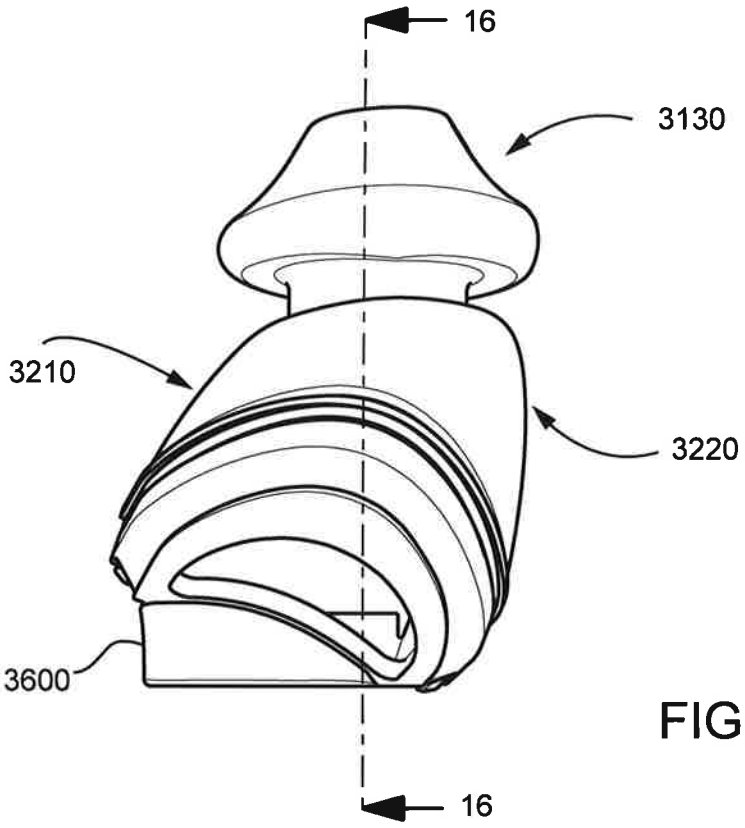

16
3130
3210
3220
3600
16

FIG. 15

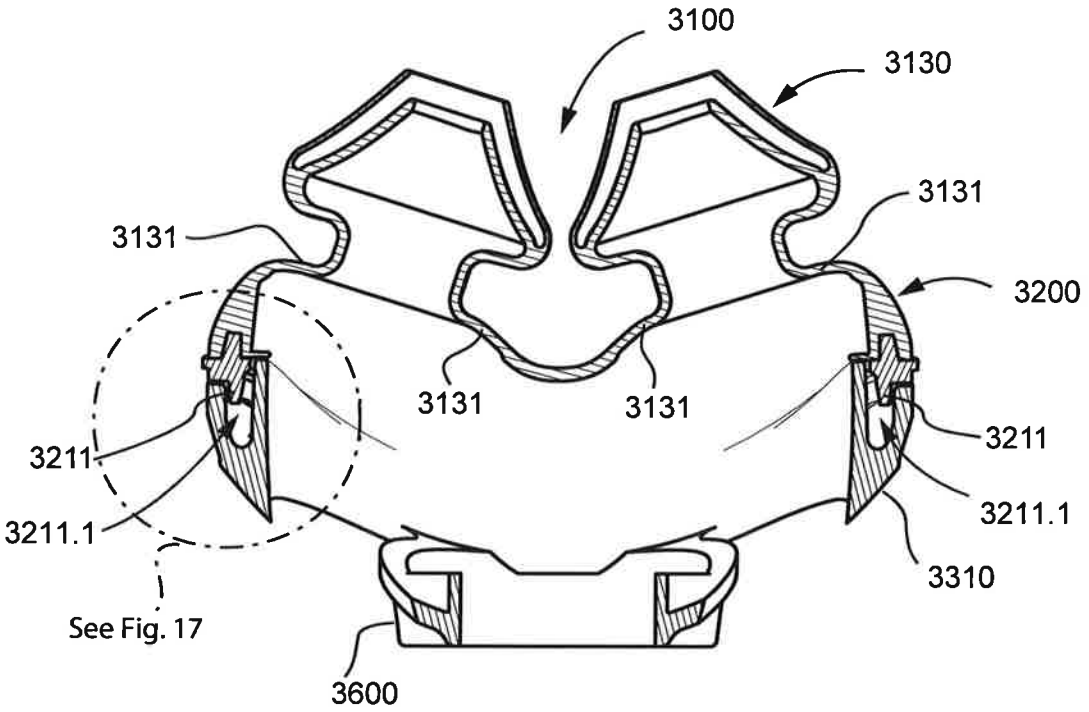

3100
3130
3131
3131
3200
3131
3131
3211
3211.1
3211
3211.1
3310
See Fig. 17
3600

FIG. 16

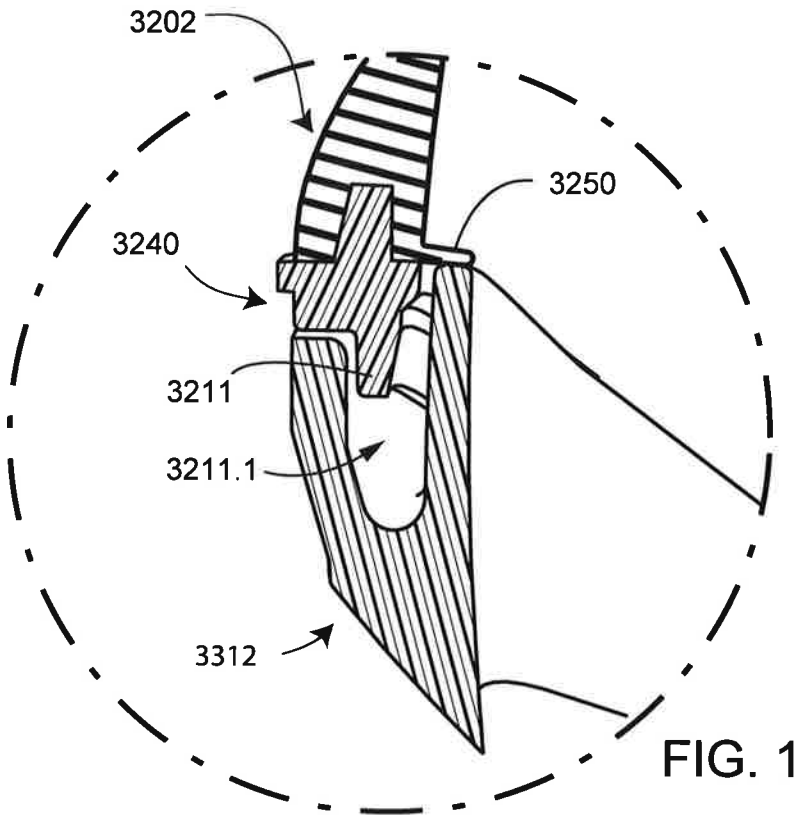

3202
3250
3240
3211
3211.1
3312

FIG. 17

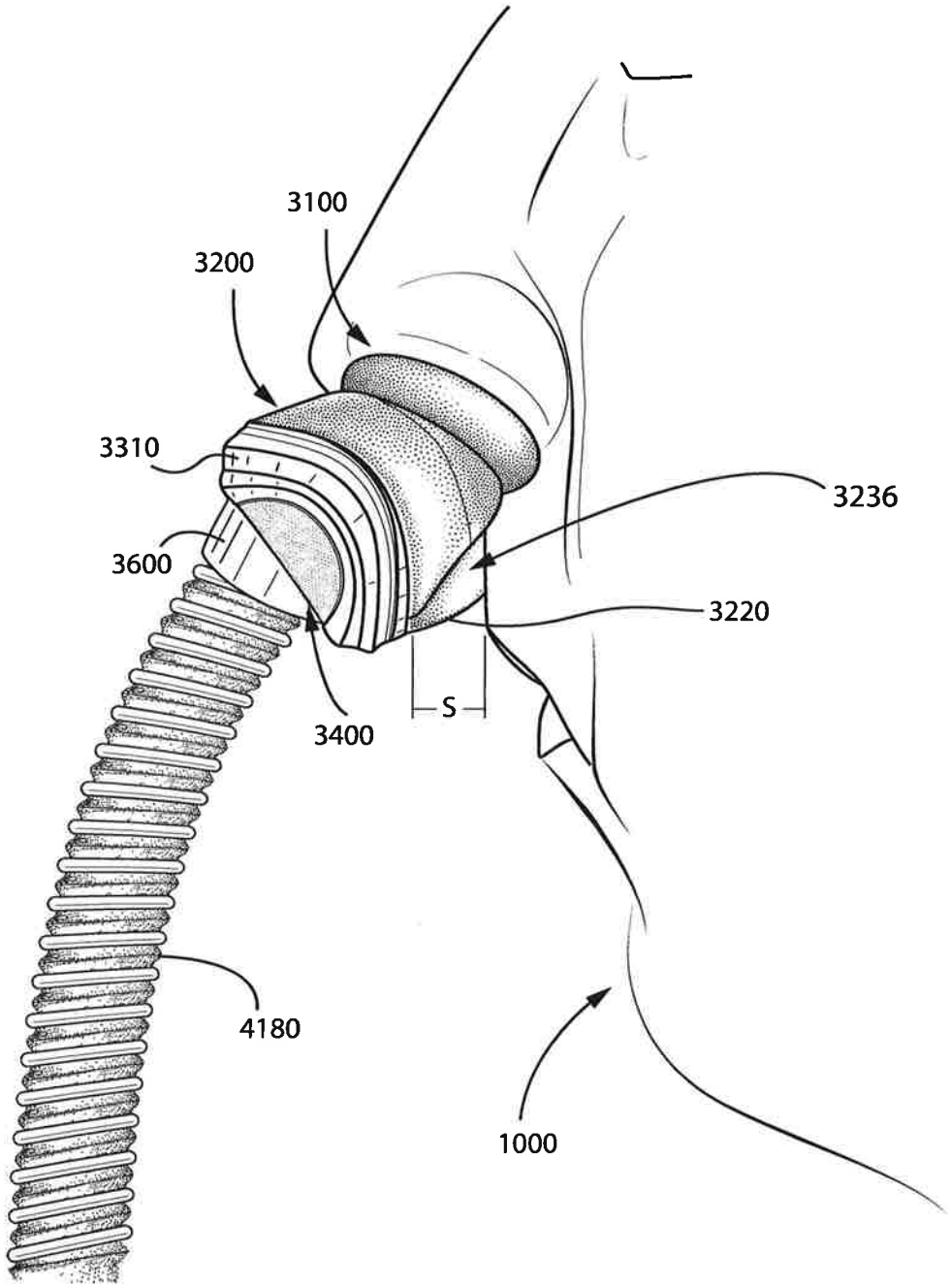


FIG. 18

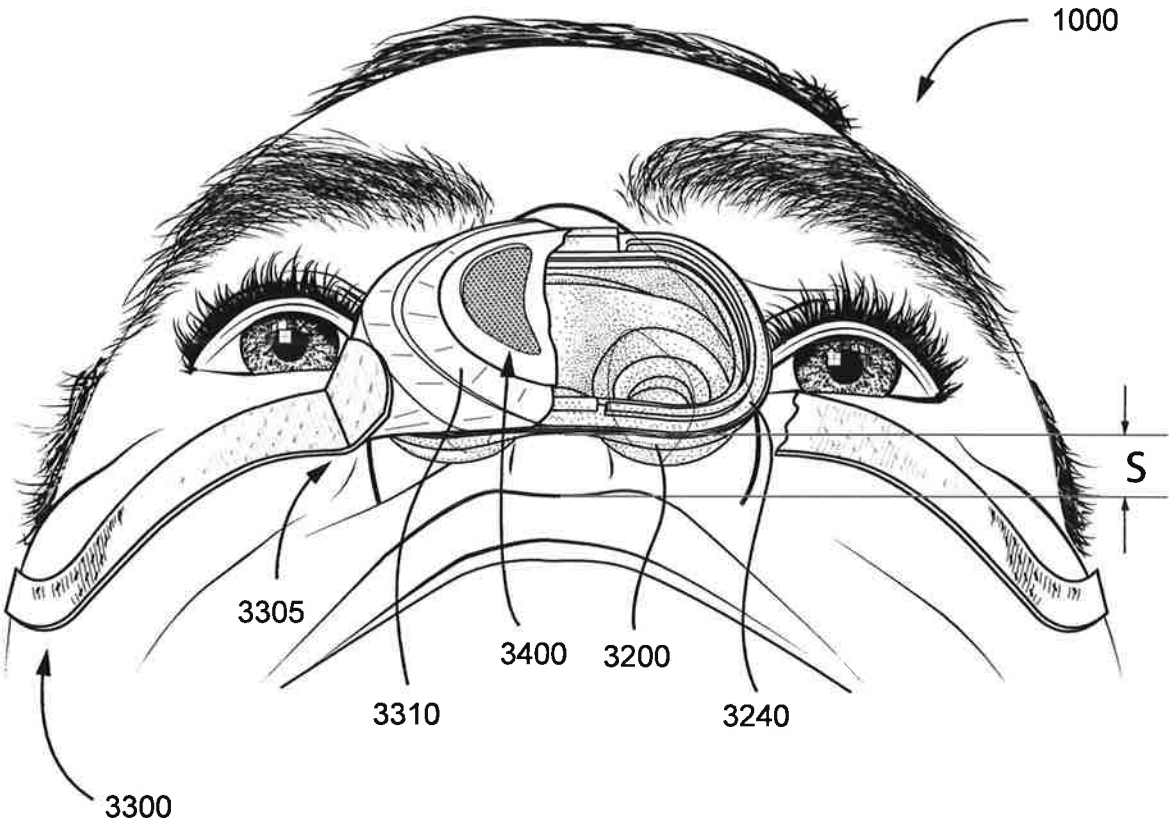


FIG. 19

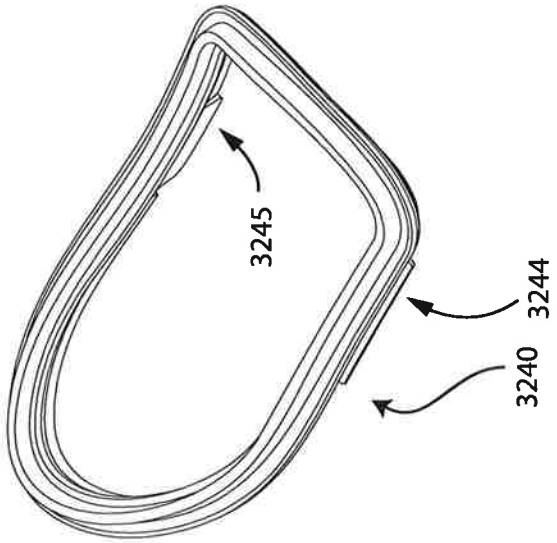


FIG. 24

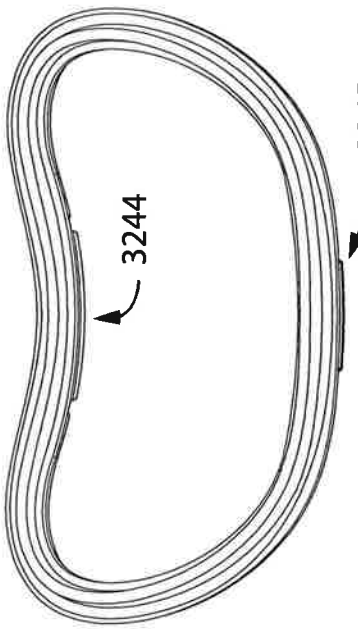


FIG. 21

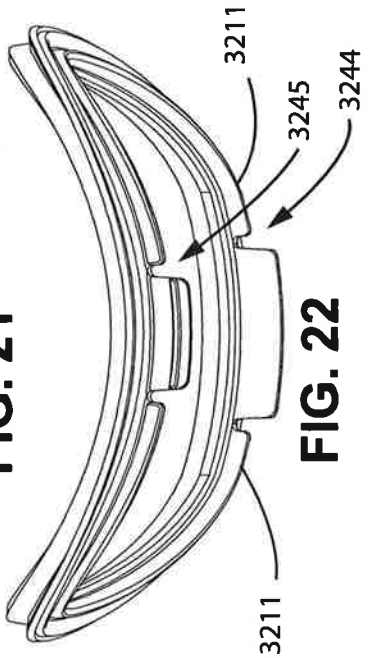


FIG. 22

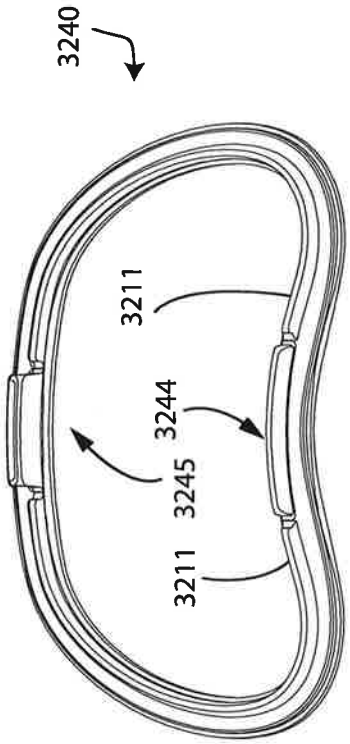


FIG. 23

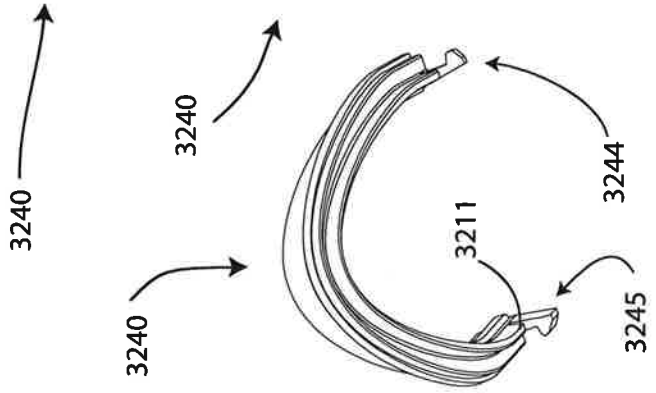


FIG. 20

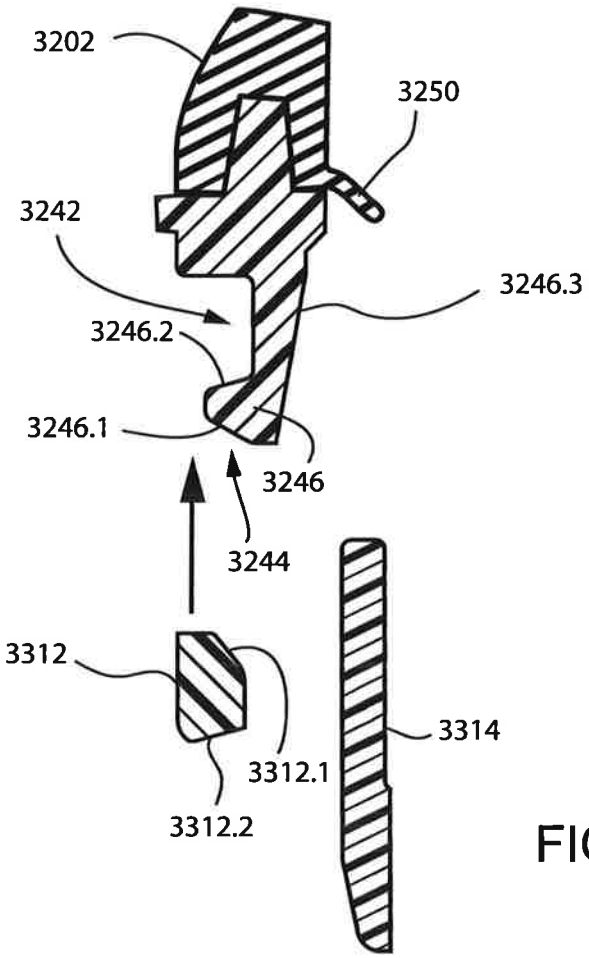

3202
3250
3242
3246.3
3246.2
3246.1
3246
3244
3312
3312.1
3312.2
3314

FIG. 25

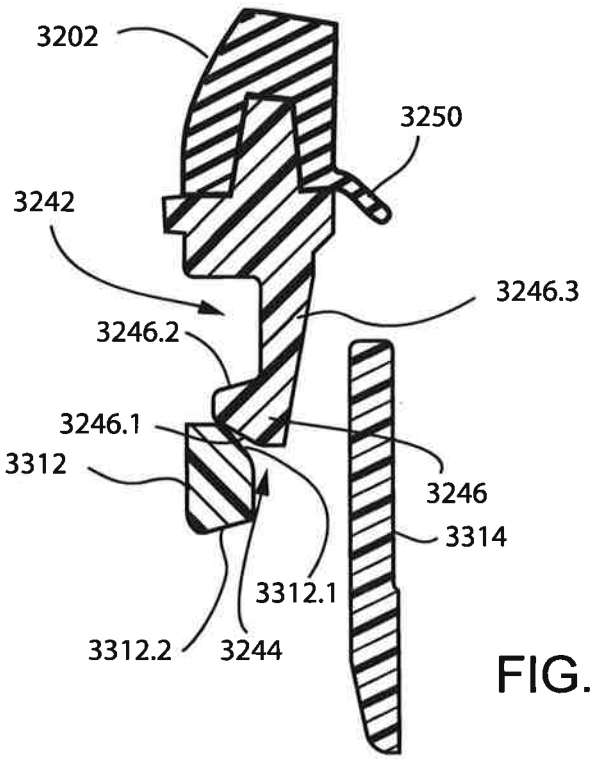

3202
3250
3242
3246.3
3246.2
3246.1
3312
3246
3314
3312.1
3312.2
3244

FIG. 26

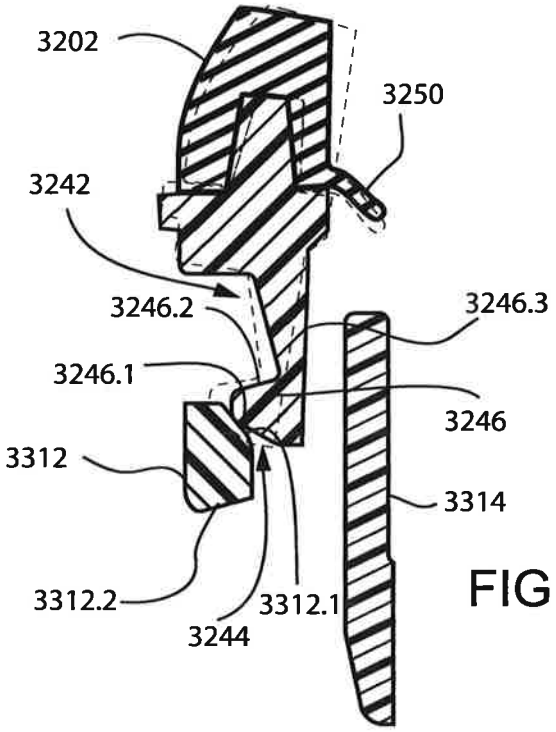


FIG. 27

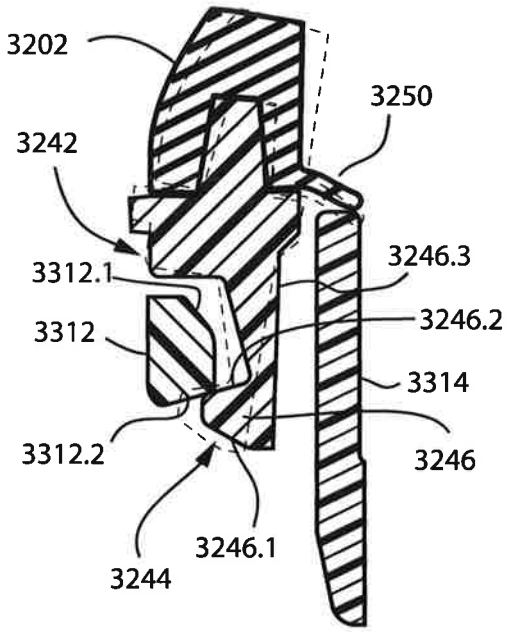


FIG. 28

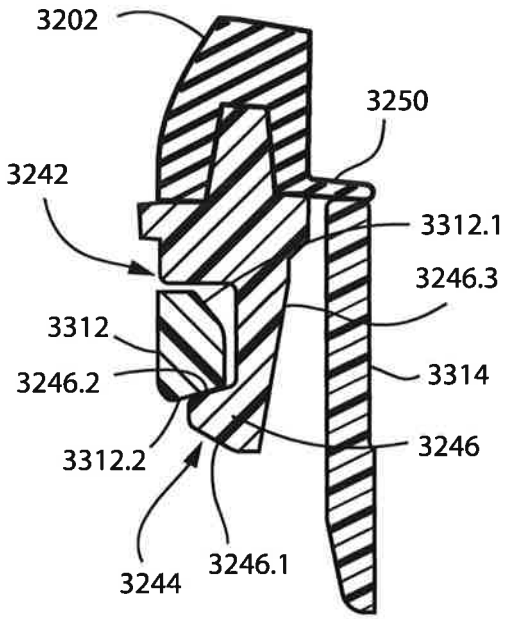


FIG. 29

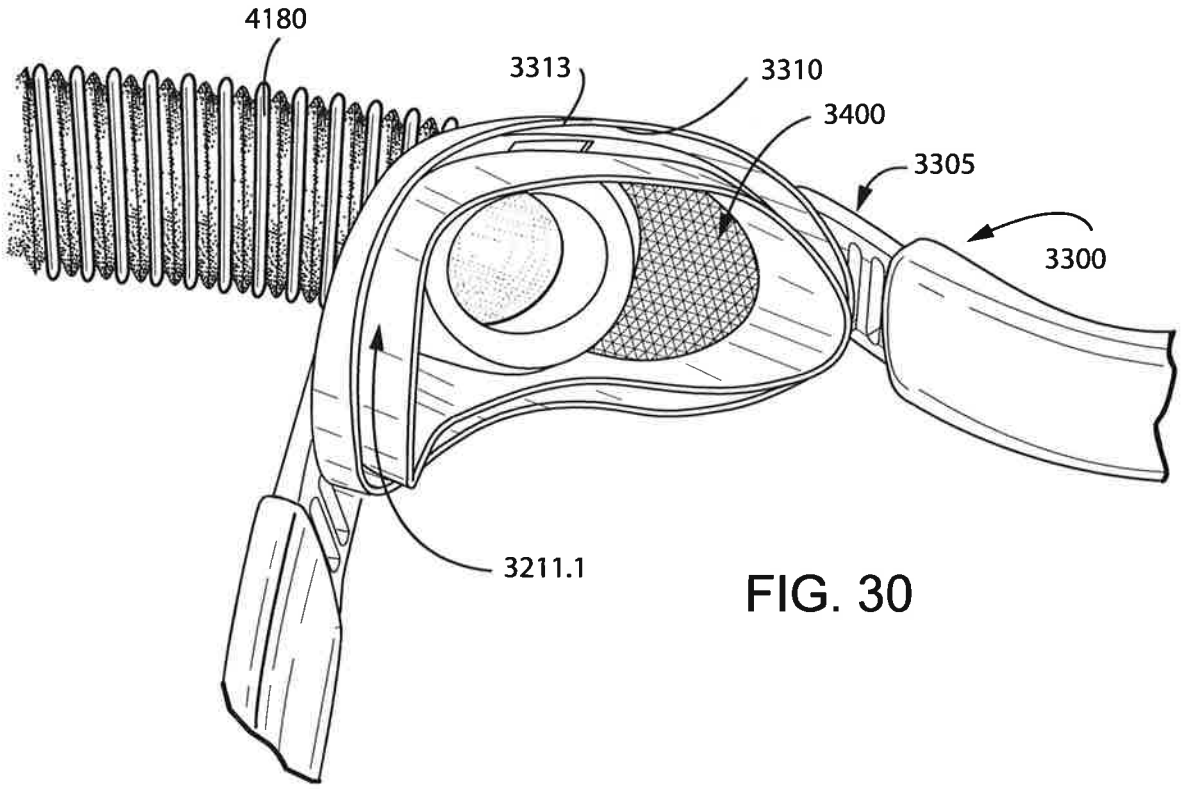

4180
3313
3310
3400
3305
3300
3211.1

FIG. 30

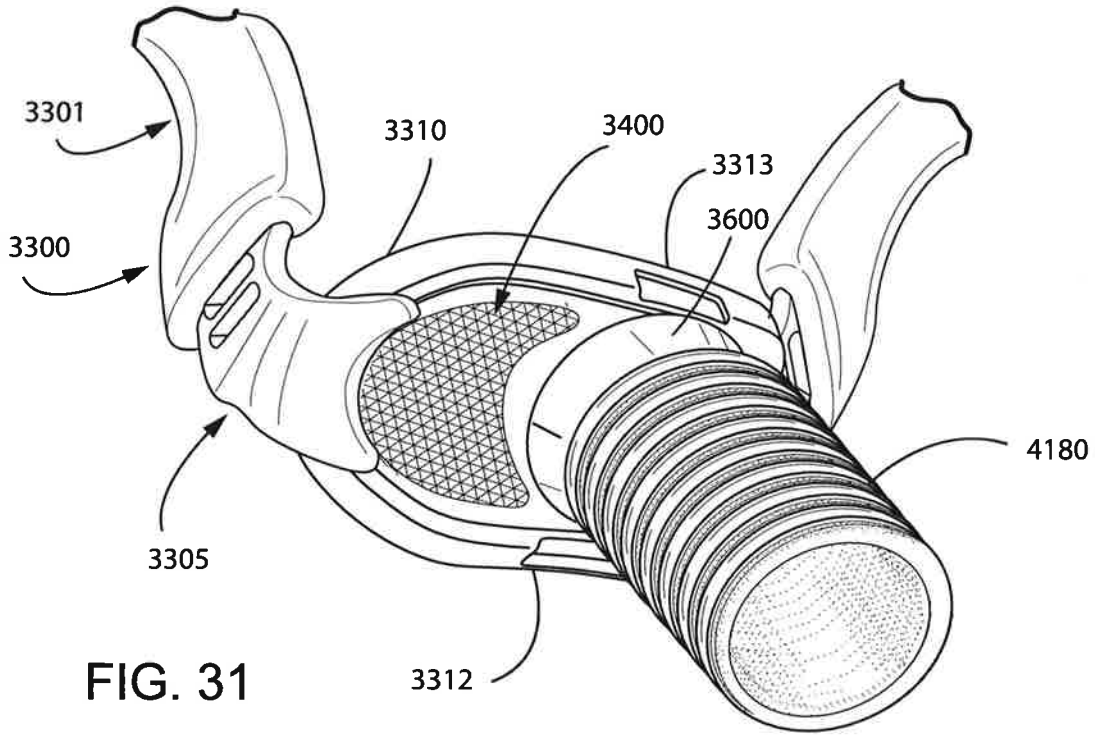

3301
3310
3400
3313
3600
3300
4180
3305
3312

FIG. 31

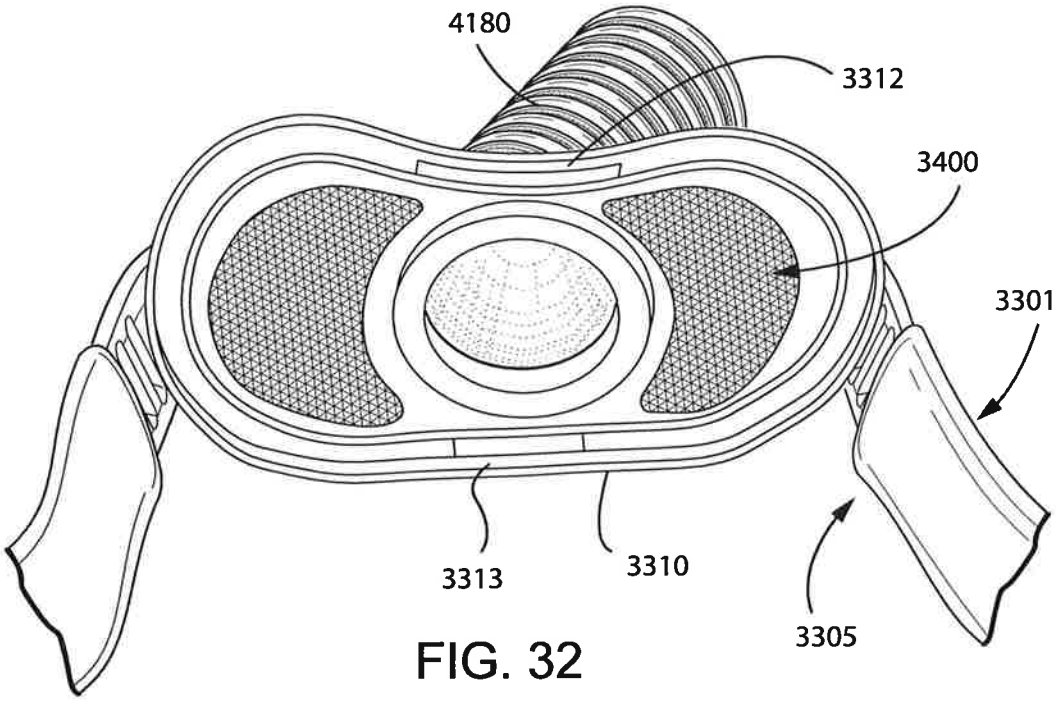

4180
3312
3400
3301
3313
3310
3305

FIG. 32

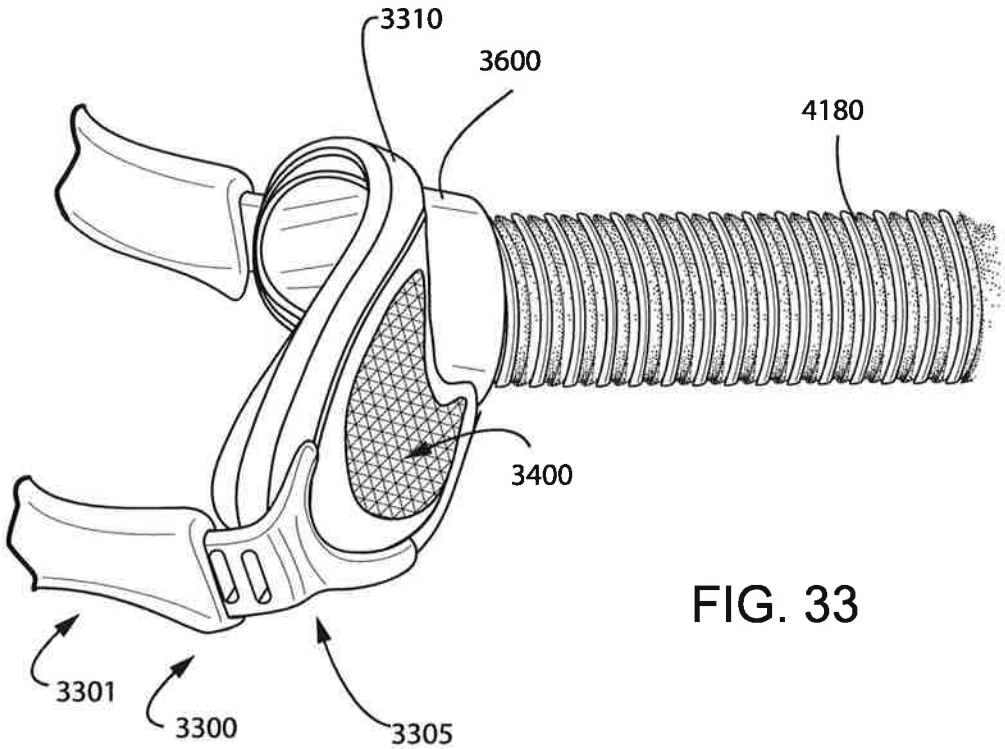

3310
3600
4180
3400
3301
3300
3305

FIG. 33

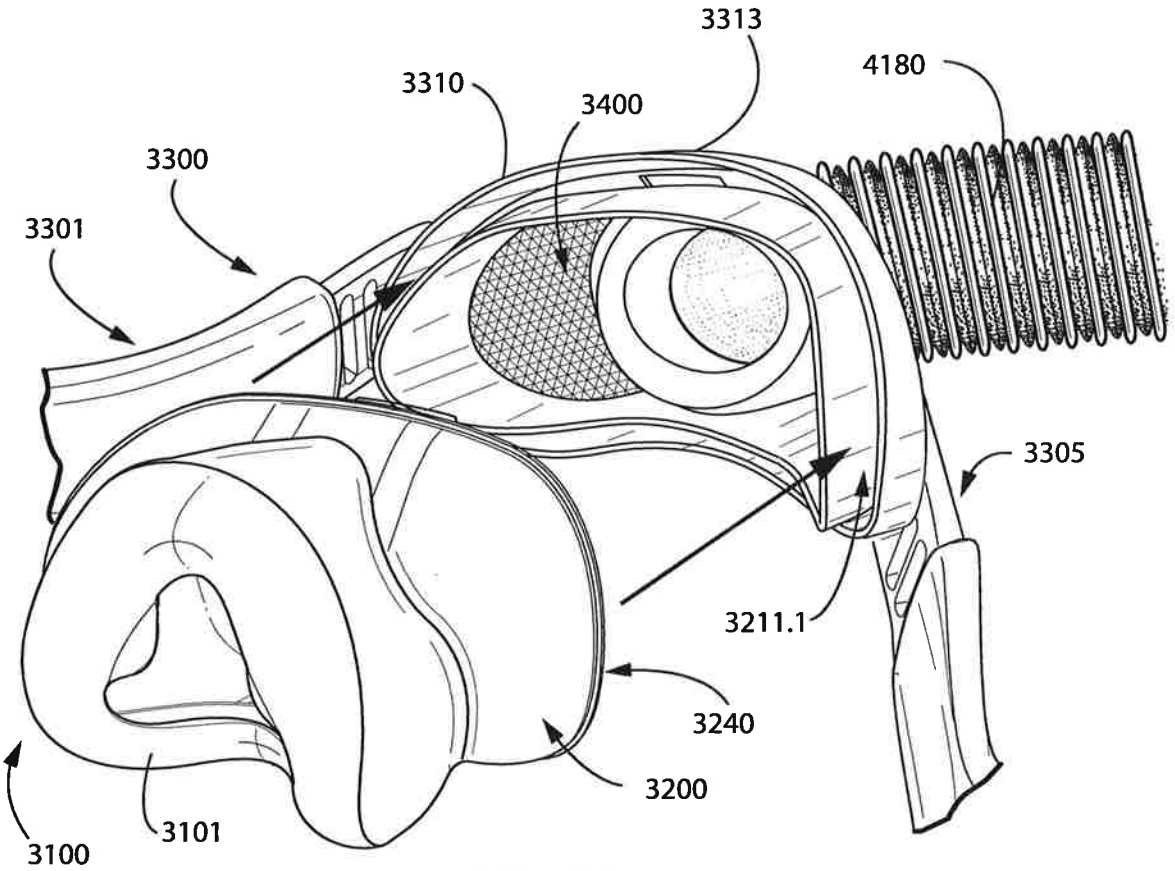


FIG. 34

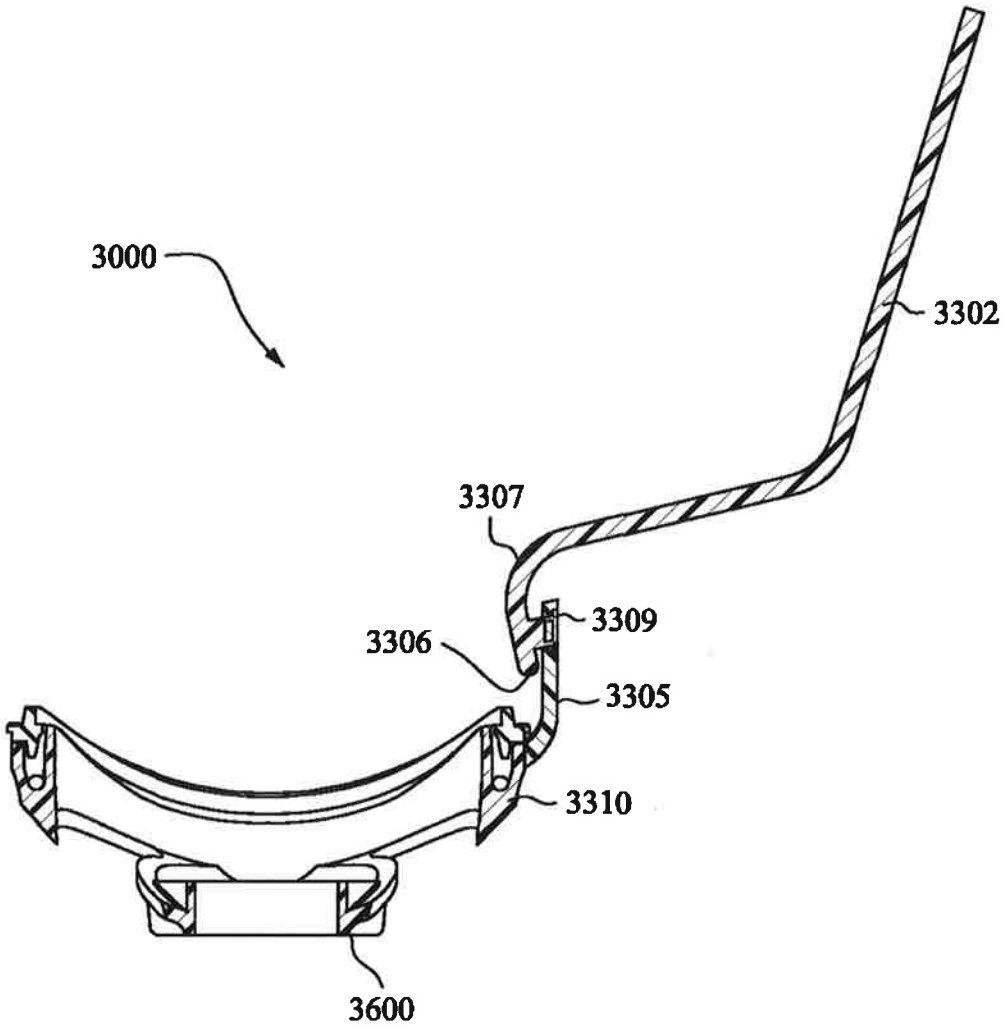


FIG. 35

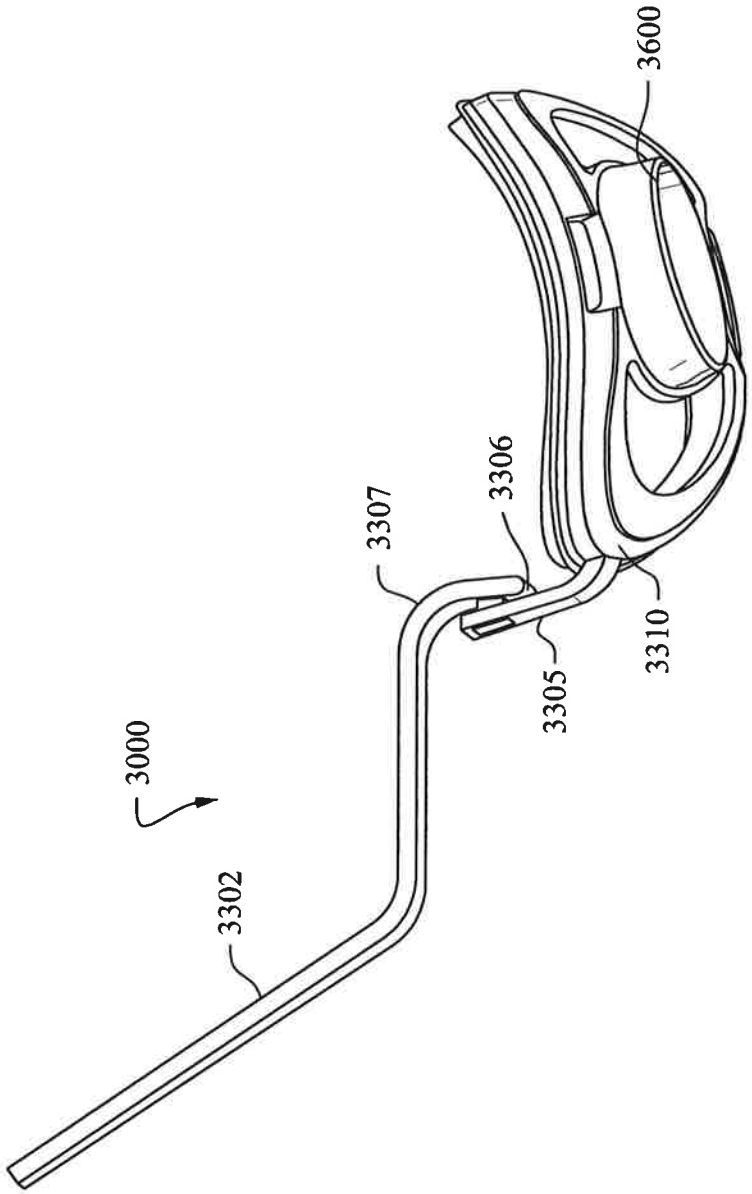


FIG. 36

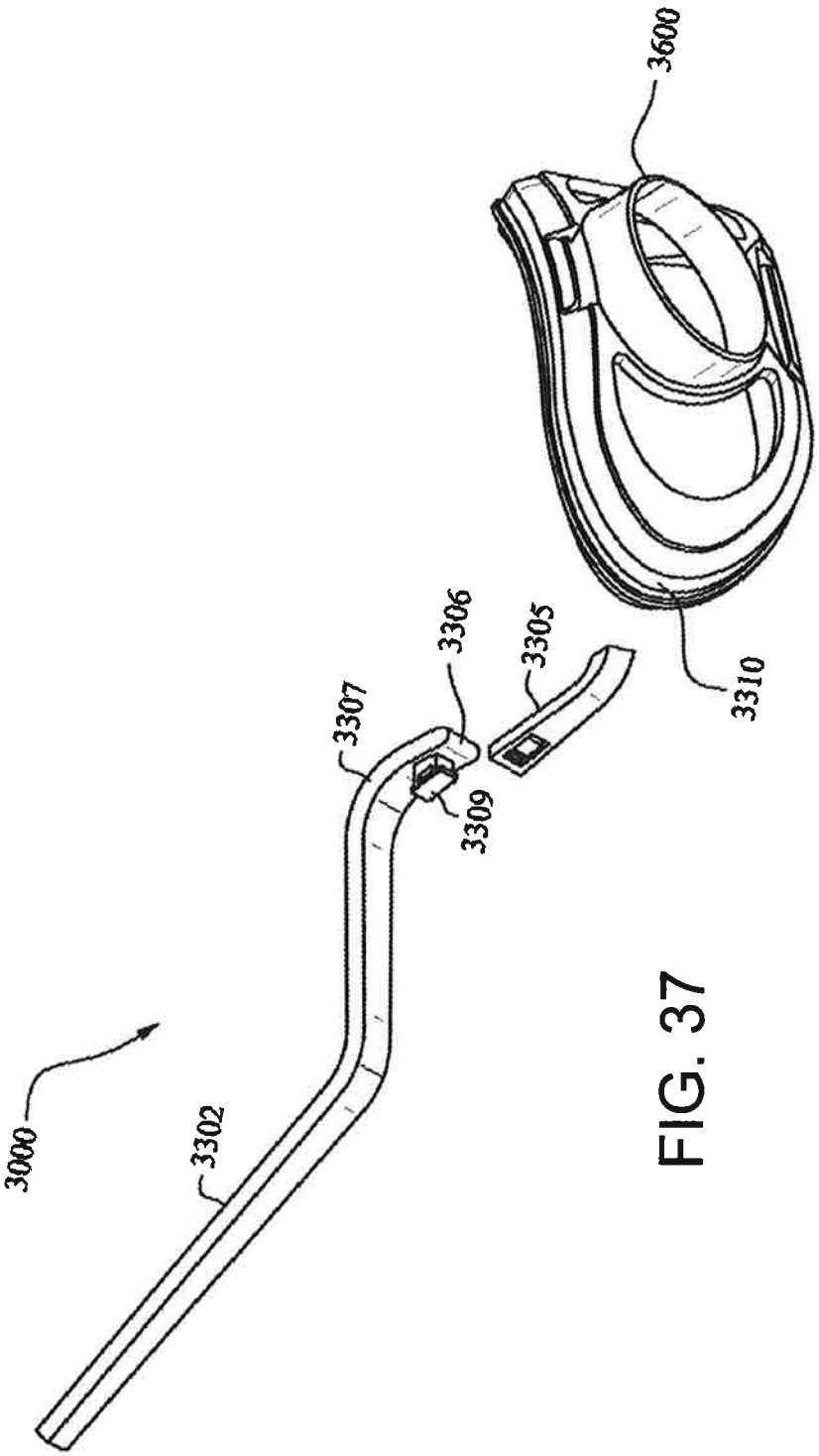


FIG. 37

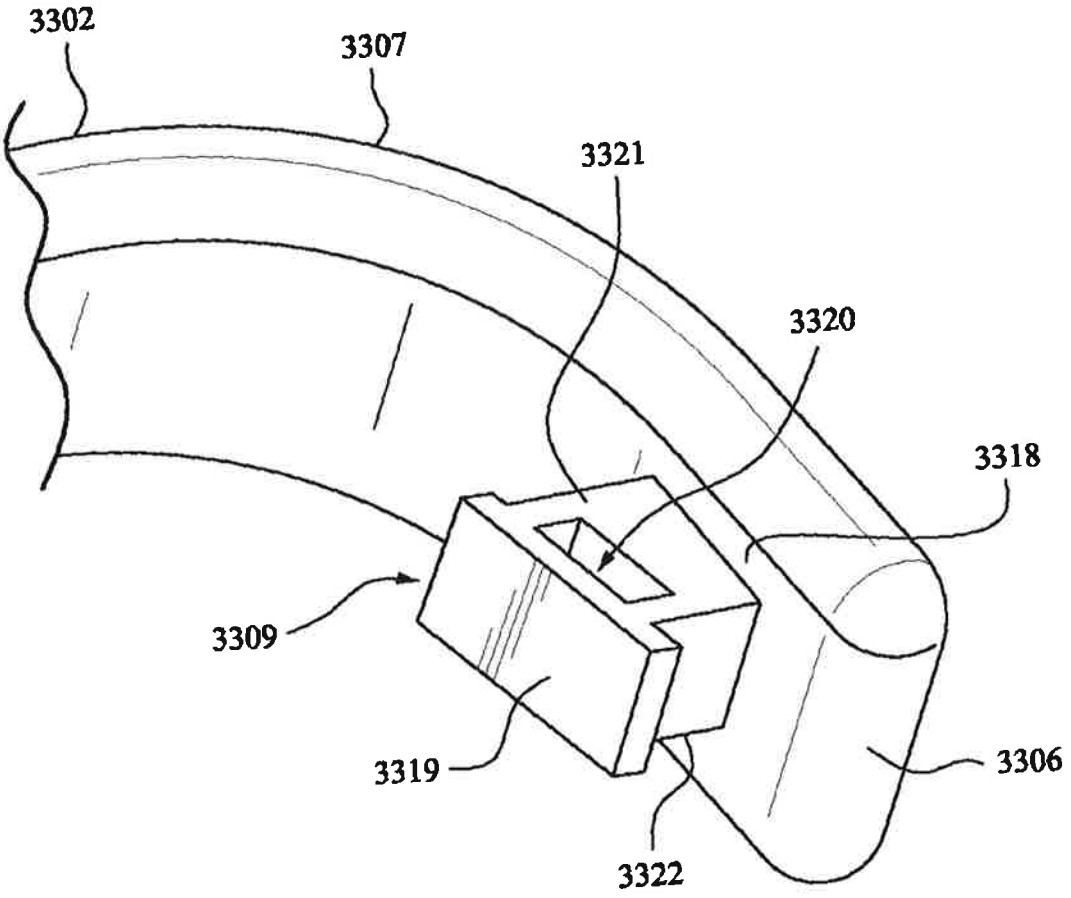


FIG. 38

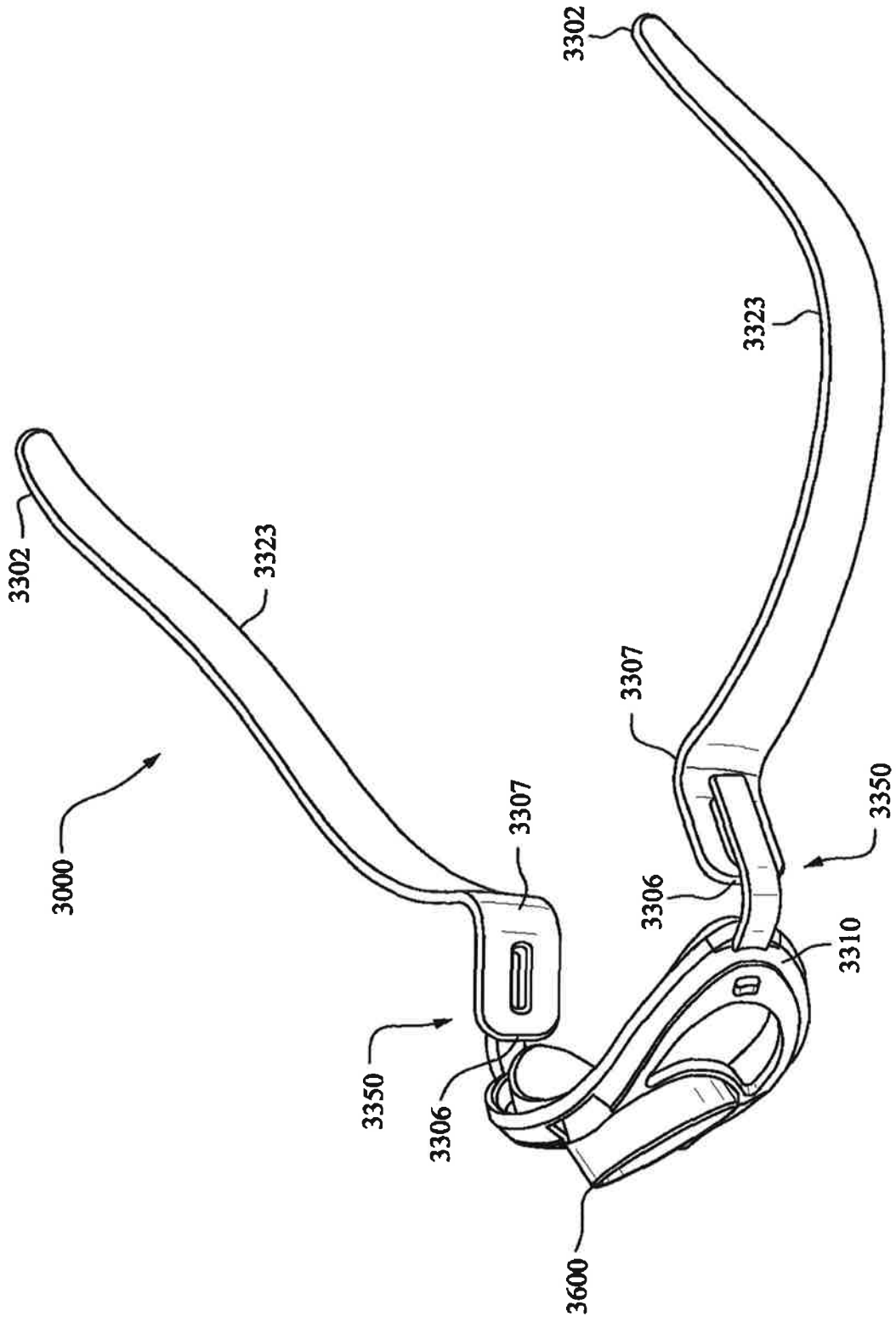


FIG. 39

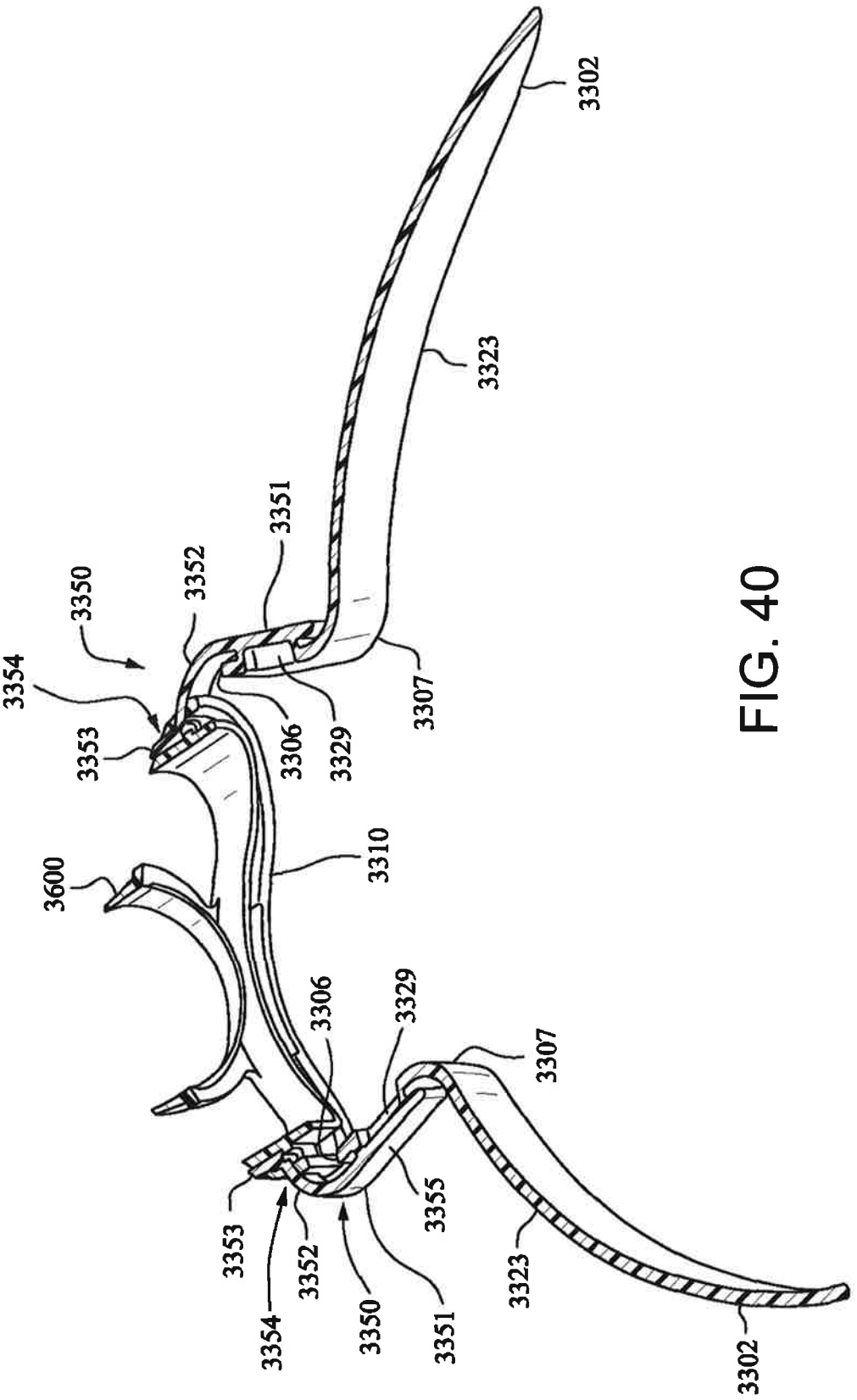

3302
3323
3307
3351
3352
3350
3354
3353
3306
3329
3310
3600
3355

FIG. 40

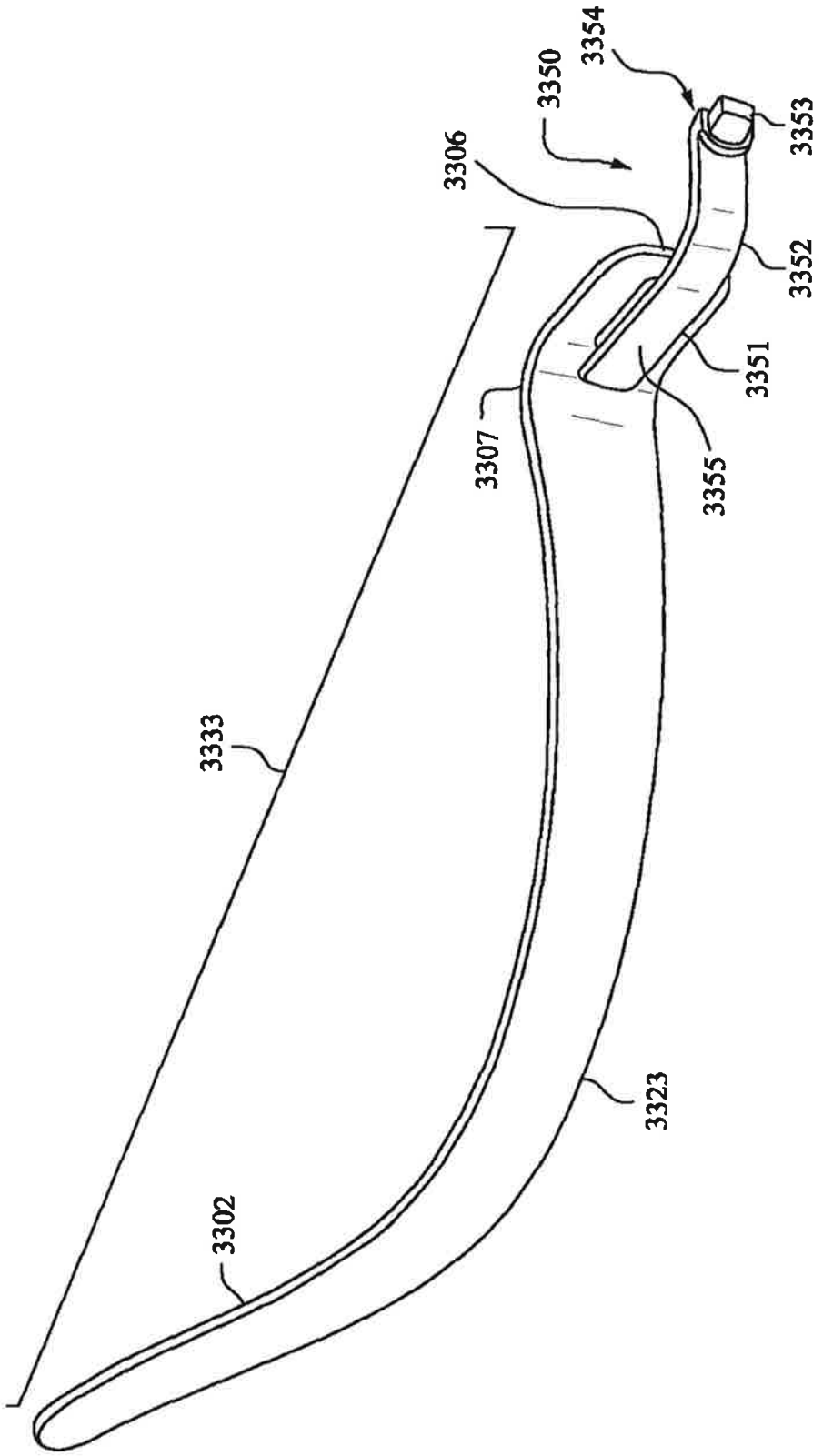


FIG. 41

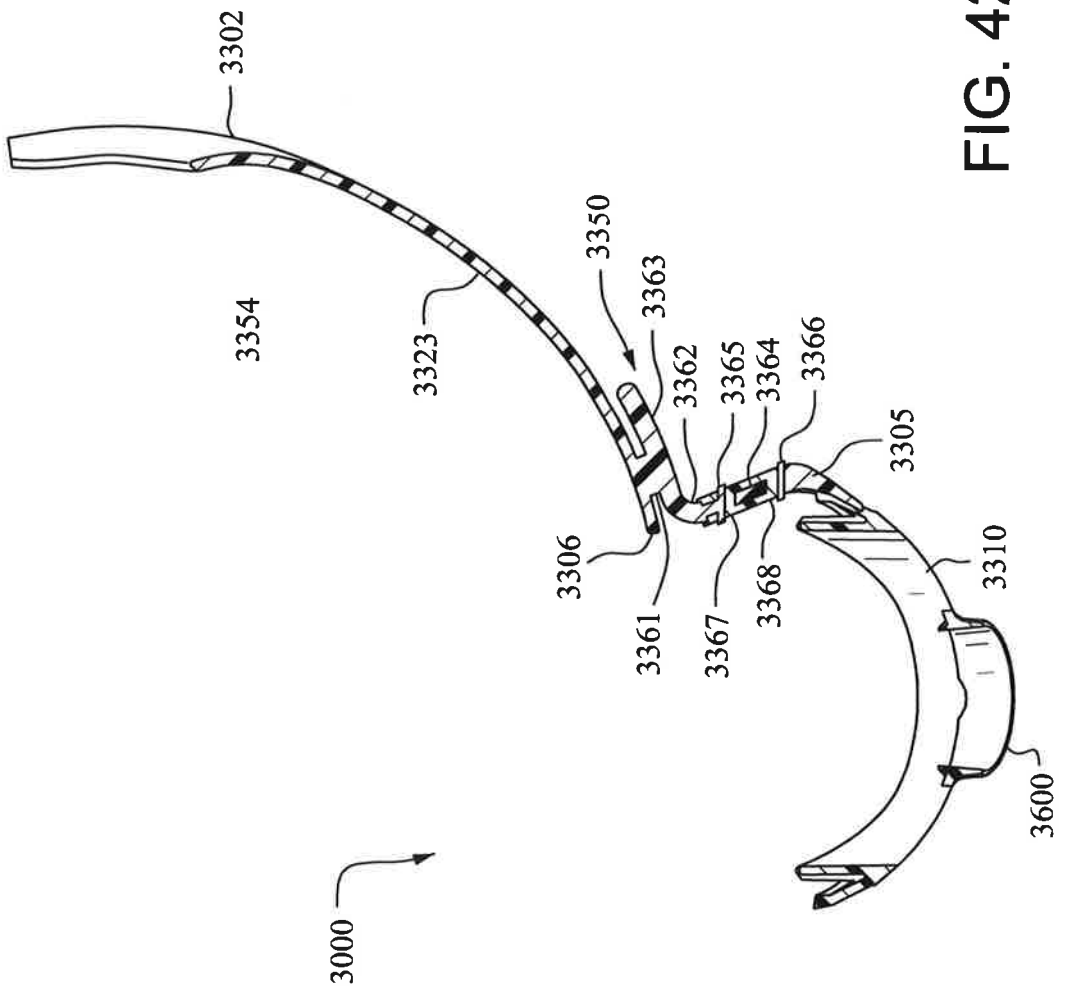

3302
3354
3323
3350
3363
3362
3365
3364
3366
3305
3306
3361
3367
3368
3310
3600
3000

FIG. 42

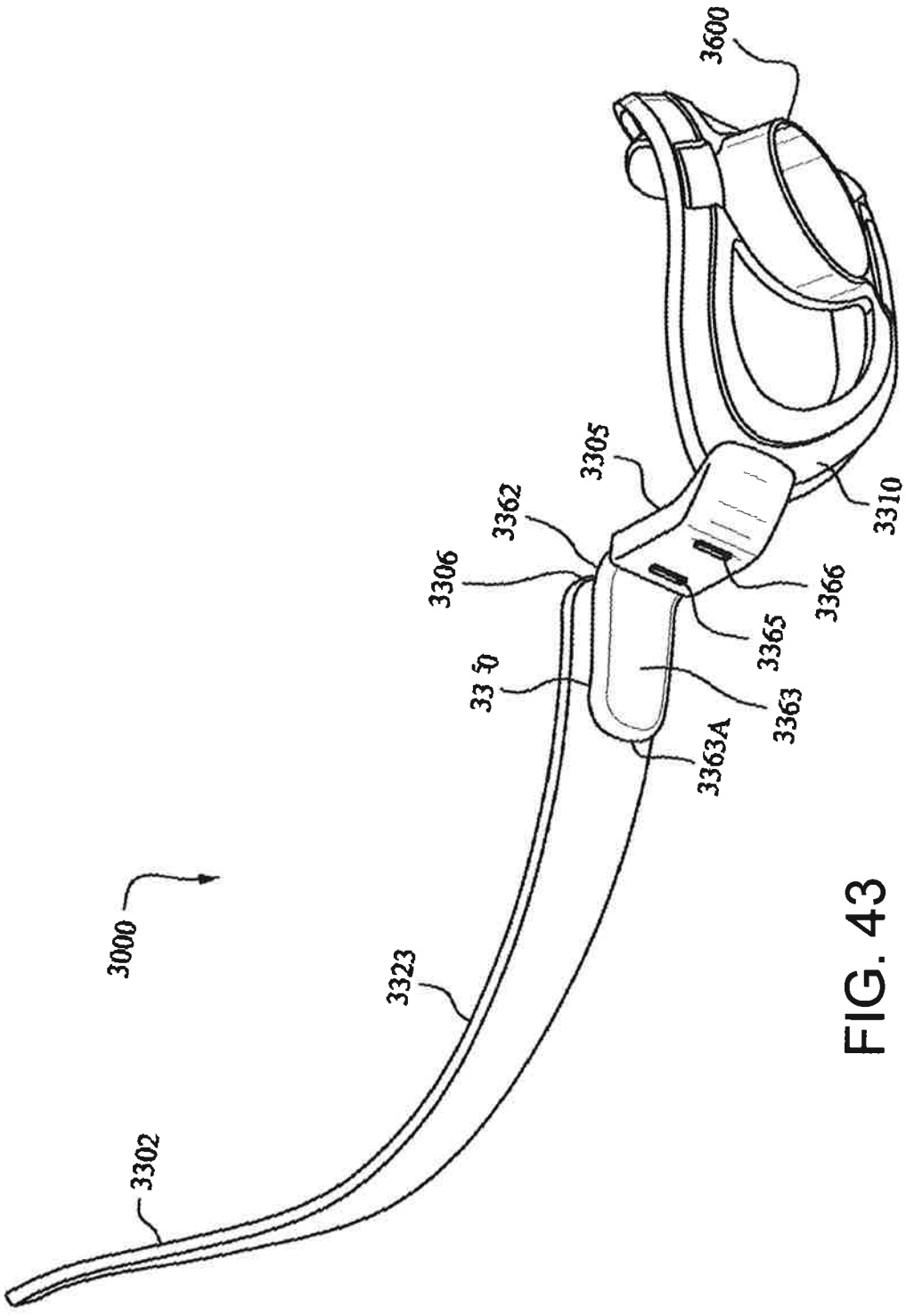


FIG. 43

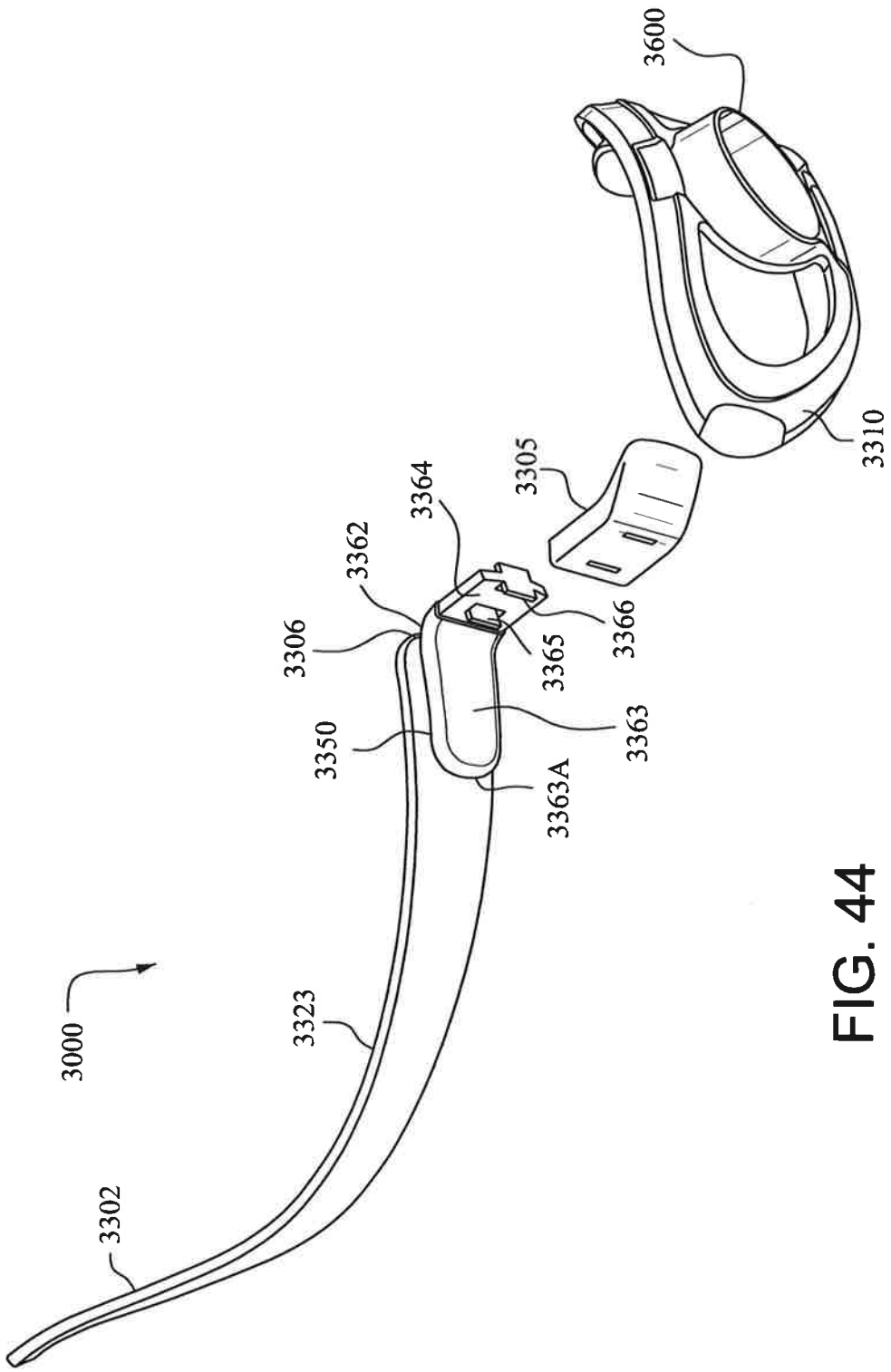

3600
3310
3305
3364
3362
3306
3366
3365
3350
3363
3363A
3323
3000
3302

FIG. 44

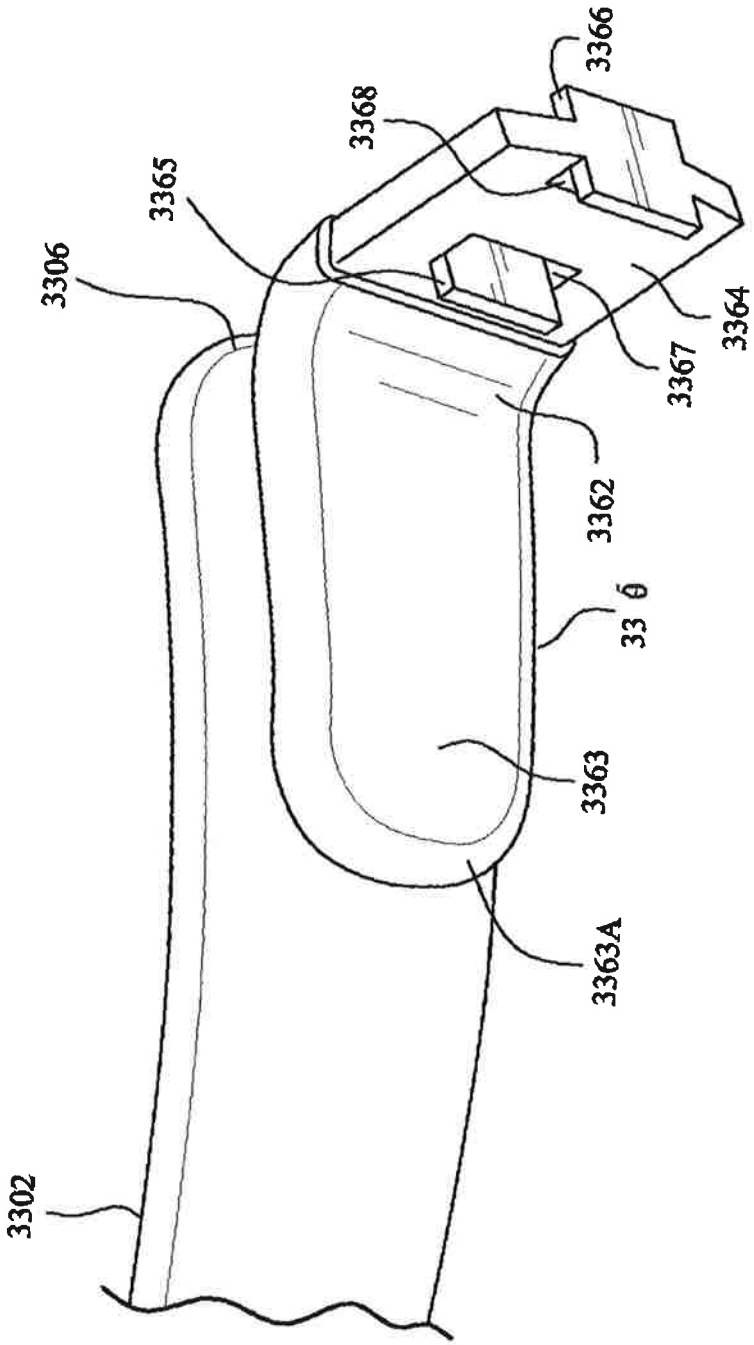


FIG. 45

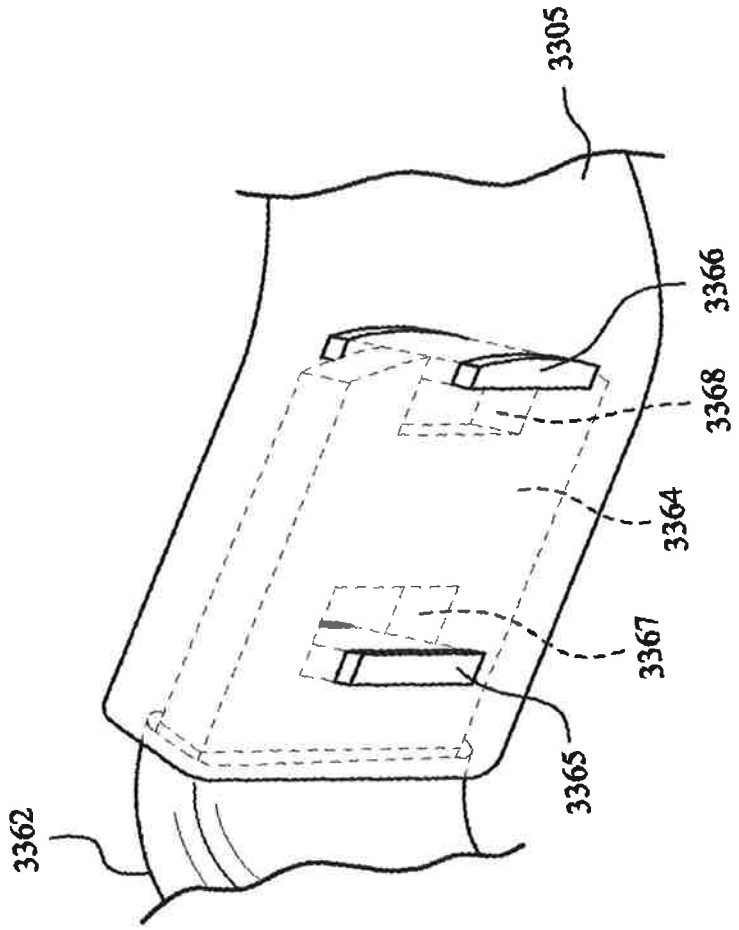


FIG. 46

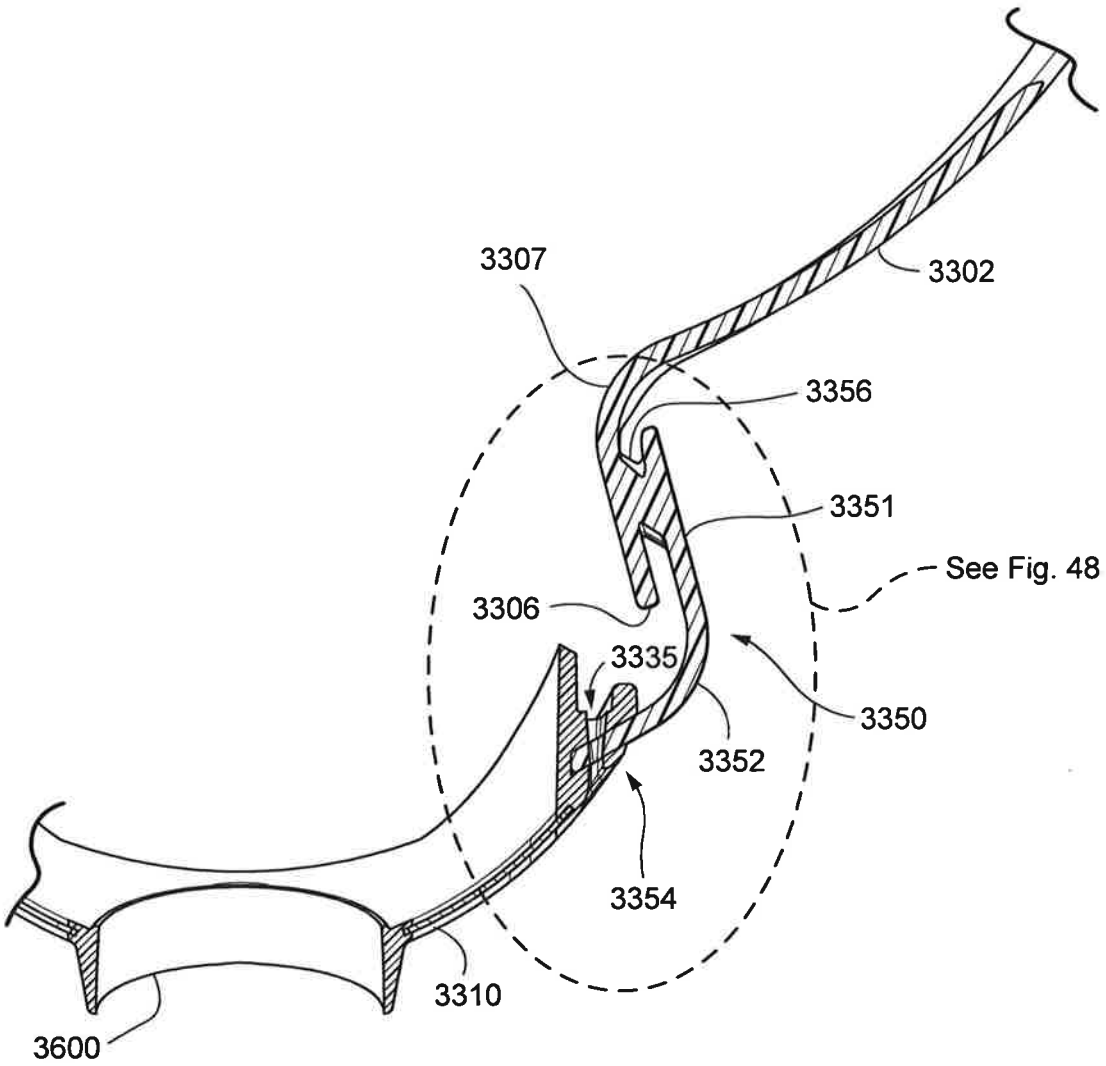

3307
3302
3356
3351
See Fig. 48
3306
3335
3350
3352
3354
3310
3600

FIG. 47

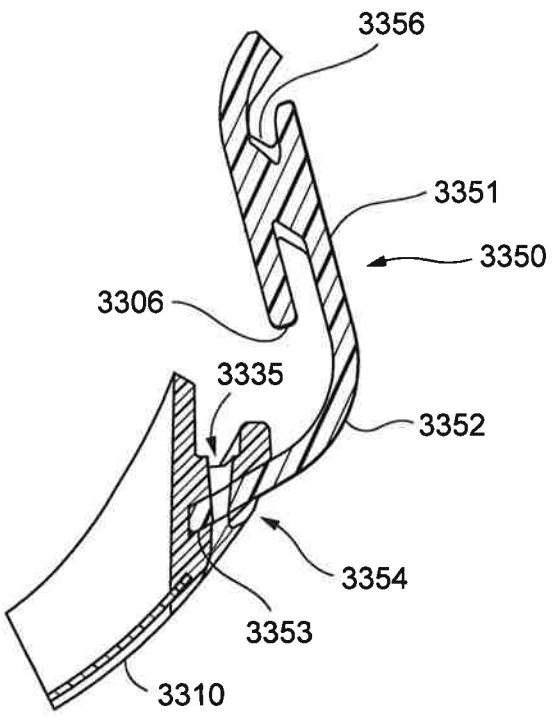

3356
3351
3350
3306
3335
3352
3354
3353
3310

FIG. 48

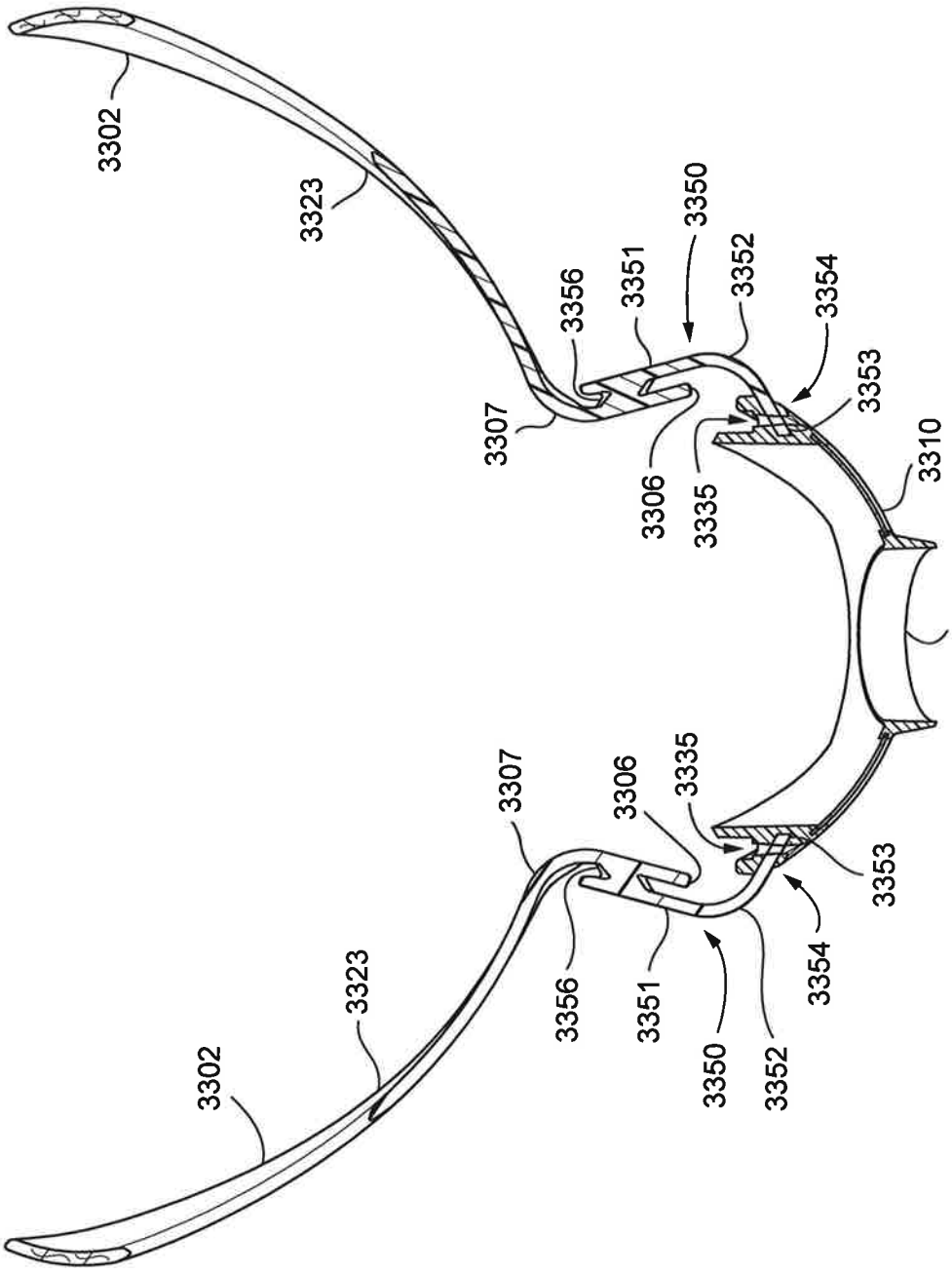

3302
3323
3307
3356
3351
3350
3352
3354
3353
3306
3335
3310
3600
3307
3306
3335
3353
3356
3351
3350
3352
3354
3323
3302

FIG. 49

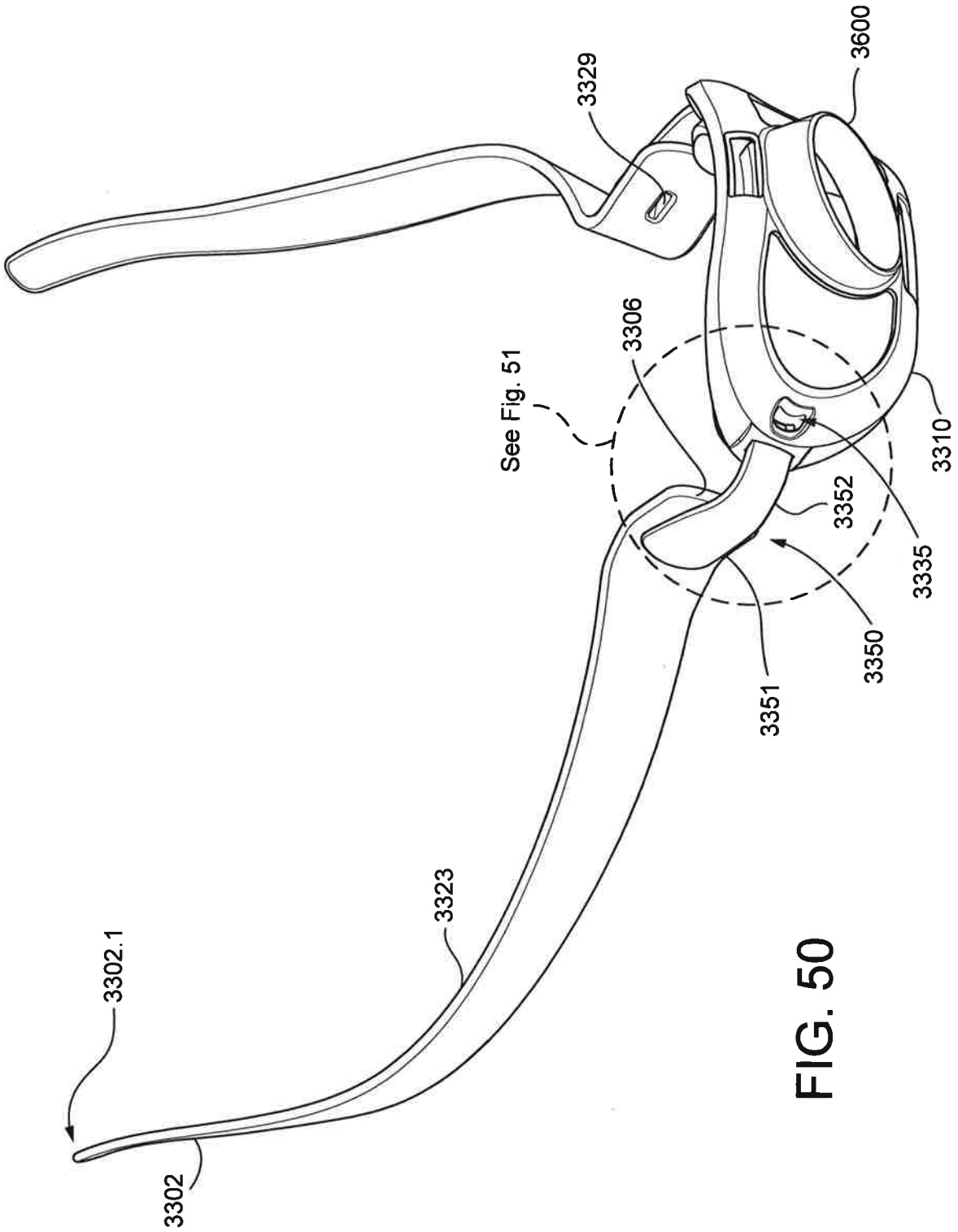

3329
3600
3306
See Fig. 51
3310
3352
3335
3350
3351
3323
3302.1
3302

FIG. 50

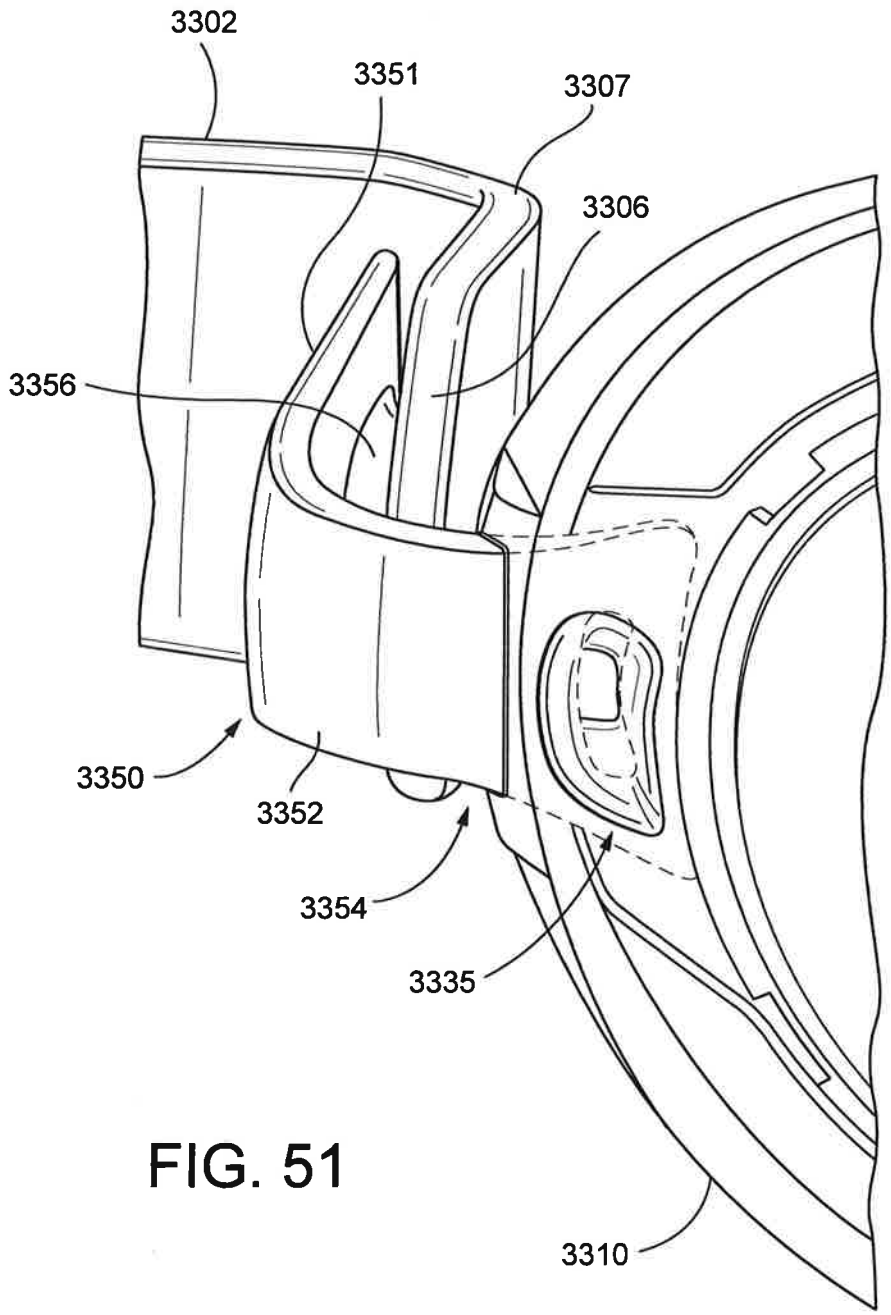


FIG. 51

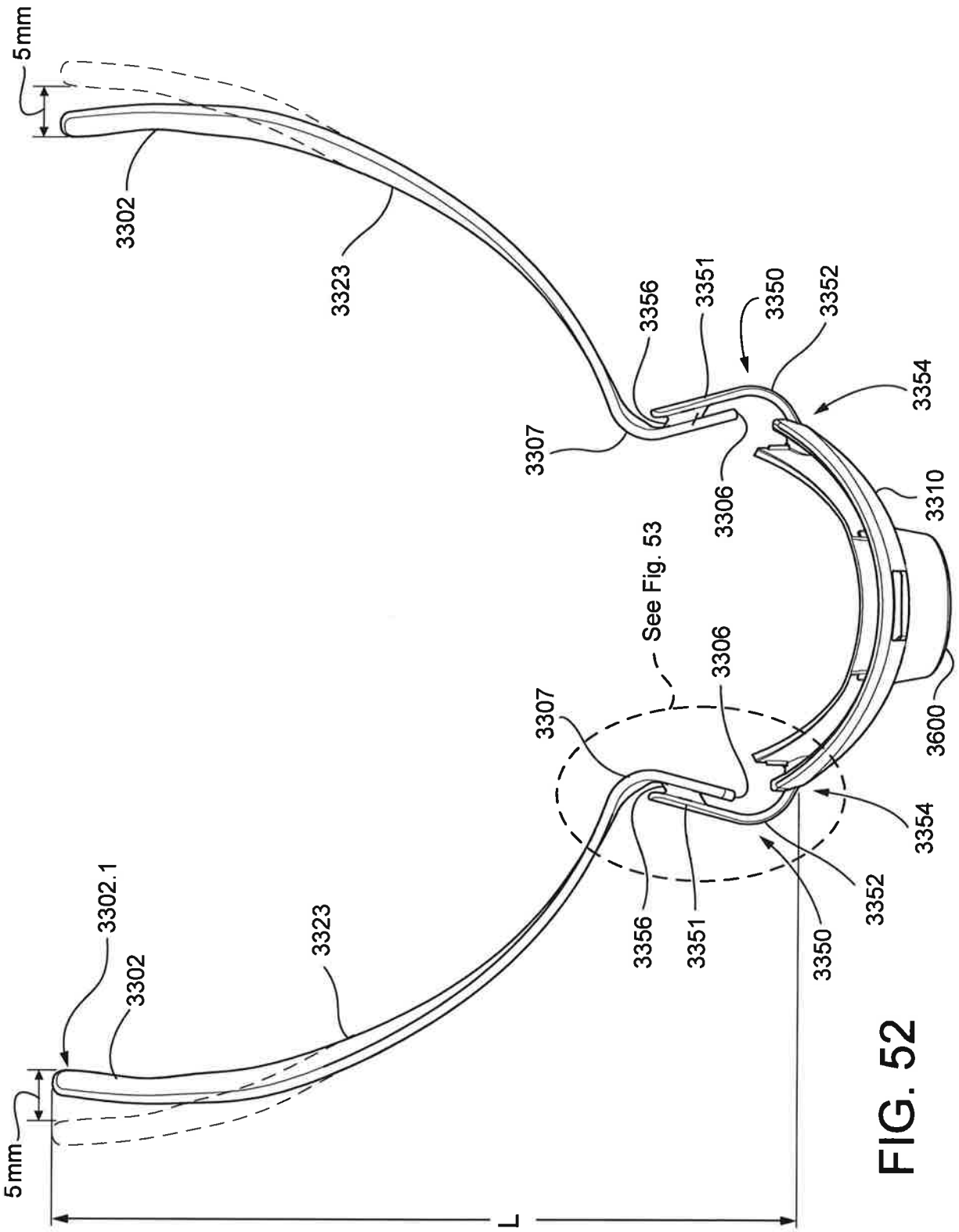

5mm
3302
3323
3356
3351
3350
3352
3354
3307
3306
3310
See Fig. 53
3306
3307
3600
3354
3352
3350
3356
3351
3323
3302.1
3302
5mm
L

FIG. 52

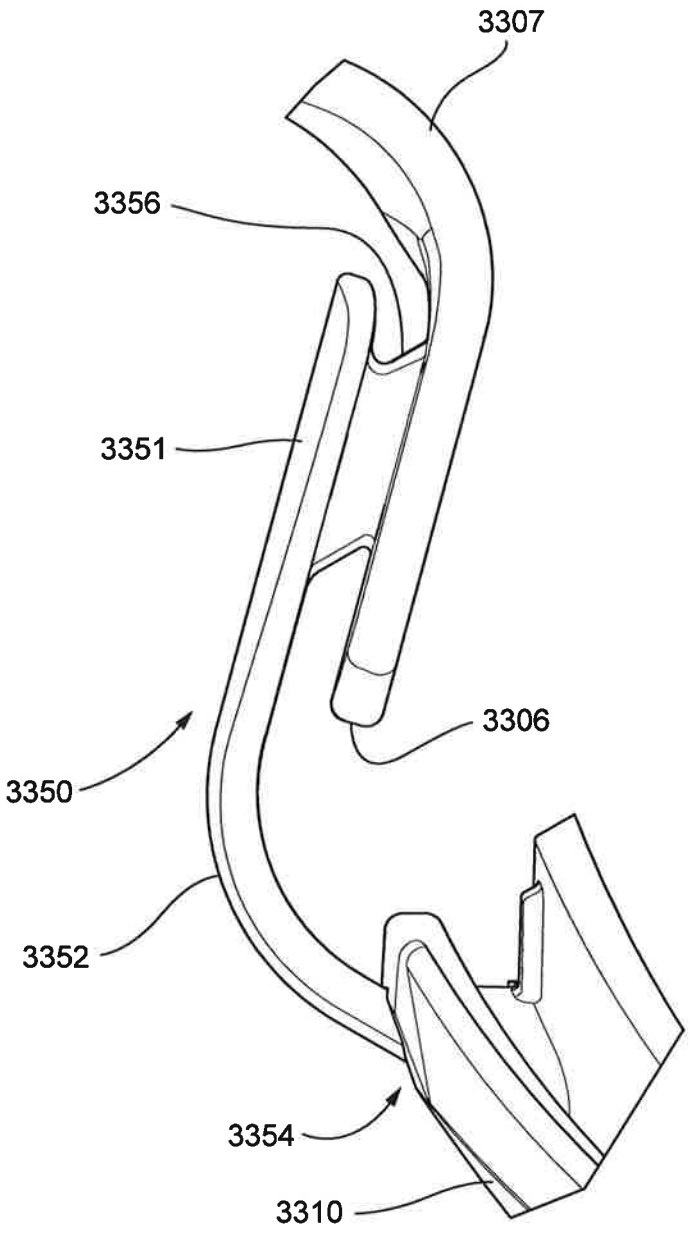


FIG. 53

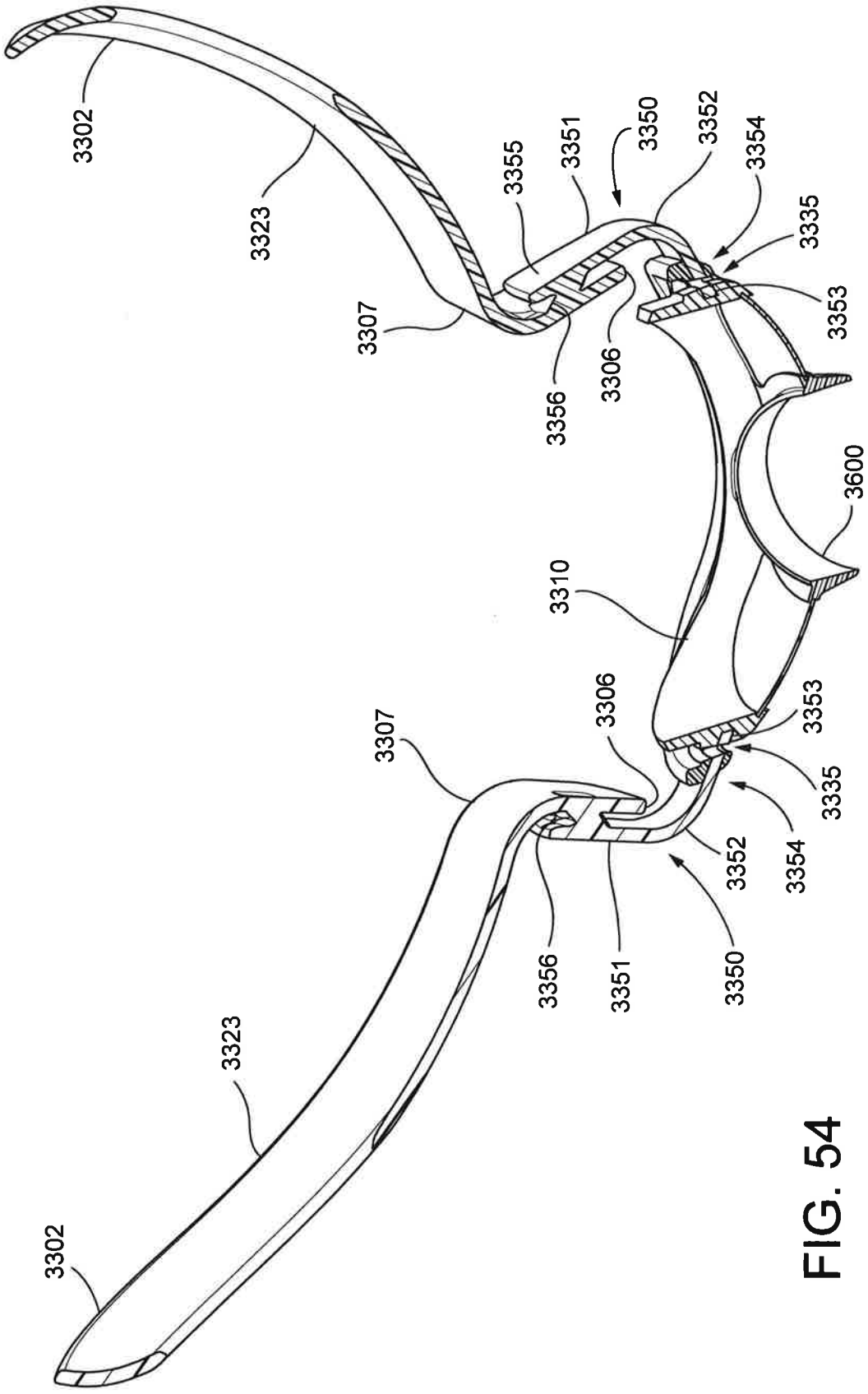

3302
3323
3307
3355
3351
3350
3352
3354
3335
3353
3306
3356
3600
3310
3307
3306
3353
3335
3354
3352
3356
3351
3350
3323
3302

FIG. 54

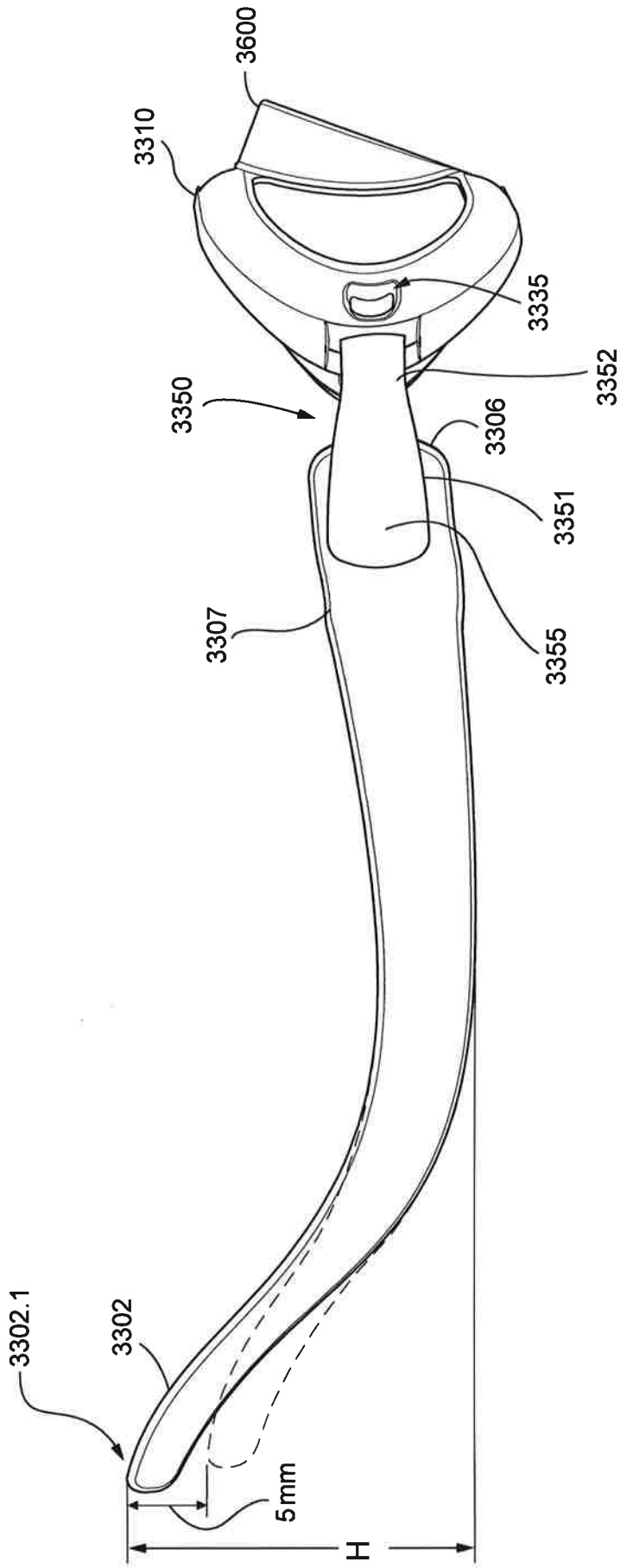


FIG. 55

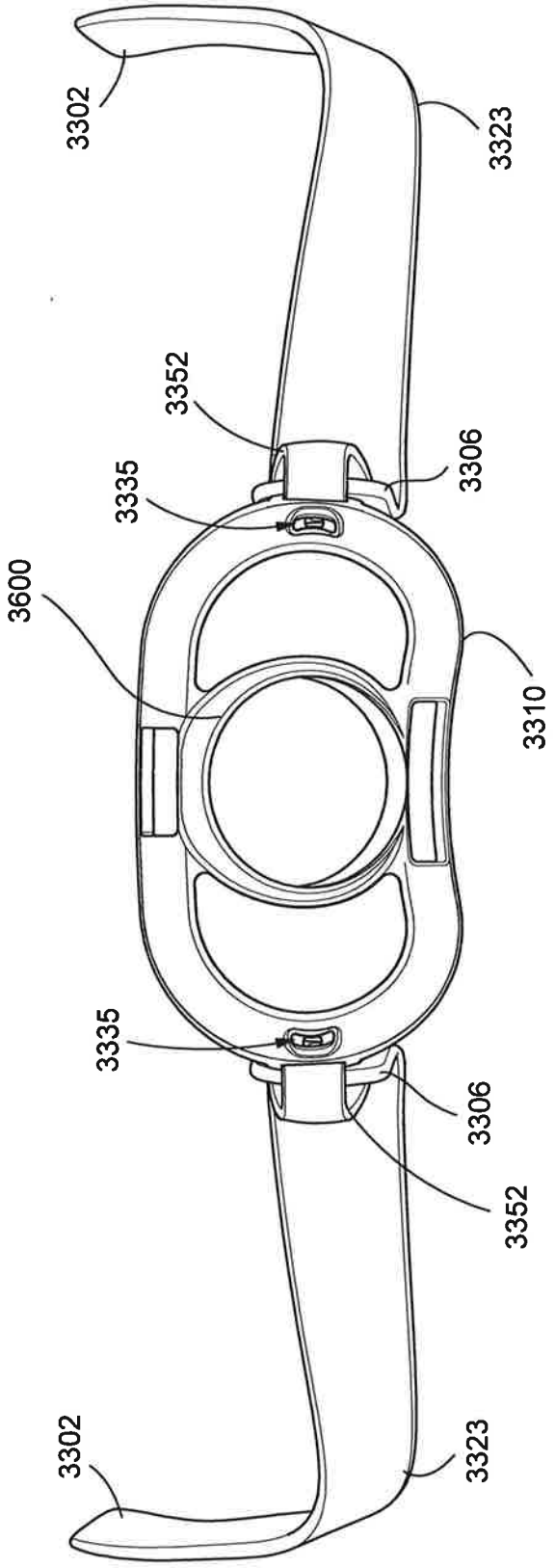


FIG. 56

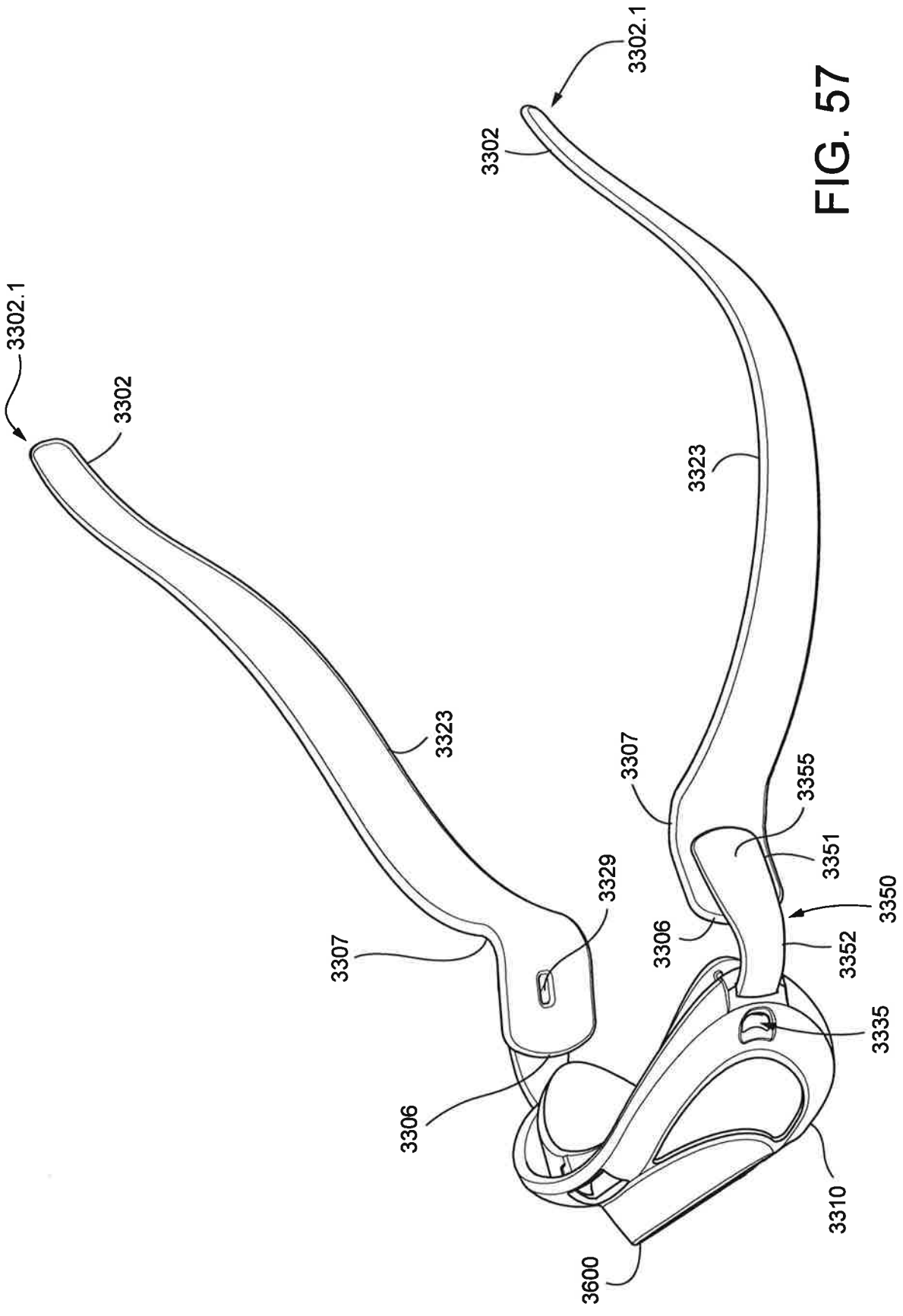

3302.1
3302
3323
3307
3329
3306
3600
3310
3335
3352
3350
3351
3355
3307
3323
3302
3302.1

FIG. 57

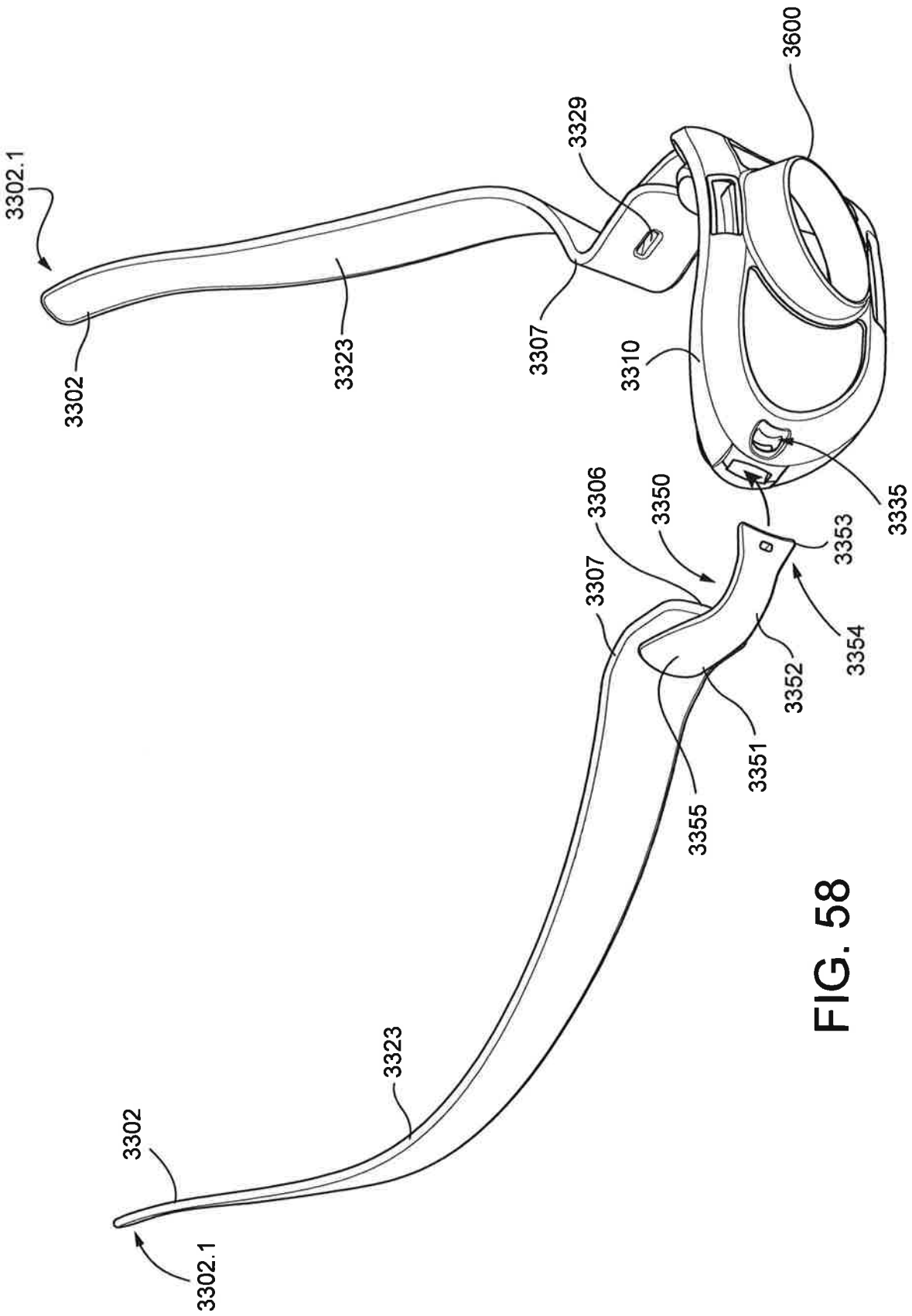

3302.1
3302
3323
3307
3329
3600
3310
3335
3306
3350
3353
3307
3354
3352
3351
3355
3323
3302
3302.1

FIG. 58

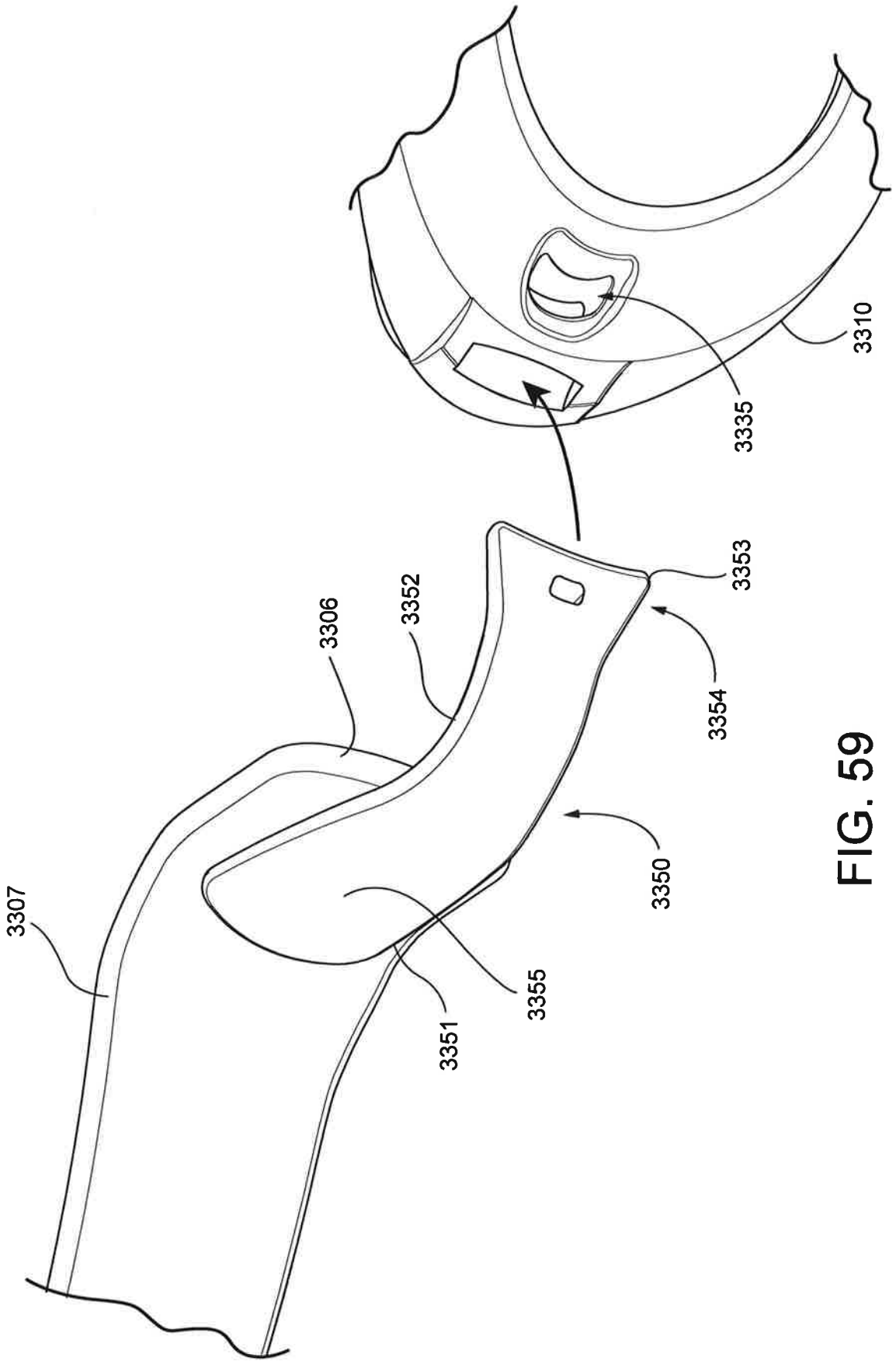


FIG. 59

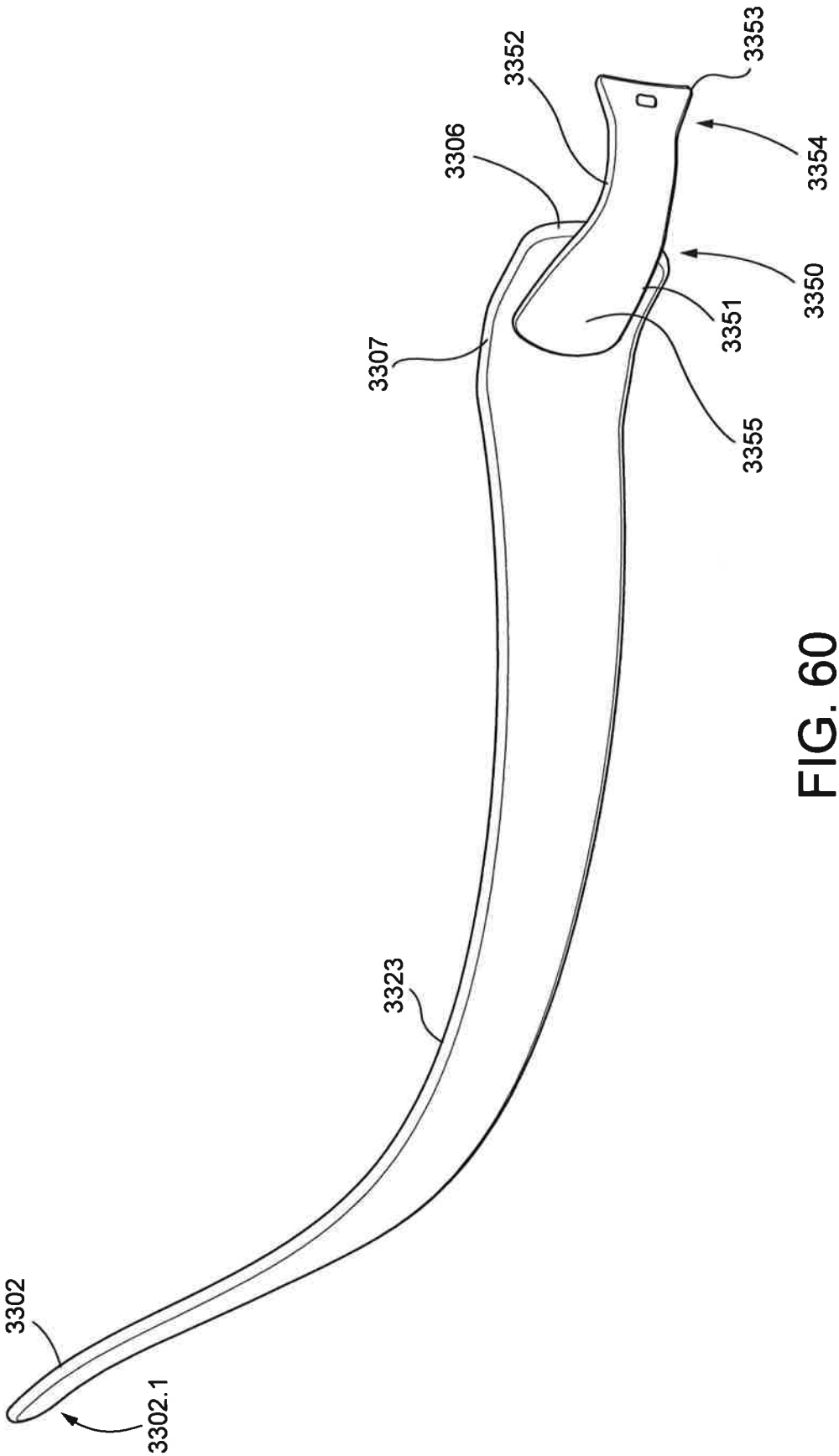


FIG. 60

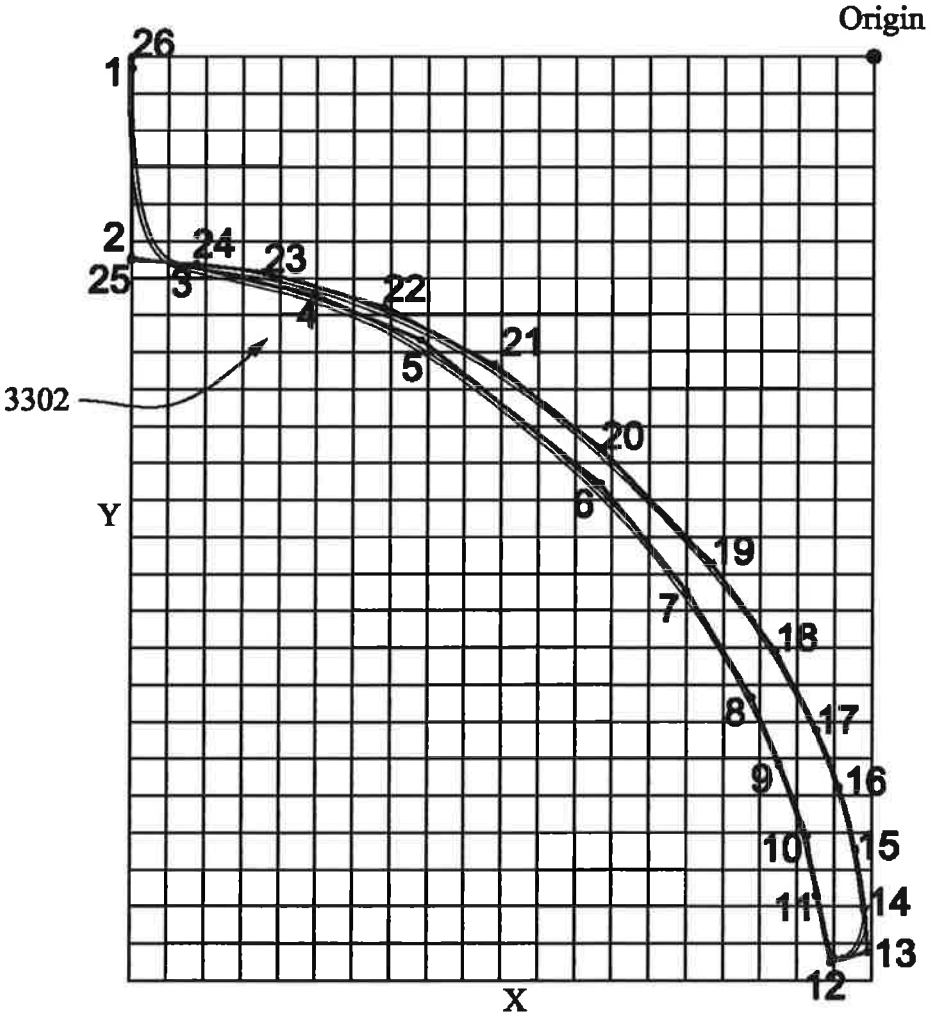

Origin
26
1
2
24
23
25
3
22
4
21
5
3302
20
6
Y
19
7
18
8
17
9
16
10
15
11
14
13
12
X

FIG. 61

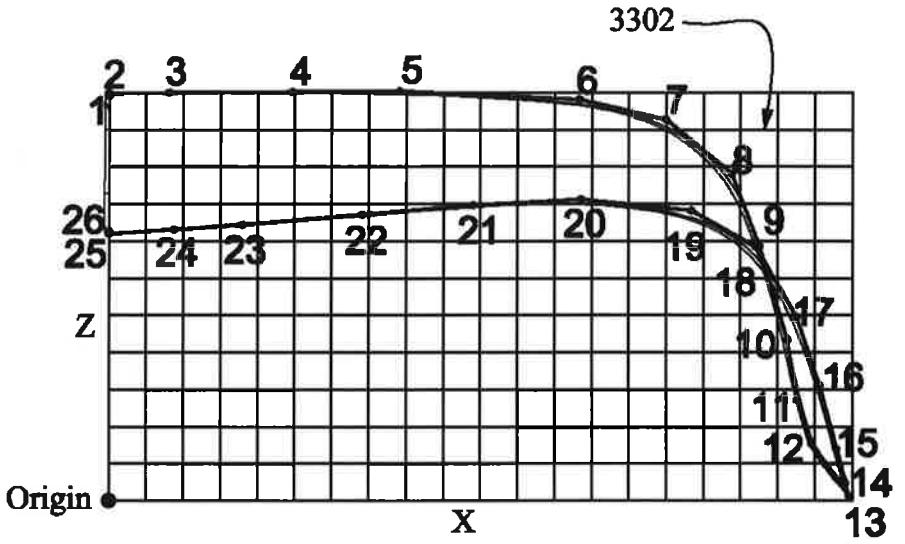

3302
2
3
4
5
6
7
1
8
26
9
25
24
23
22
21
20
19
18
17
Z
10
16
11
12
15
14
Origin
X
13

FIG. 62

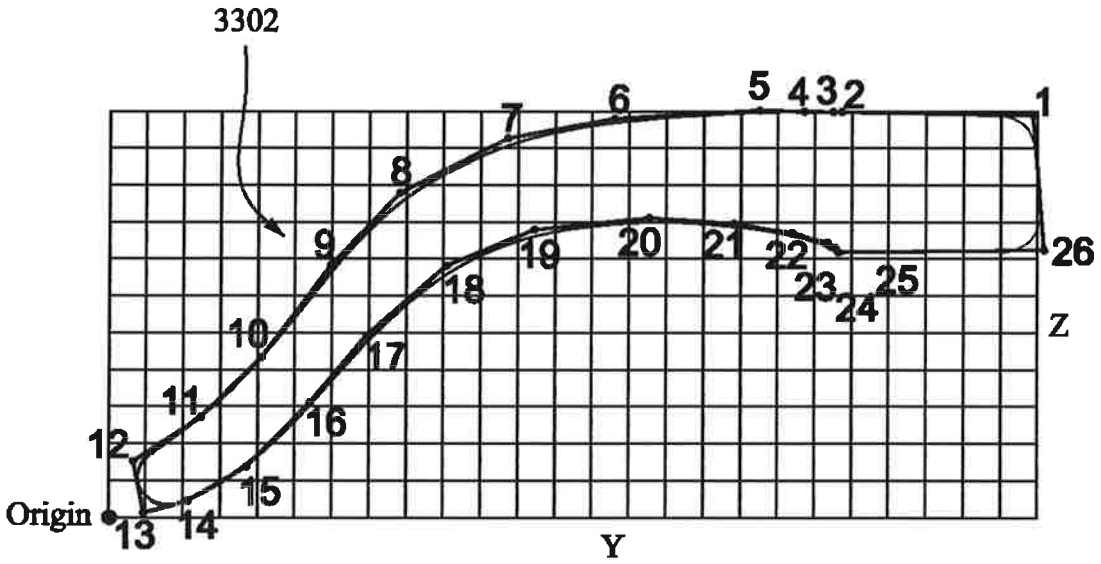

3302
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
Origin
Y
Z

FIG. 63

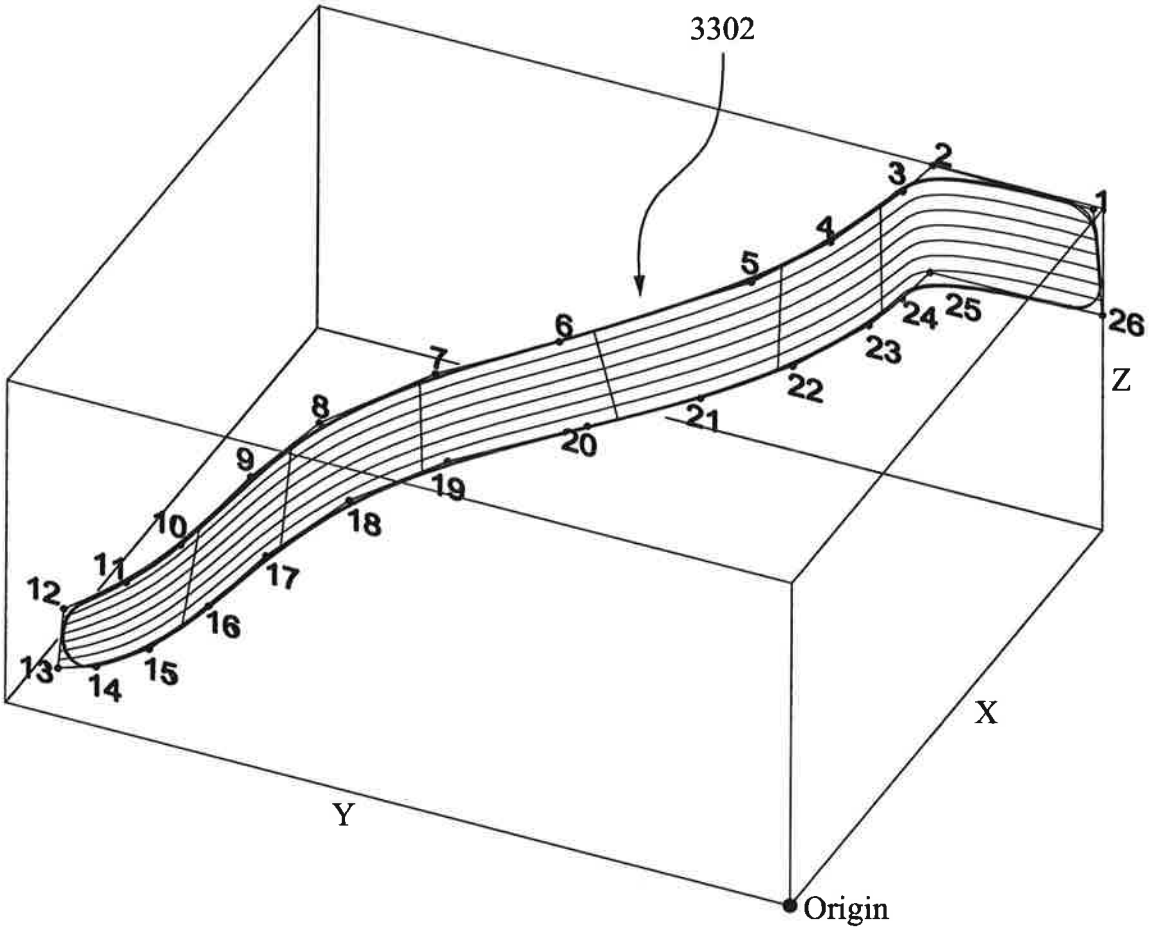

3302
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
Z
X
Y
Origin

FIG. 64

FIG. 65

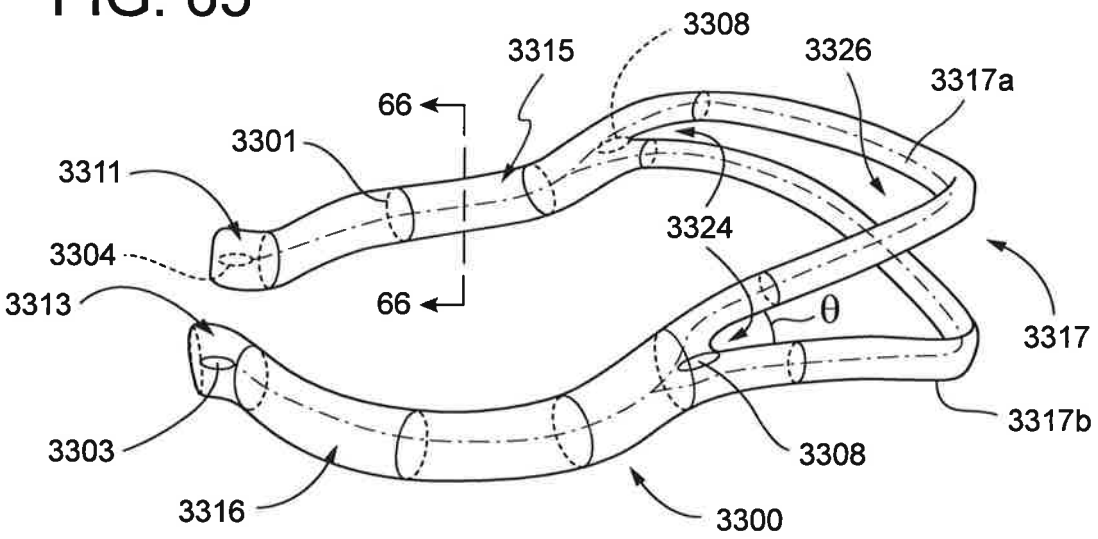




FIG. 66

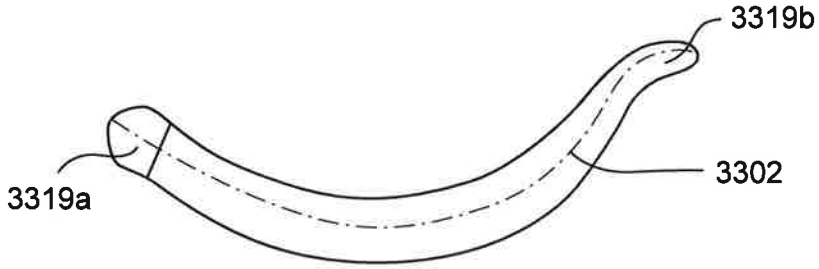


FIG. 67

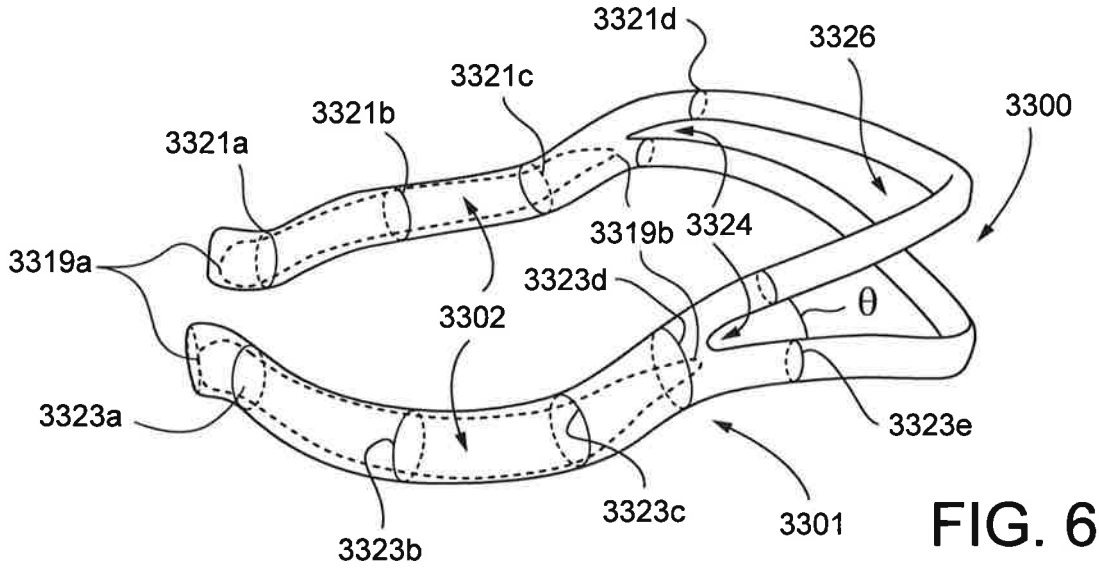


FIG. 68

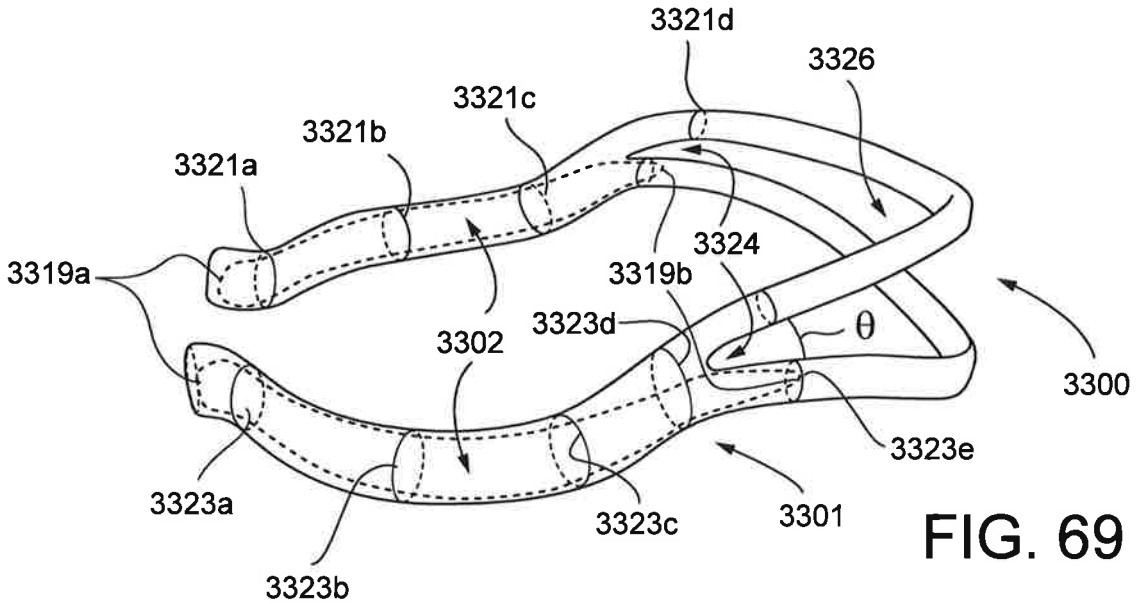


FIG. 69

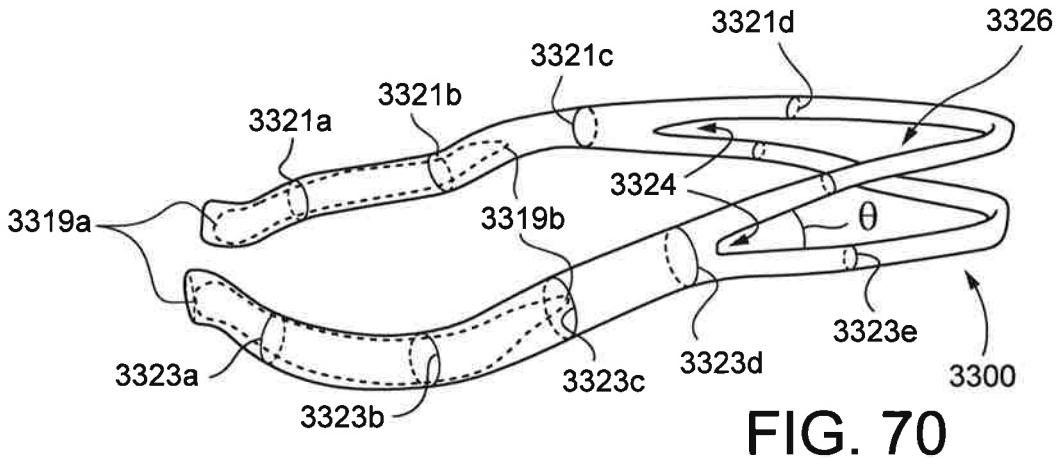


FIG. 70

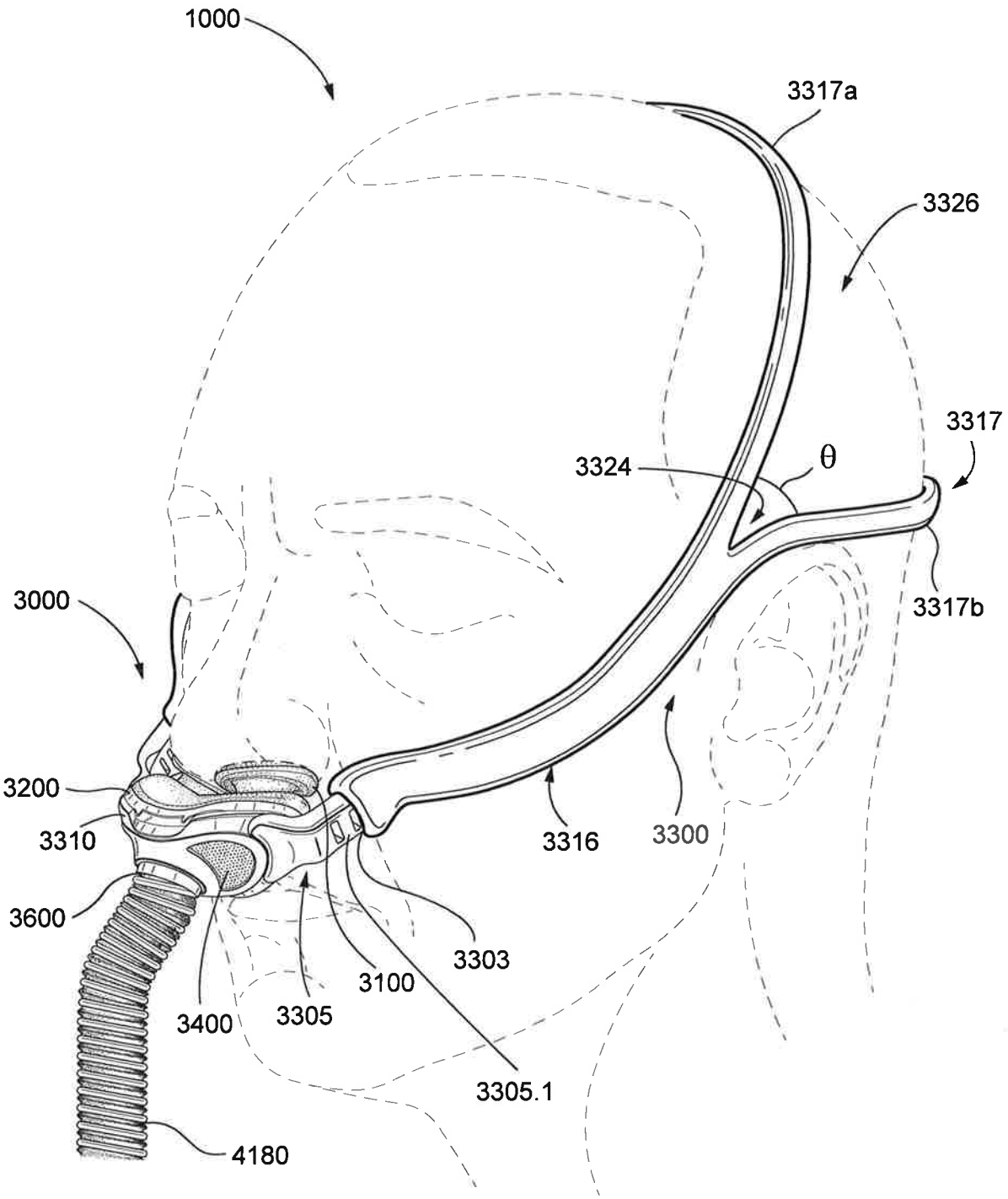

1000
3317a
3326
3317
θ
3324
3317b
3000
3200
3310
3600
3316
3300
3303
3100
3400
3305
3305.1
4180

FIG. 71

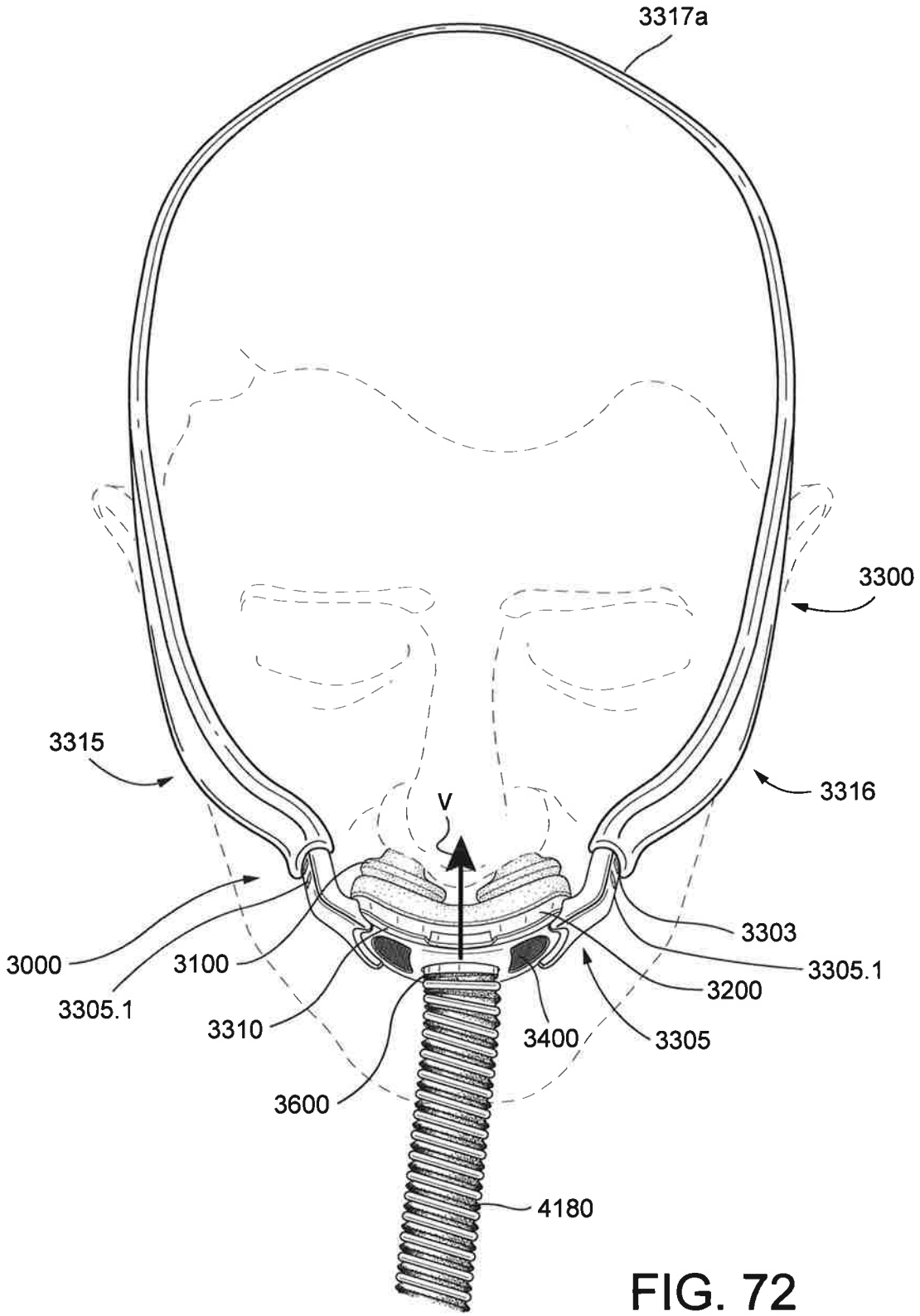

3317a
3300
3315
3316
V
3303
3305.1
3200
3305
3400
3000
3100
3305.1
3310
3600
4180

FIG. 72

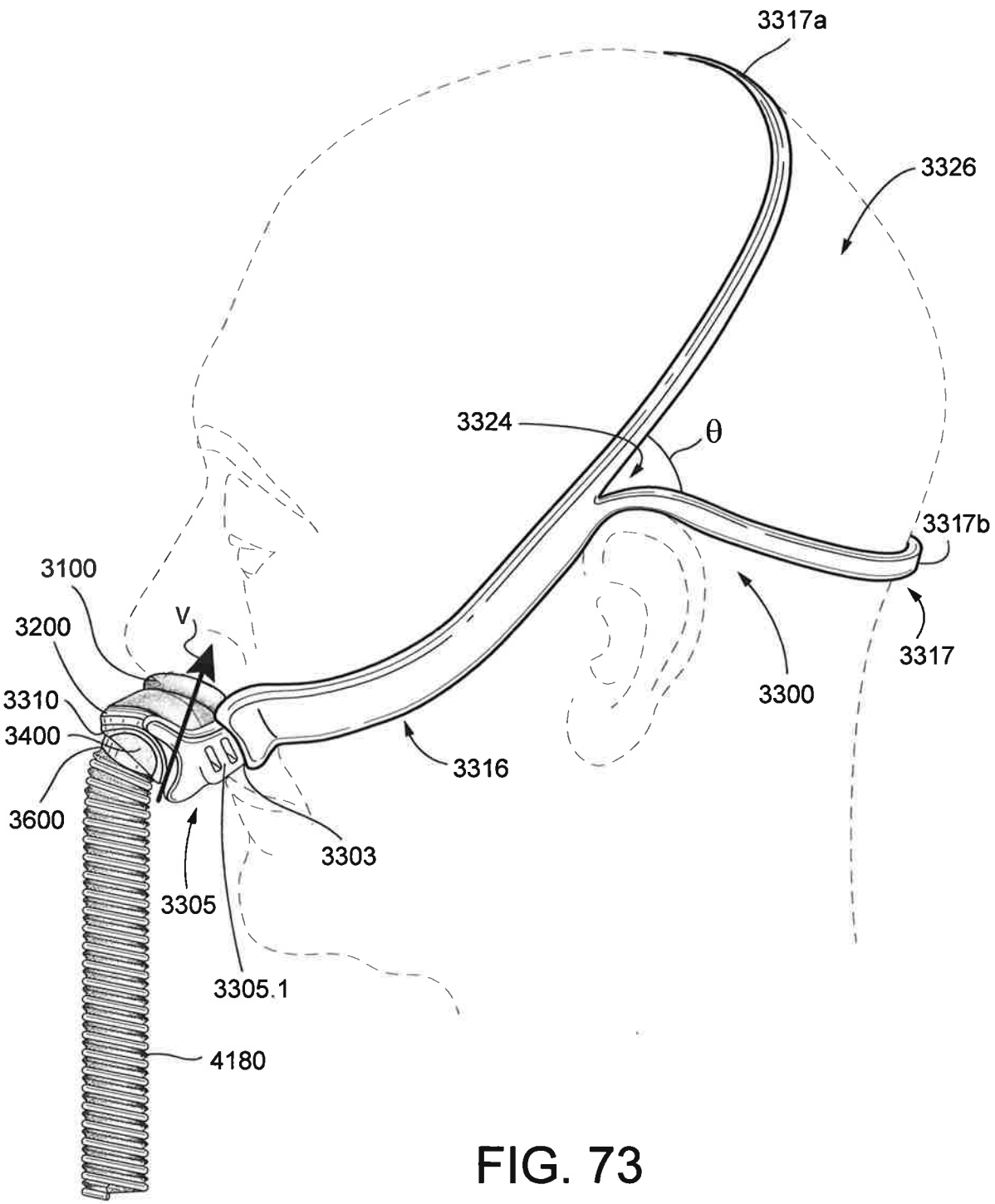

3317a
3326
3324
θ
3317b
3100
V
3200
3310
3400
3600
3316
3317
3300
3303
3305
3305.1
4180

FIG. 73

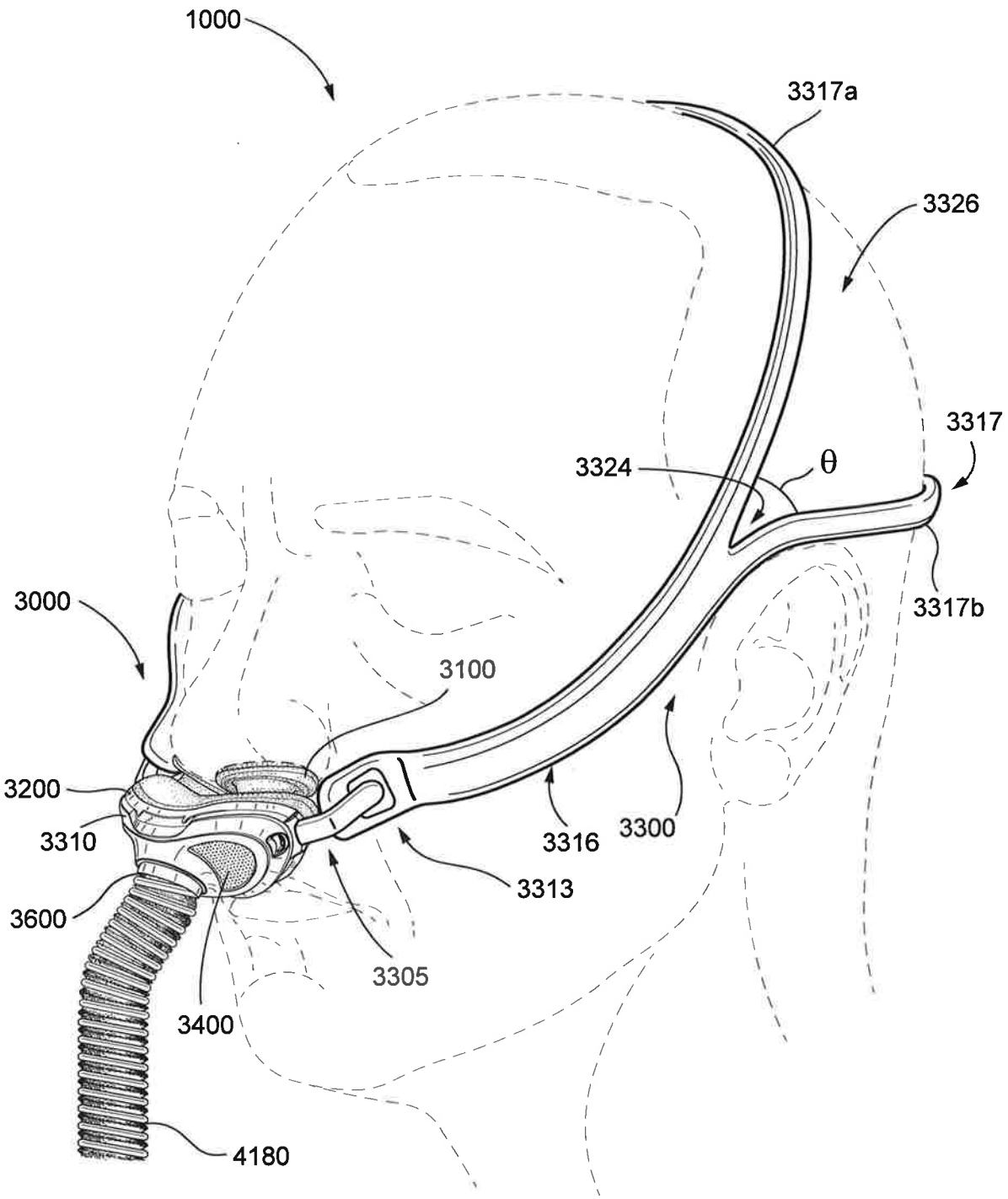

1000
3317a
3326
3317
θ
3324
3317b
3000
3100
3200
3310
3600
3316
3300
3313
3305
3400
4180

FIG. 74

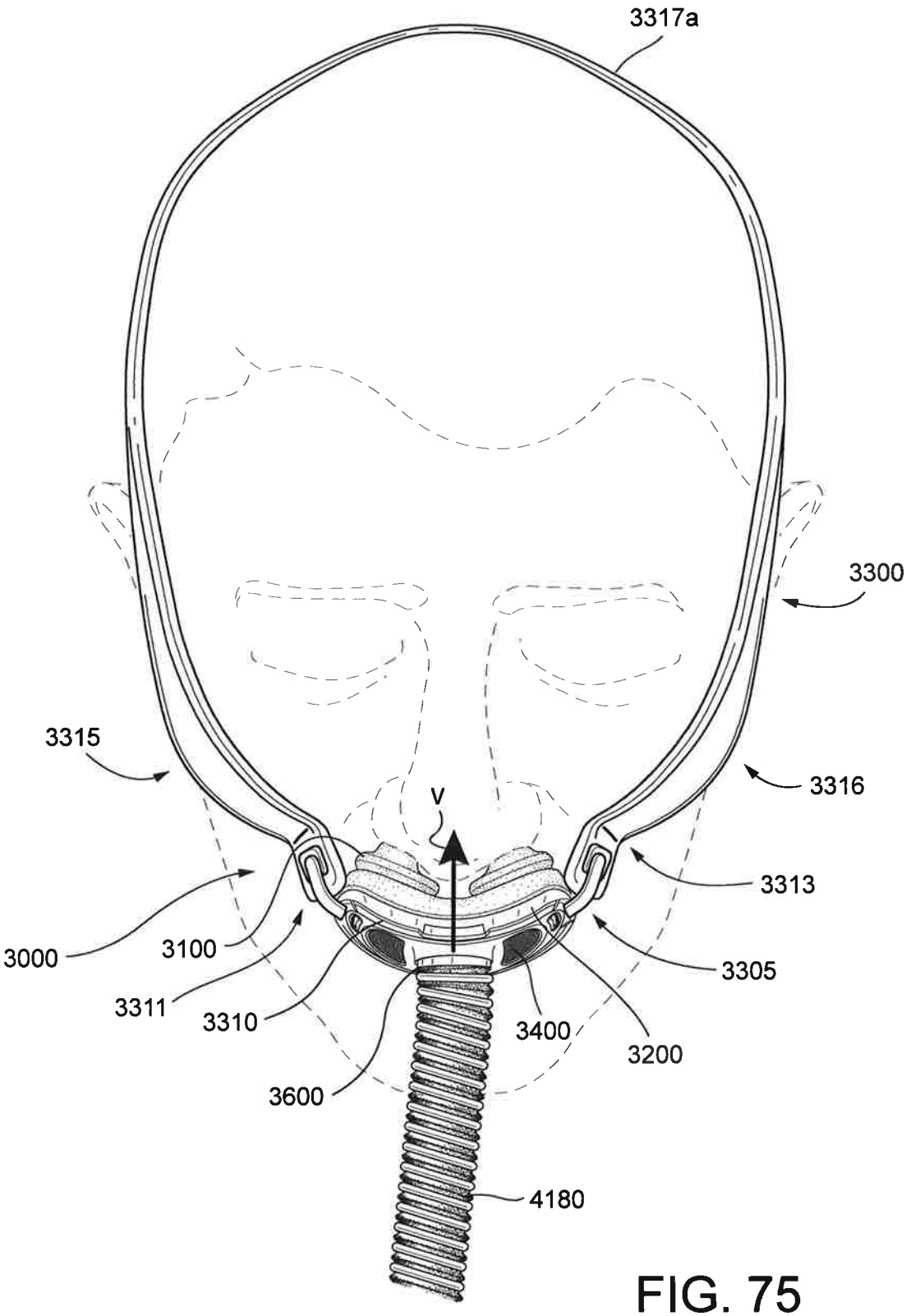

3317a
3300
3315
3316
V
3313
3000
3100
3305
3311
3310
3400
3200
3600
4180

FIG. 75

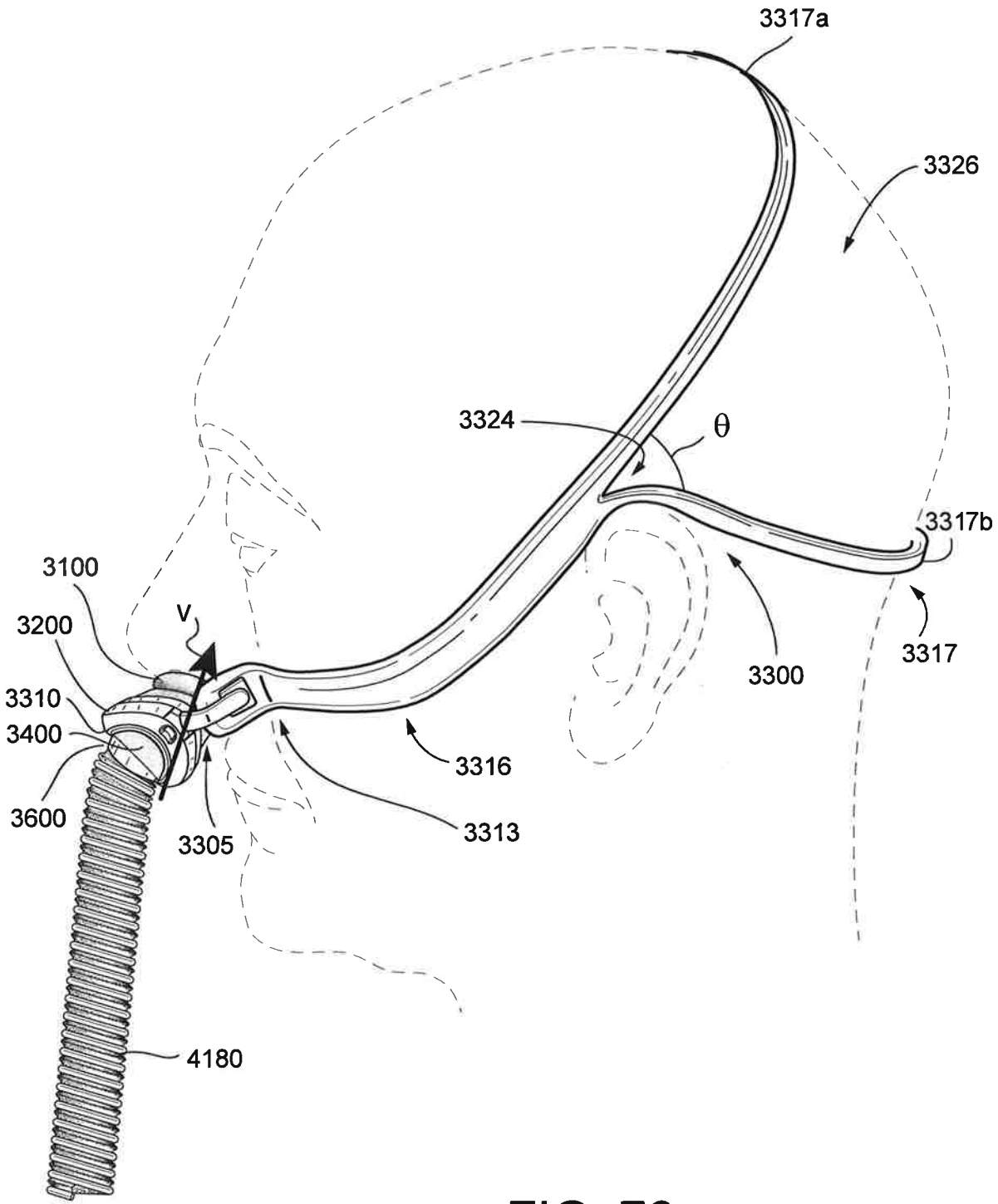

3317a
3326
3324
θ
3317b
3100
V
3200
3310
3400
3600
3305
3313
3316
3300
3317
4180

FIG. 76

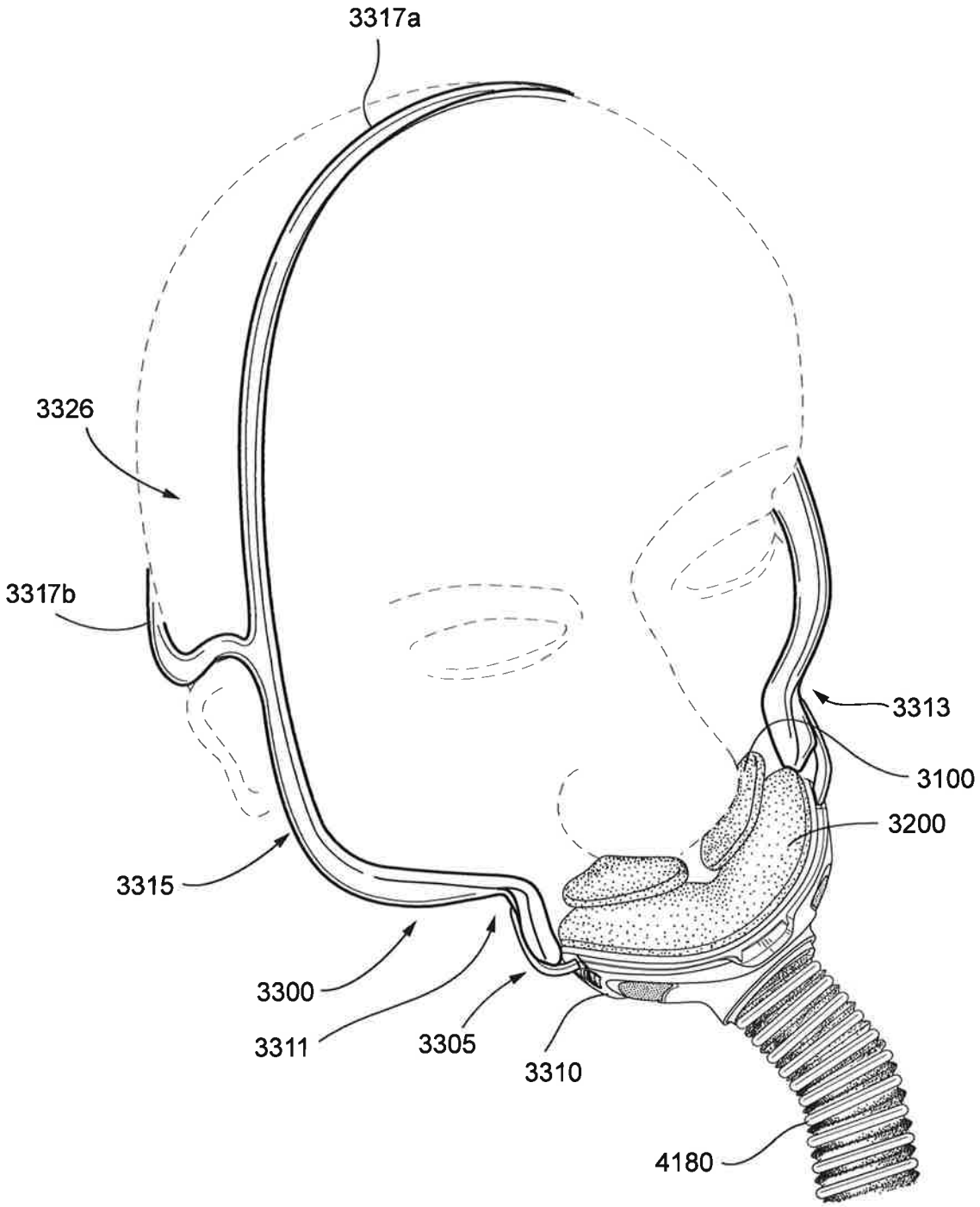

3317a
3326
3317b
3313
3100
3200
3315
3300
3311
3305
3310
4180

FIG. 77

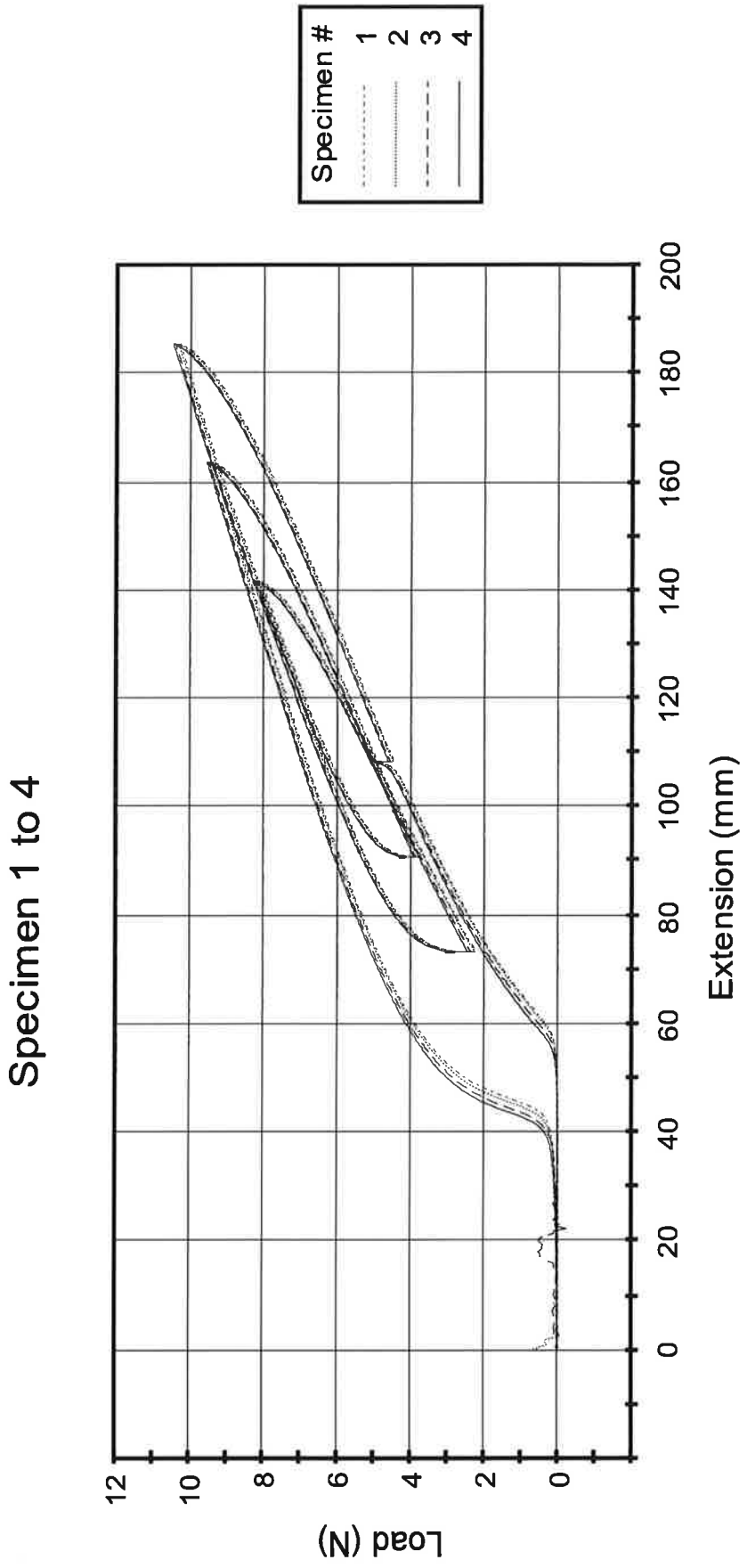

Specimen 1 to 4
Specimen #
1
2
3
4
Load (N)
0
2
4
6
8
10
12
Extension (mm)
0
20
40
60
80
100
120
140
160
180
200

FIG. 78

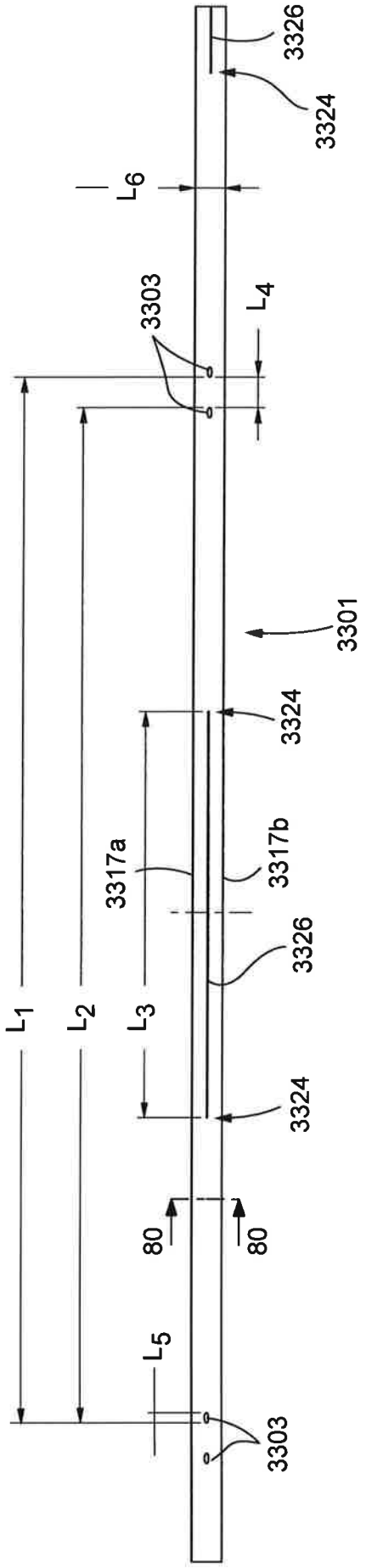

3326
3324
L6
3303
L4
3301
3324
3317a
3317b
3326
L1
L2
L3
3324
80
80
L5
3303

FIG. 79

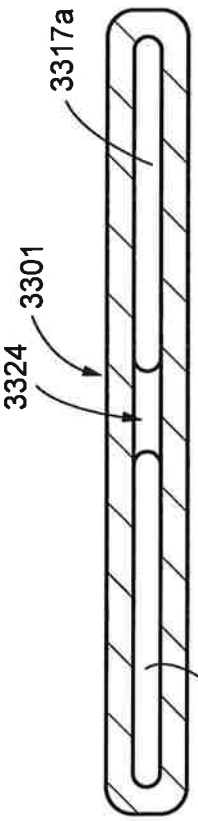

3317a
3301
3324
3317b

FIG. 80

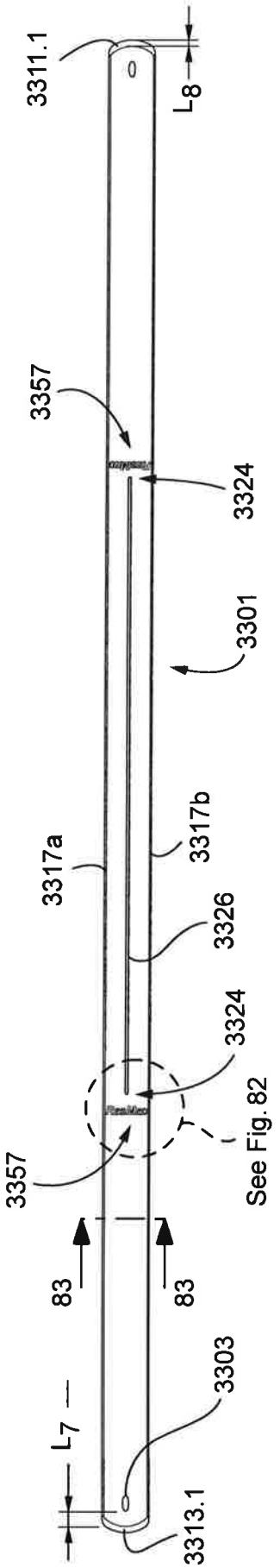


FIG. 81

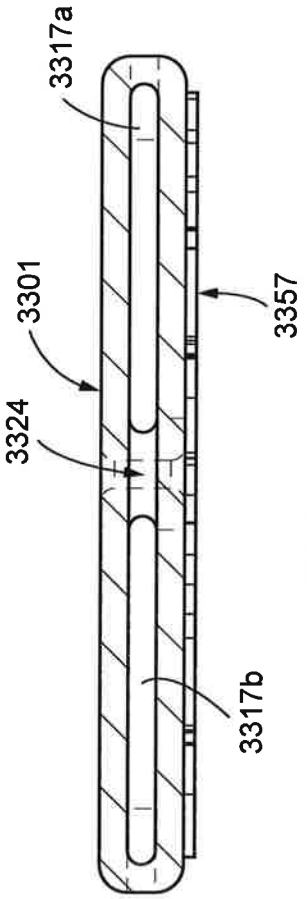


FIG. 83

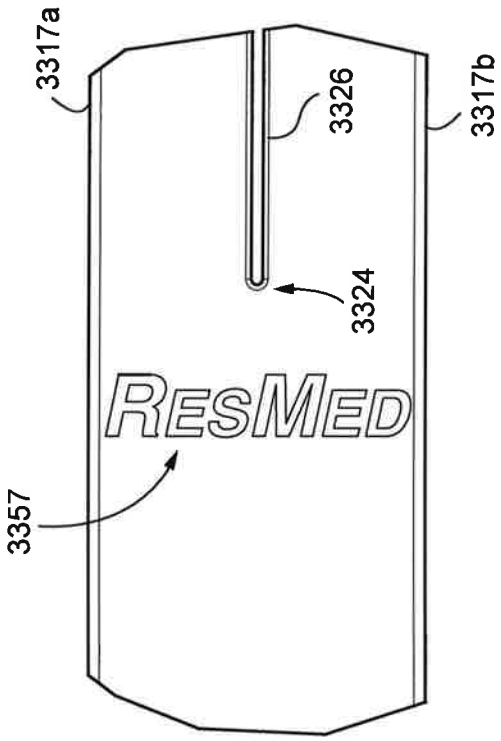


FIG. 82

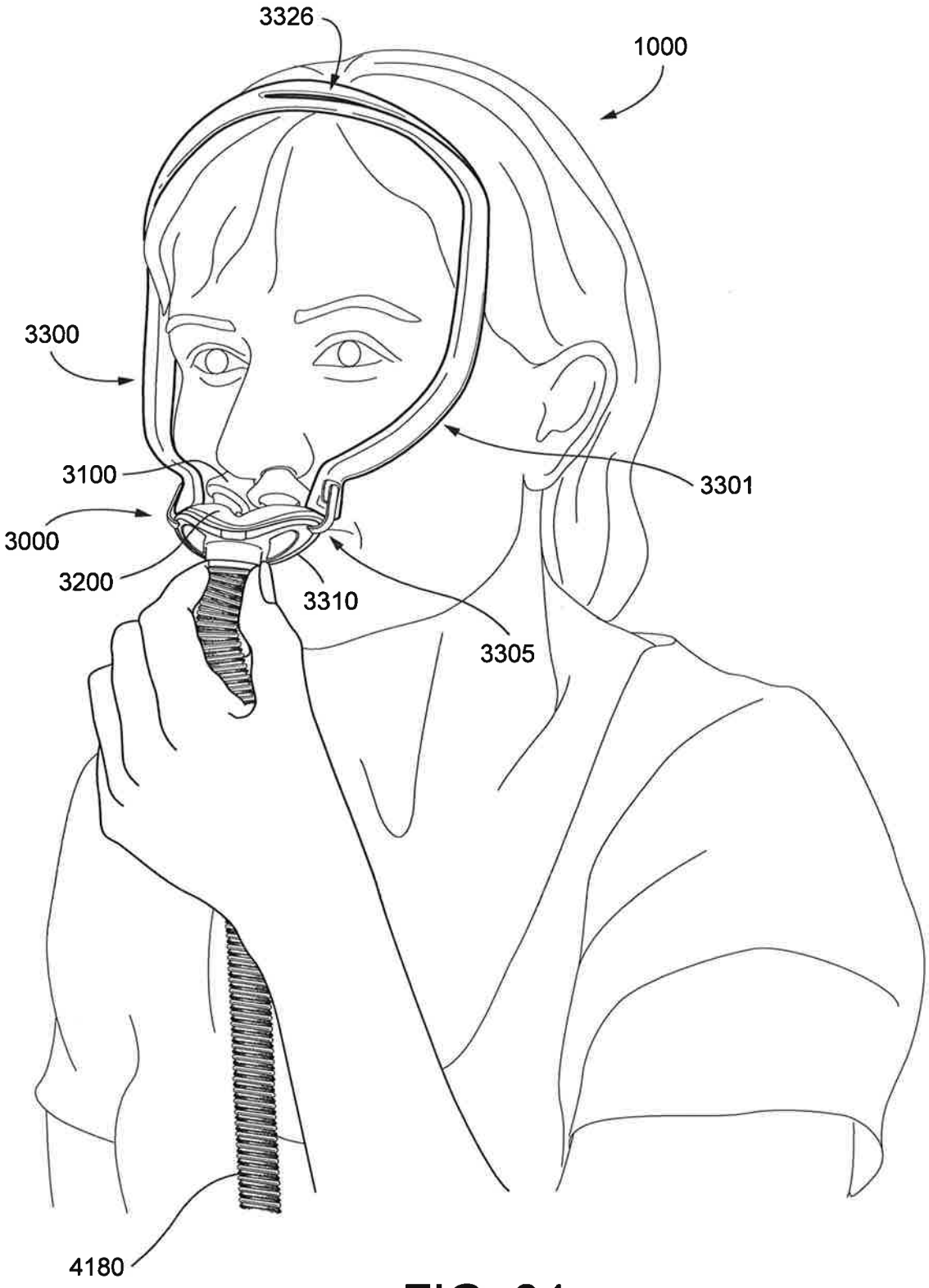


FIG. 84

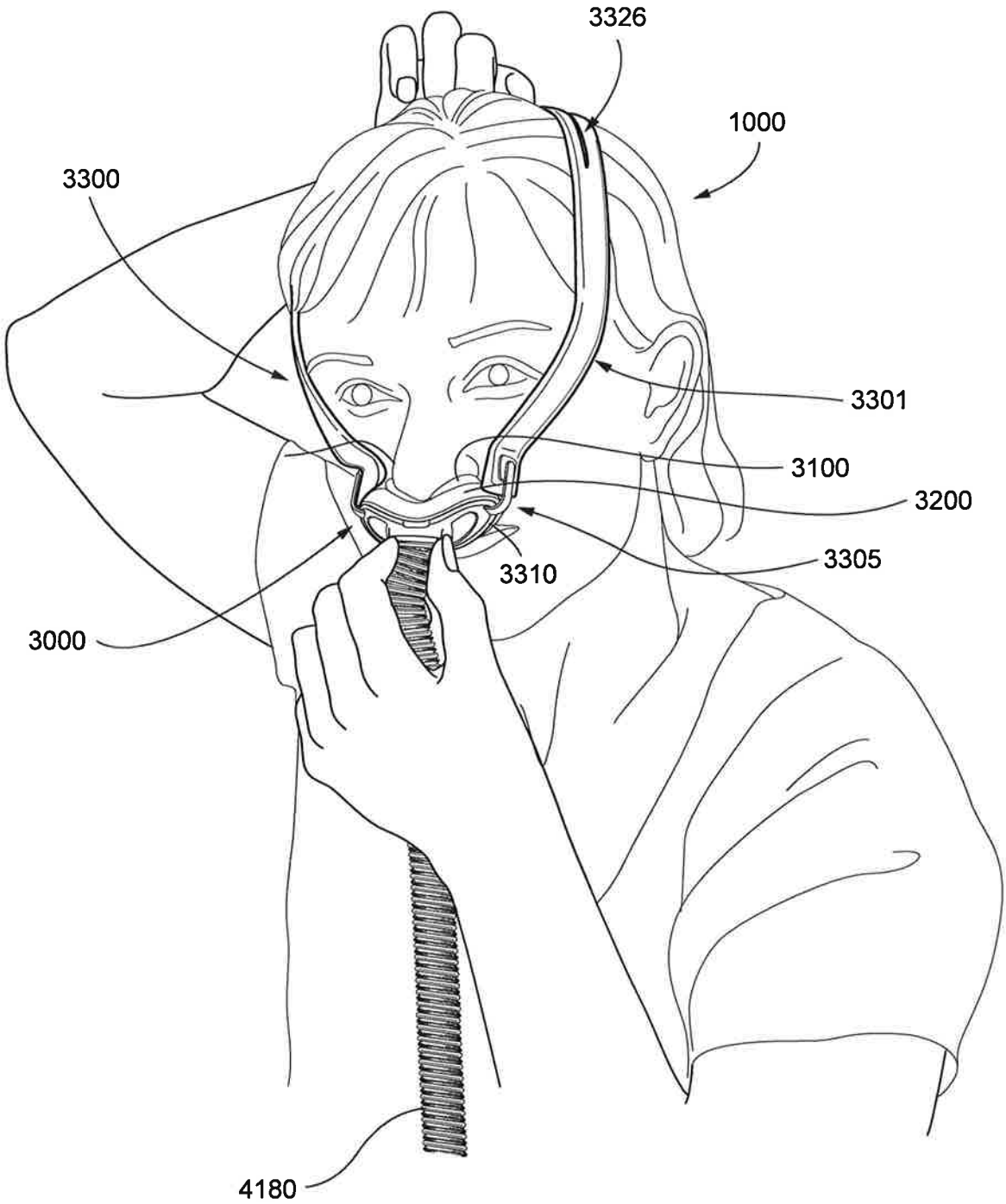


FIG. 85

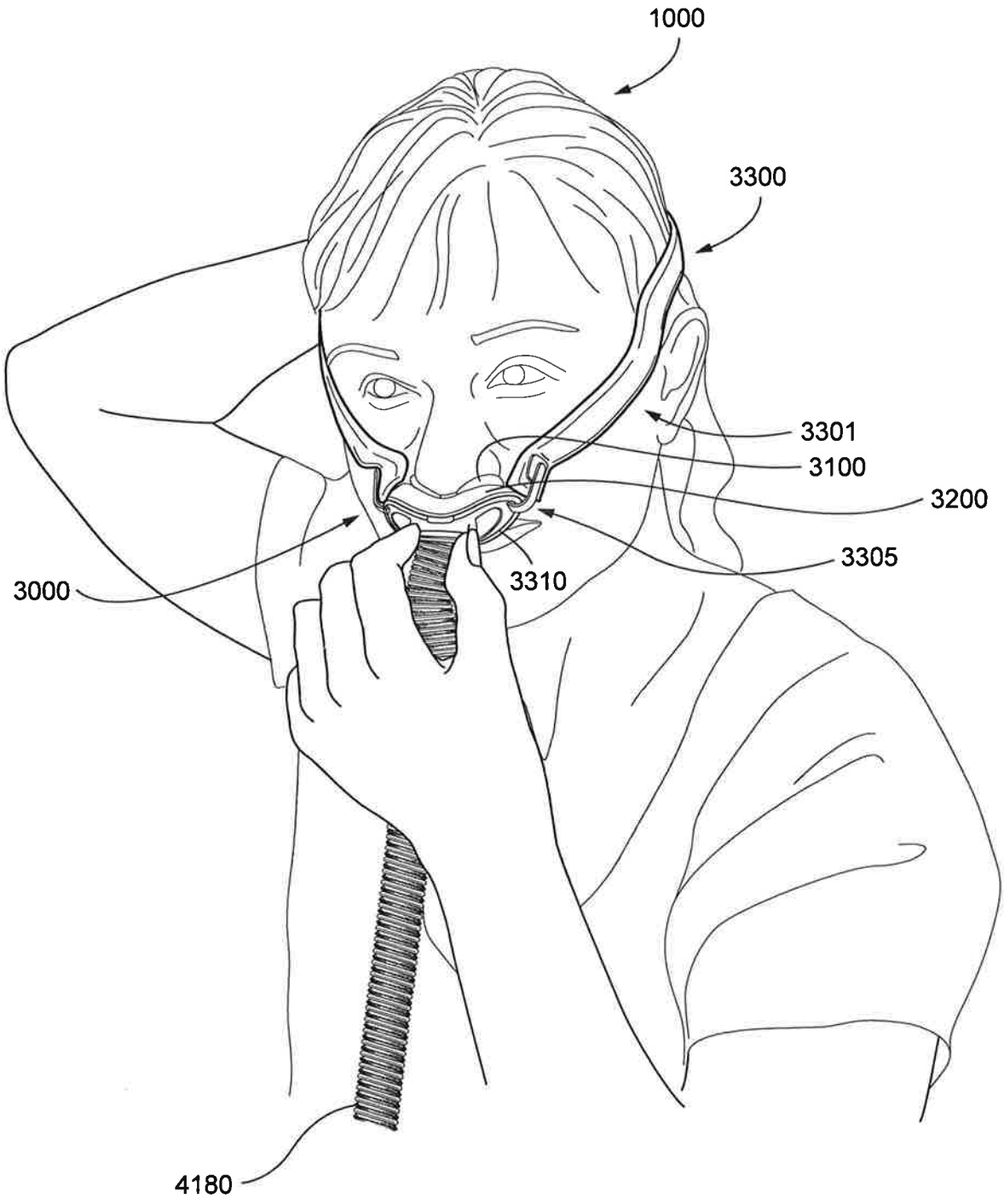


FIG. 86

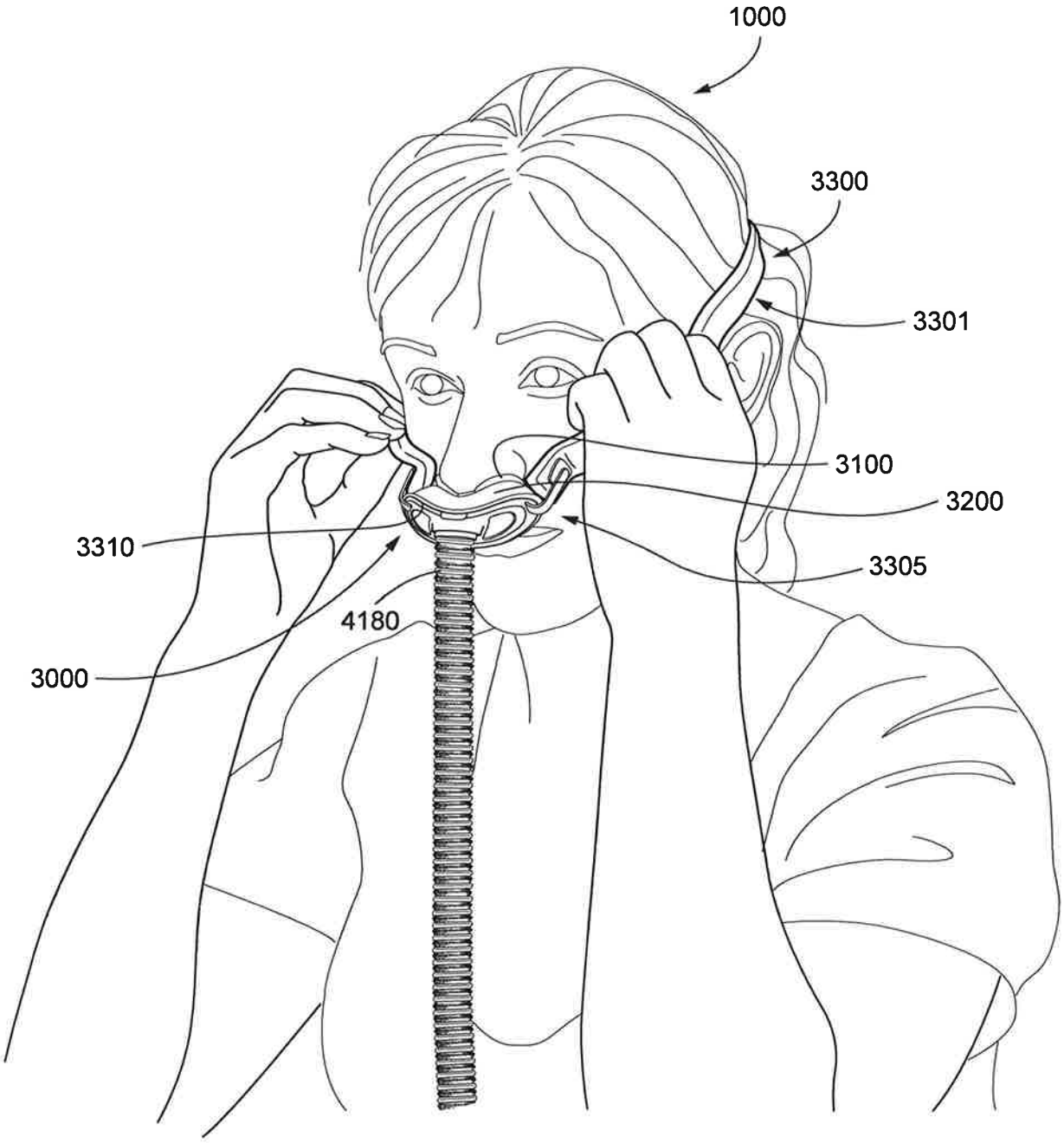


FIG. 87

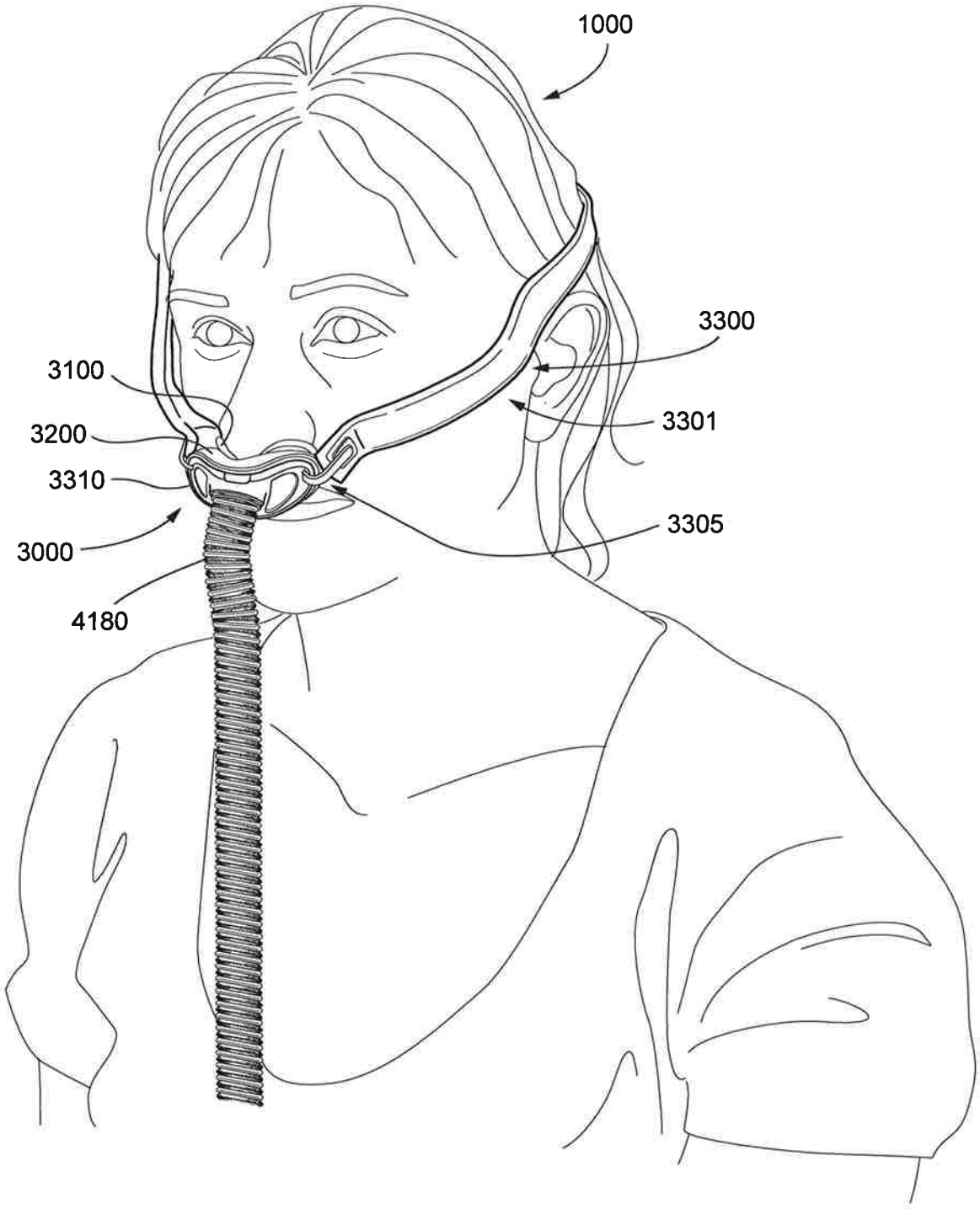


FIG. 88

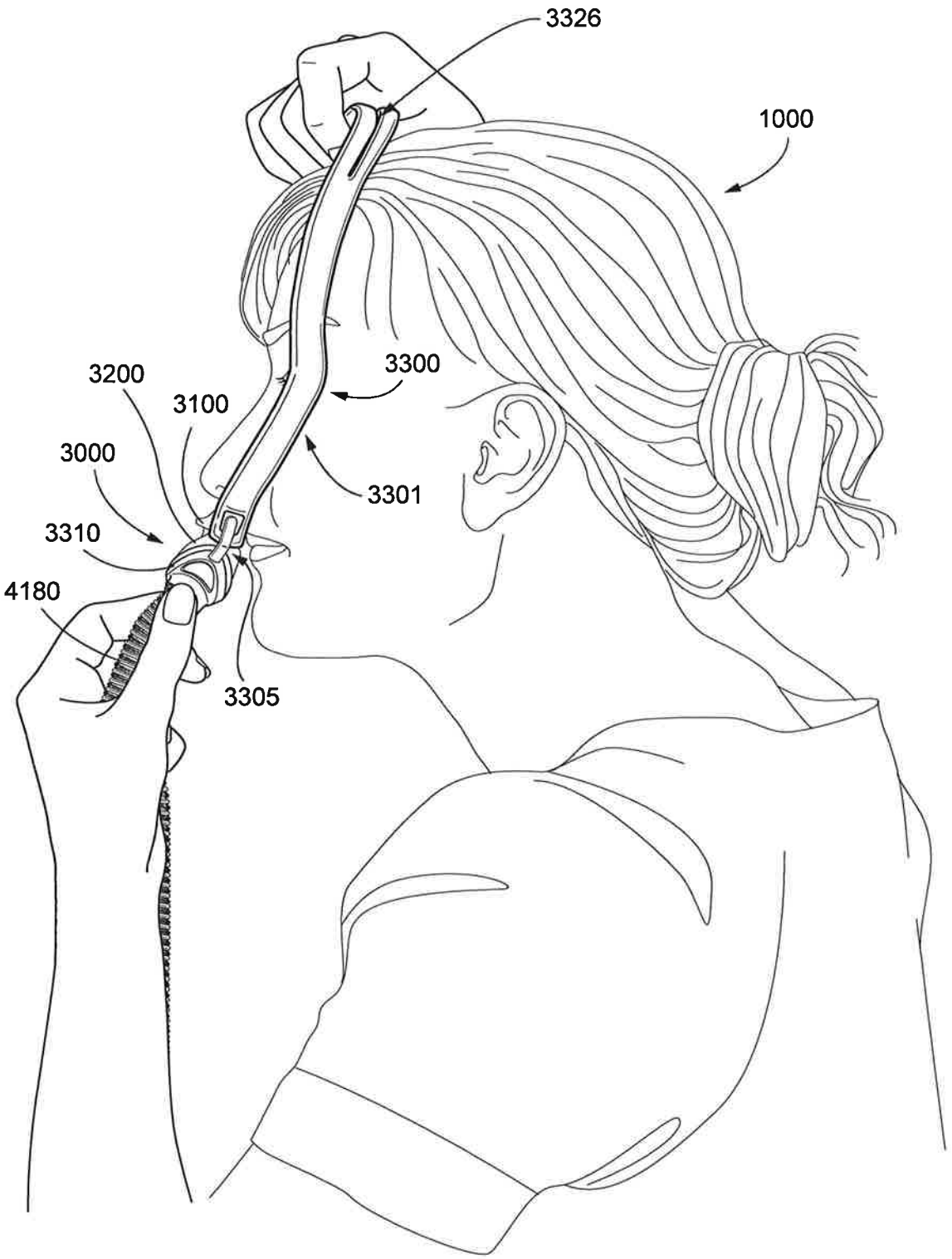


FIG. 89

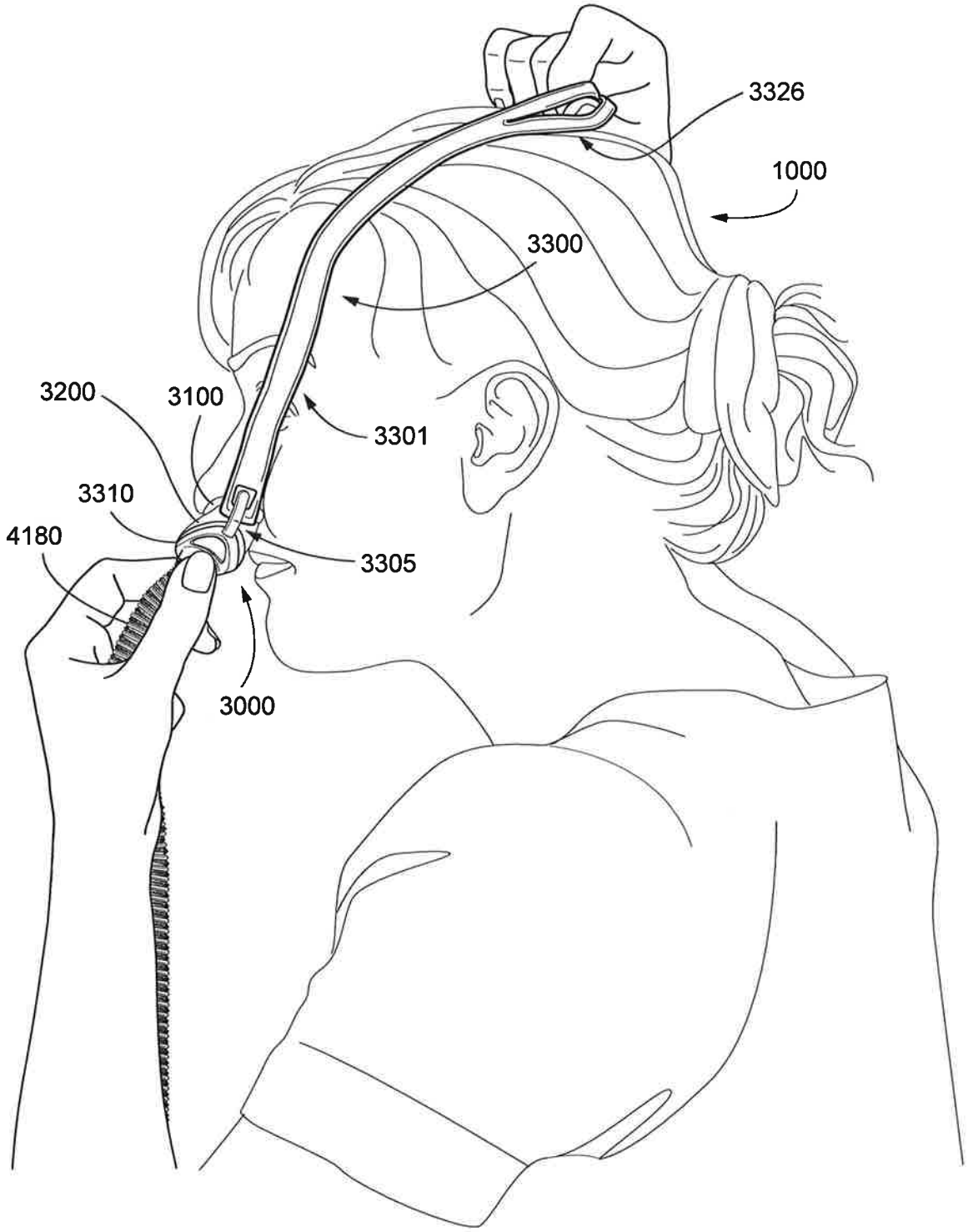


FIG. 90

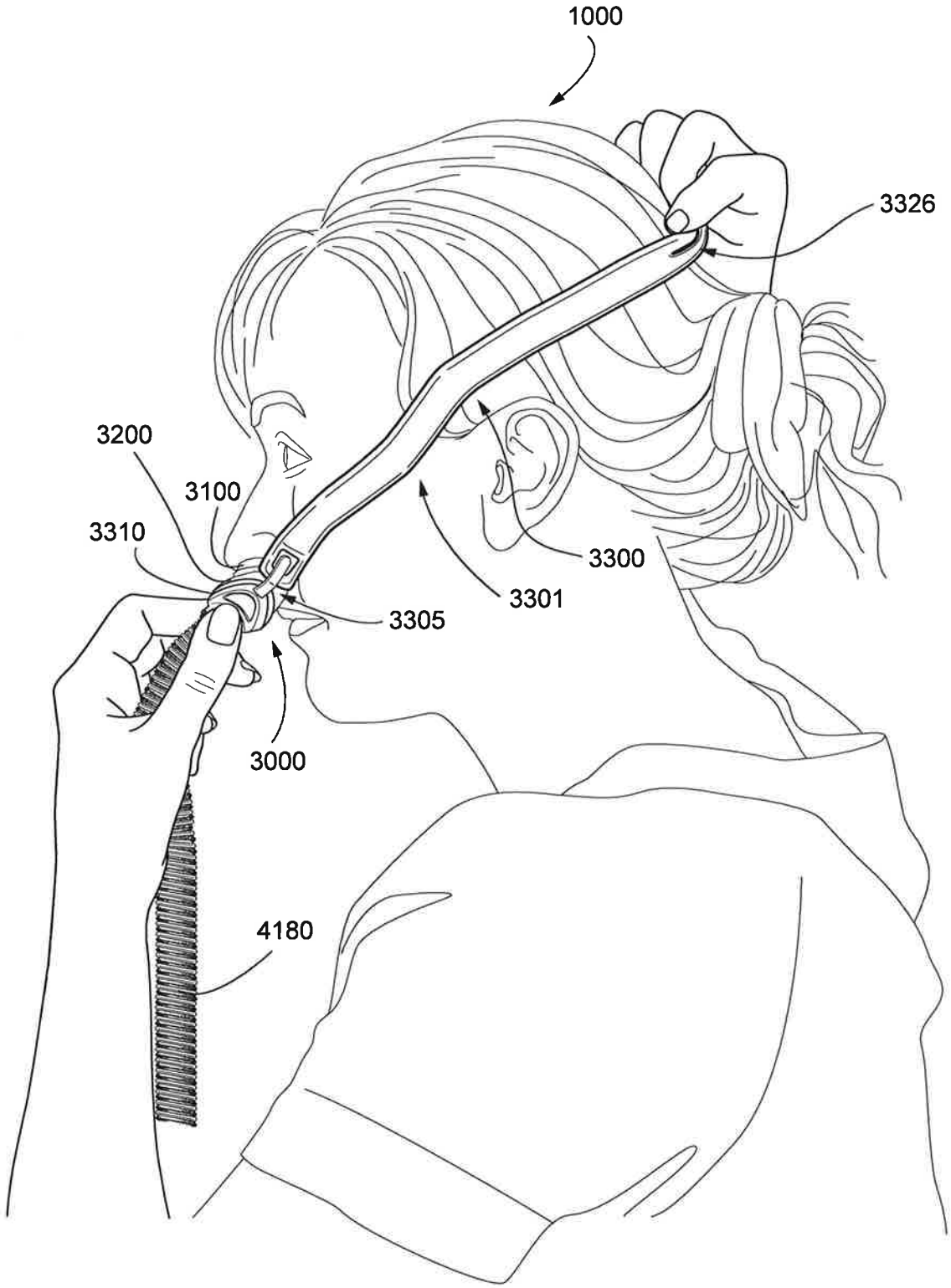


FIG. 91

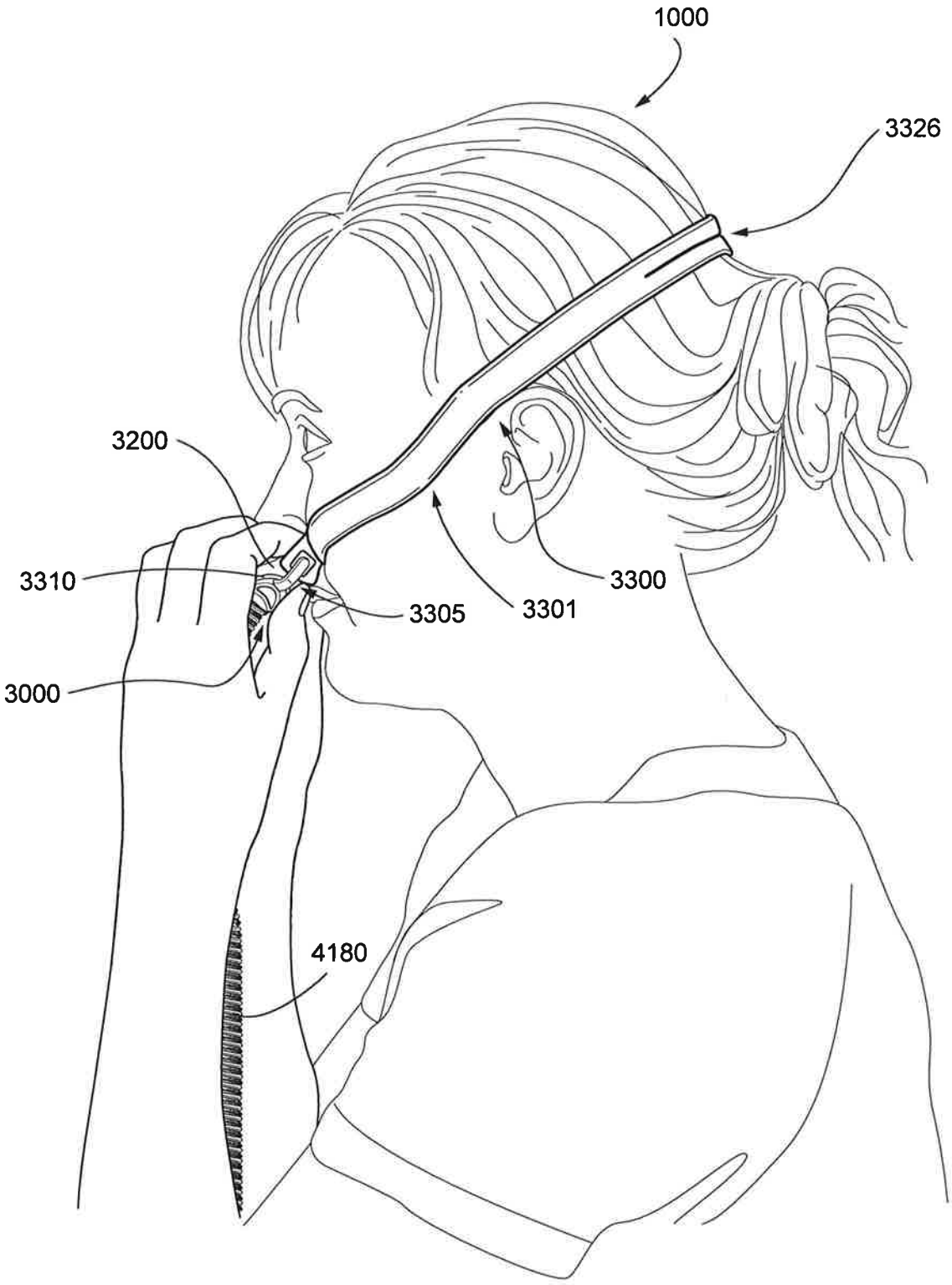


FIG. 92

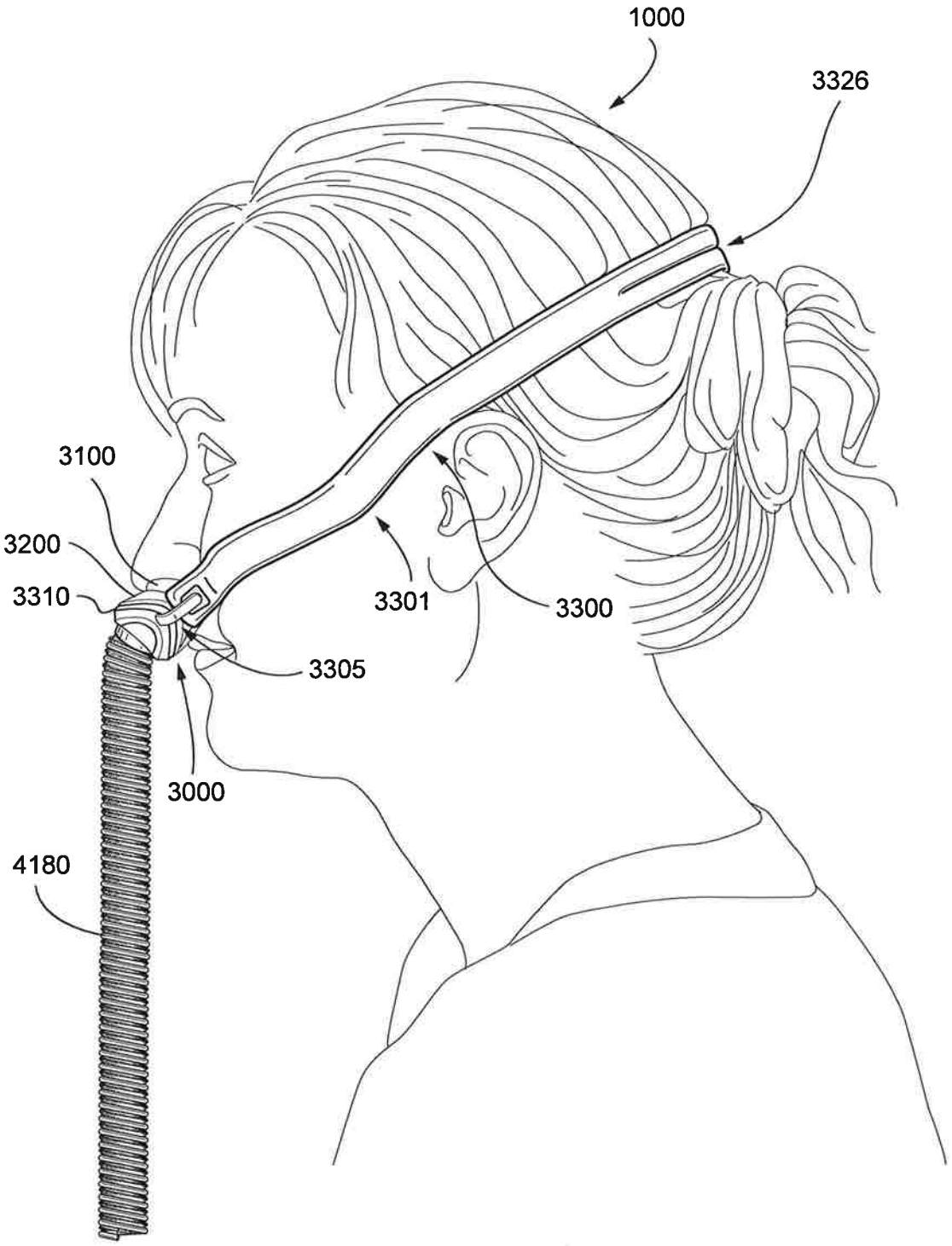


FIG. 93

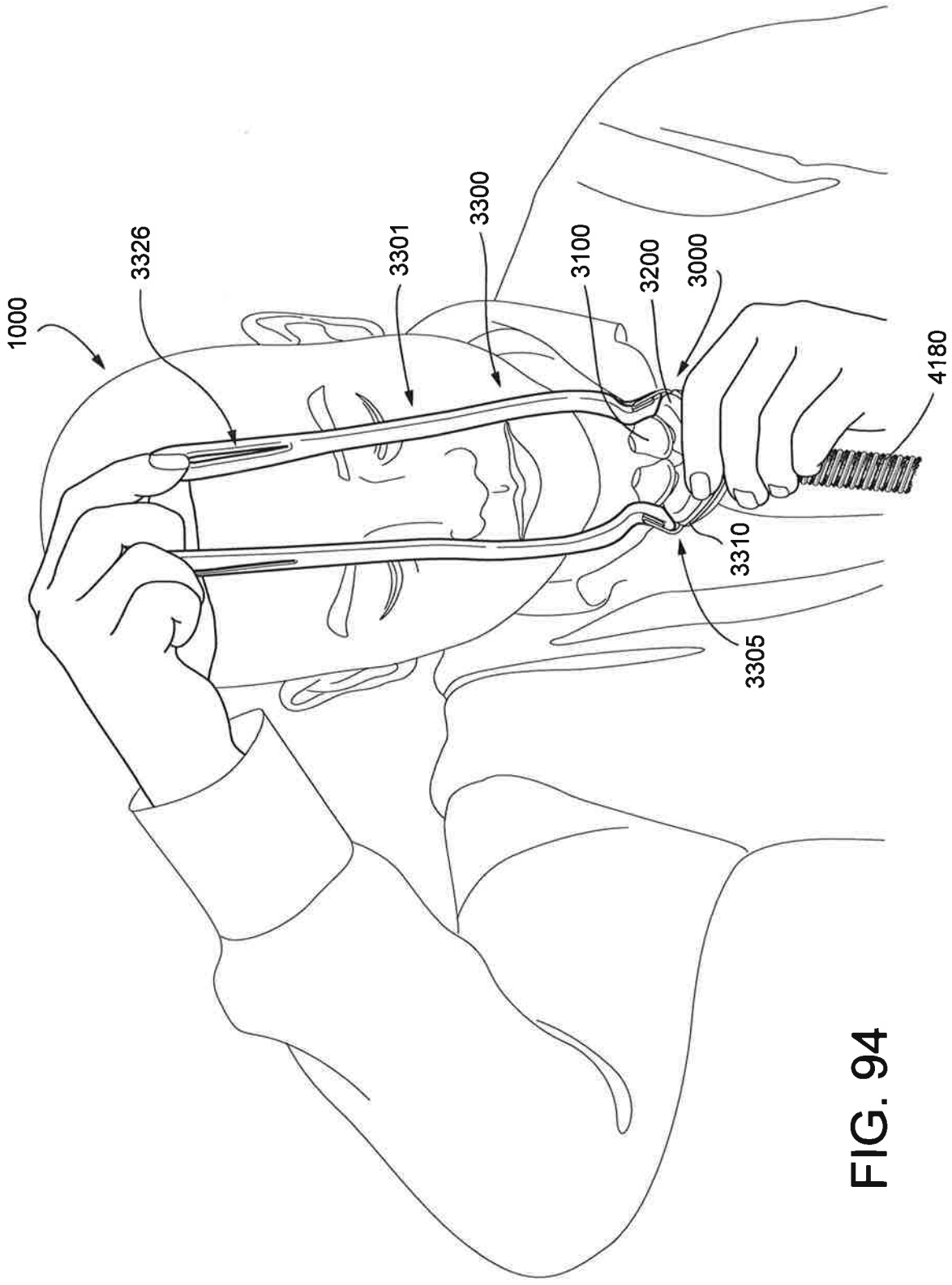


FIG. 94

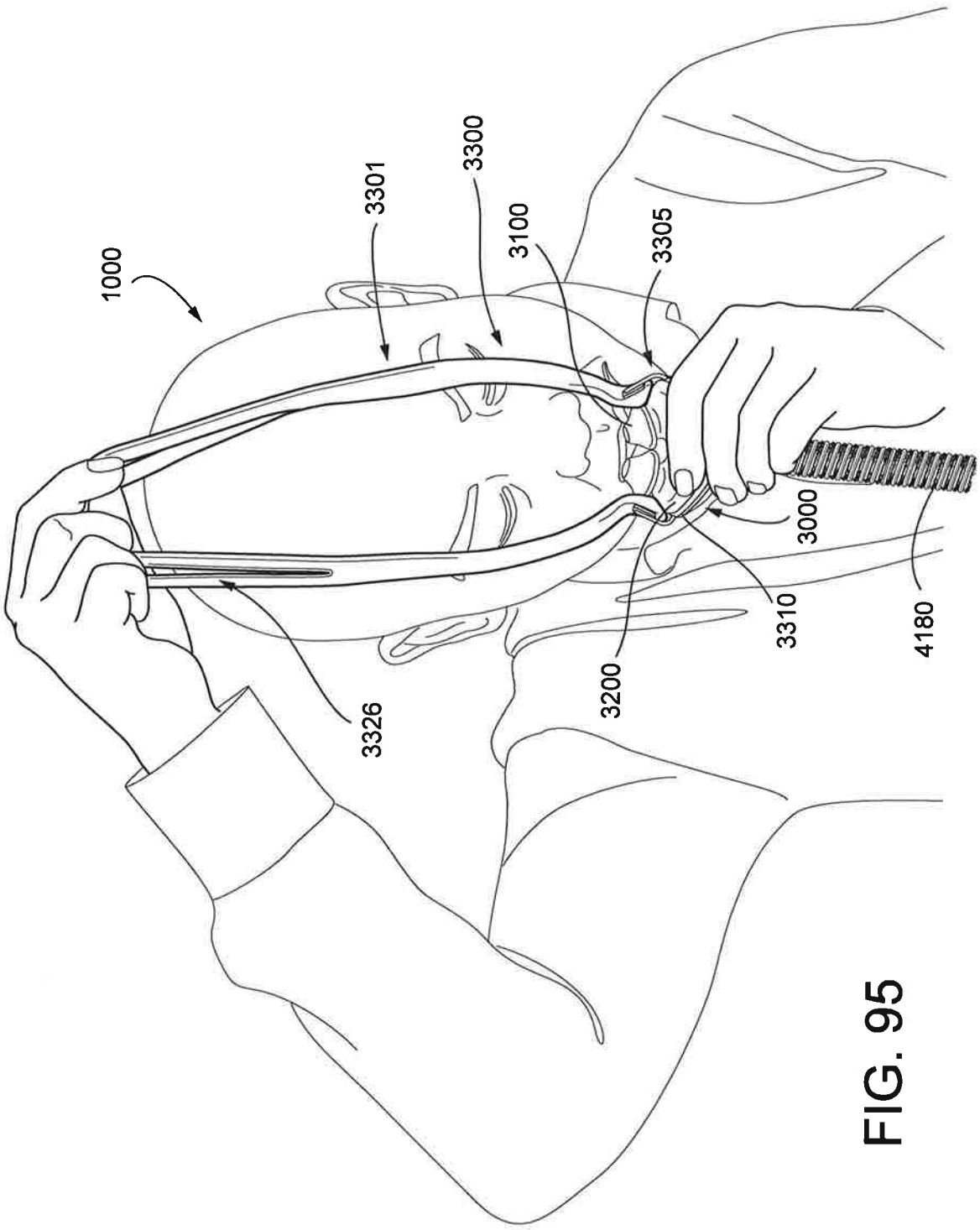


FIG. 95

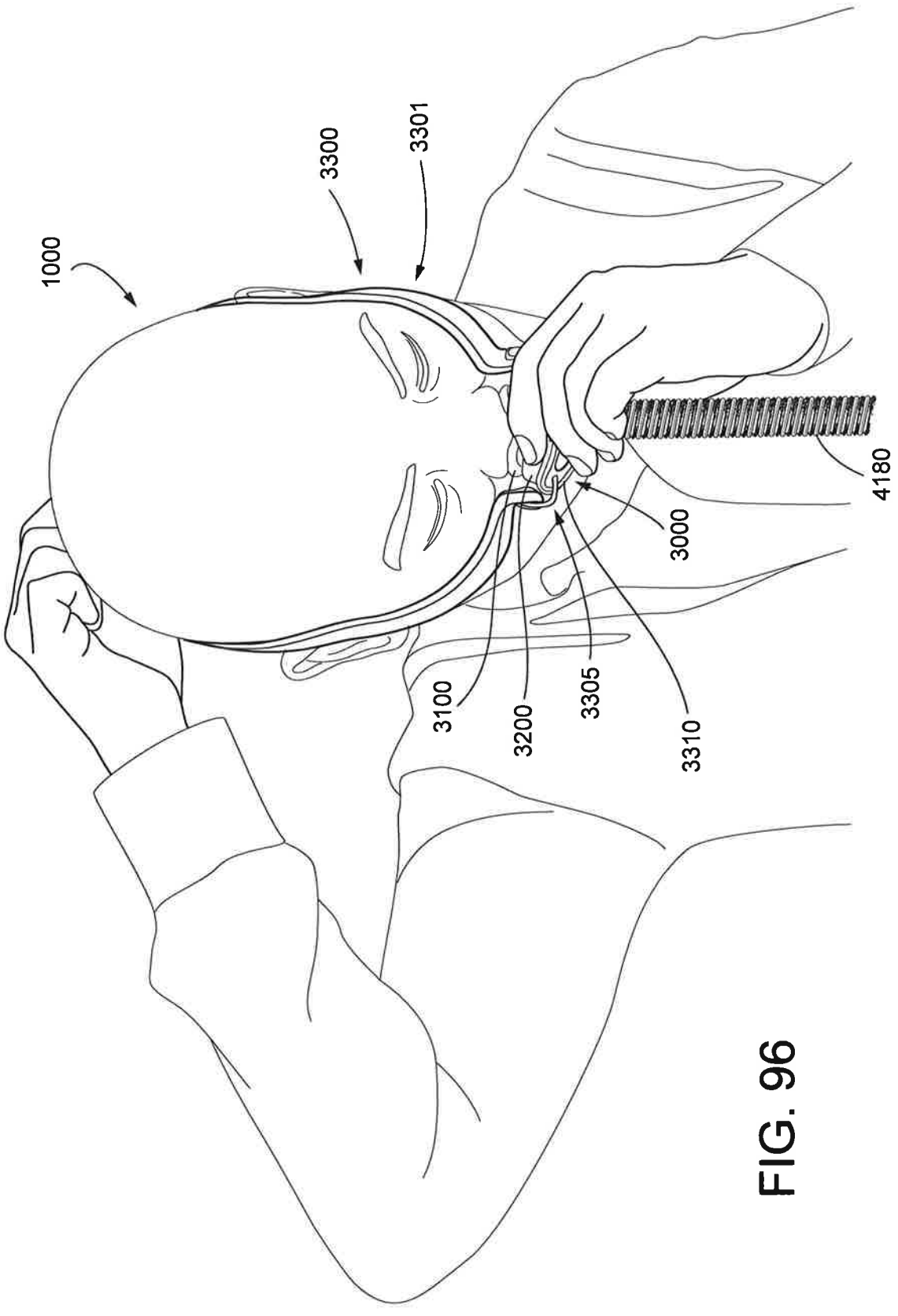


FIG. 96

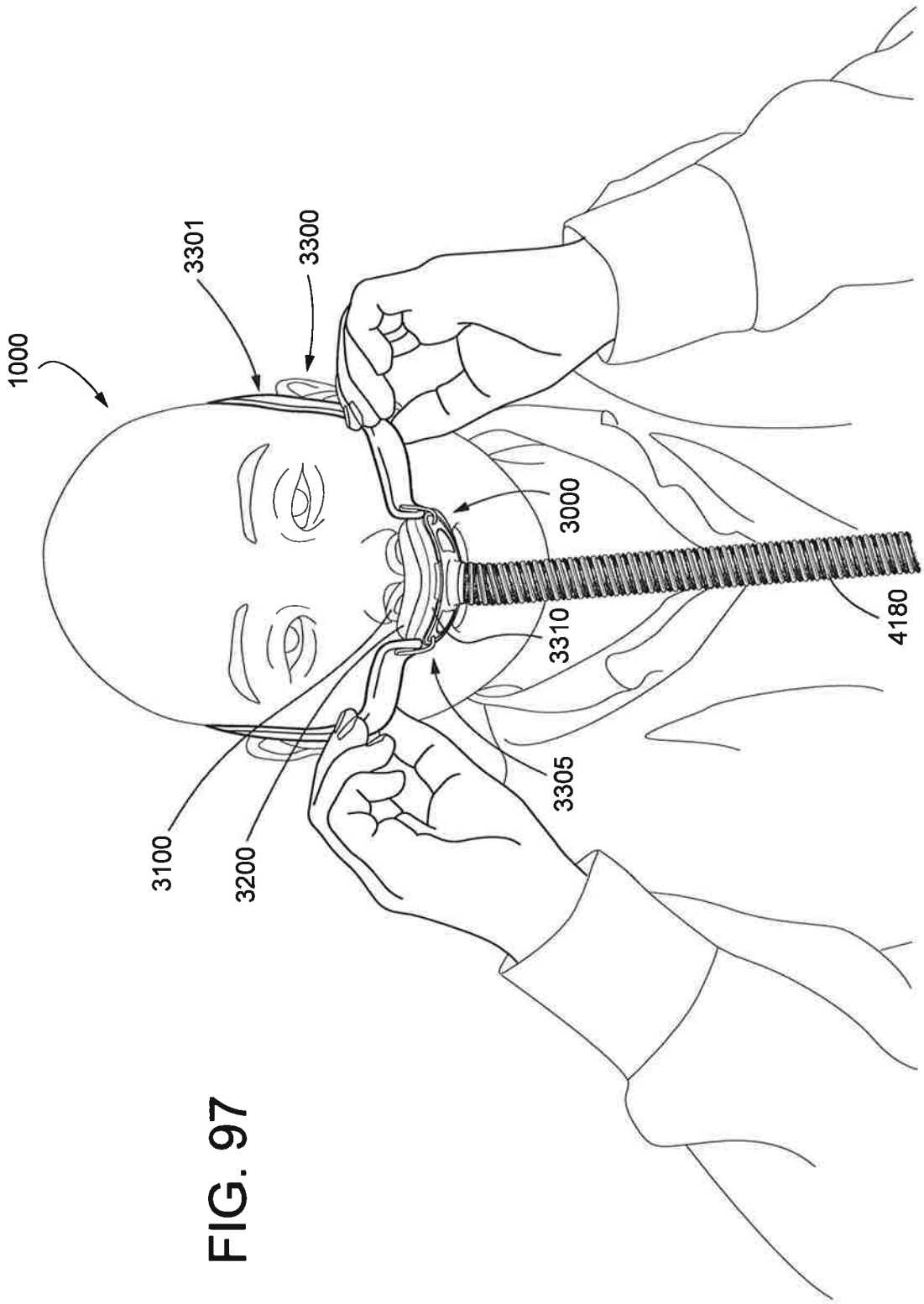


FIG. 97

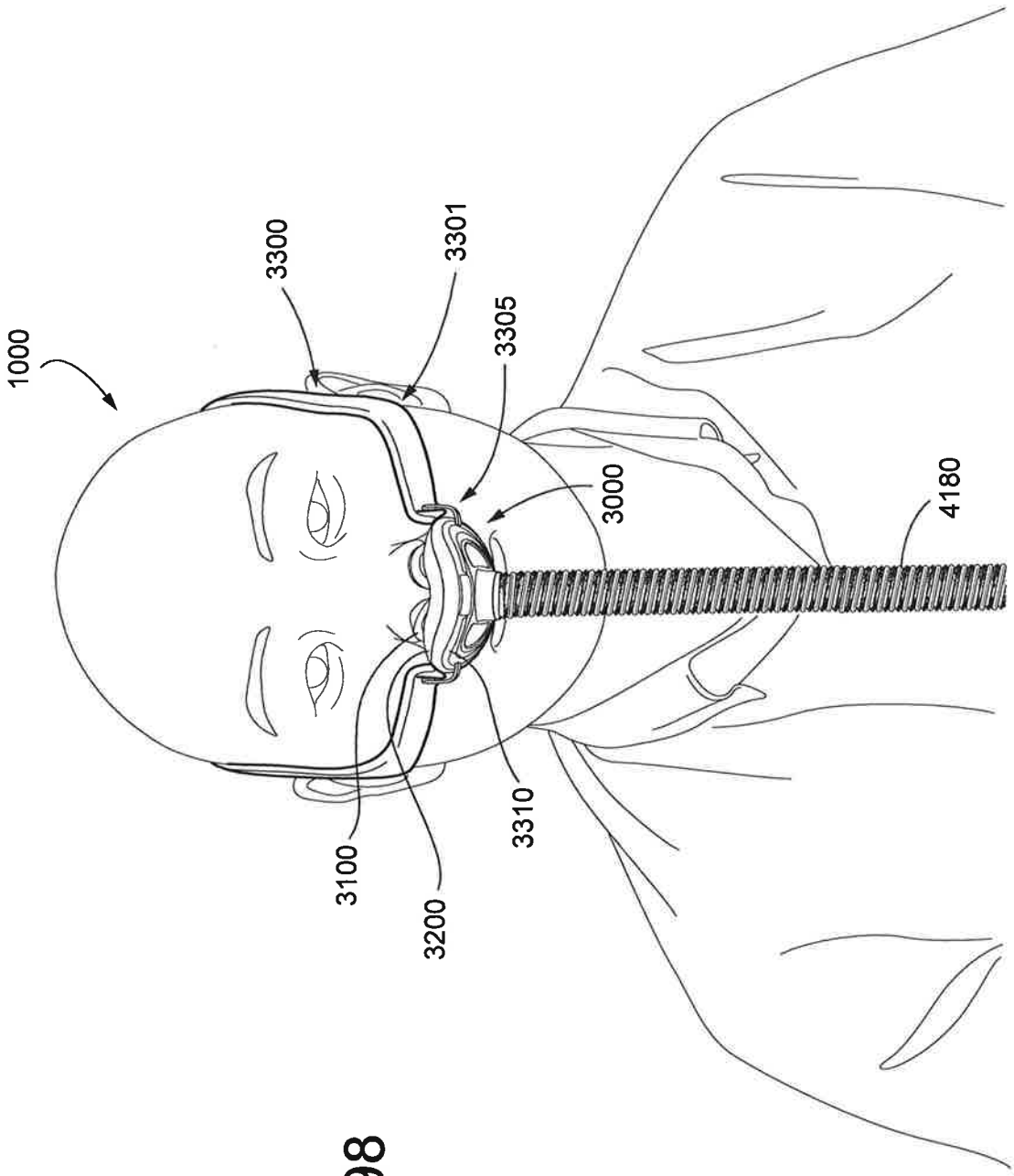


FIG. 98

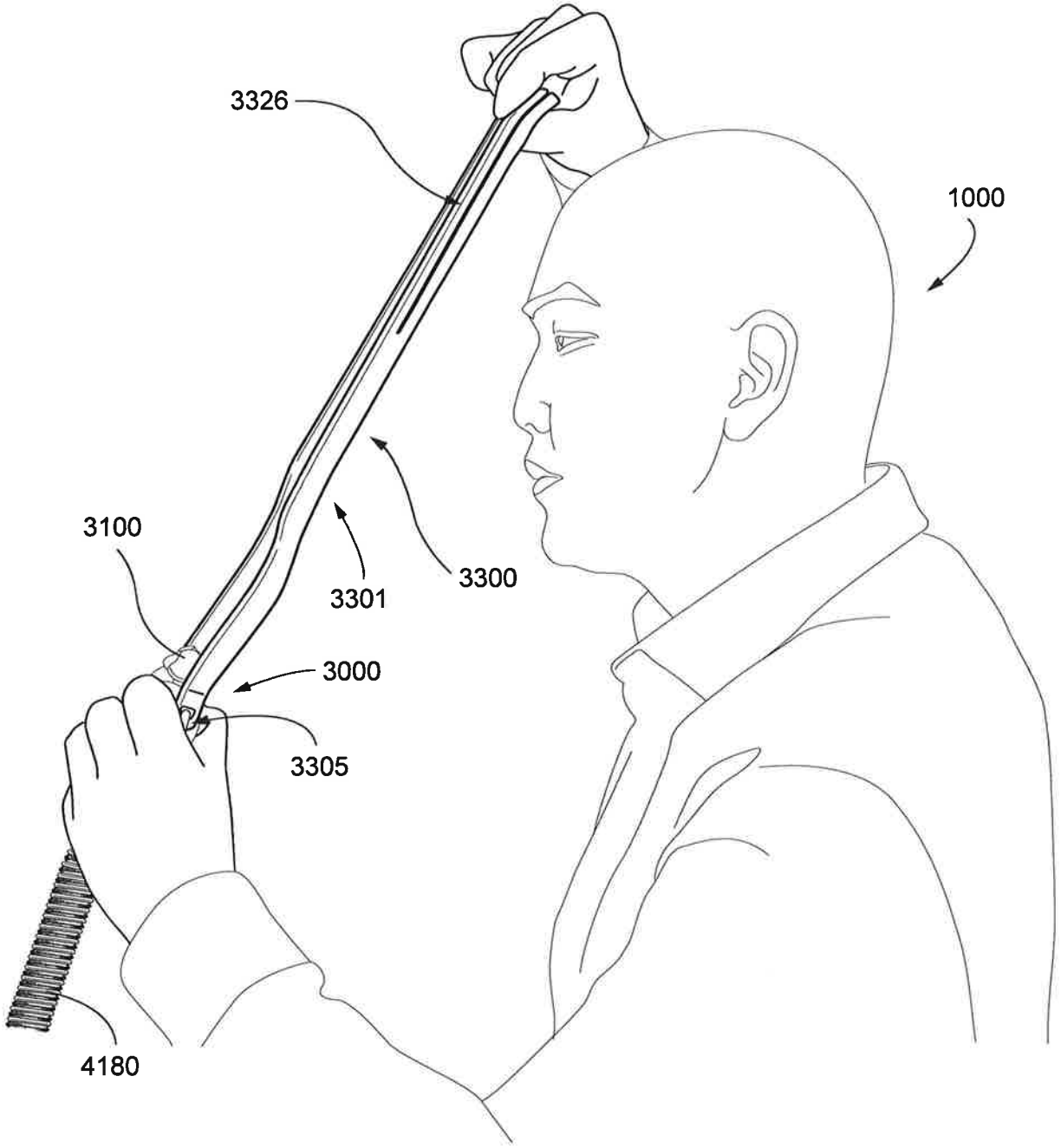


FIG. 99

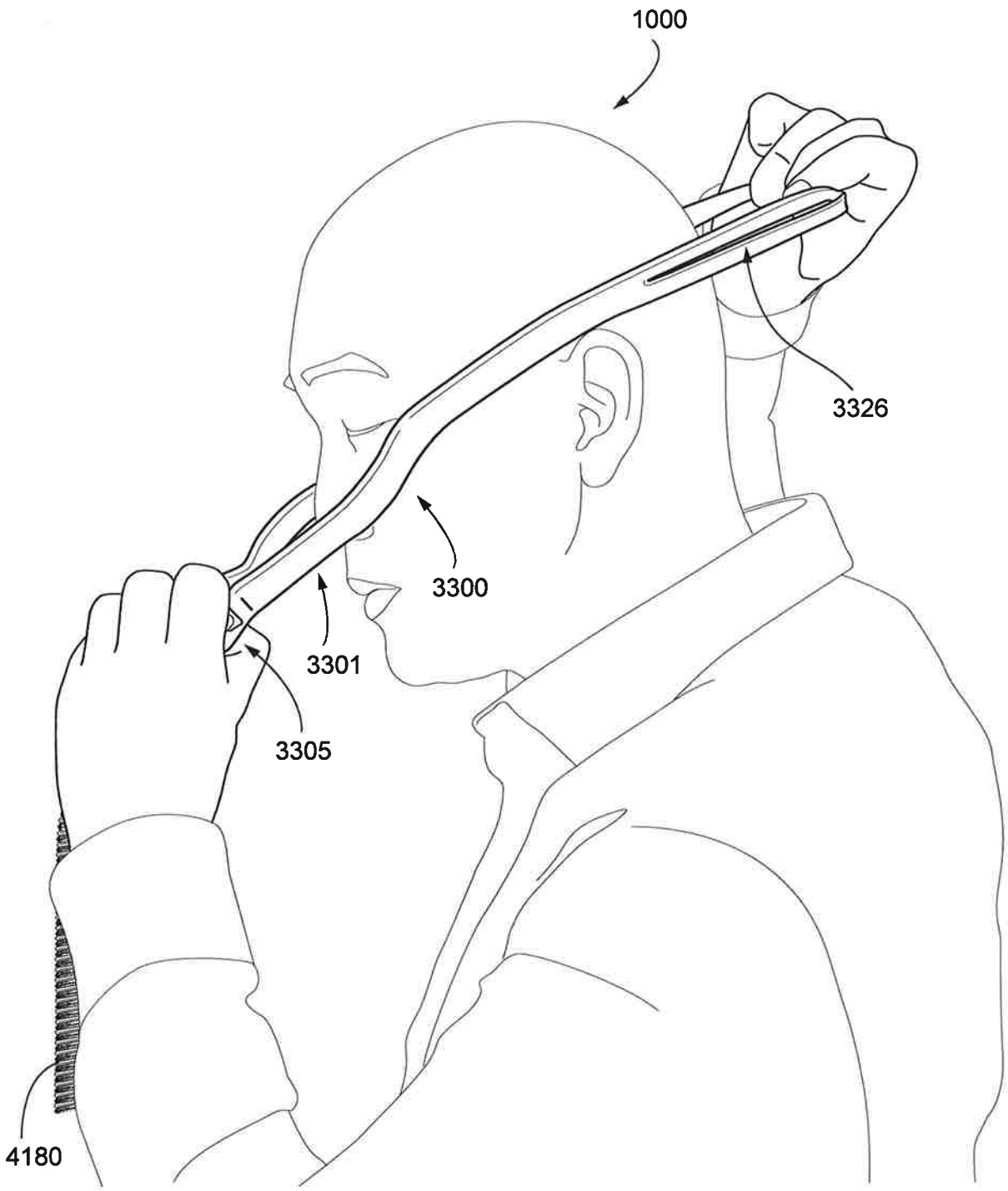


FIG. 100

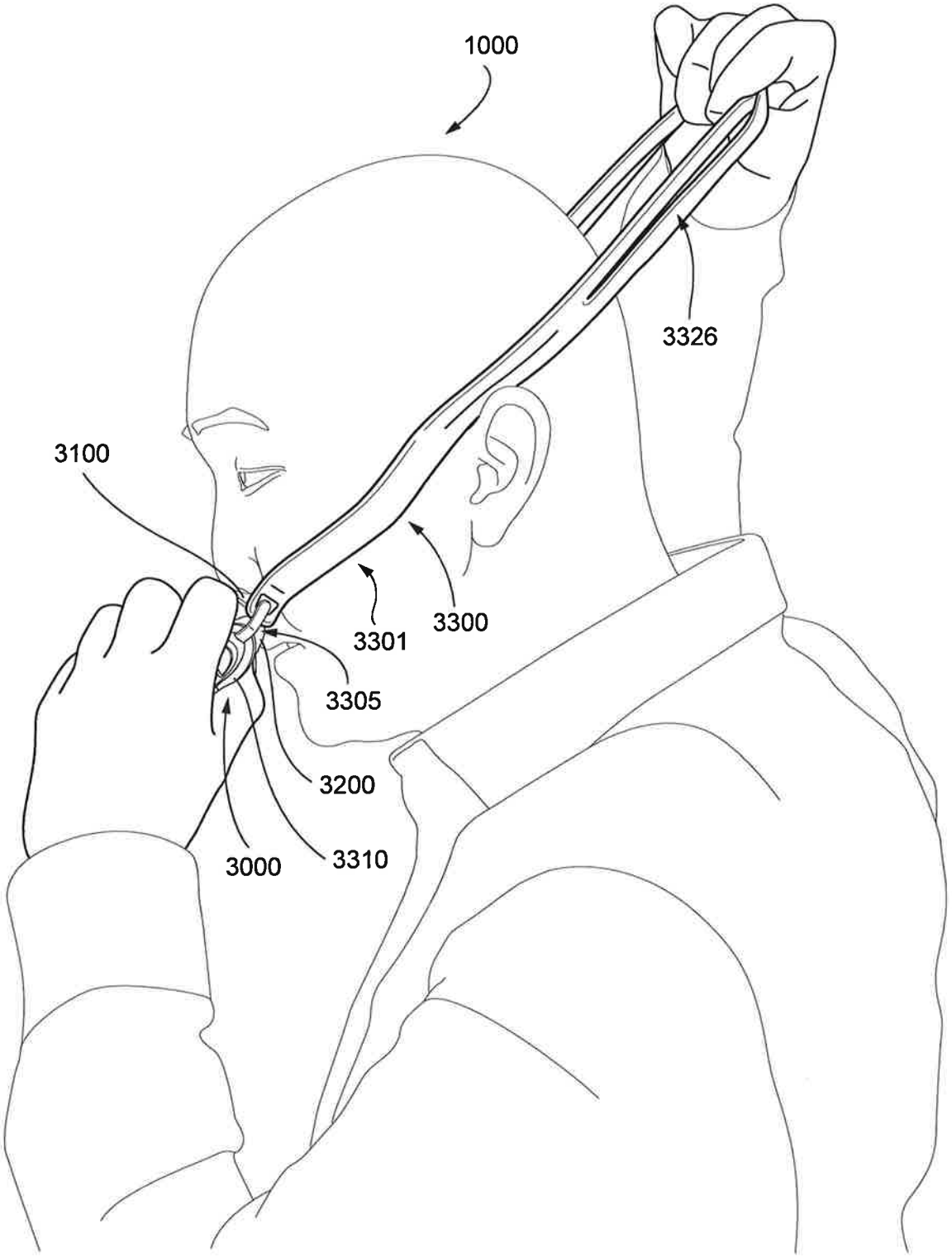


FIG. 101

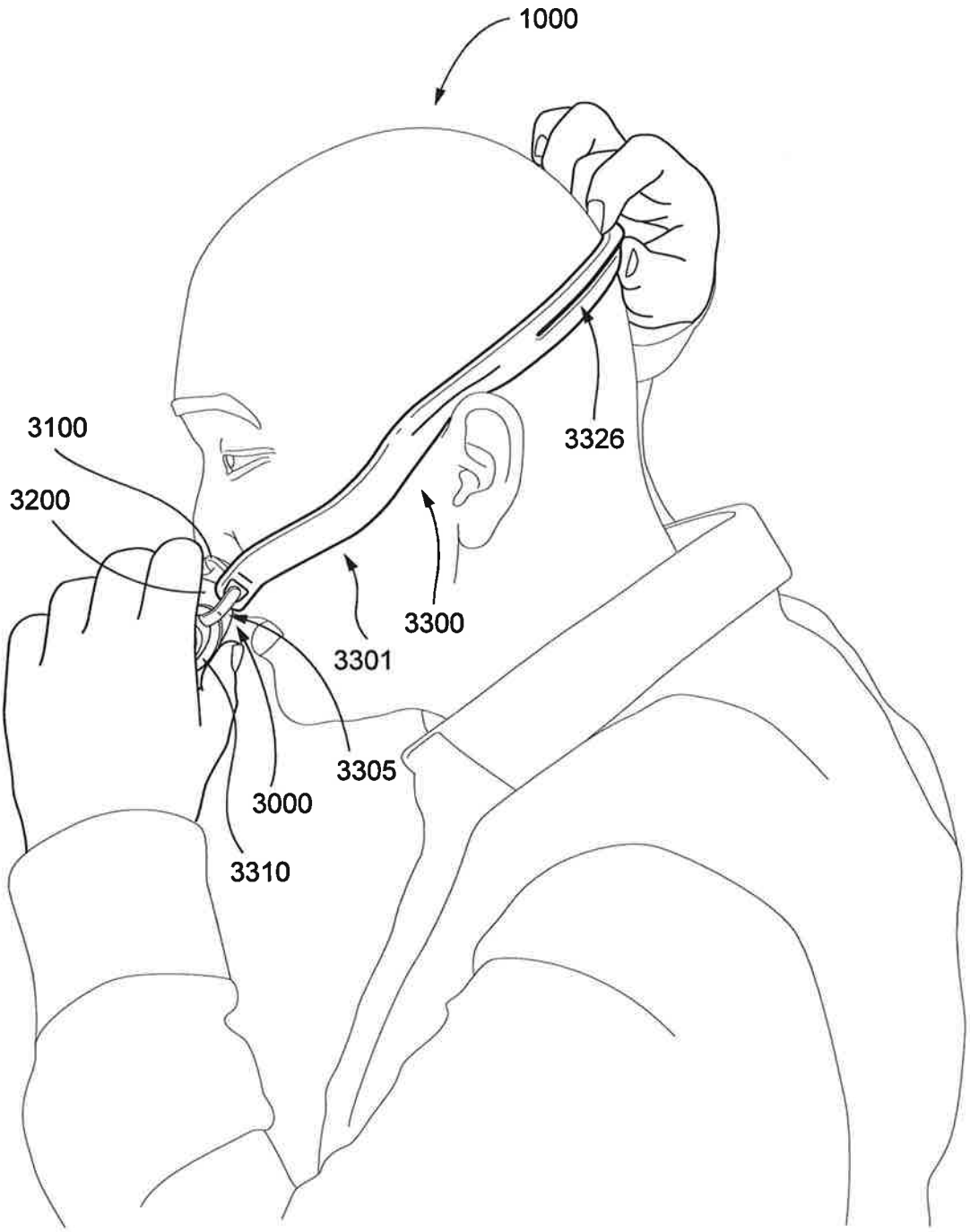


FIG. 102

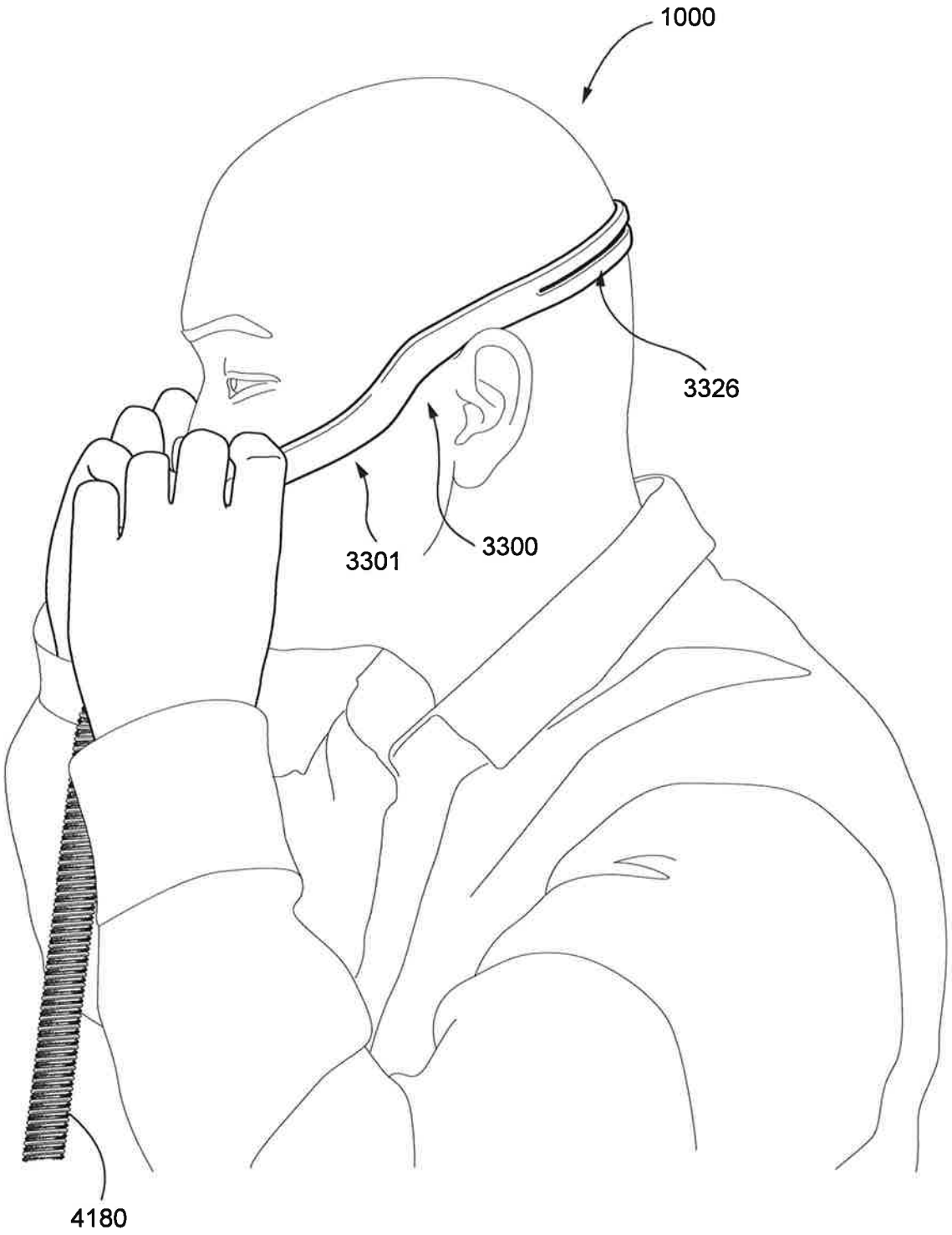


FIG. 103

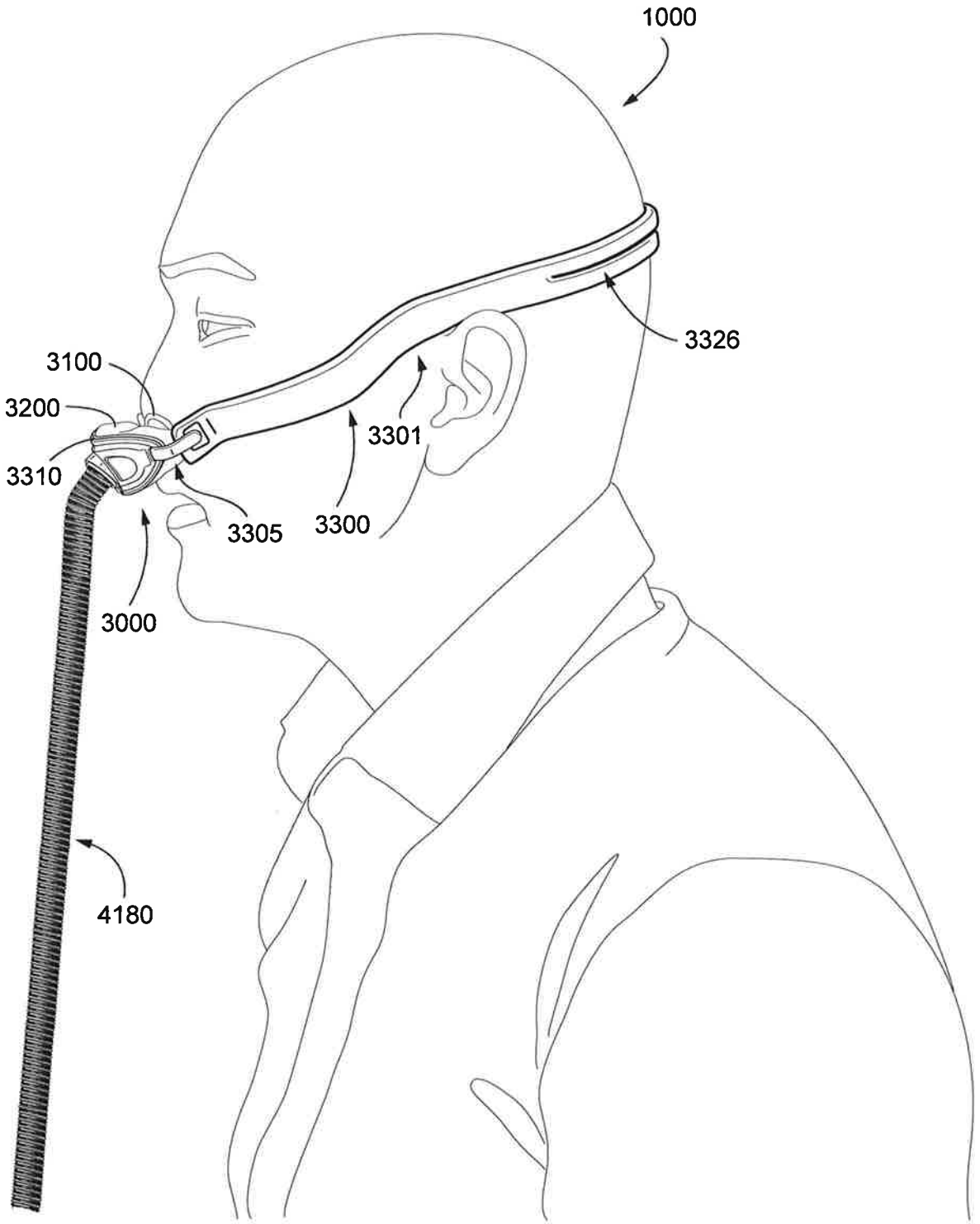


FIG. 104

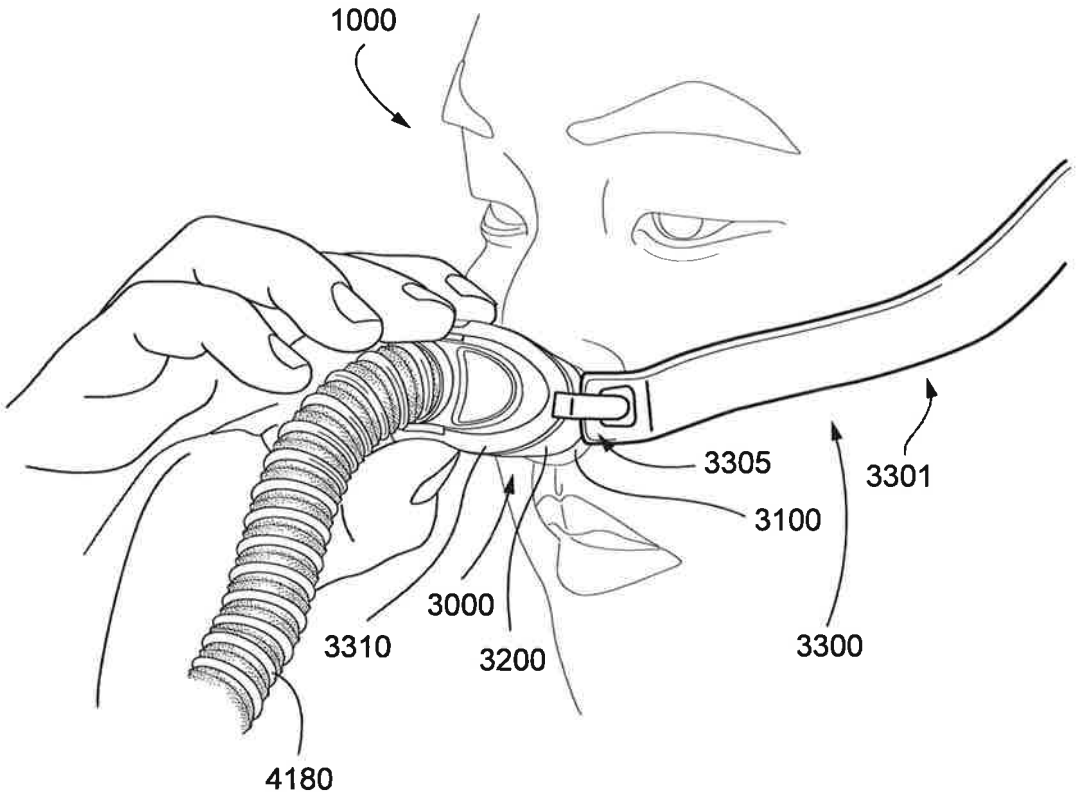


FIG. 105

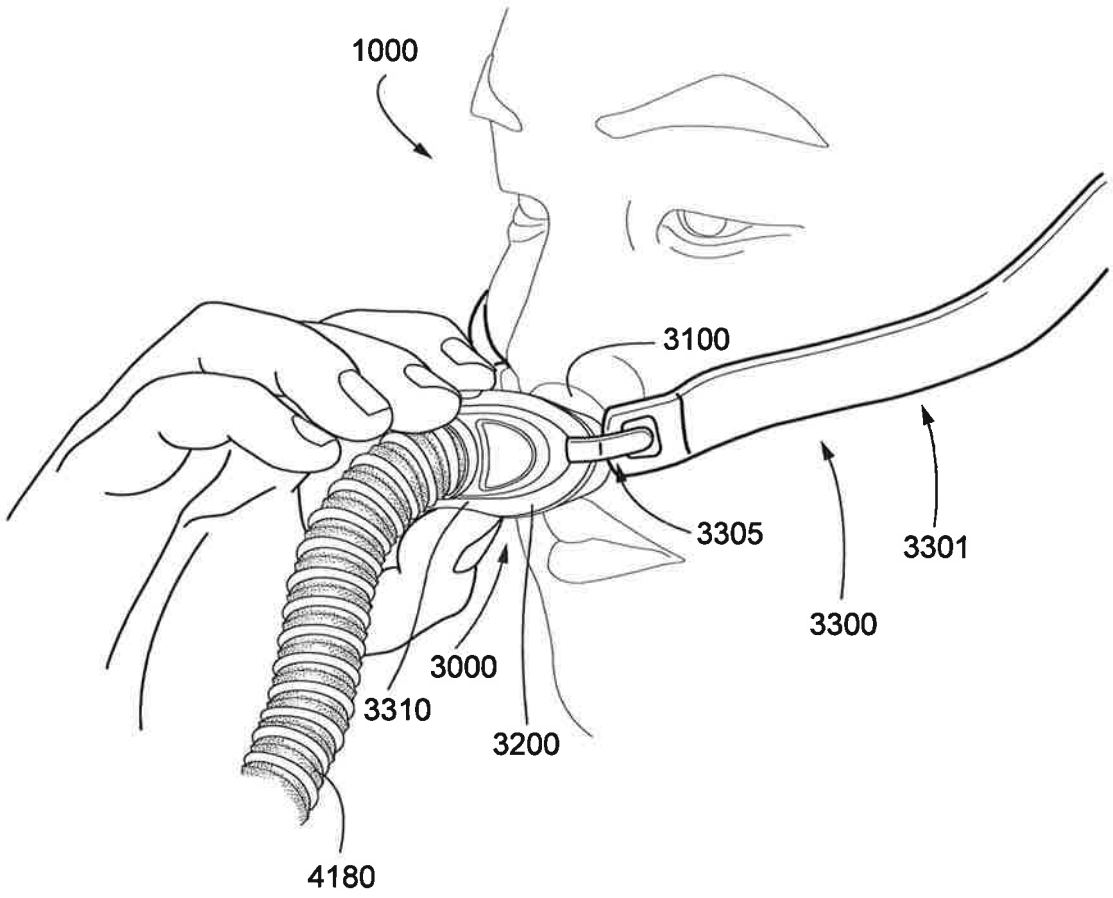


FIG. 106

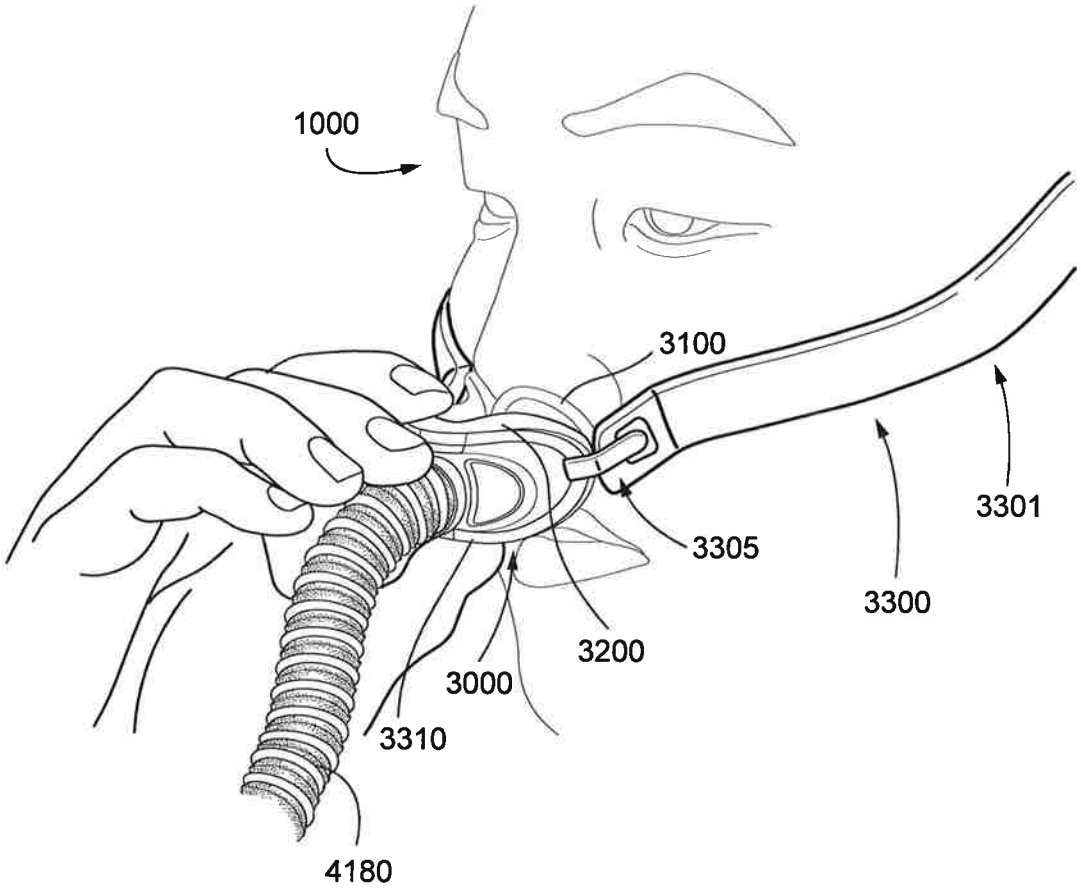


FIG. 107

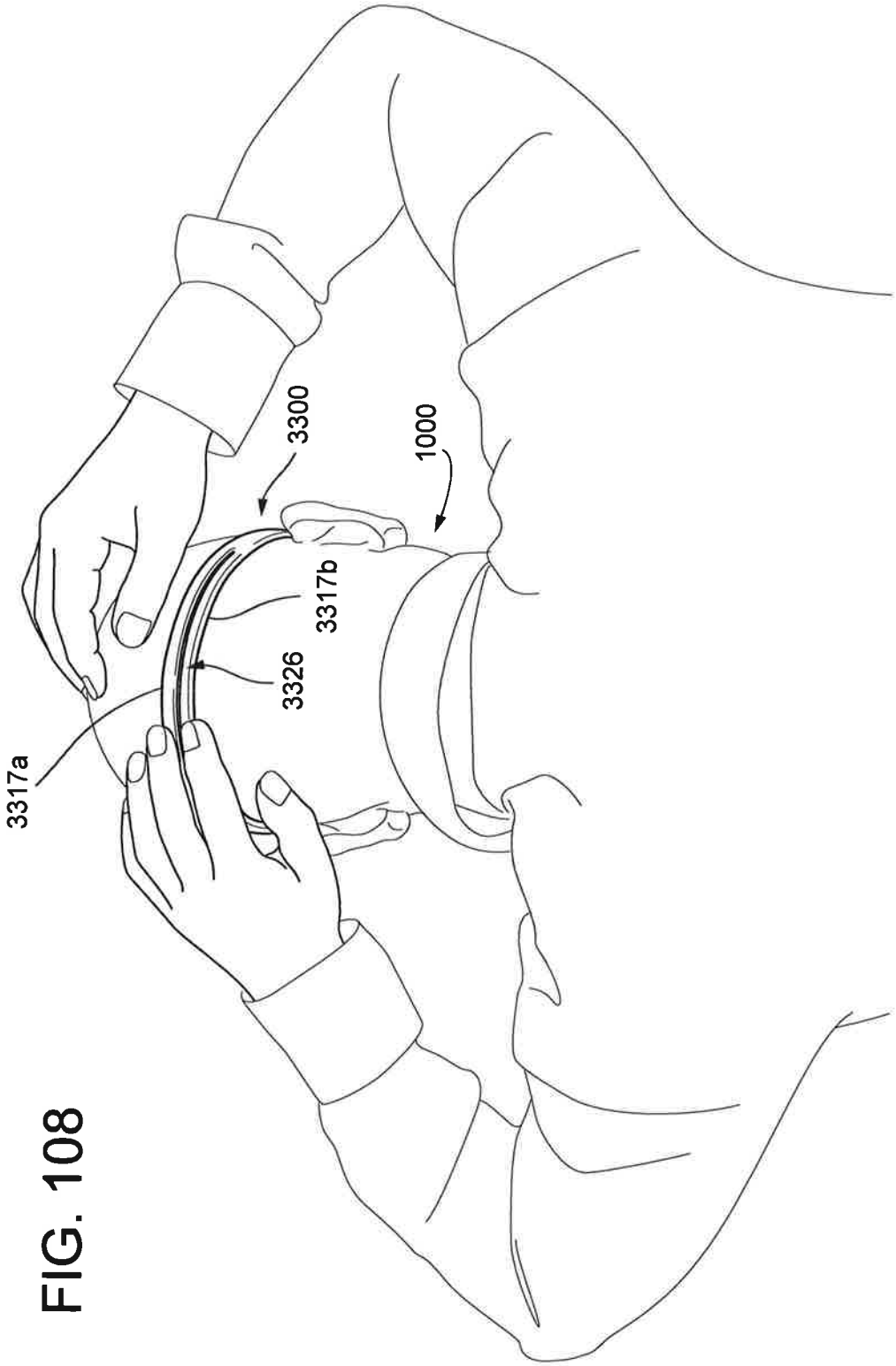


FIG. 108

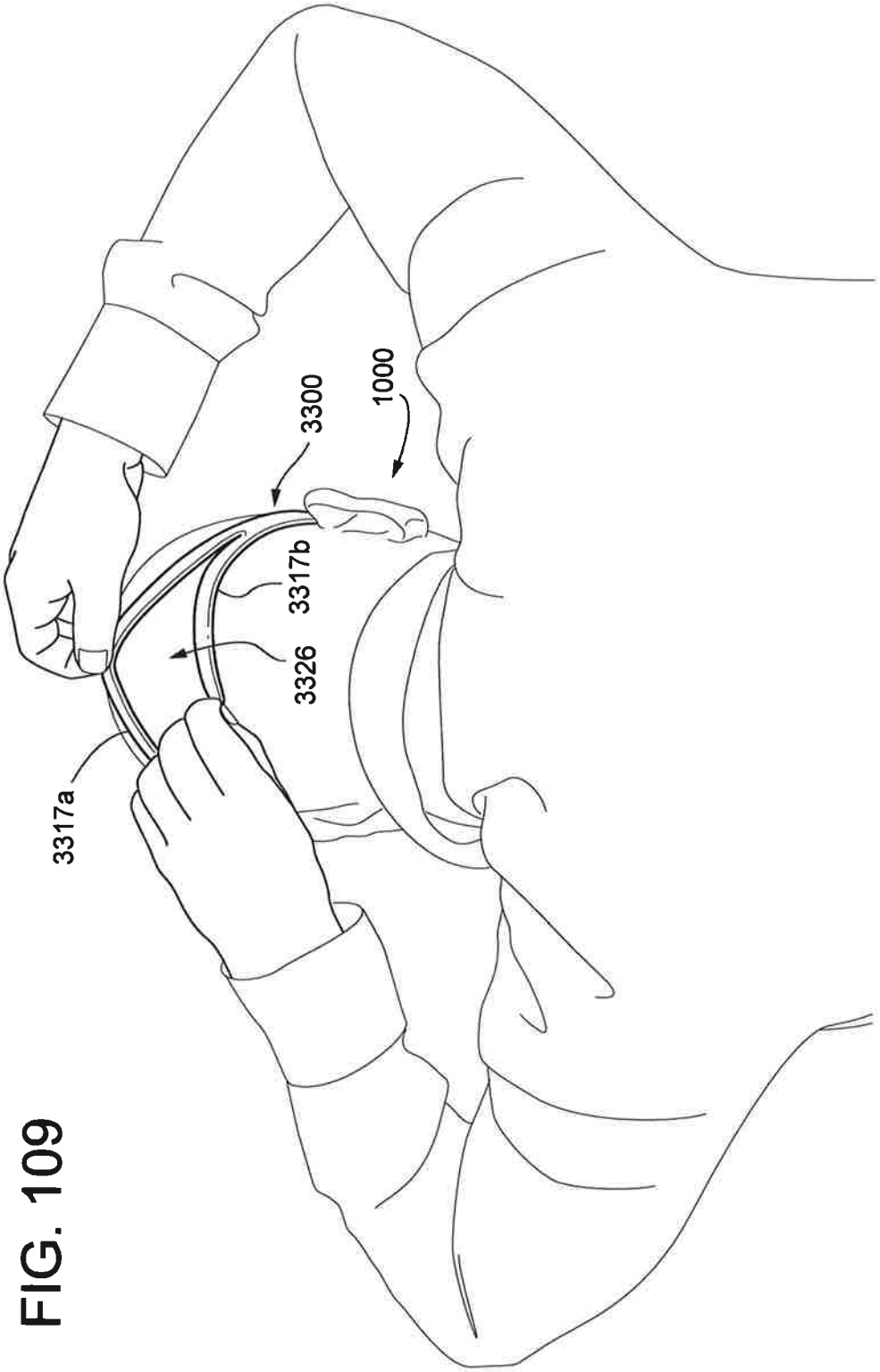


FIG. 109

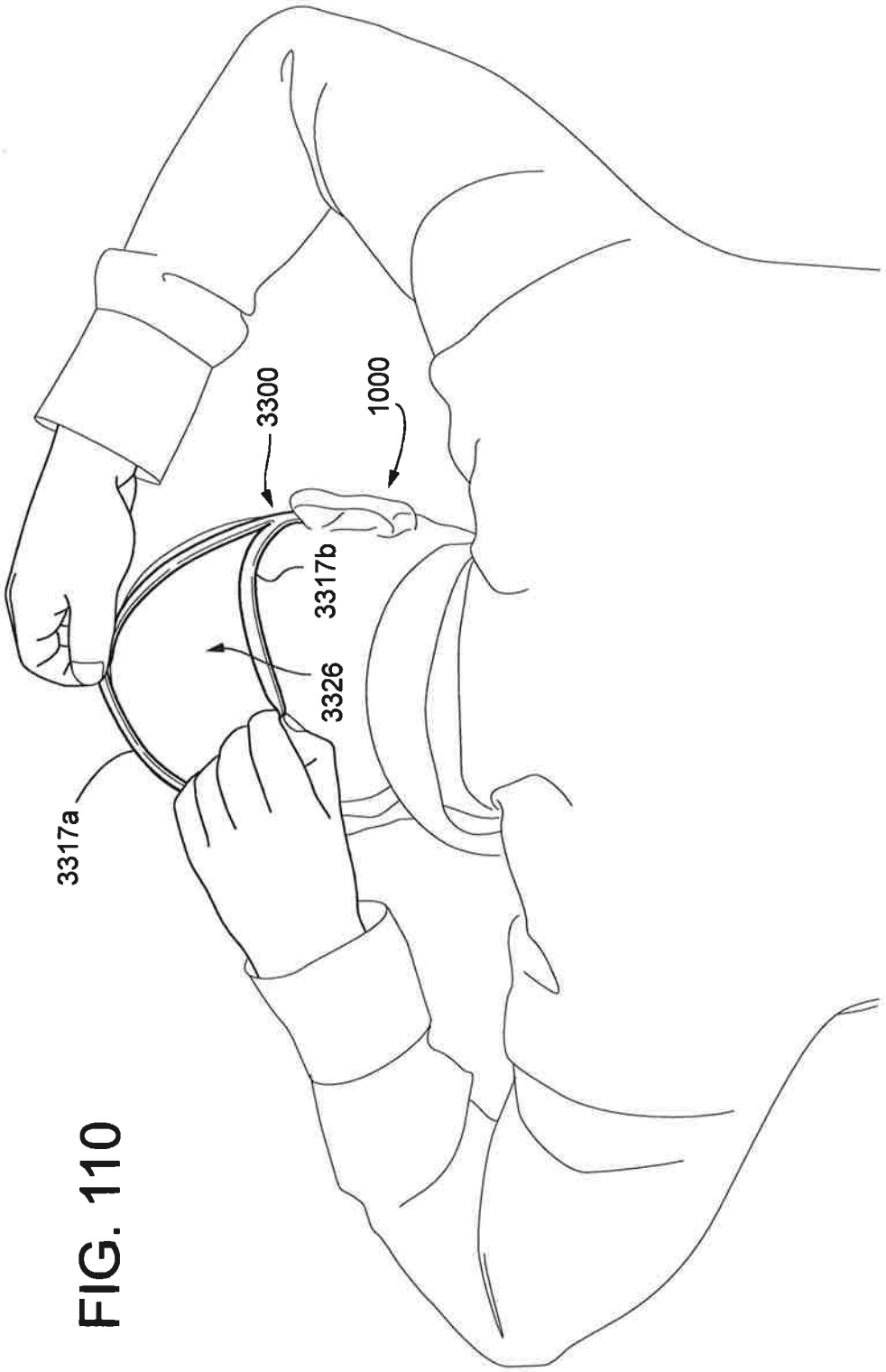


FIG. 110

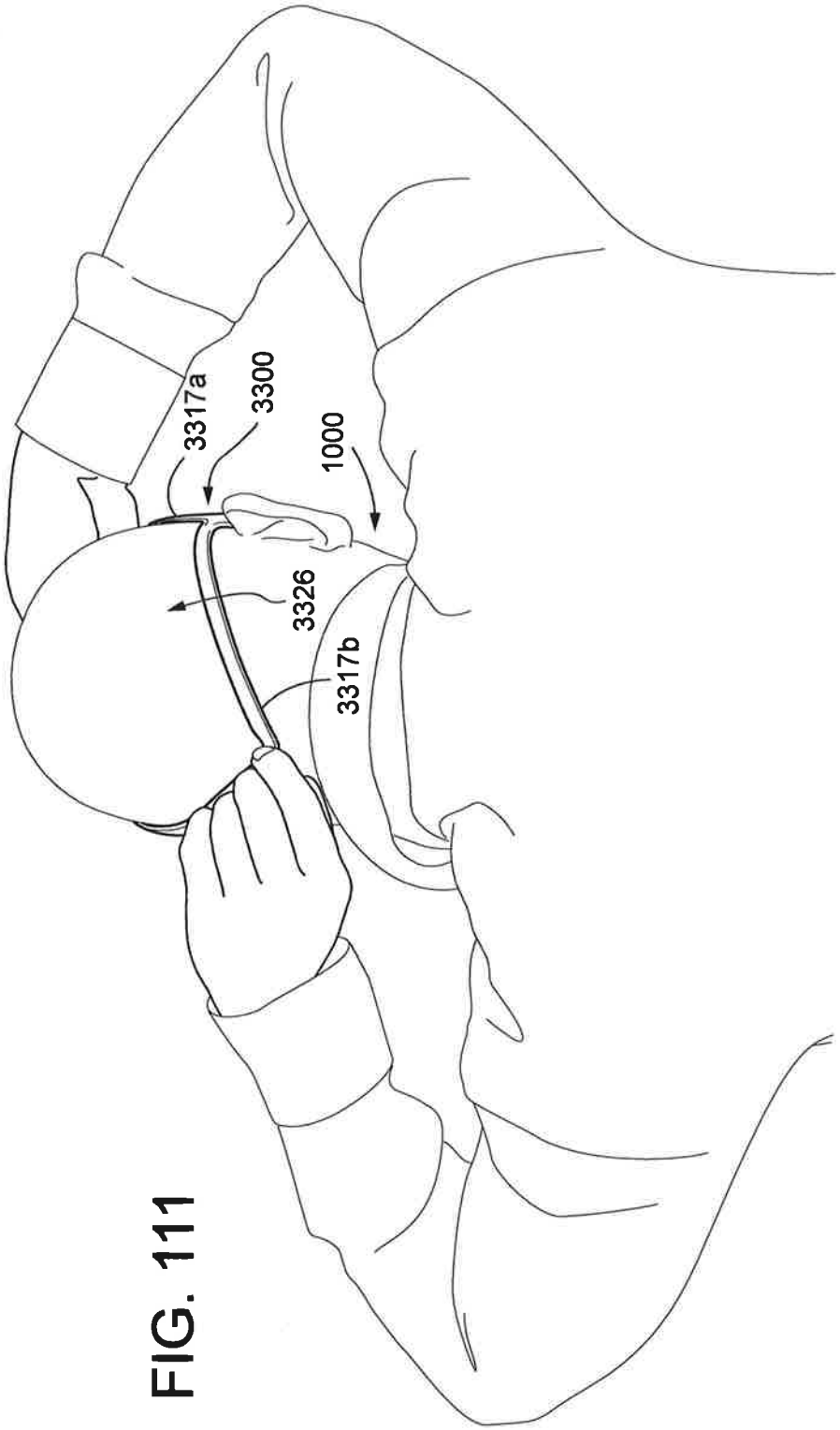


FIG. 111

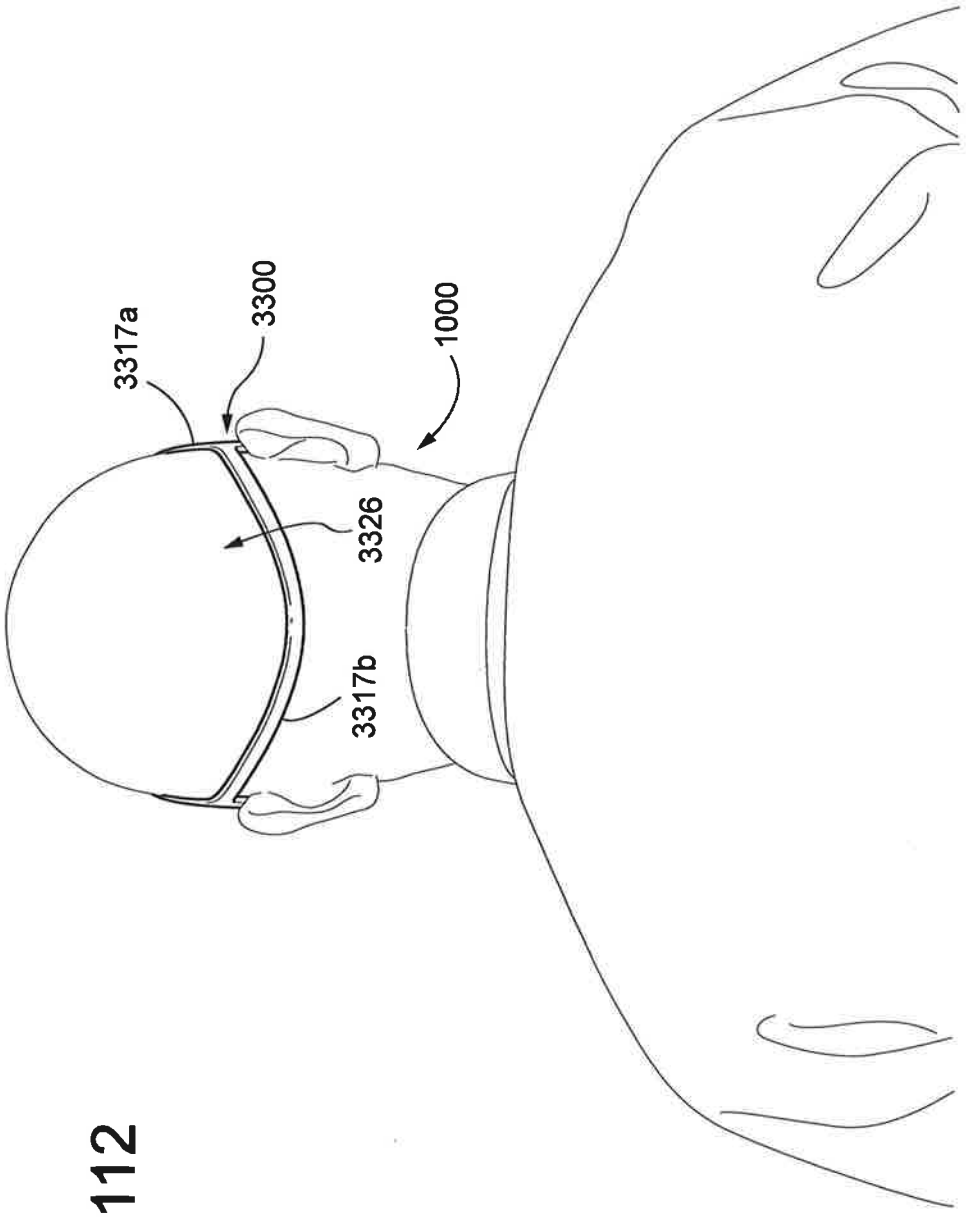


FIG. 112

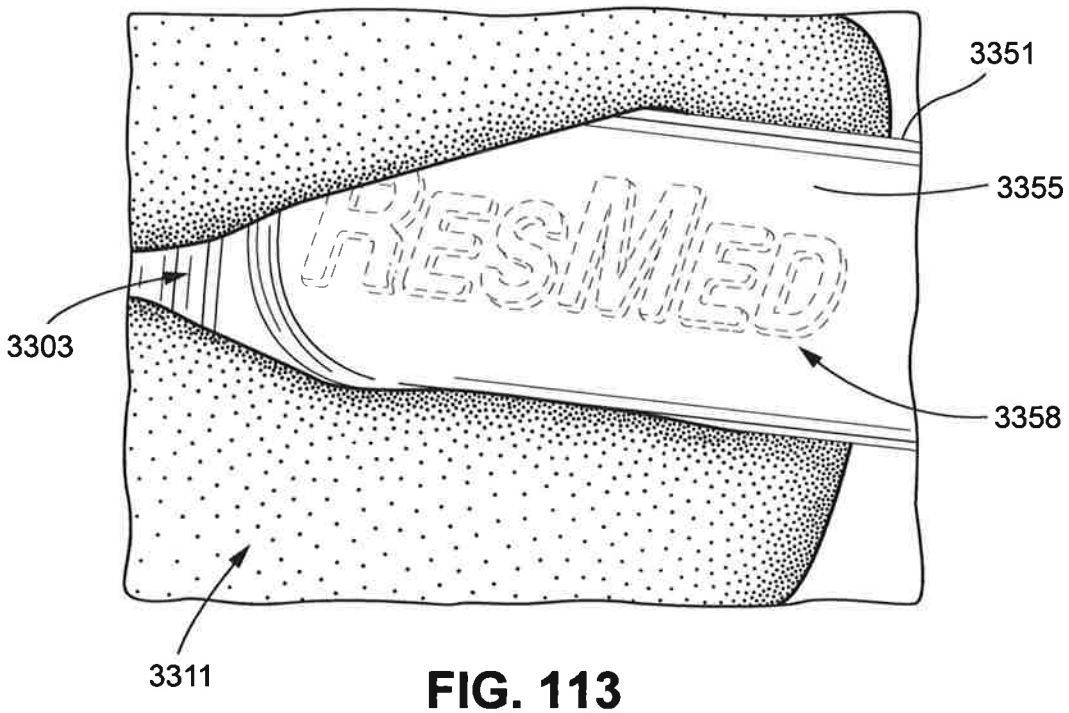


FIG. 113

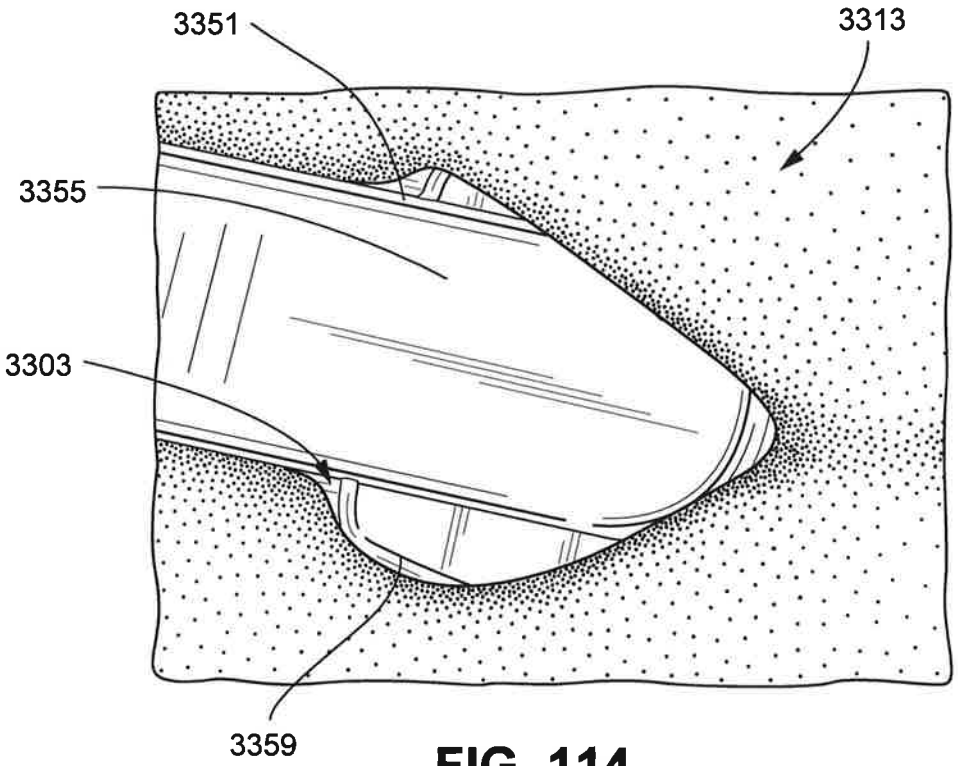


FIG. 114

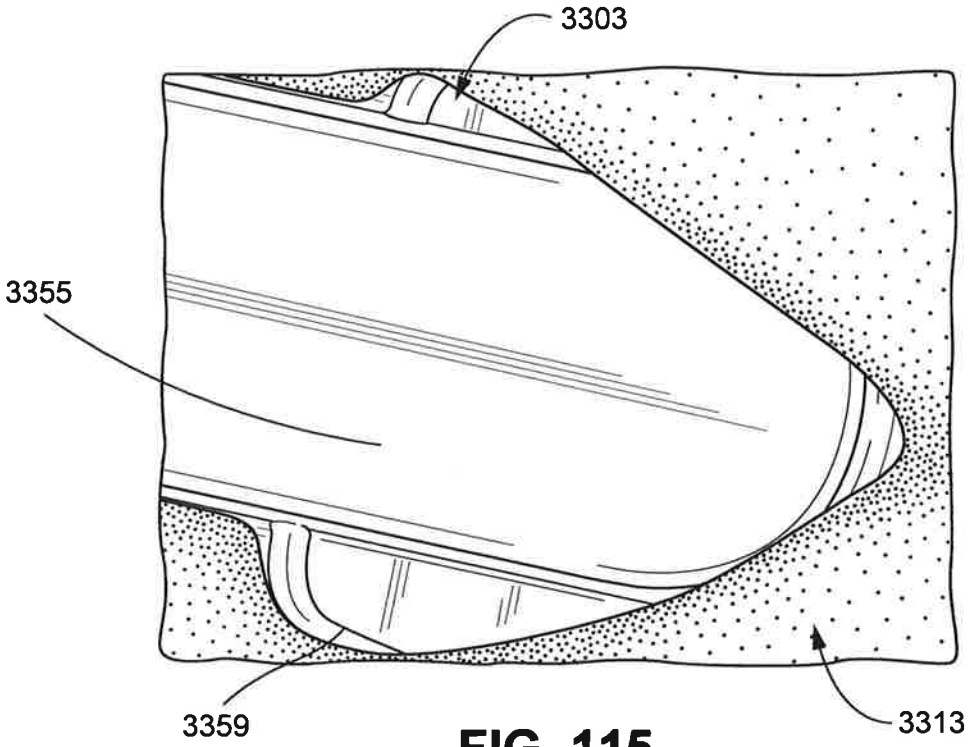


FIG. 115

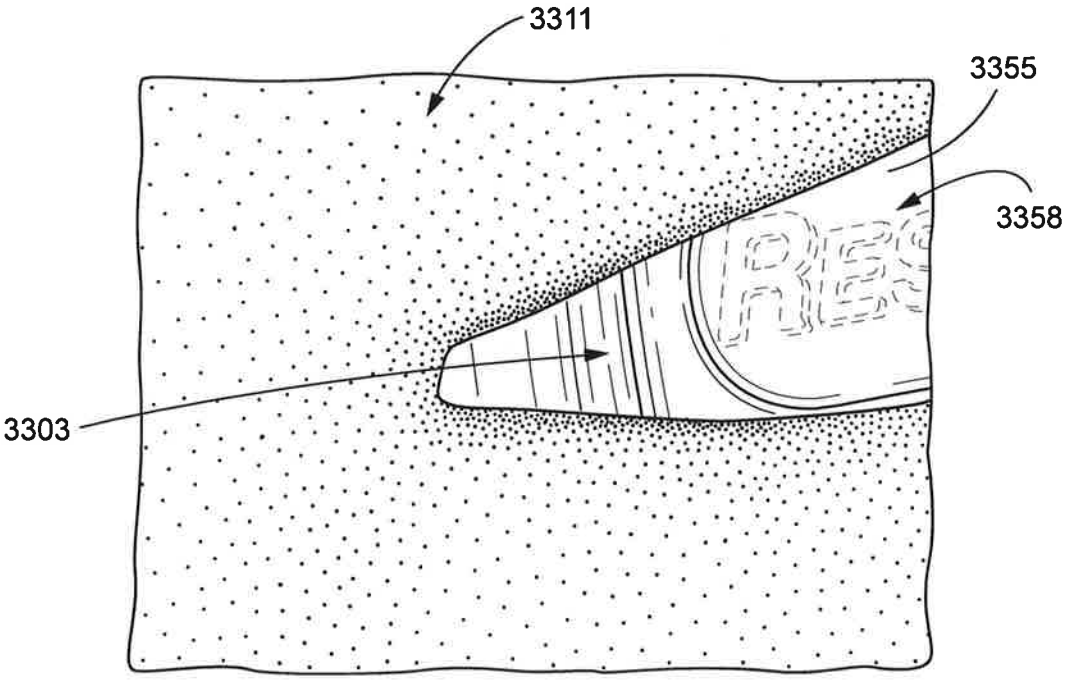


FIG. 116

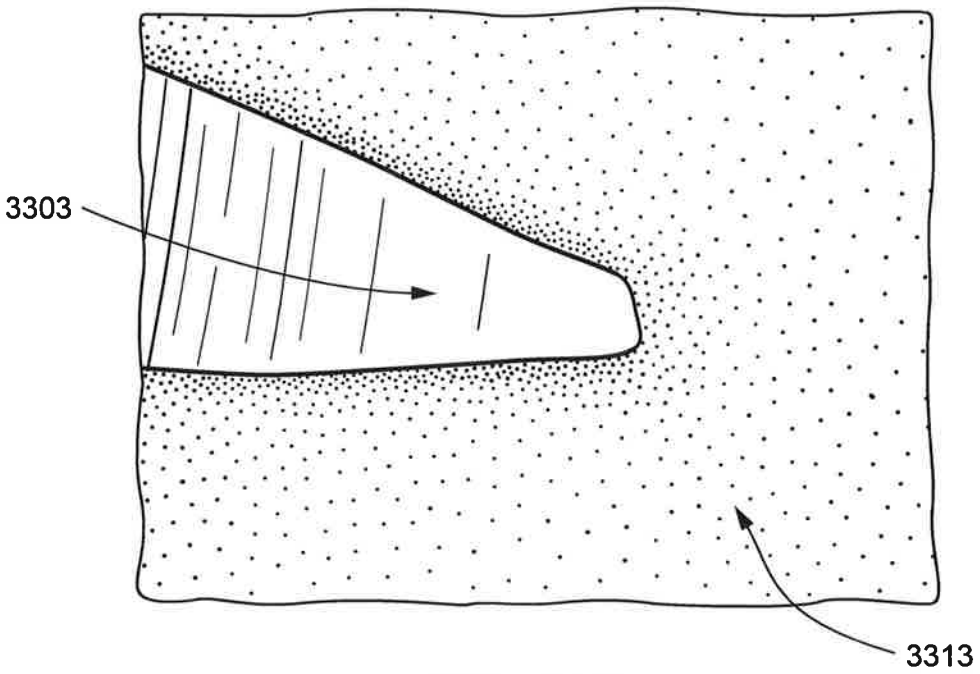


FIG. 117

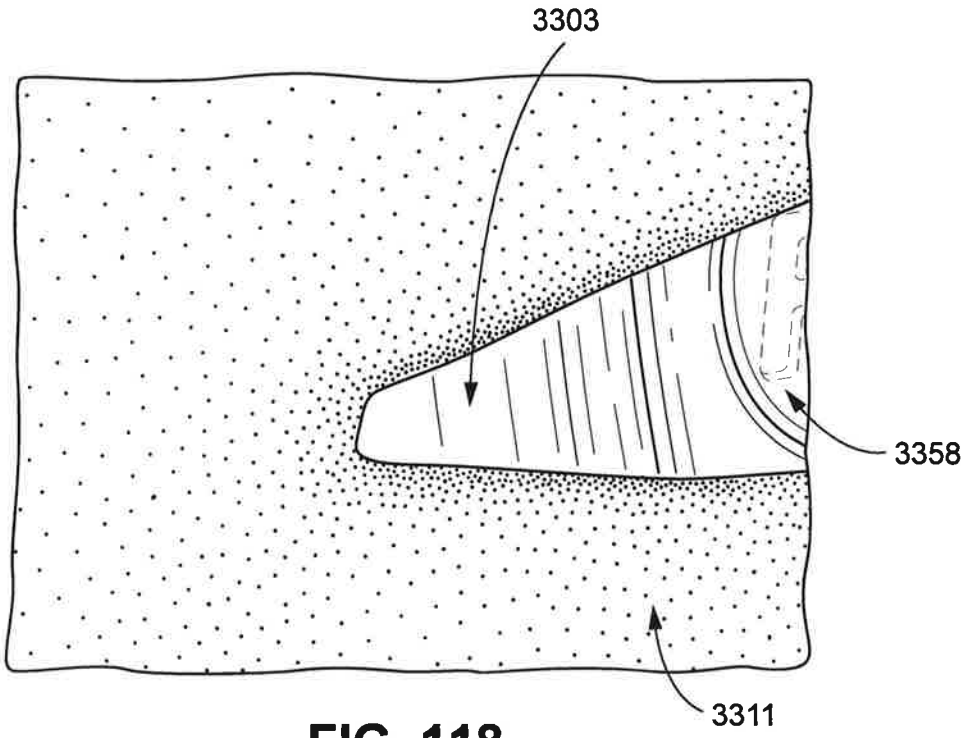


FIG. 118

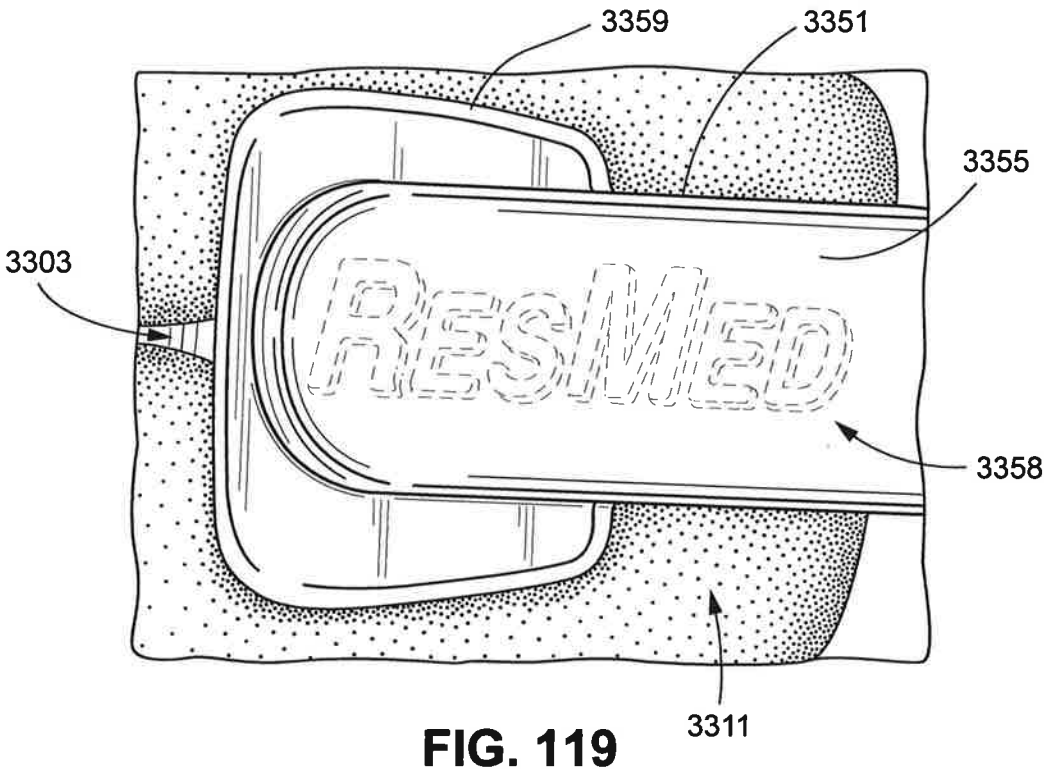


FIG. 119

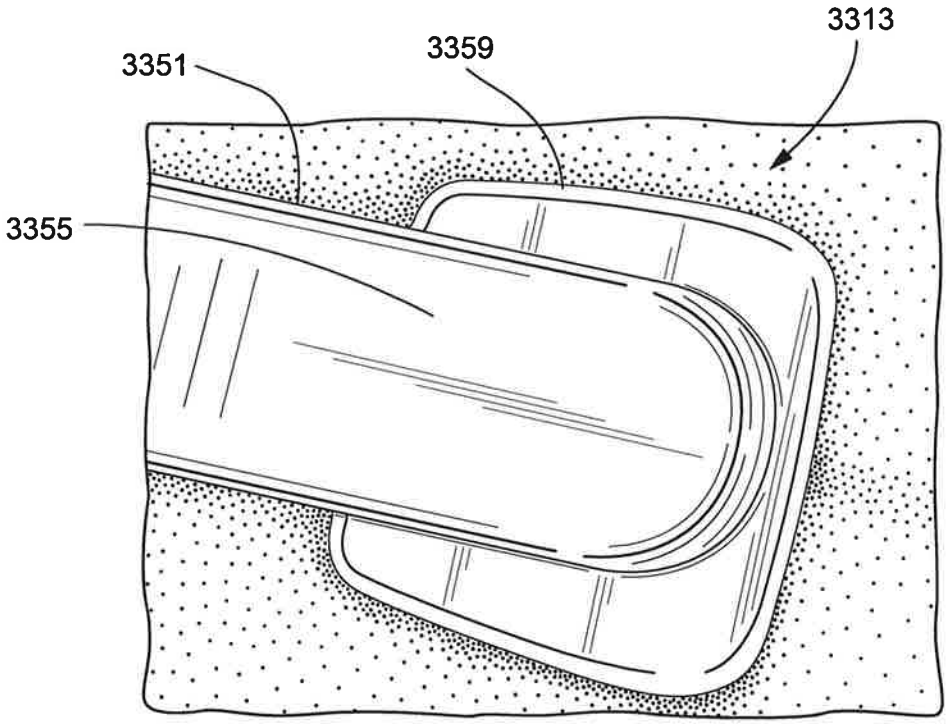


FIG. 120

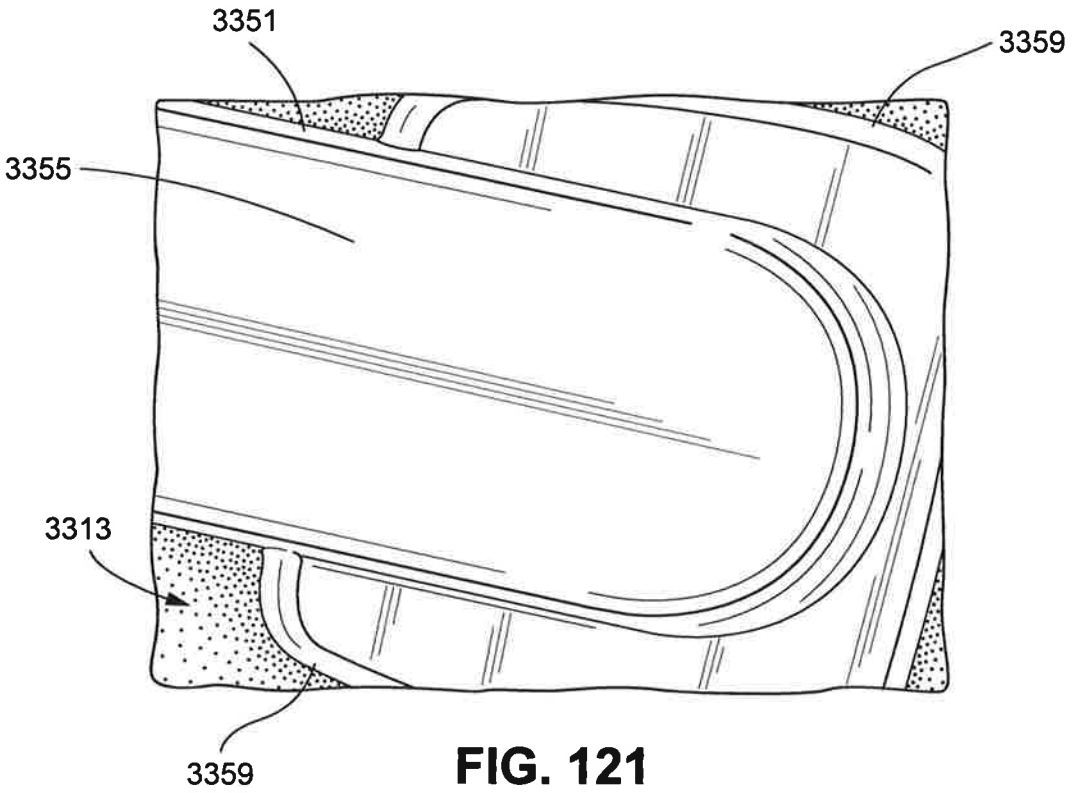


FIG. 121

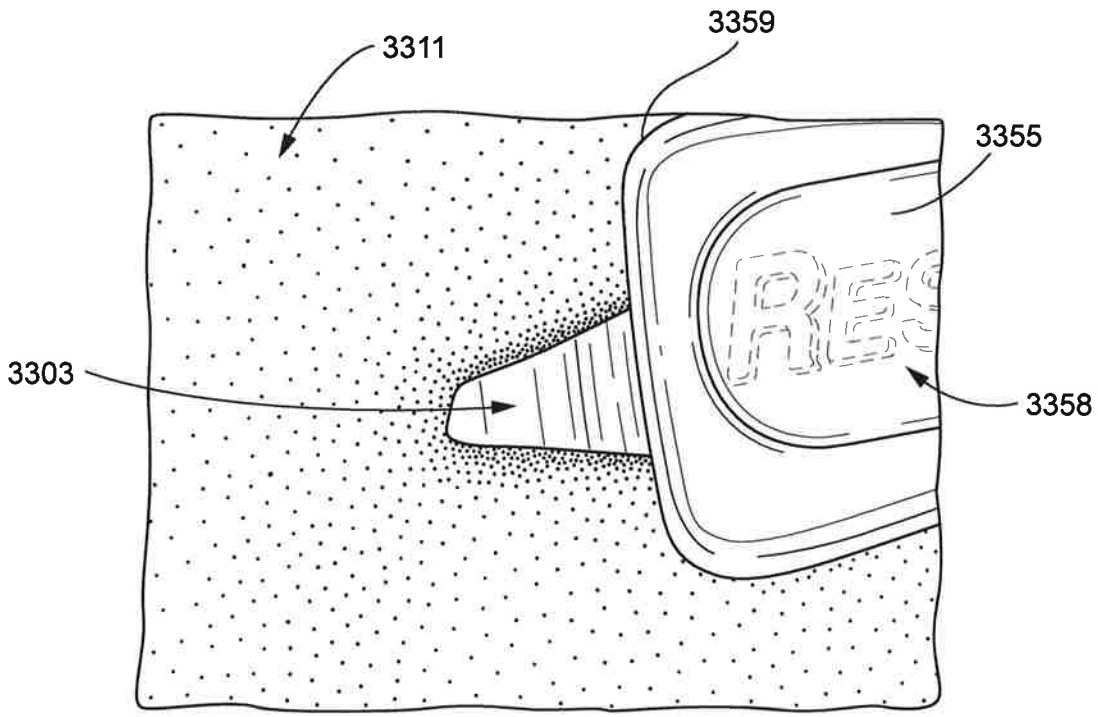


FIG. 122

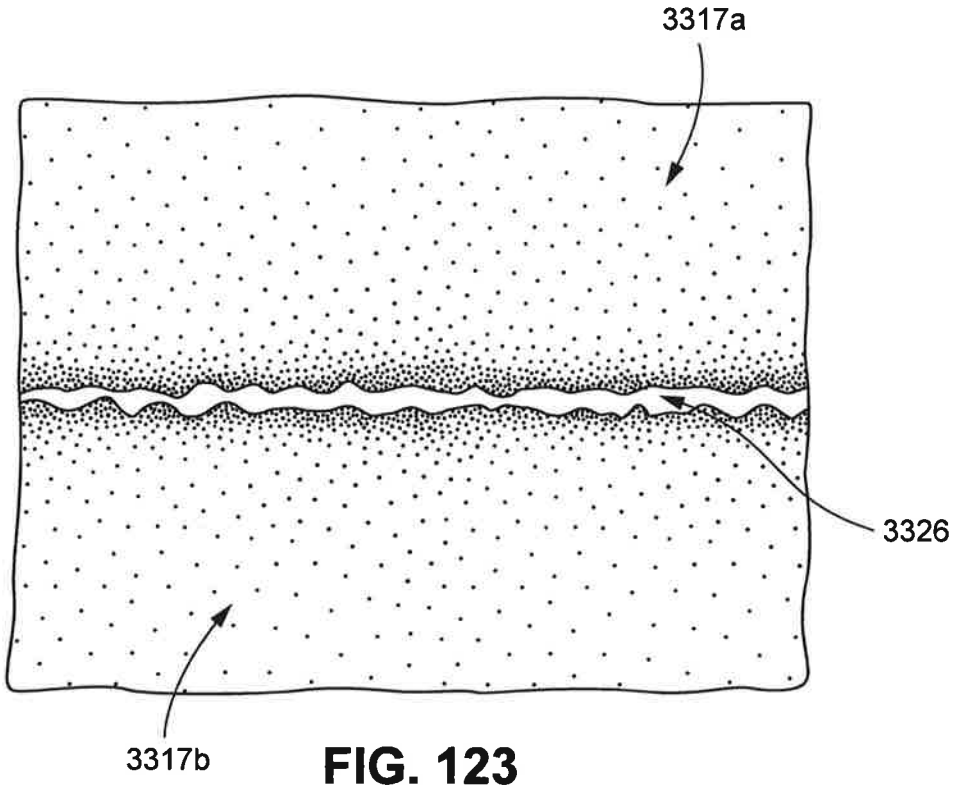


FIG. 123

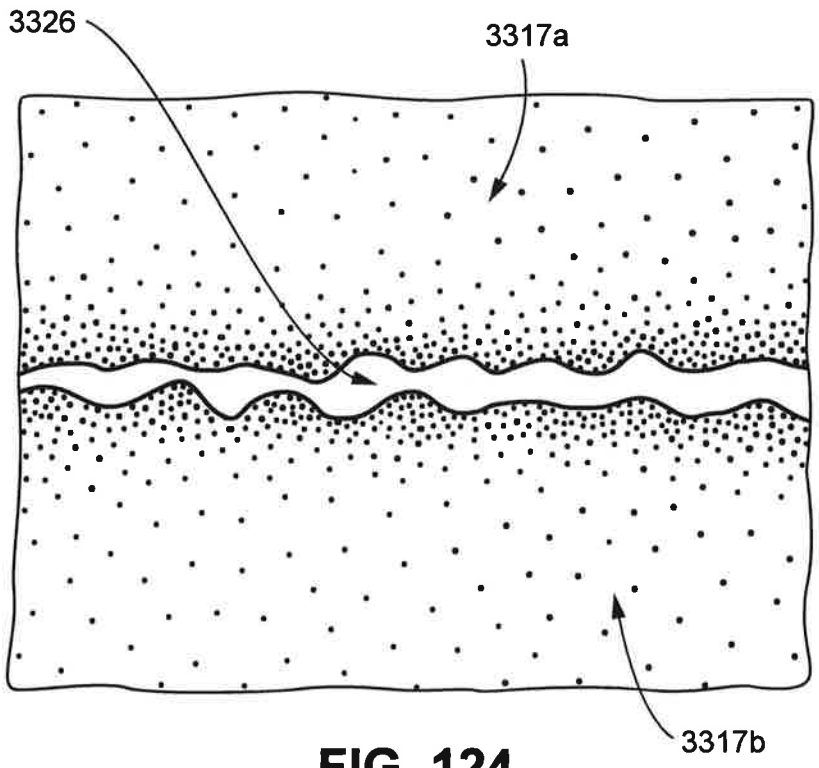


FIG. 124

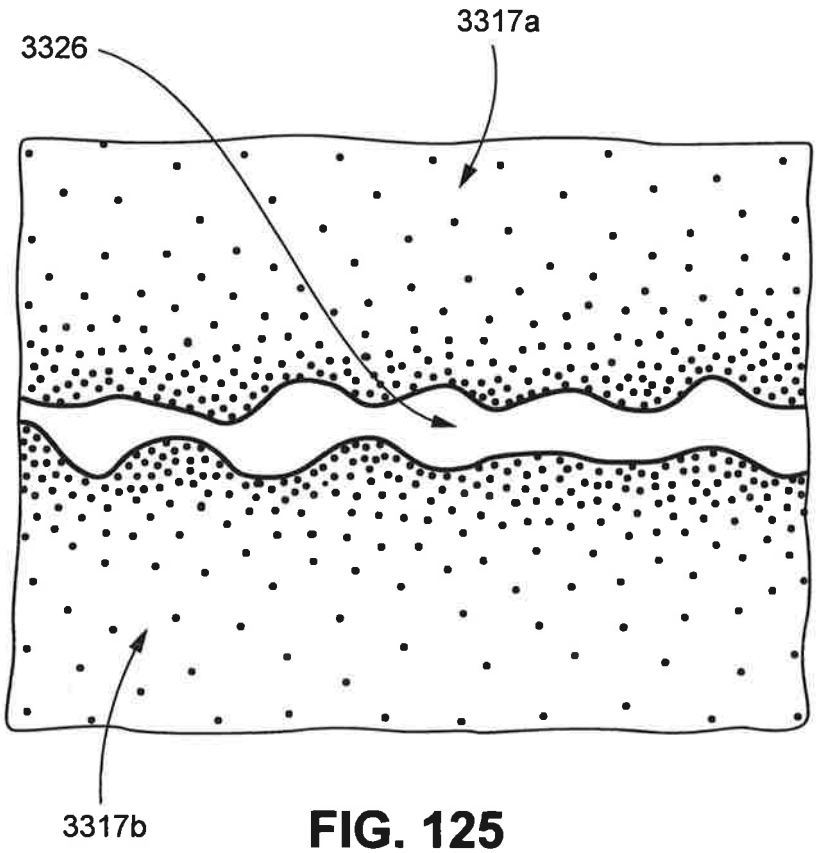


FIG. 125

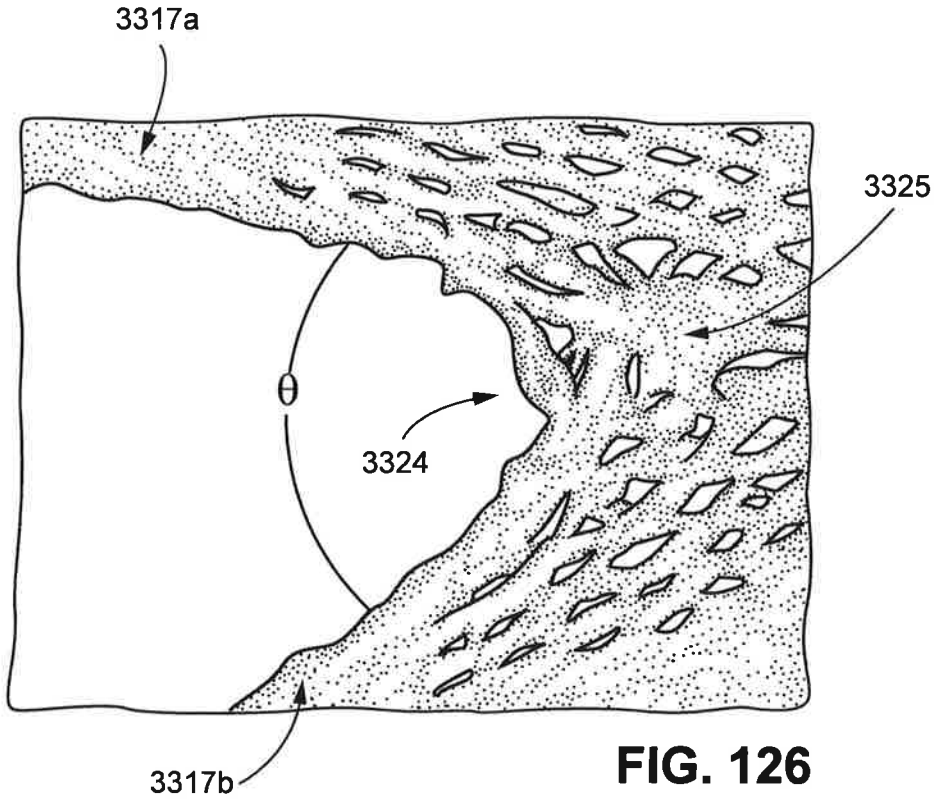


FIG. 126

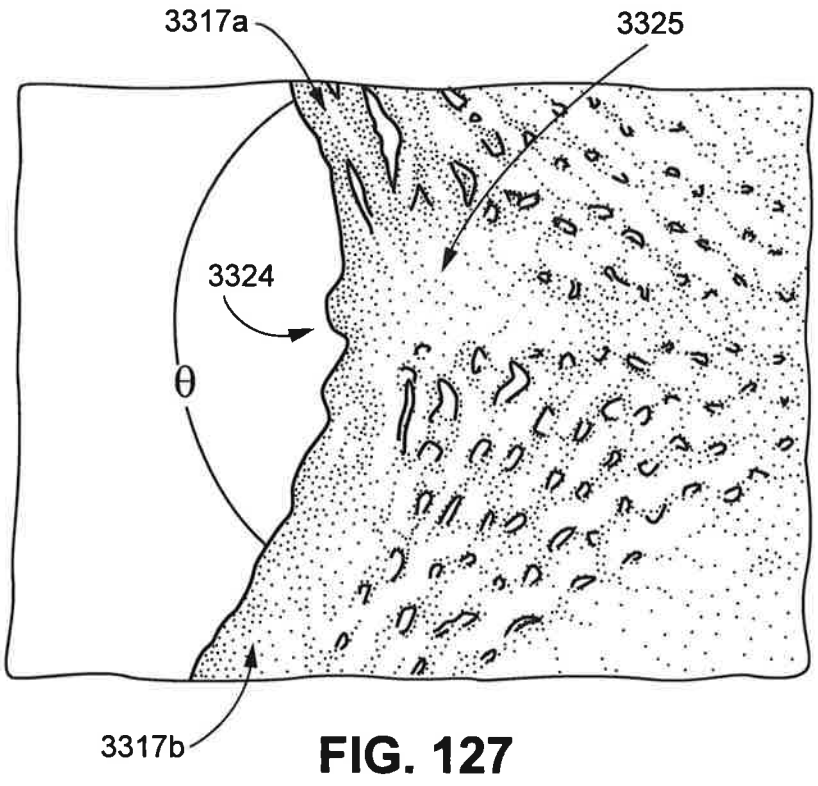


FIG. 127

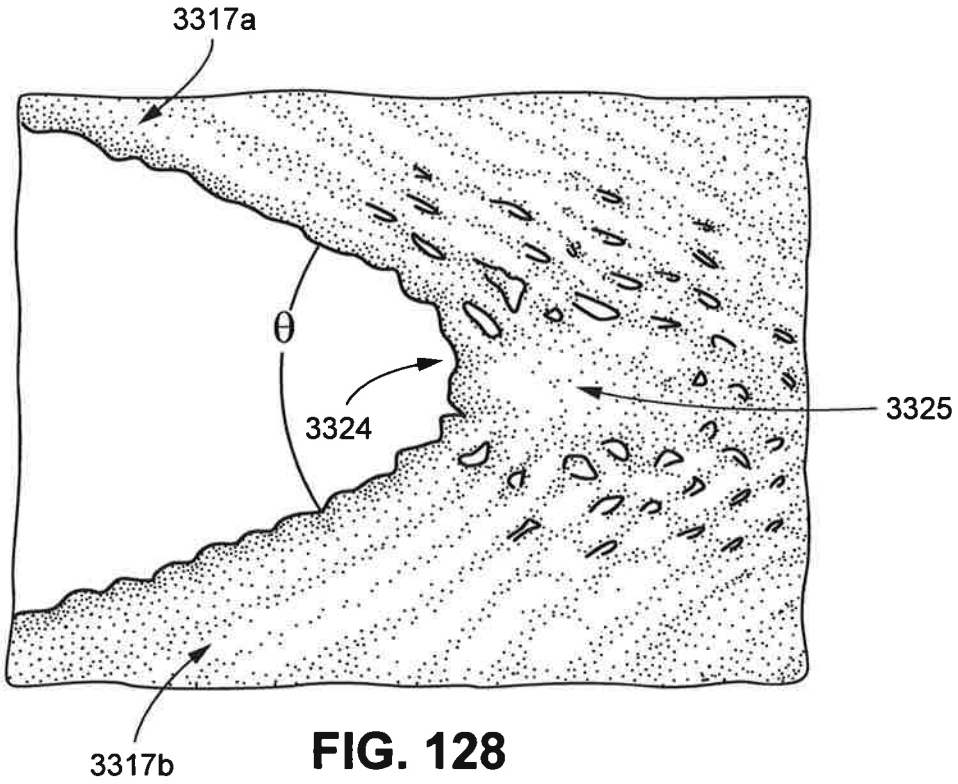


FIG. 128

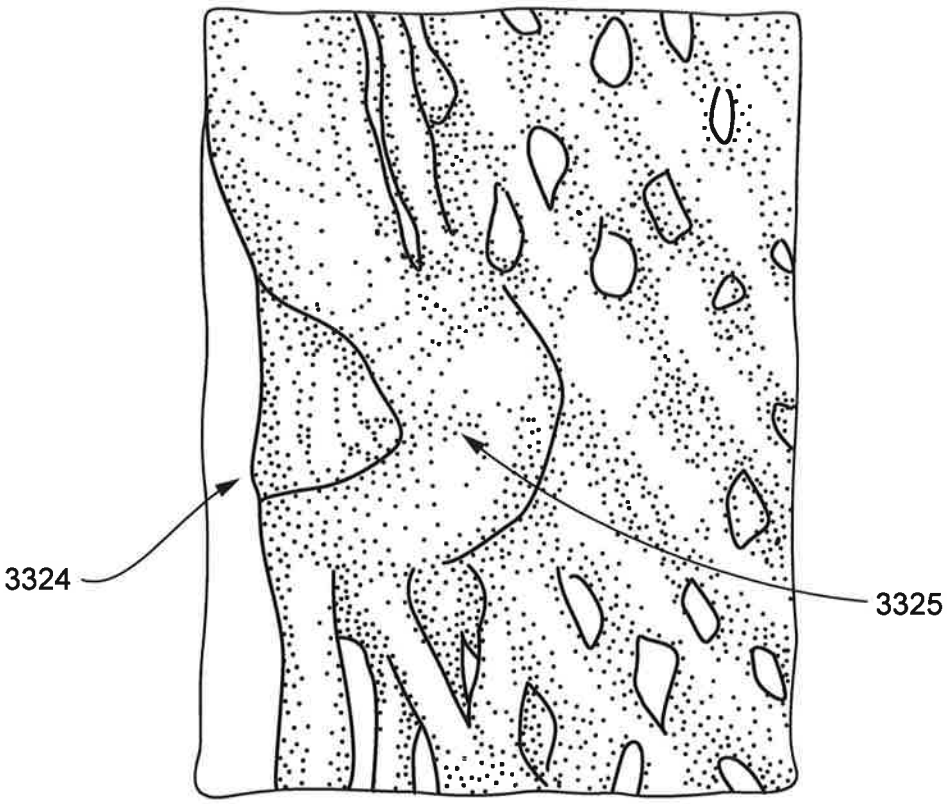


FIG. 129

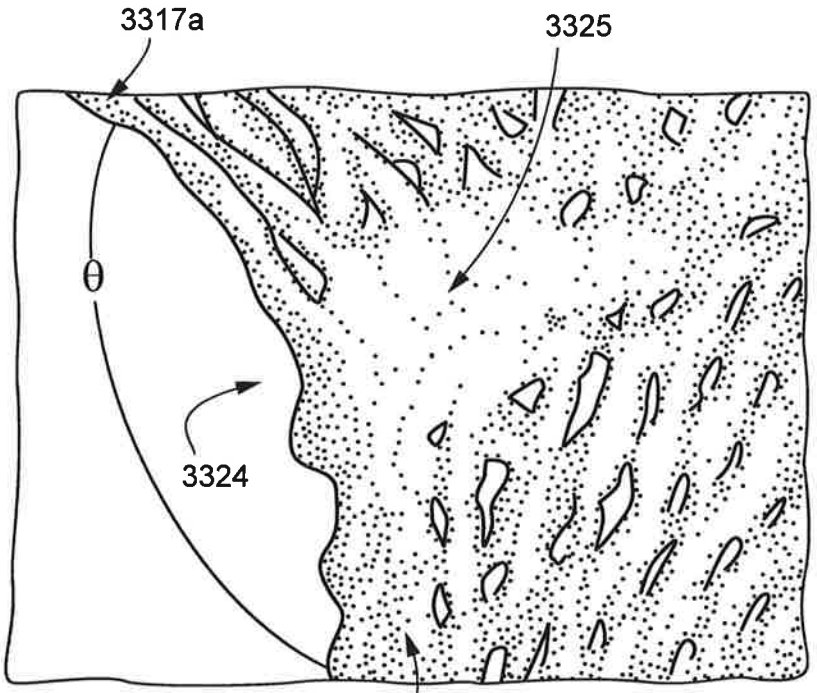


FIG. 130

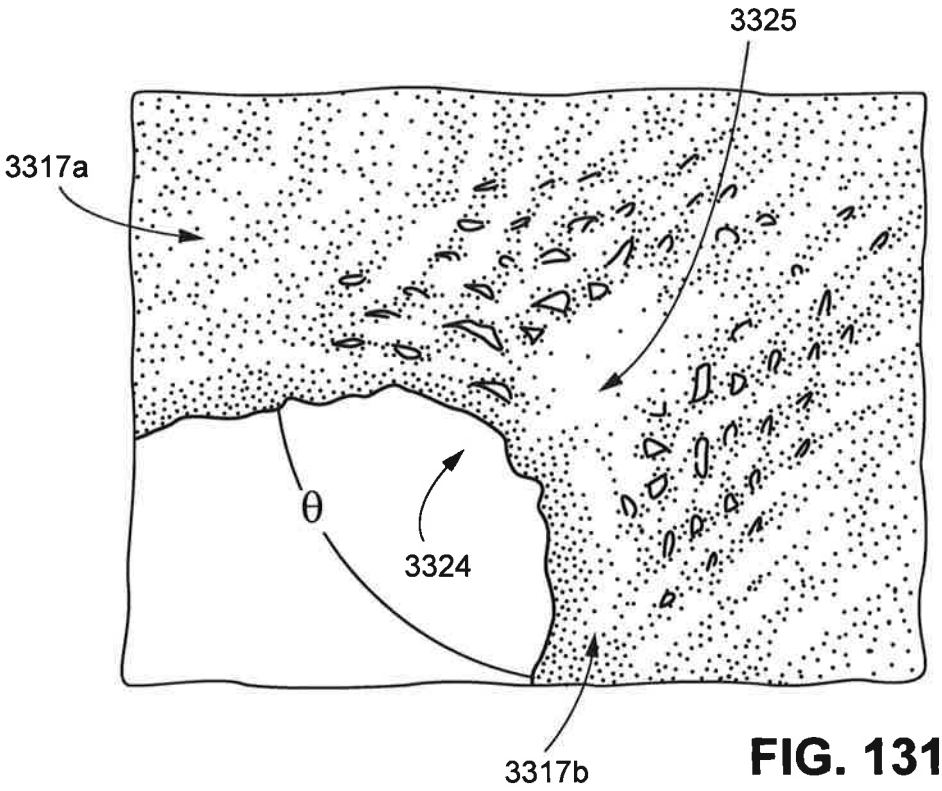


FIG. 131

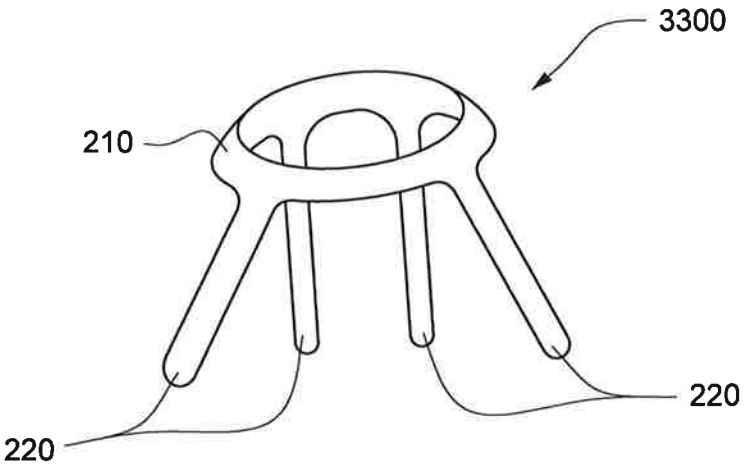


FIG. 132

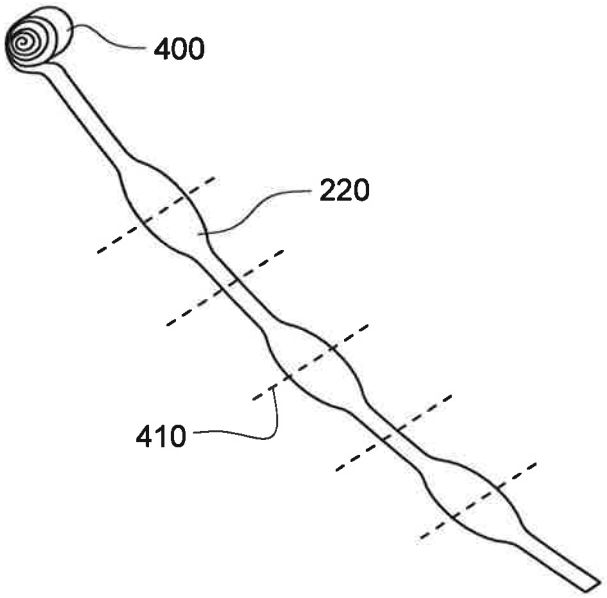


FIG. 133

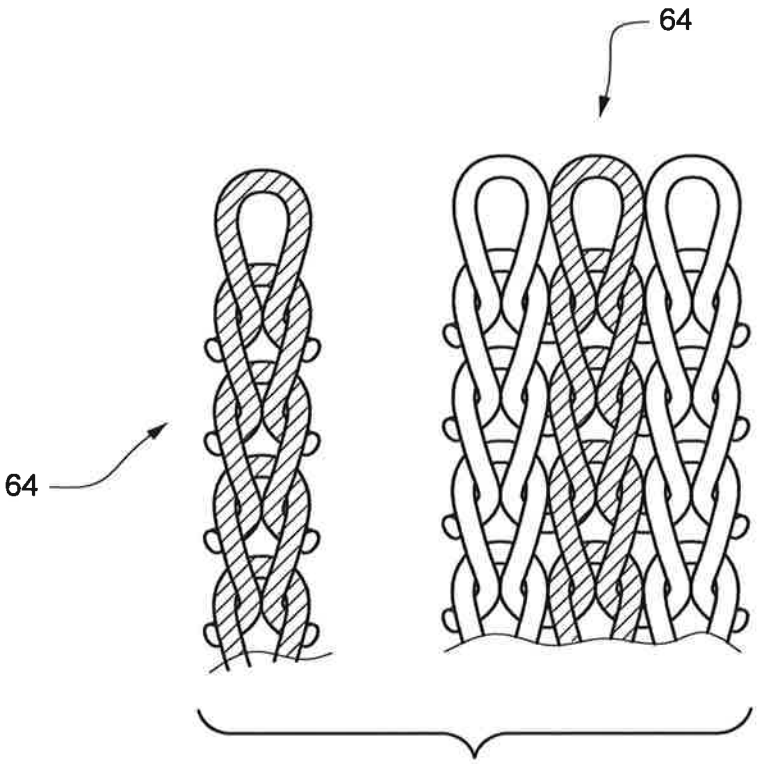


FIG. 134

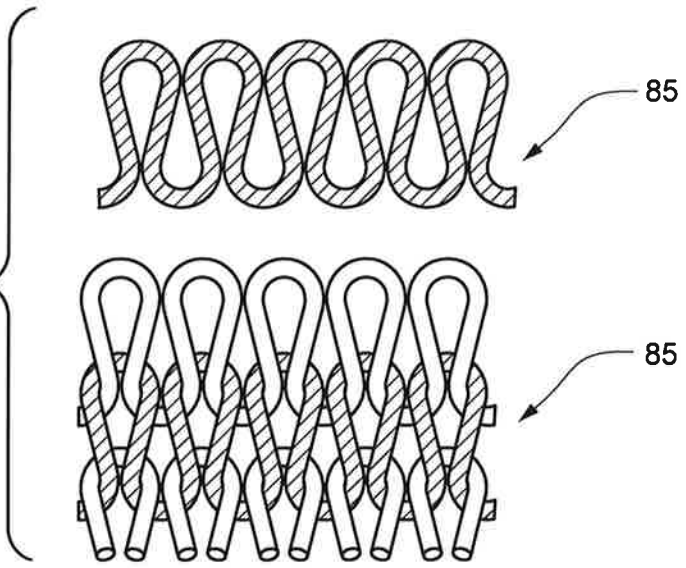


FIG. 135

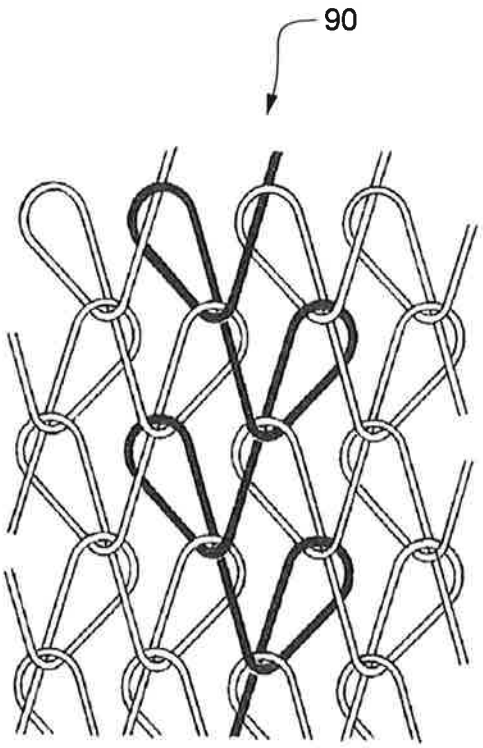


FIG. 136

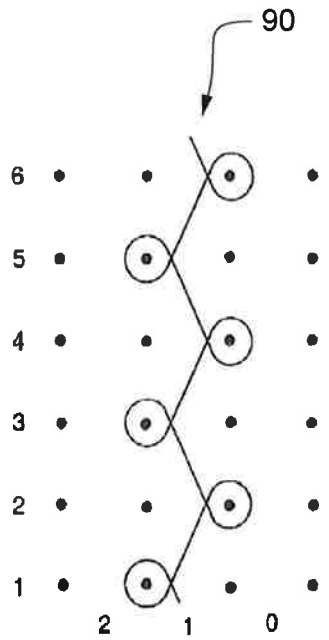


FIG. 137

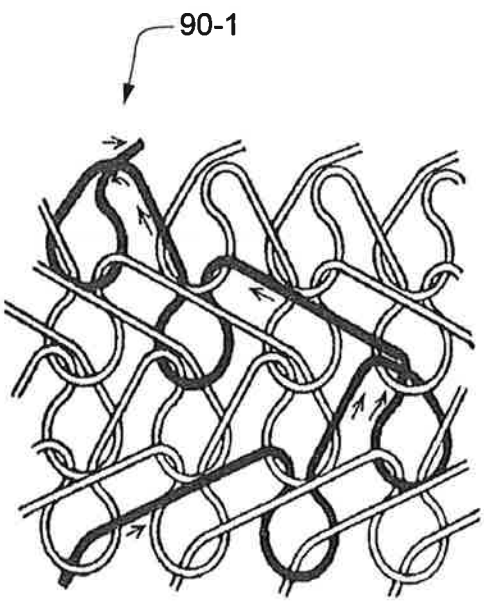


FIG. 138

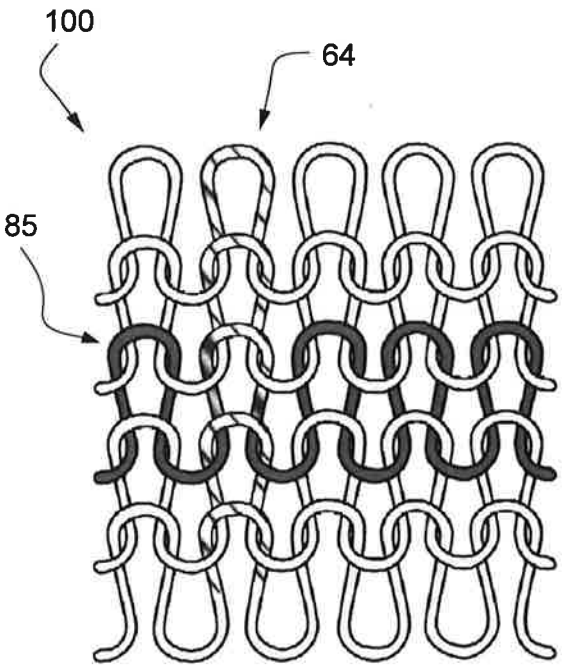


FIG. 139

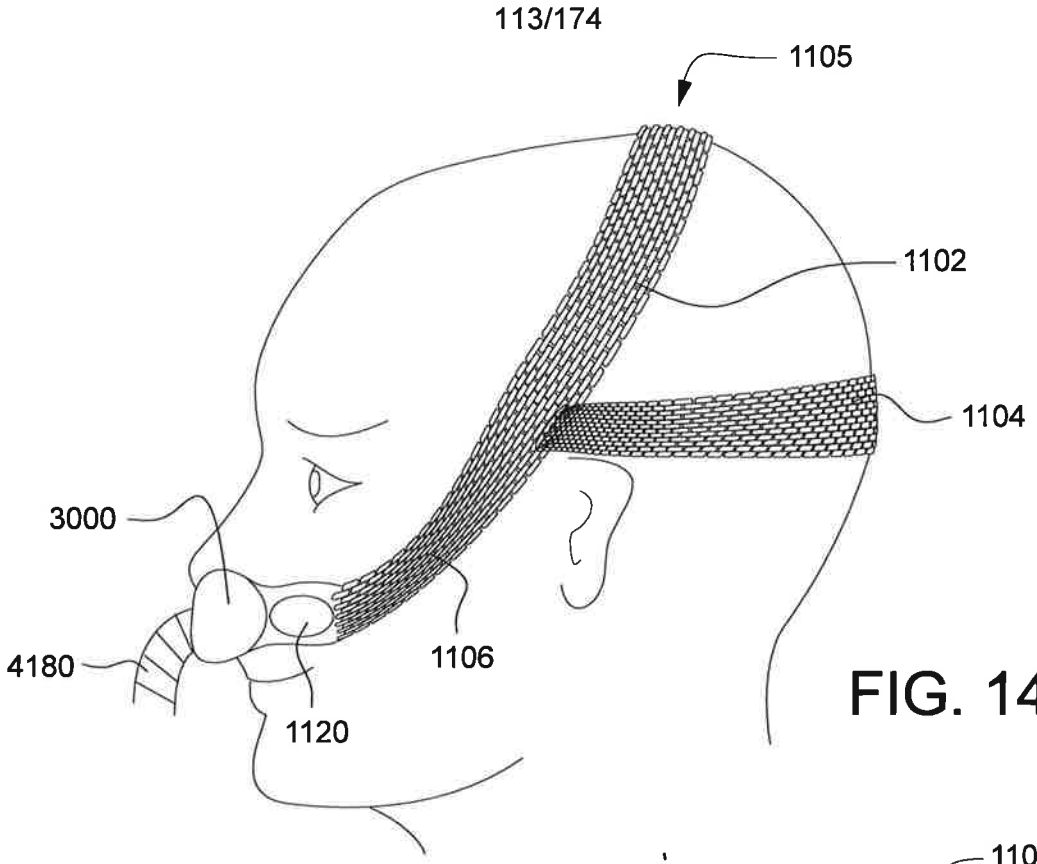


FIG. 140

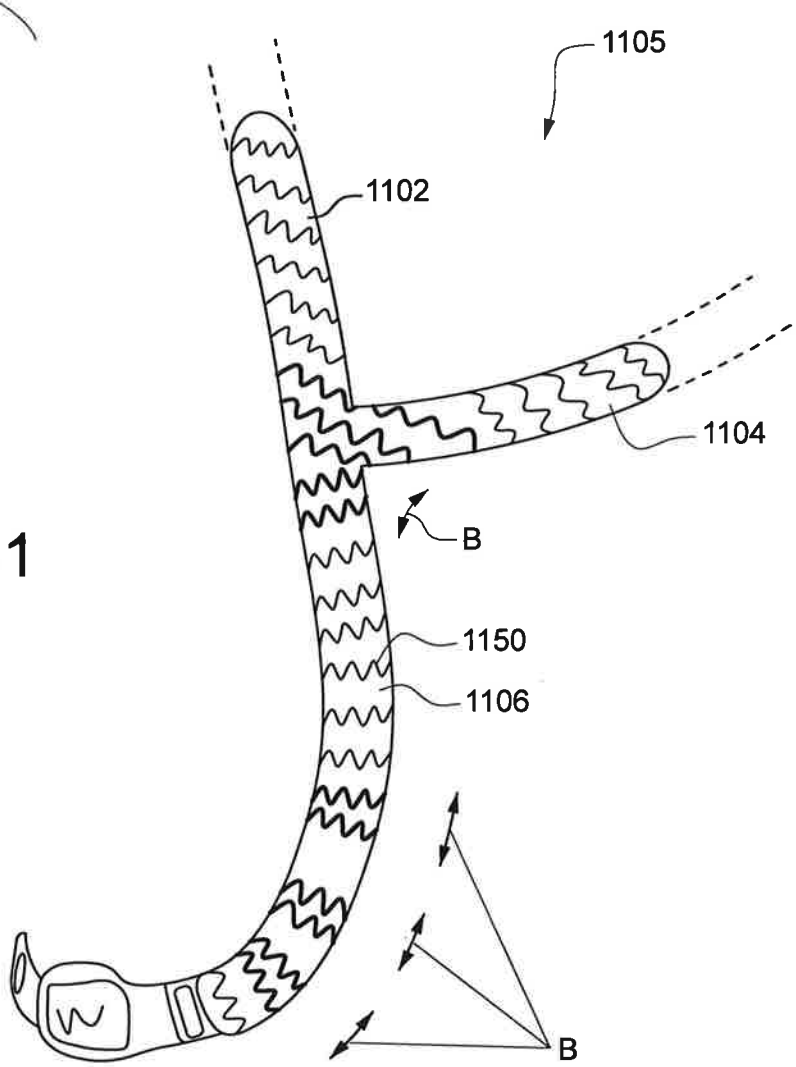


FIG. 141

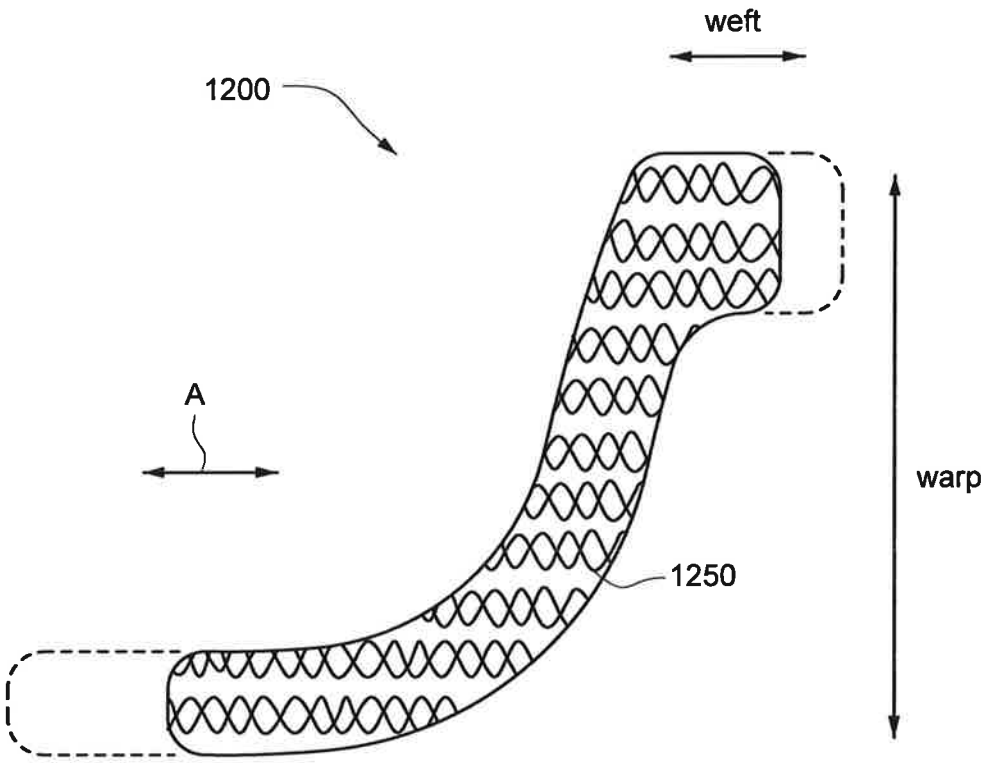


FIG. 142

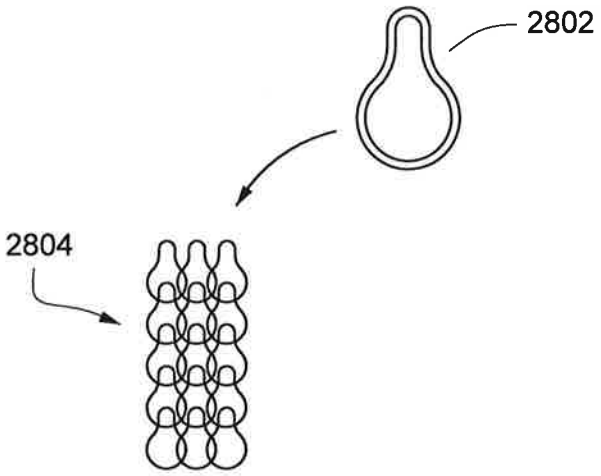


FIG. 143

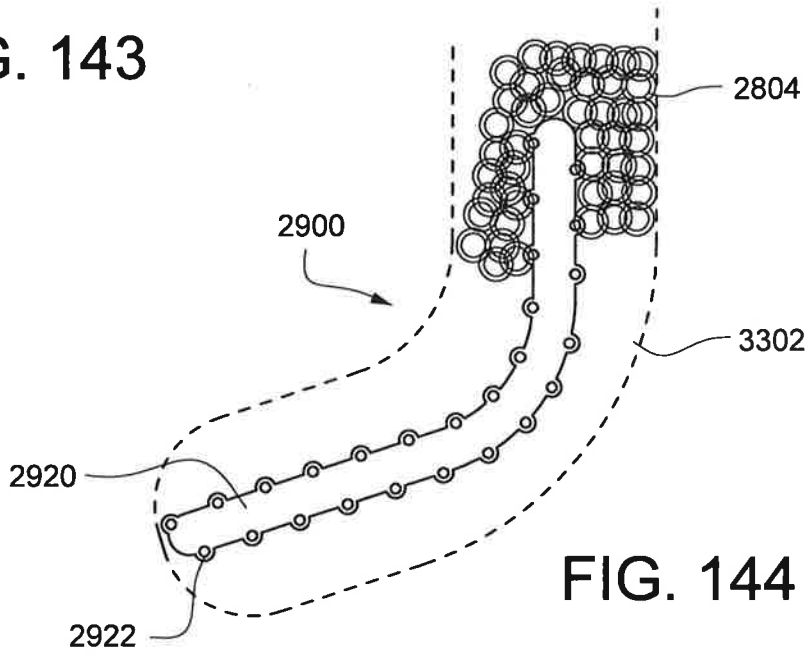


FIG. 144

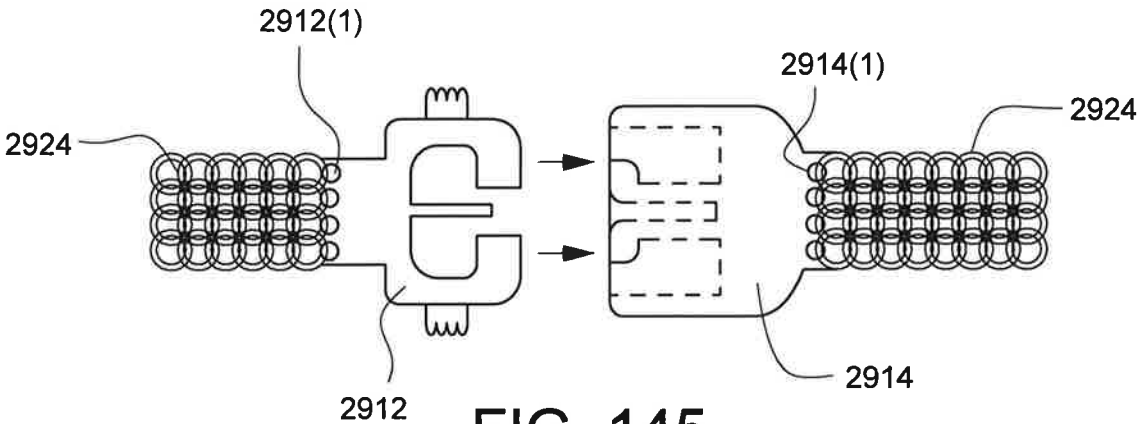


FIG. 145

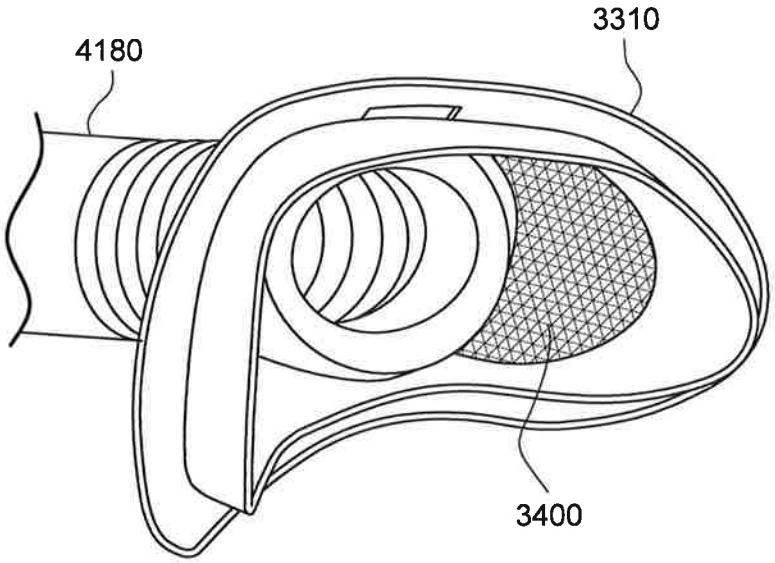


FIG. 146

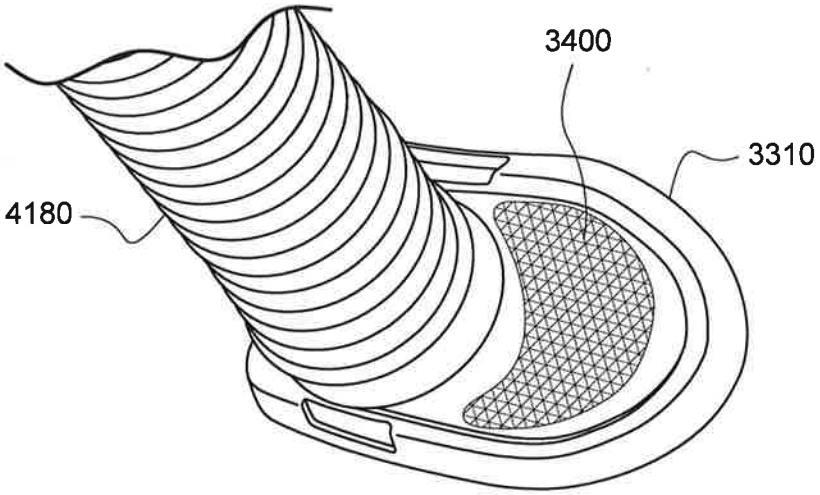


FIG. 147

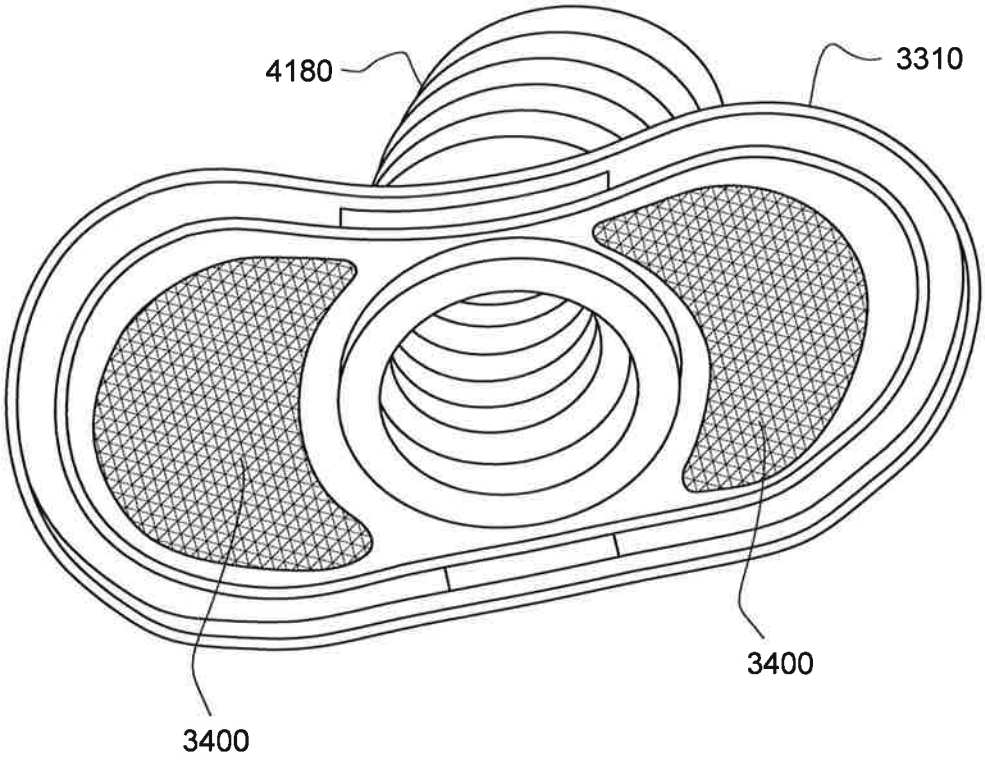


FIG. 148

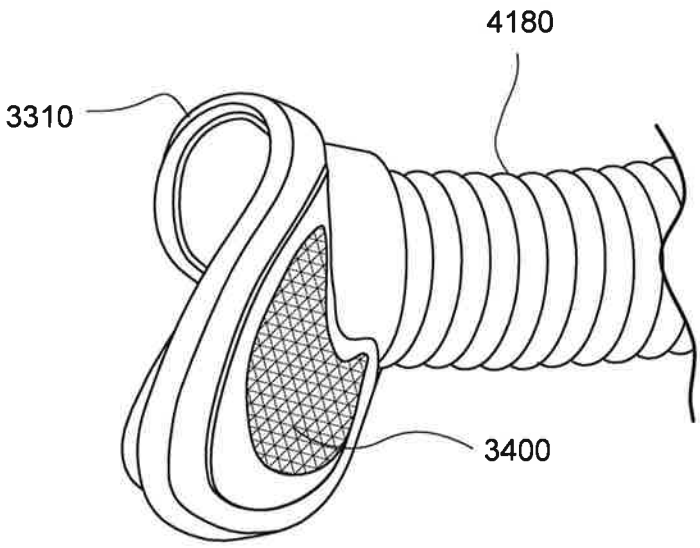


FIG. 149

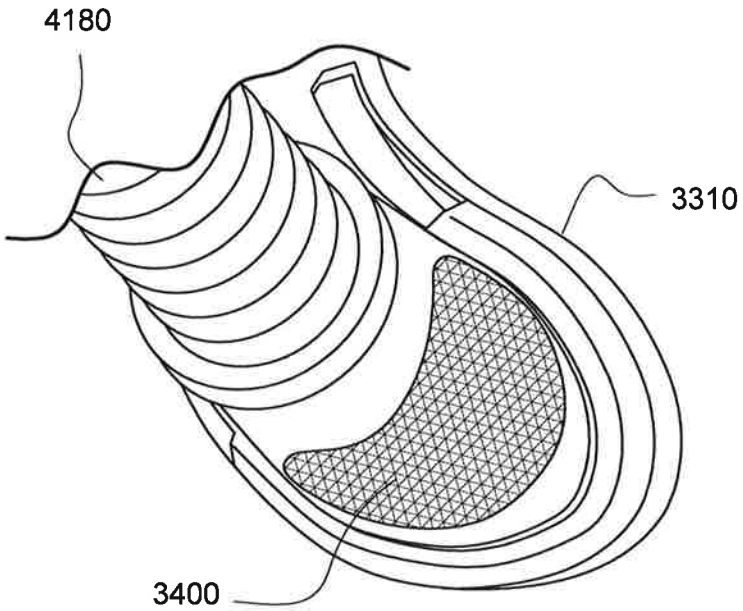


FIG. 150

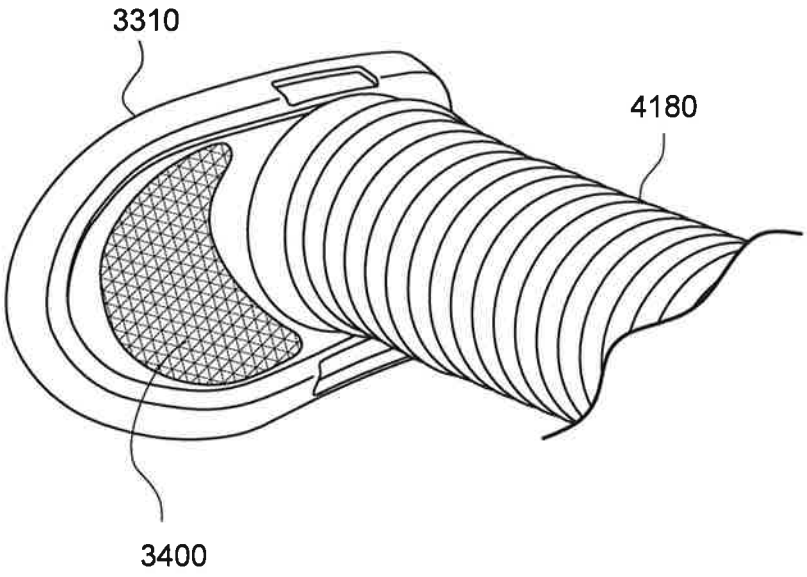


FIG. 151

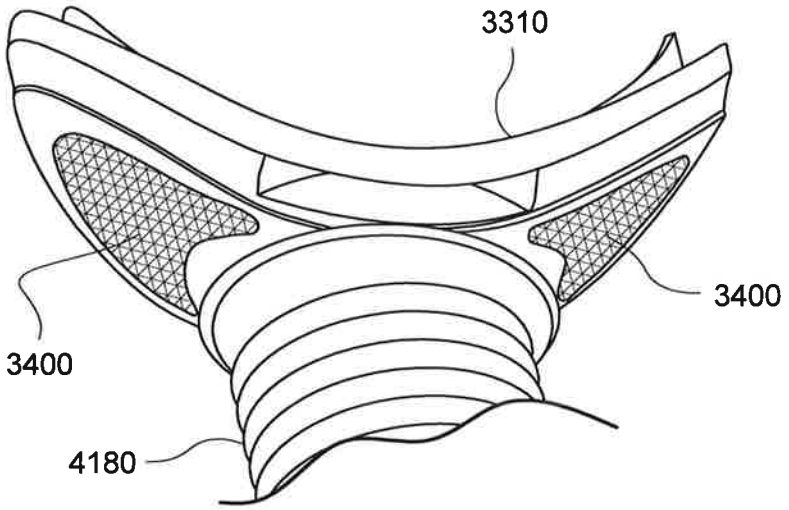


FIG. 152

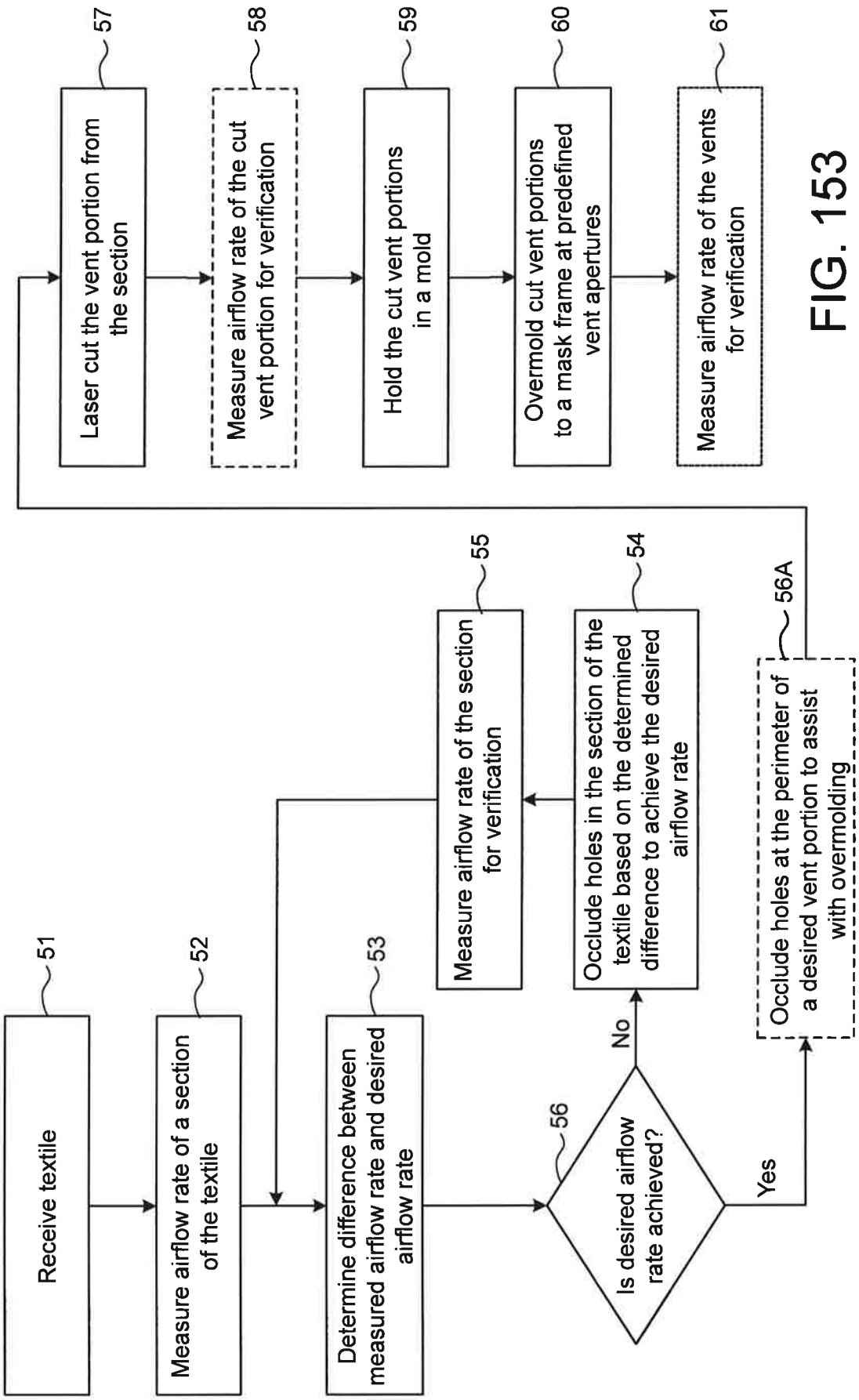

Receive textile
51
Measure airflow rate of a section of the textile
52
Determine difference between measured airflow rate and desired airflow rate
53
Is desired airflow rate achieved?
56
No
Yes
Occlude holes in the section of the textile based on the determined difference to achieve the desired airflow rate
54
Measure airflow rate of the section for verification
55
Occlude holes at the perimeter of a desired vent portion to assist with overmolding
56A
Laser cut the vent portion from the section
57
Measure airflow rate of the cut vent portion for verification
58
Hold the cut vent portions in a mold
59
Overmold cut vent portions to a mask frame at predefined vent apertures
60
Measure airflow rate of the vents for verification
61

FIG. 153

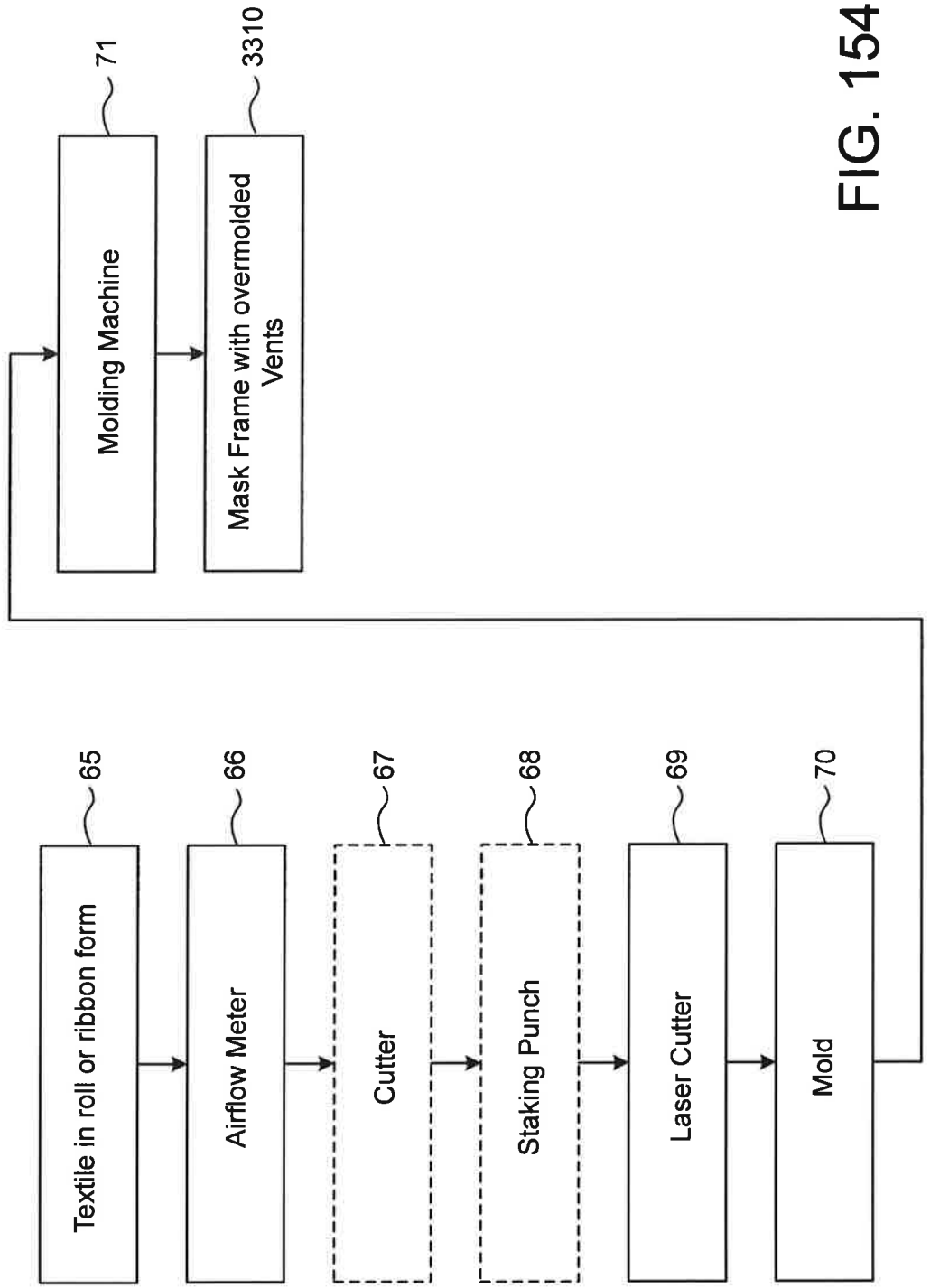

65
Textile in roll or ribbon form
66
Airflow Meter
67
Cutter
68
Staking Punch
69
Laser Cutter
70
Mold
71
Molding Machine
3310
Mask Frame with overmolded Vents

FIG. 154

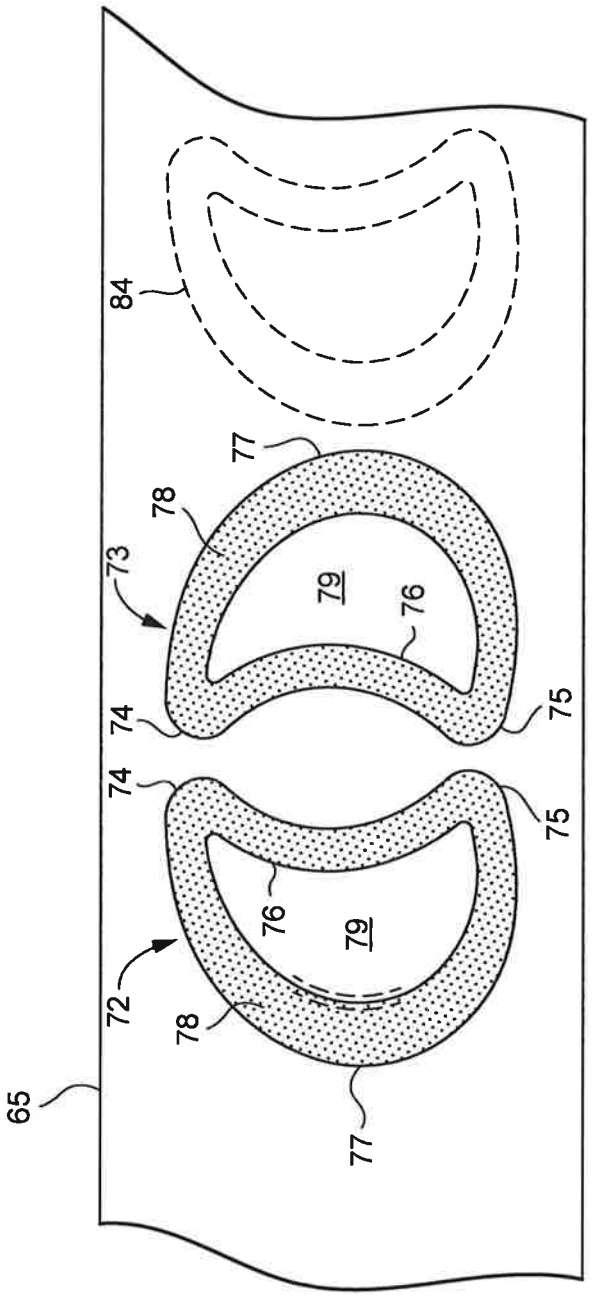


FIG. 155

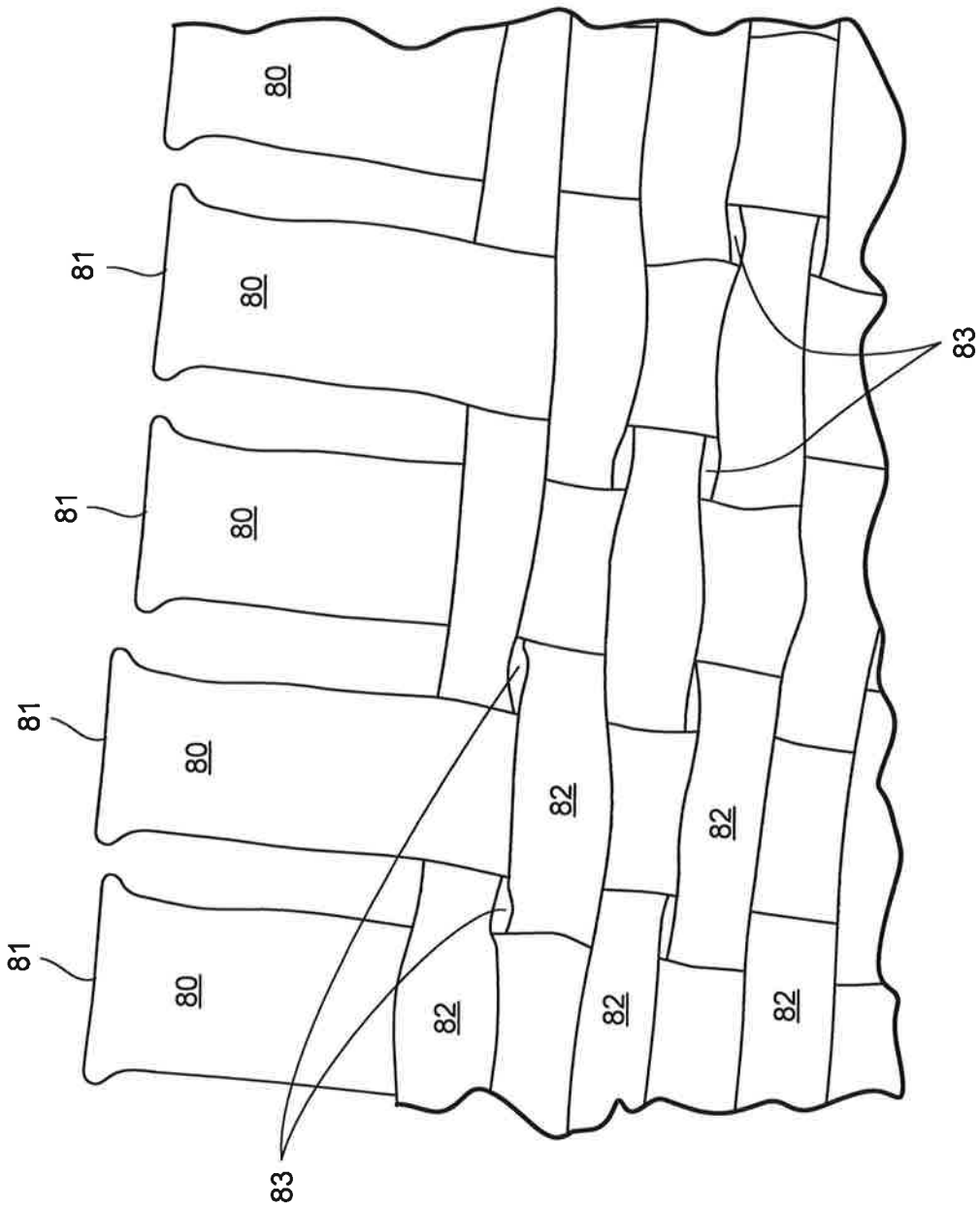


FIG. 156

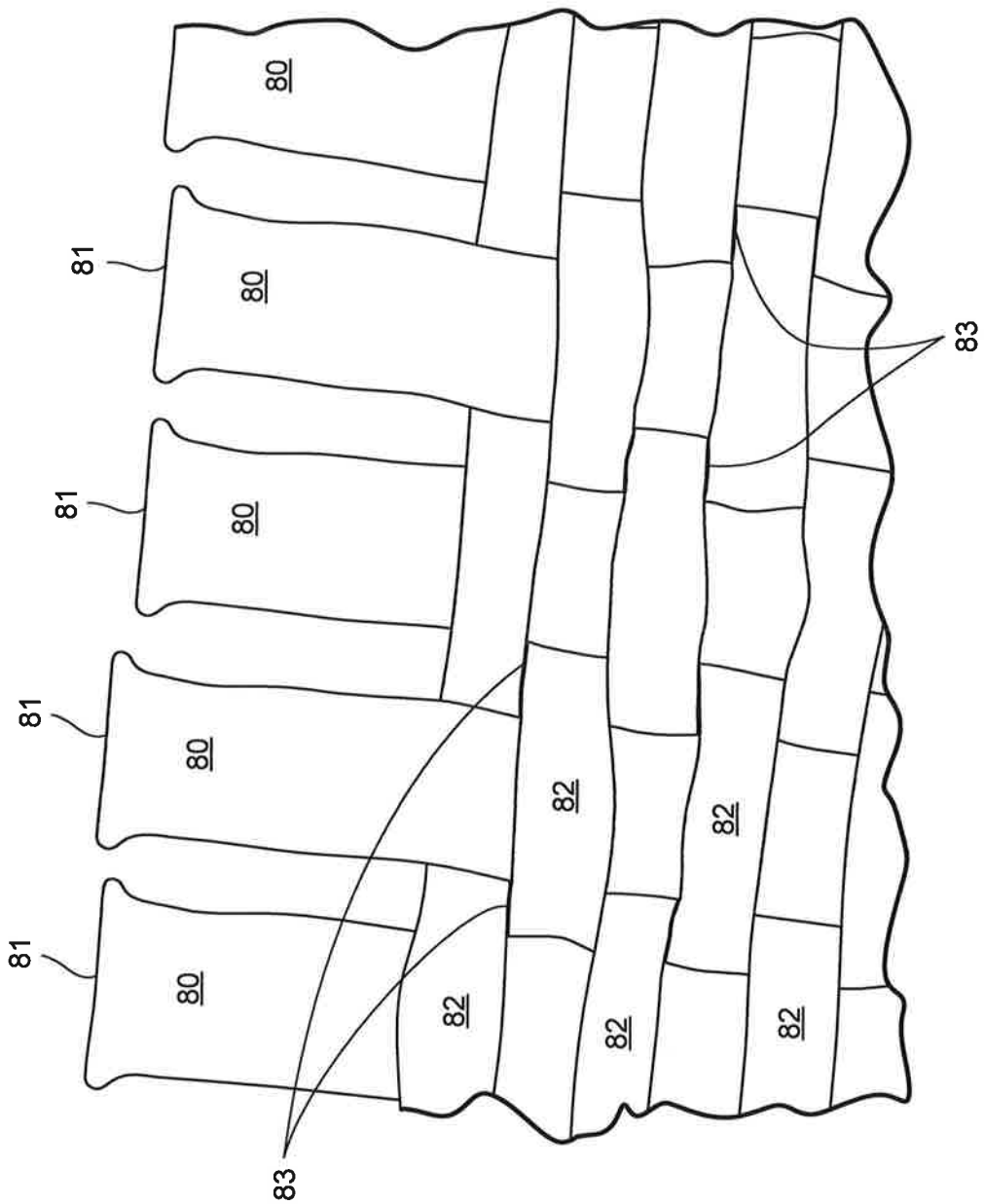


FIG. 157

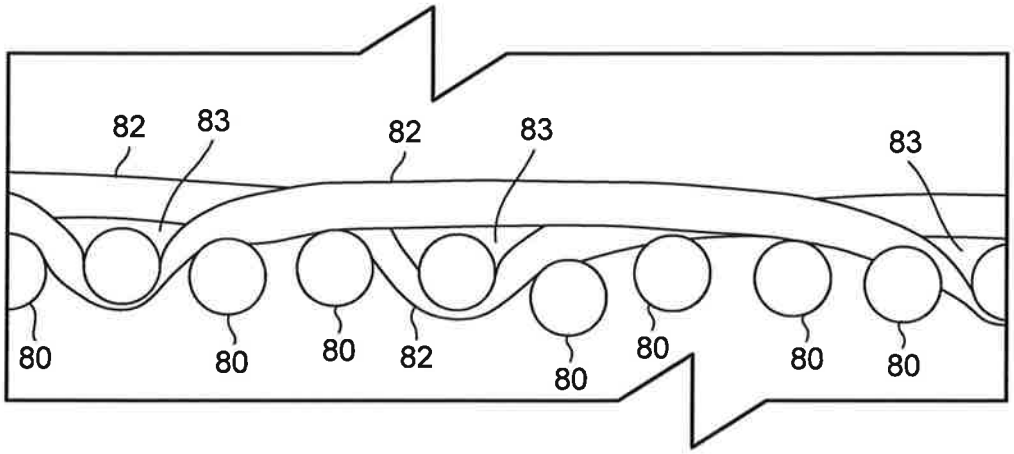


FIG. 158

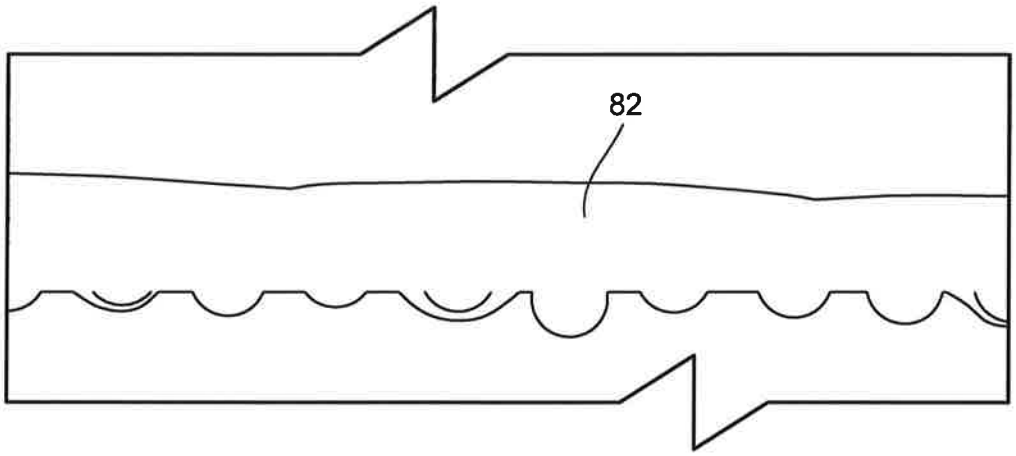


FIG. 159

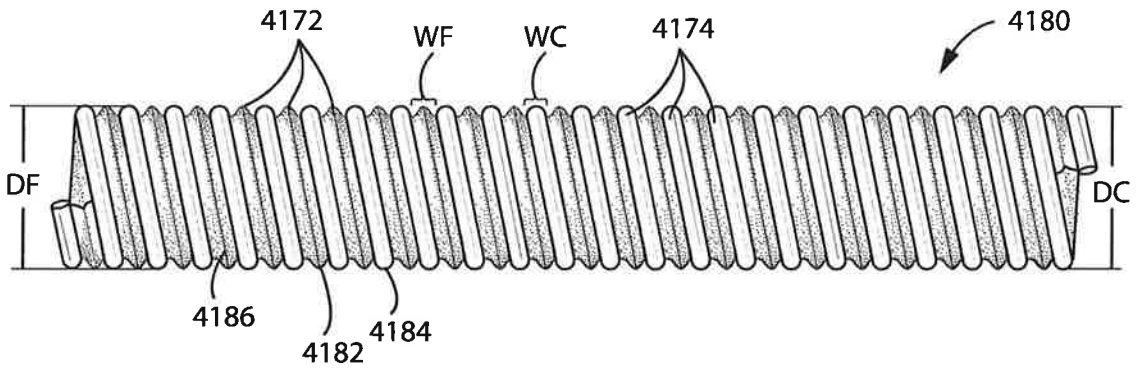


FIG. 160

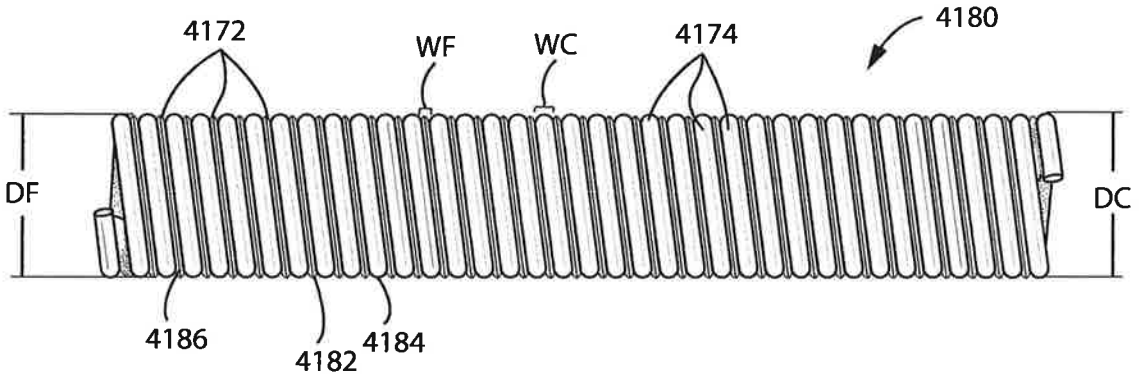


FIG. 161

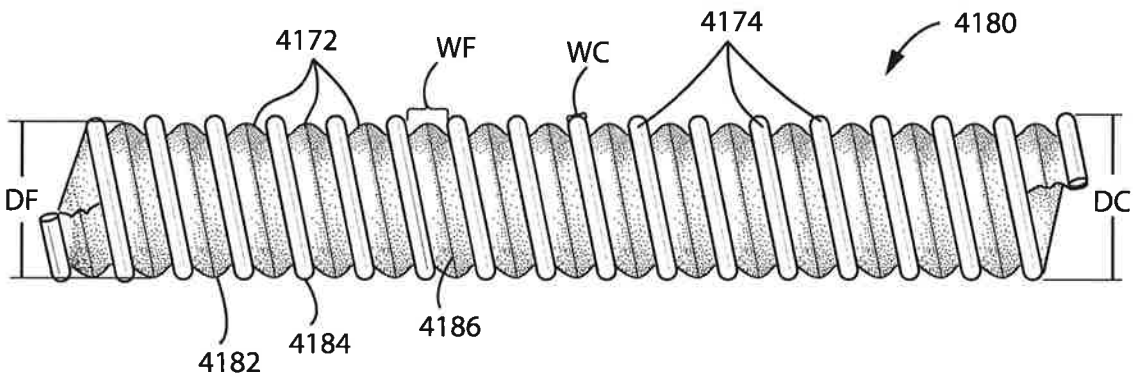


FIG. 162

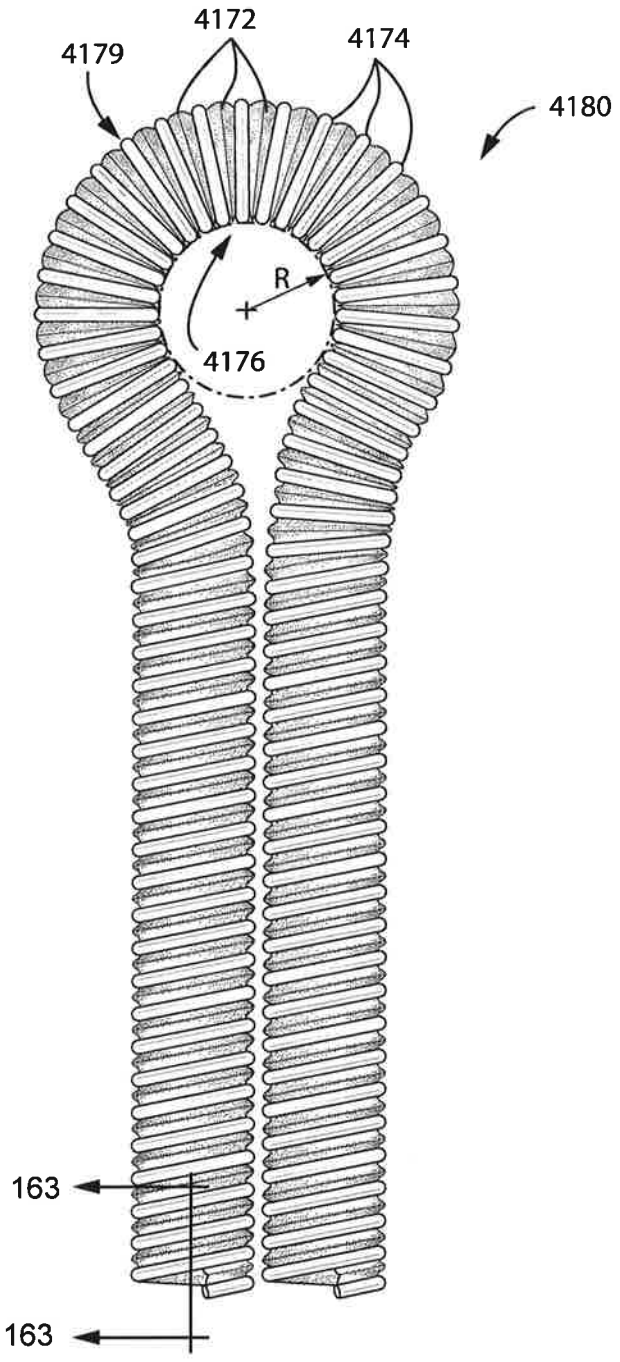
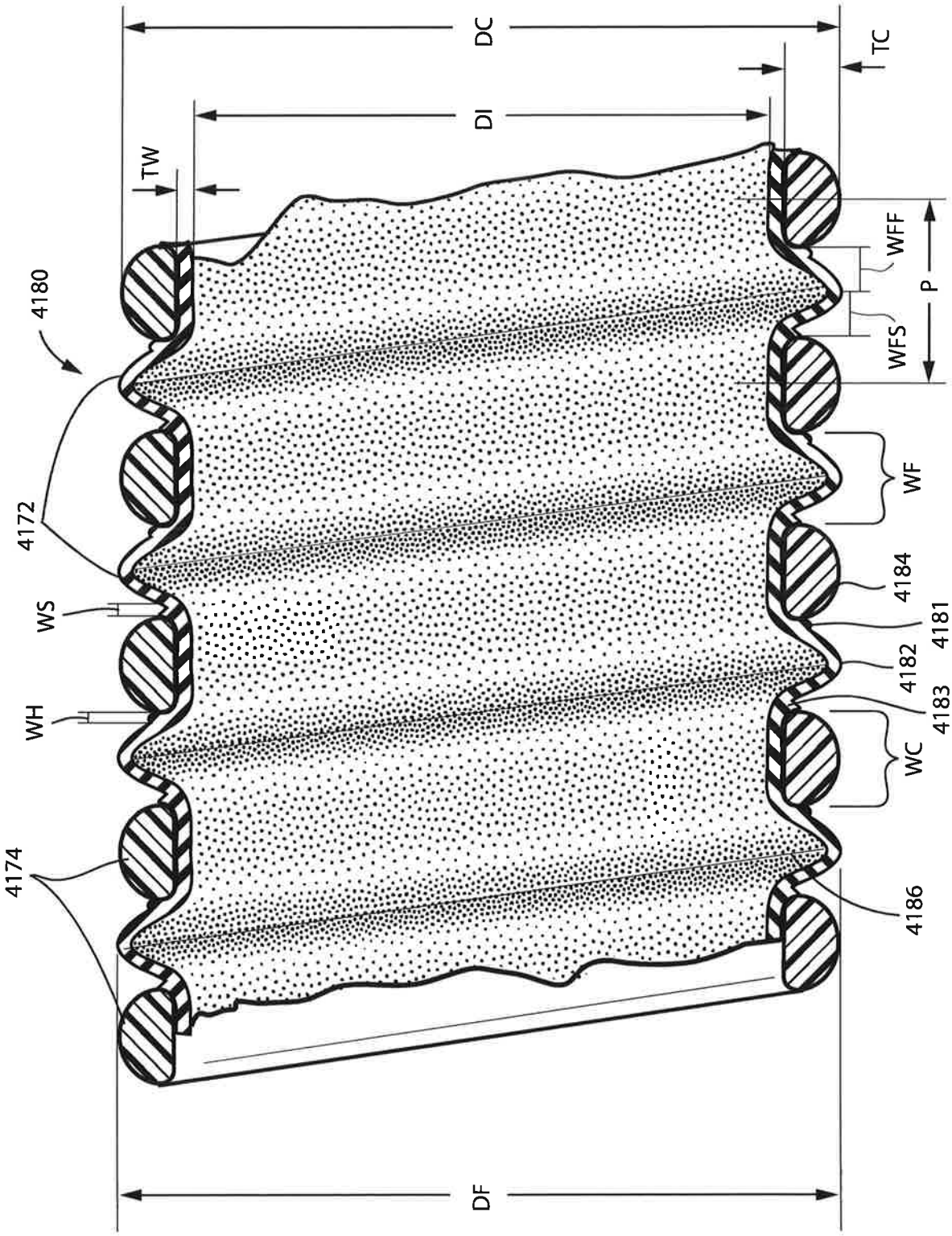


FIG. 163

FIG. 164


DC
TC
DI
TW
WFF
P
WFS
4180
WF
4172
4184
WS
4181
4182
WH
4183
WC
4174
4186
DF

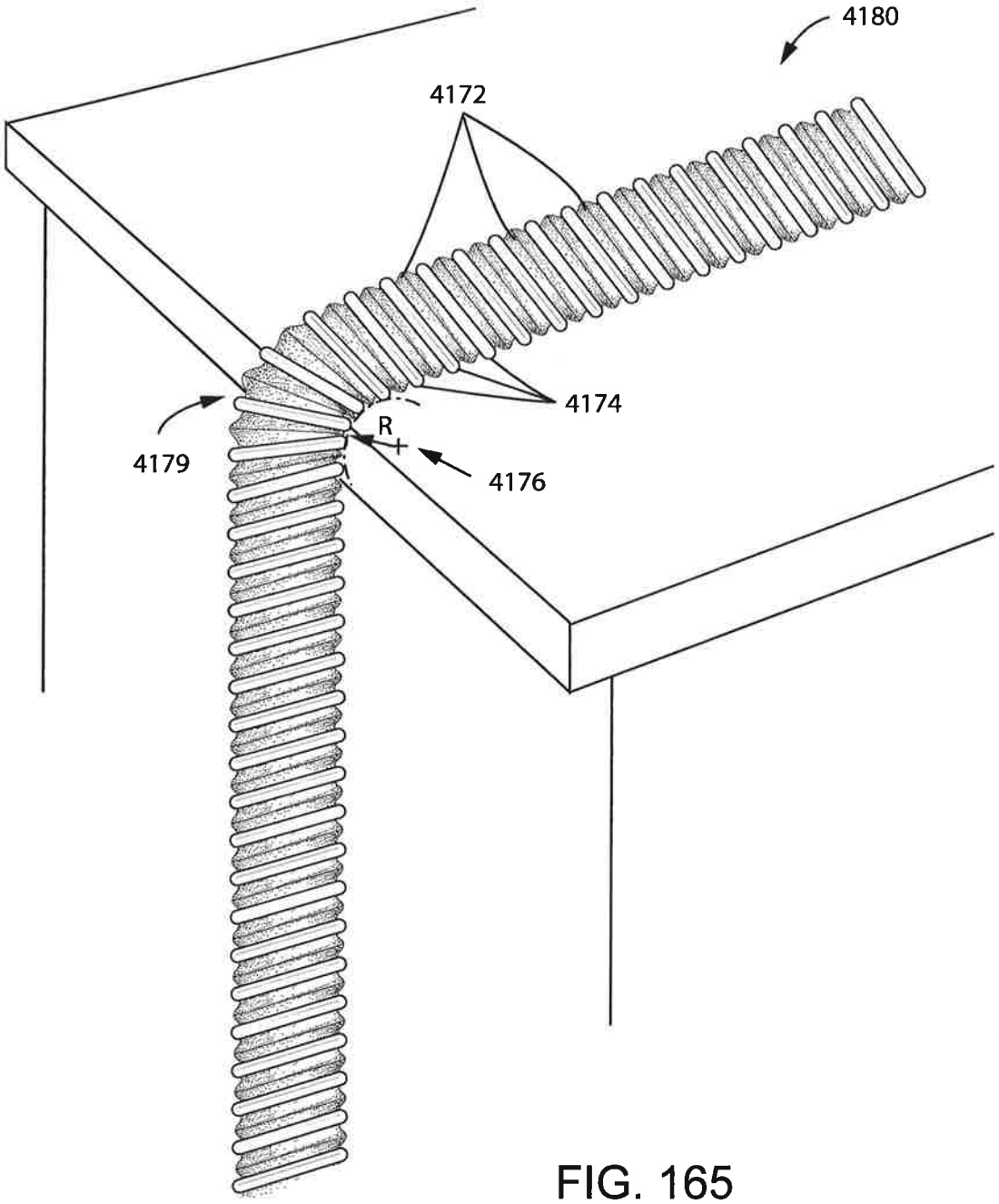


FIG. 165

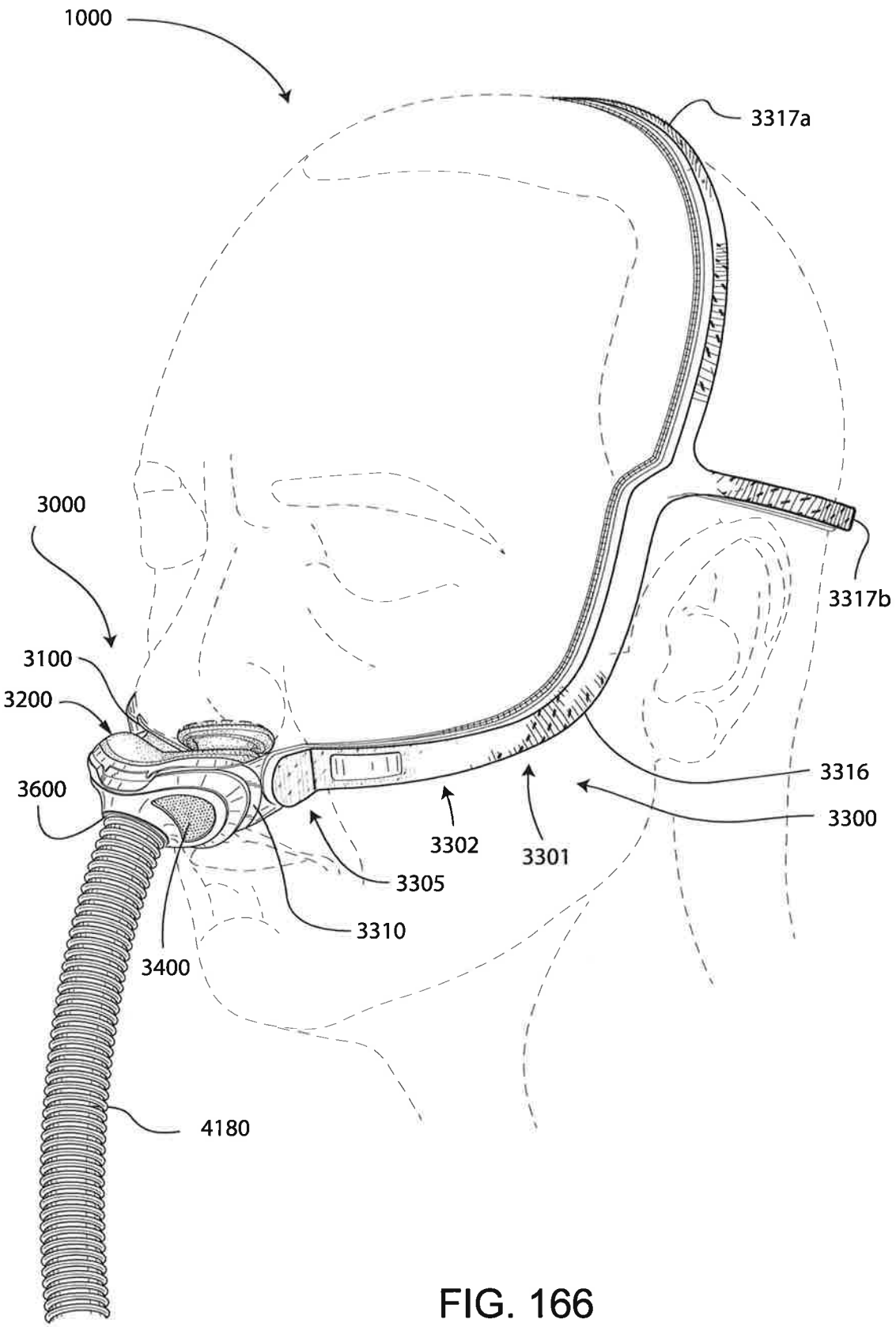

1000
3317a
3000
3317b
3100
3200
3600
3316
3300
3302
3301
3305
3310
3400
4180

FIG. 166

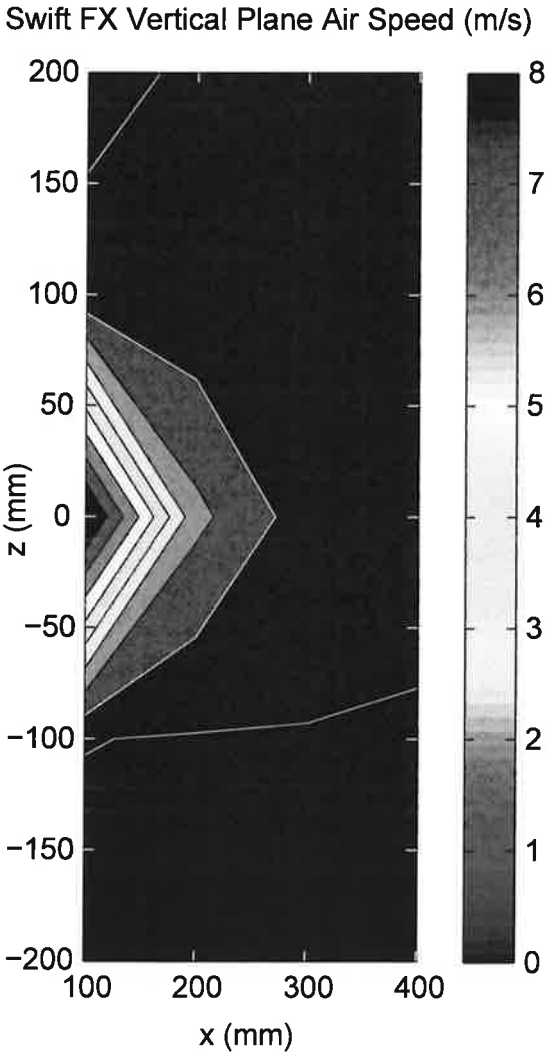


FIG. 167

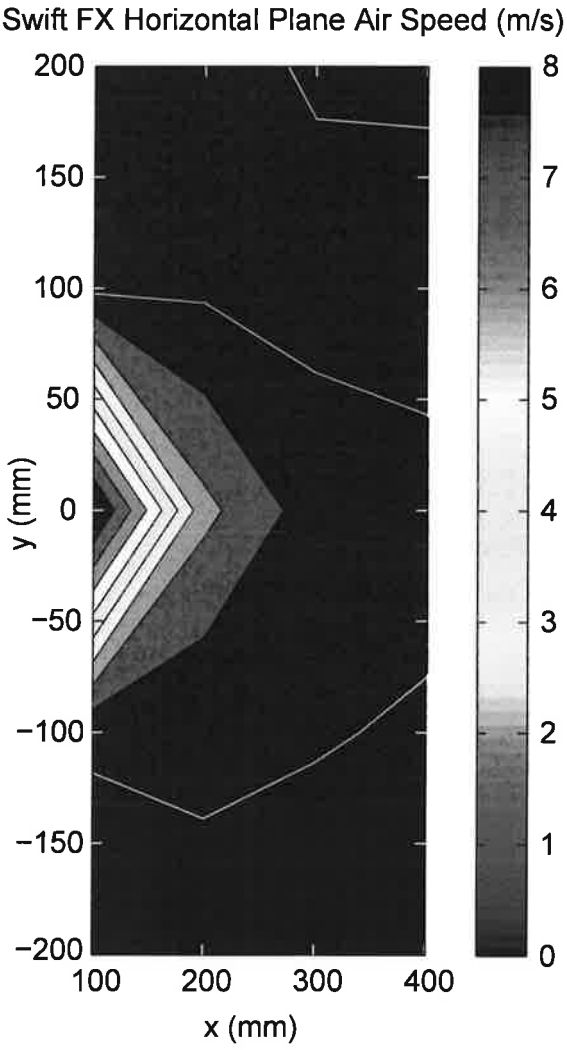


FIG. 168

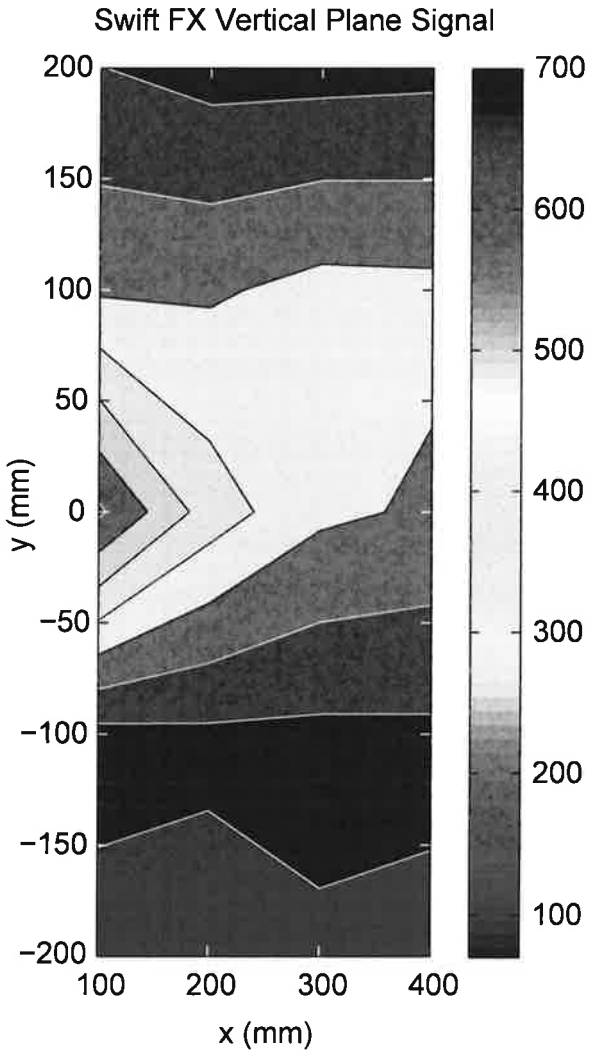


FIG. 169

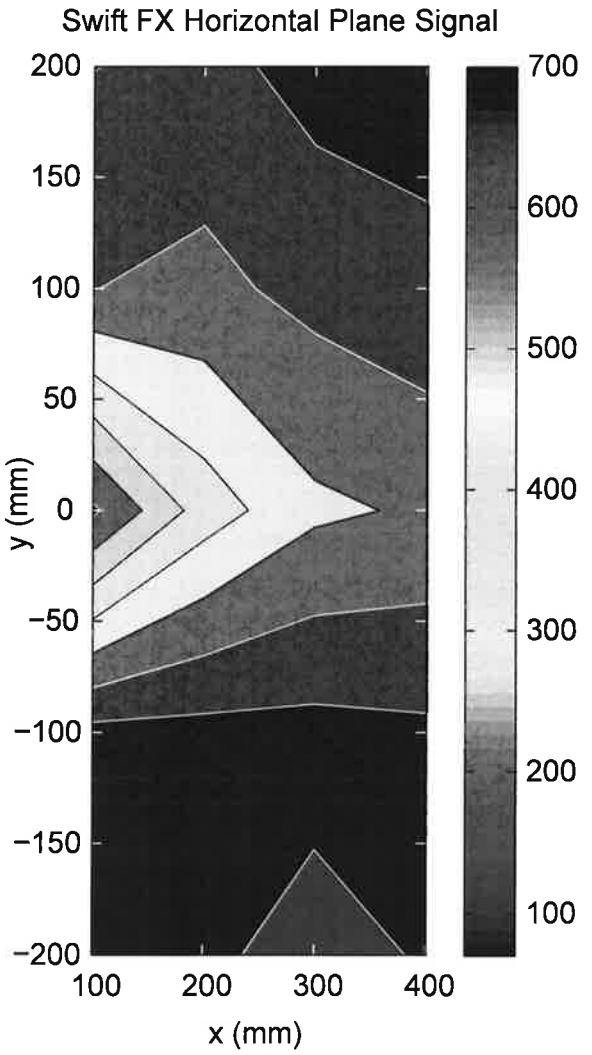


FIG. 170

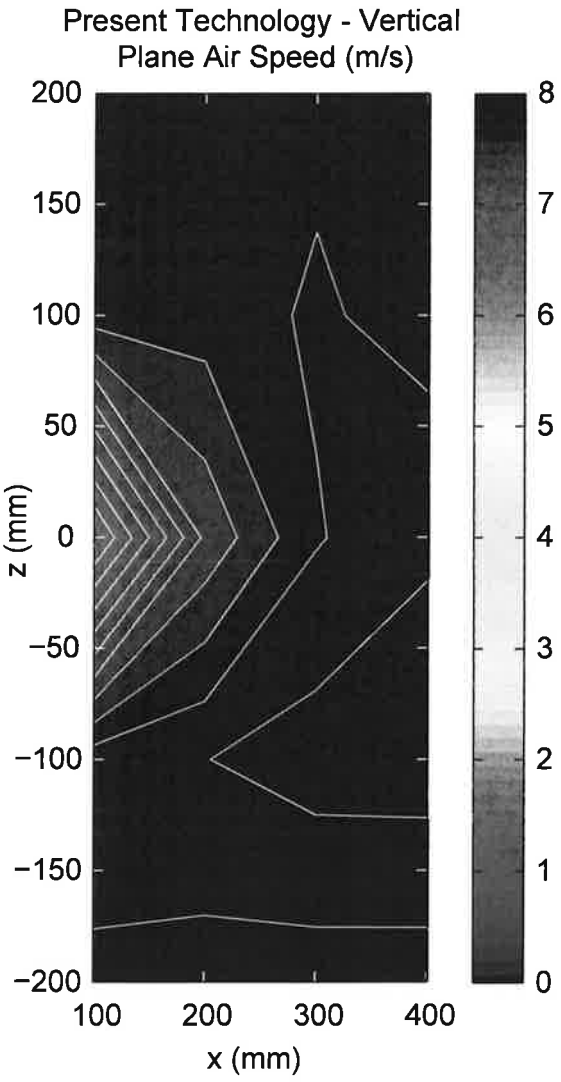


FIG. 171

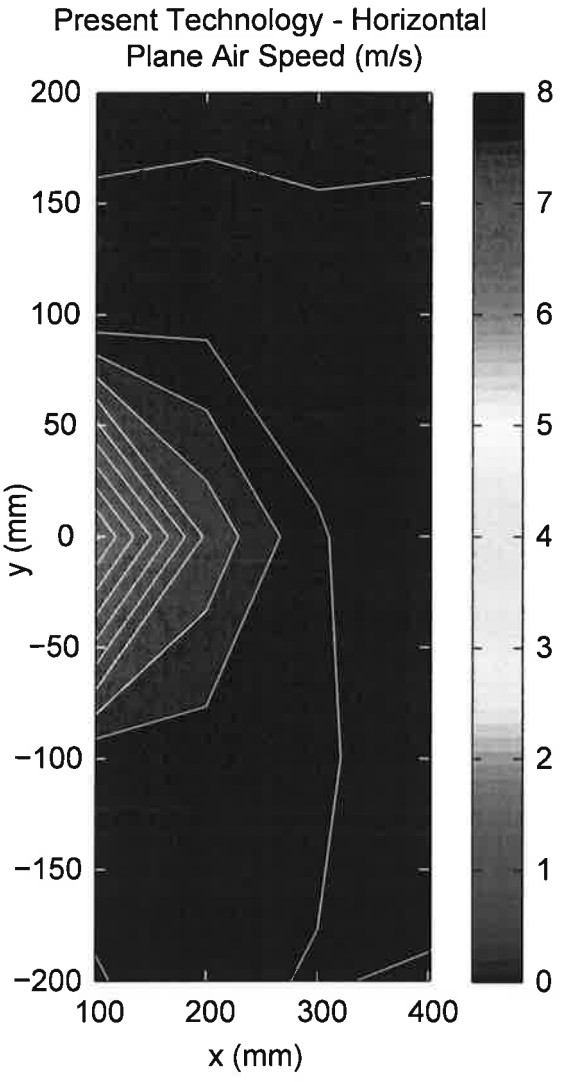


FIG. 172

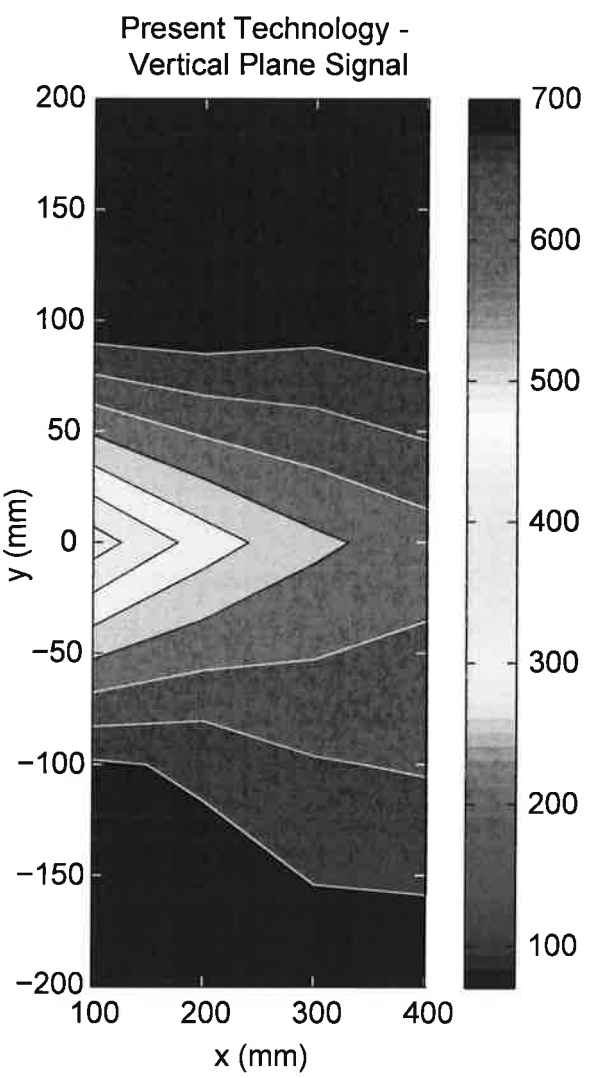


FIG. 173

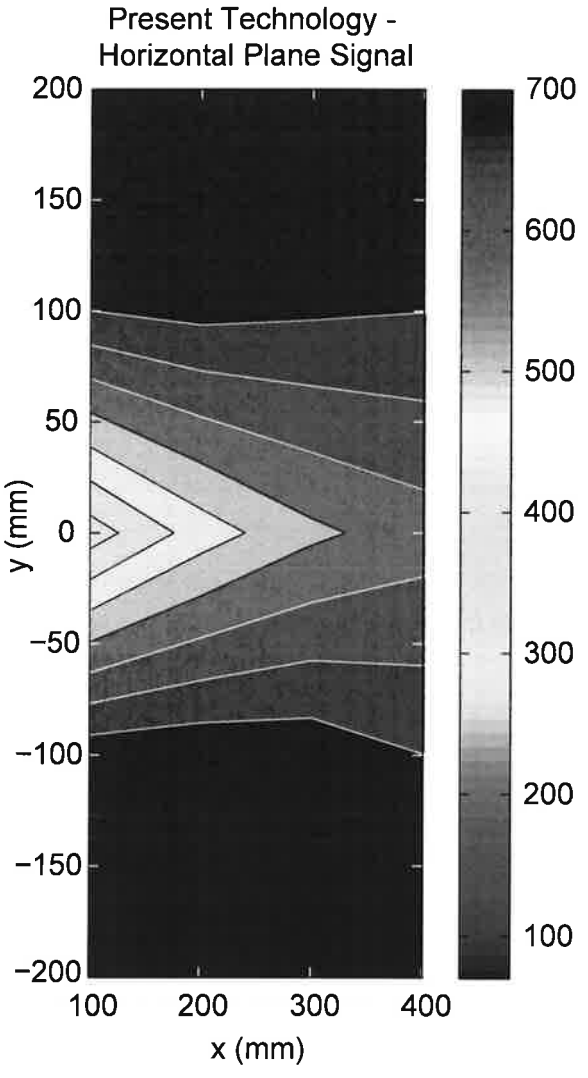


FIG. 174

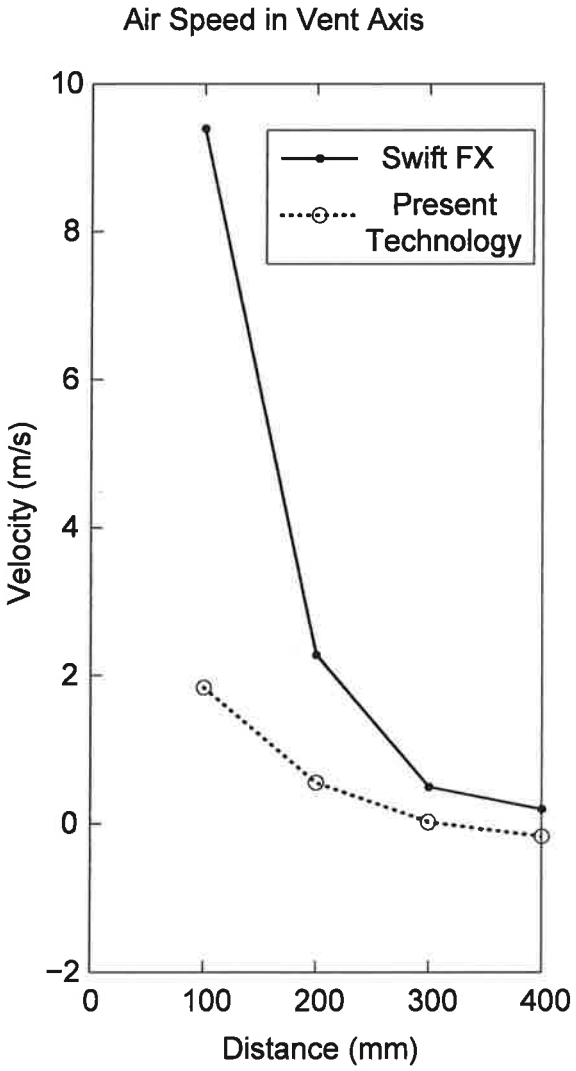

Air Speed in Vent Axis
Swift FX
Present Technology
Velocity (m/s)
Distance (mm)
10
8
6
4
2
0
−2
0
100
200
300
400

FIG. 175

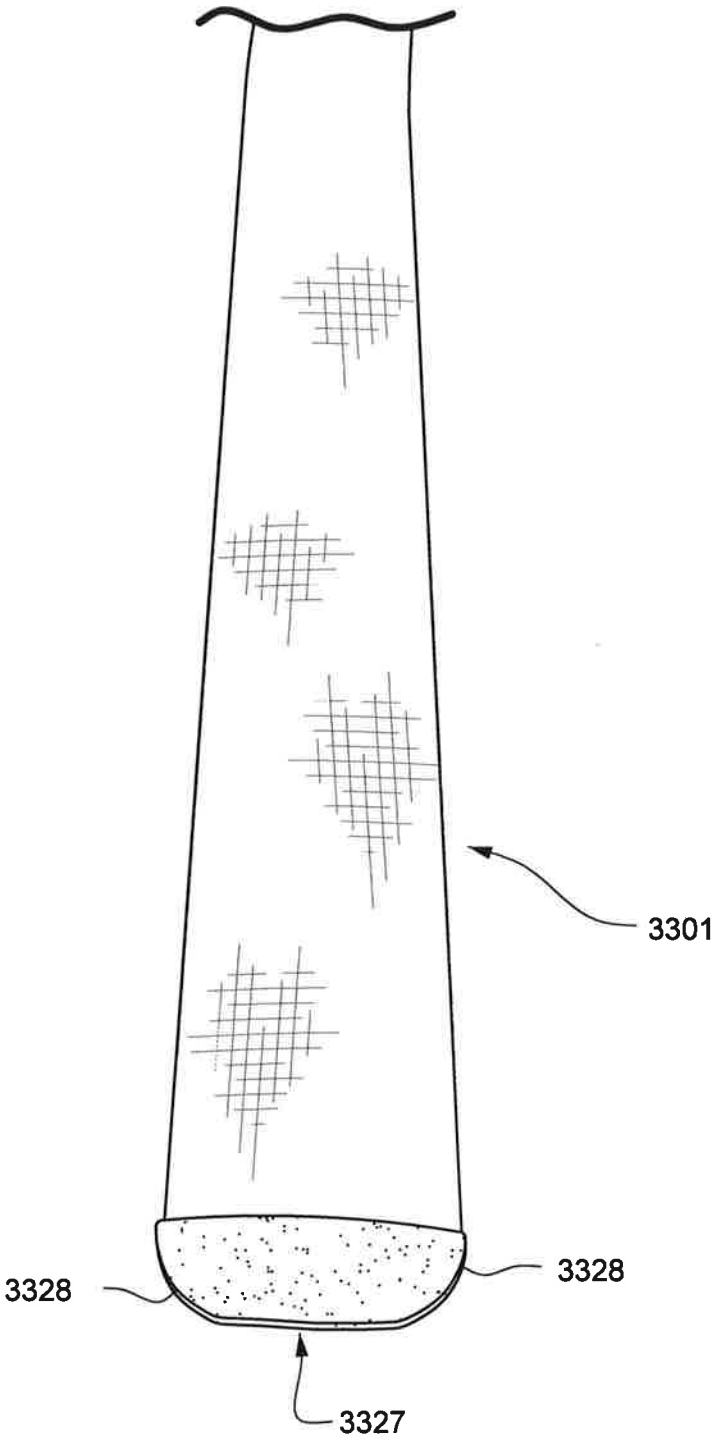


FIG. 176

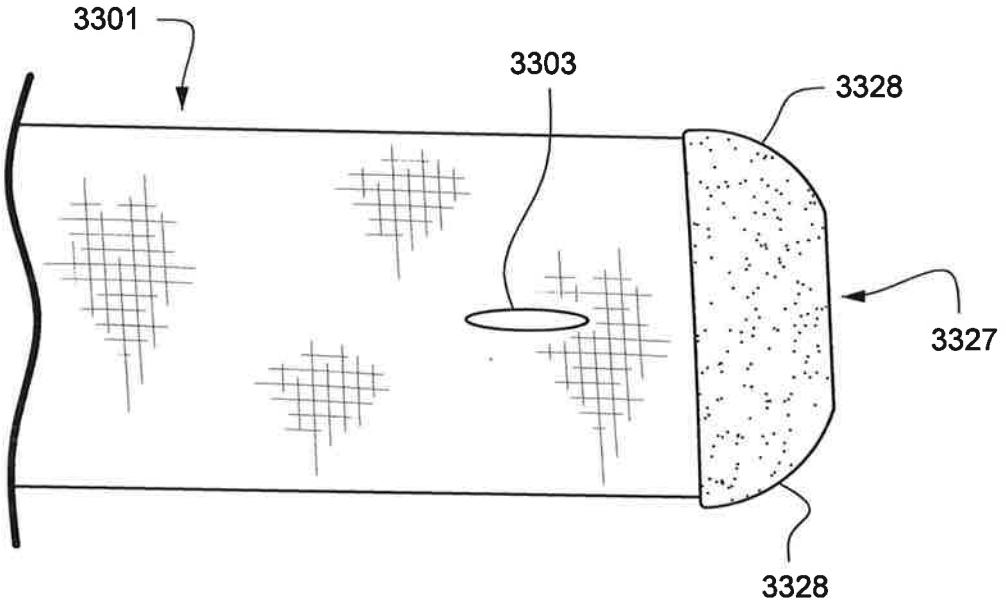


FIG. 177

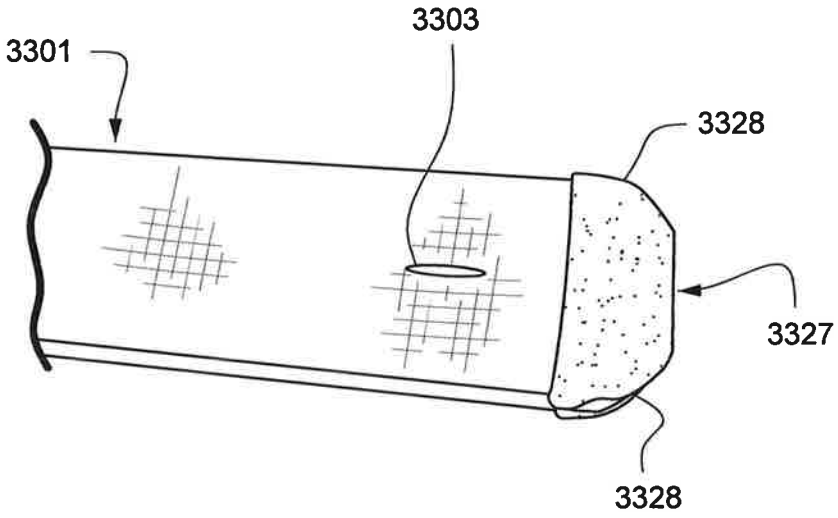


FIG. 178

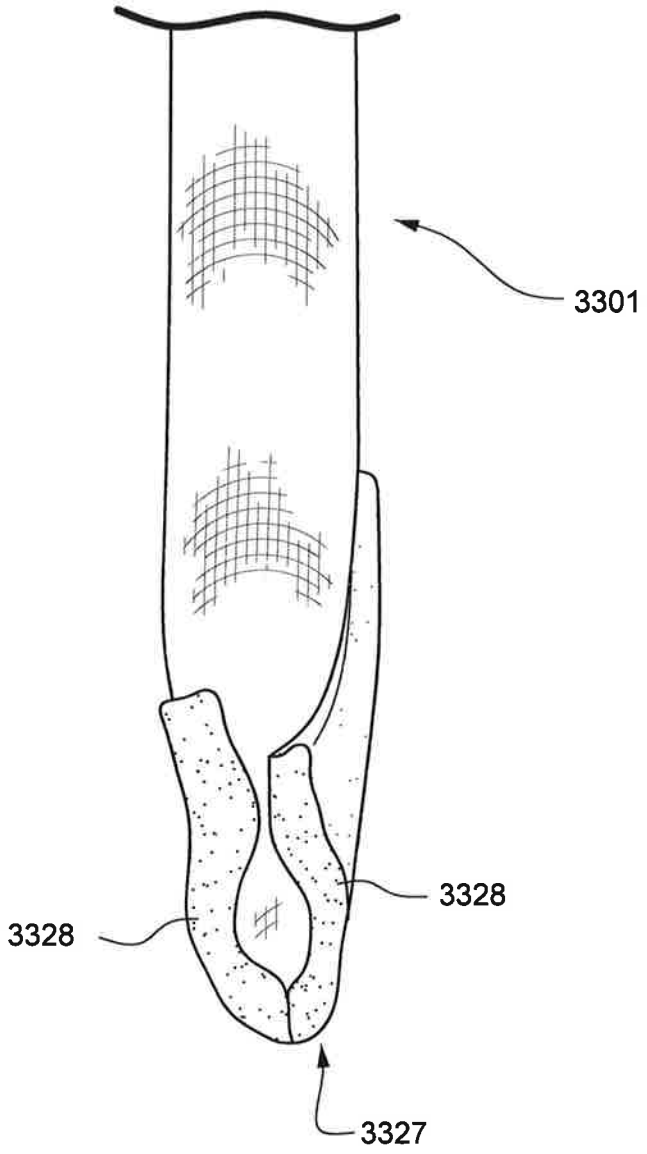


FIG. 179

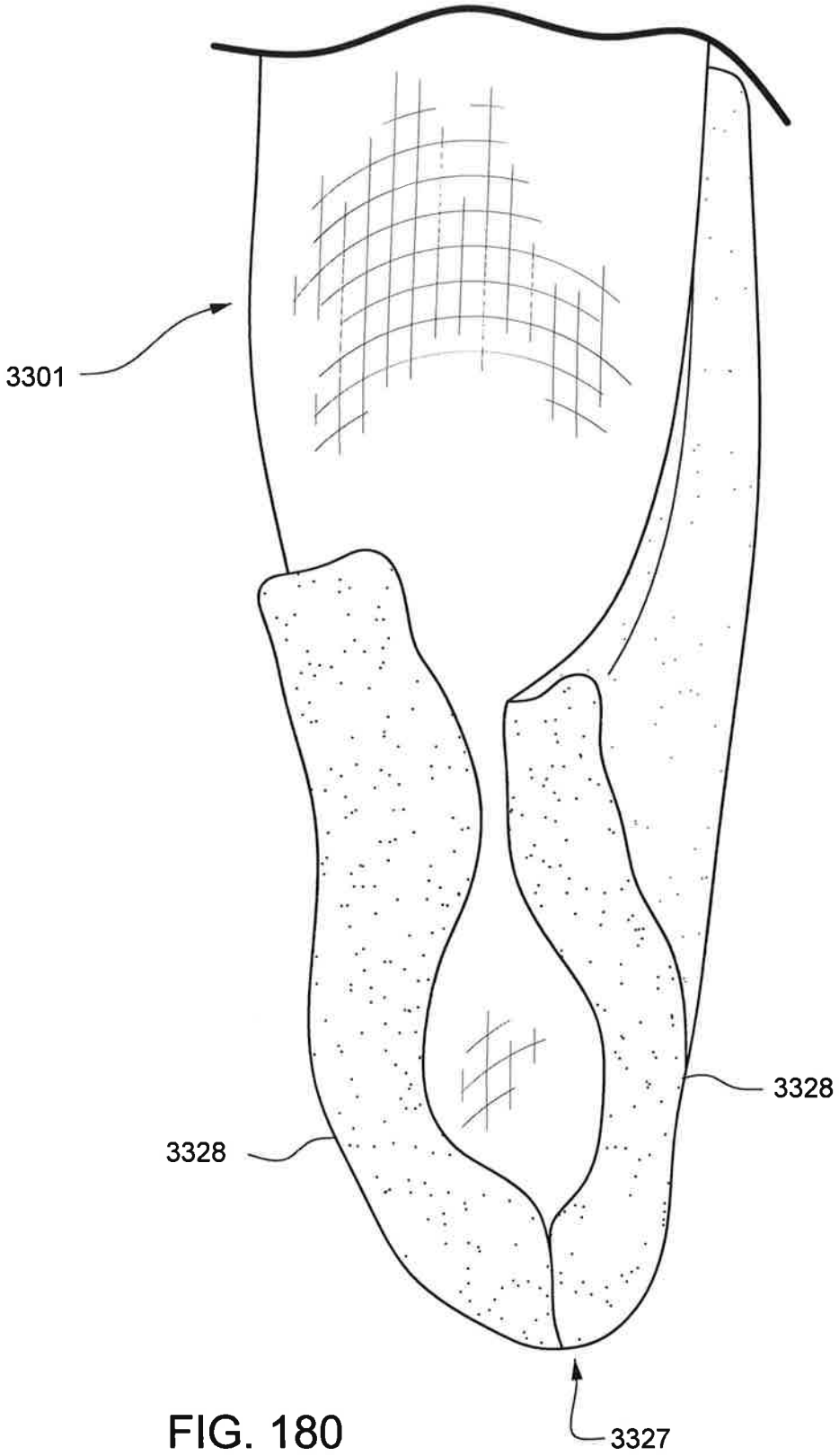


FIG. 180

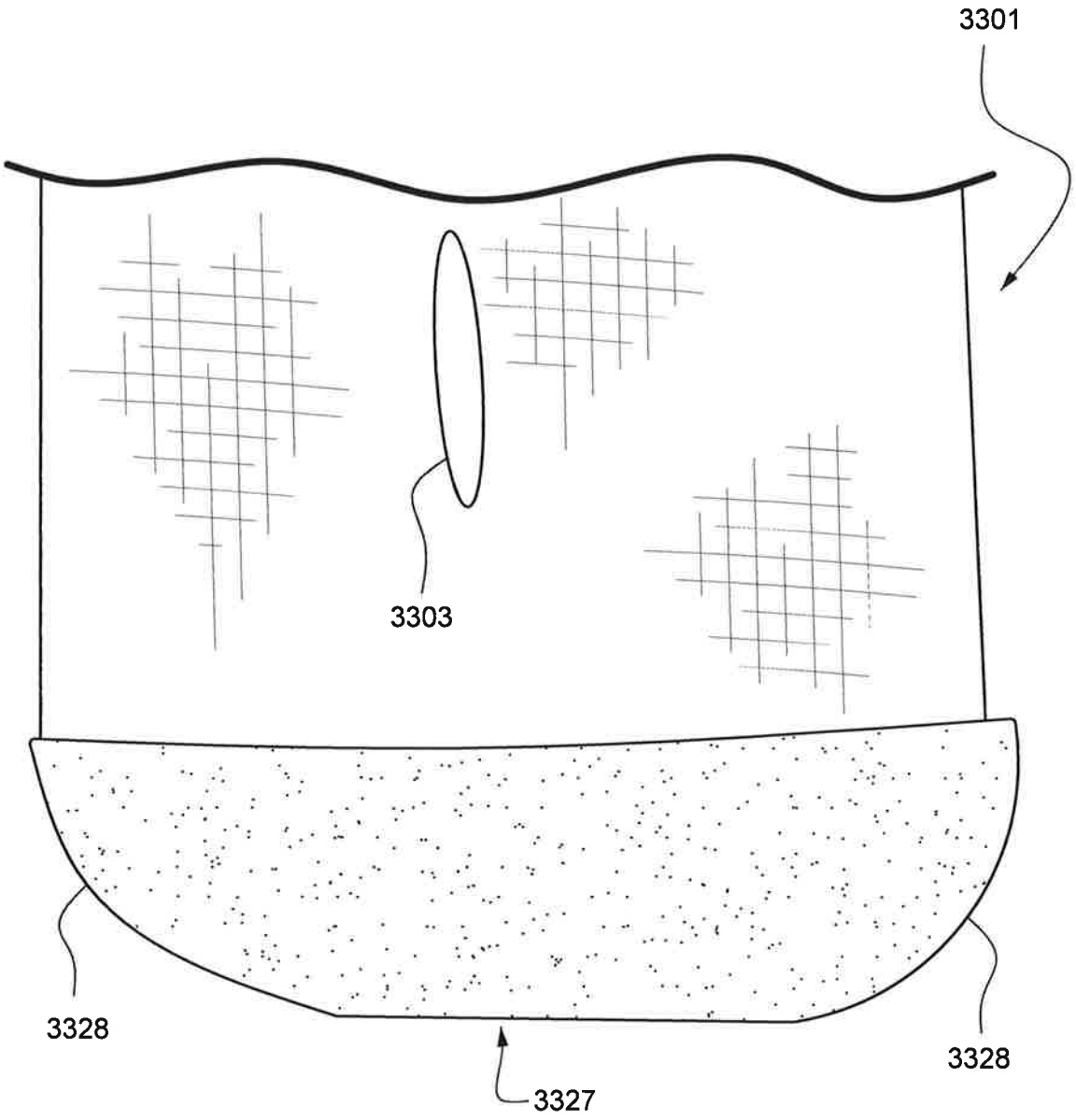


FIG. 181

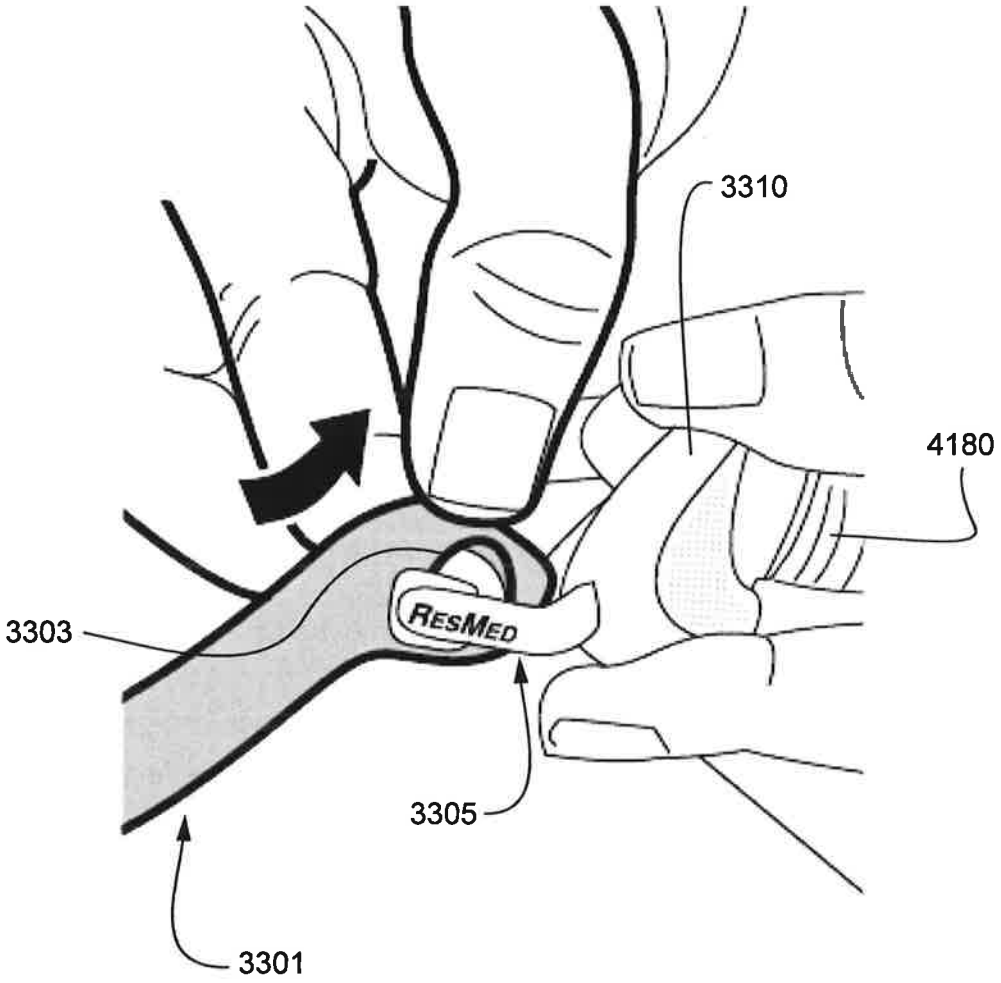


FIG. 182

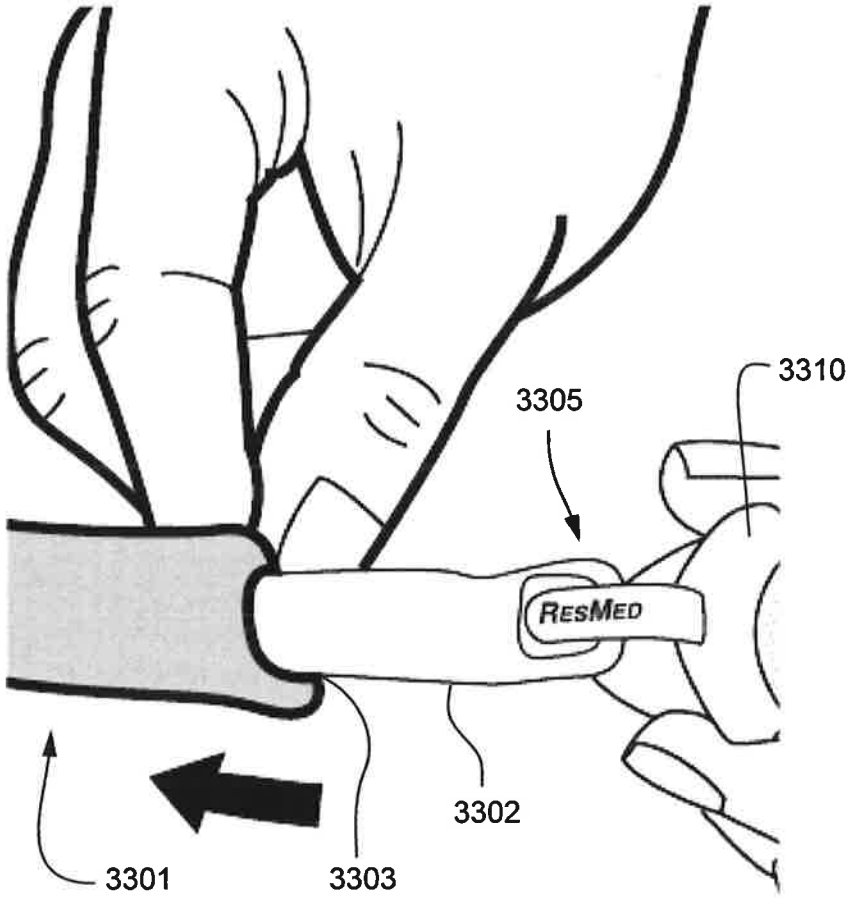


FIG. 183

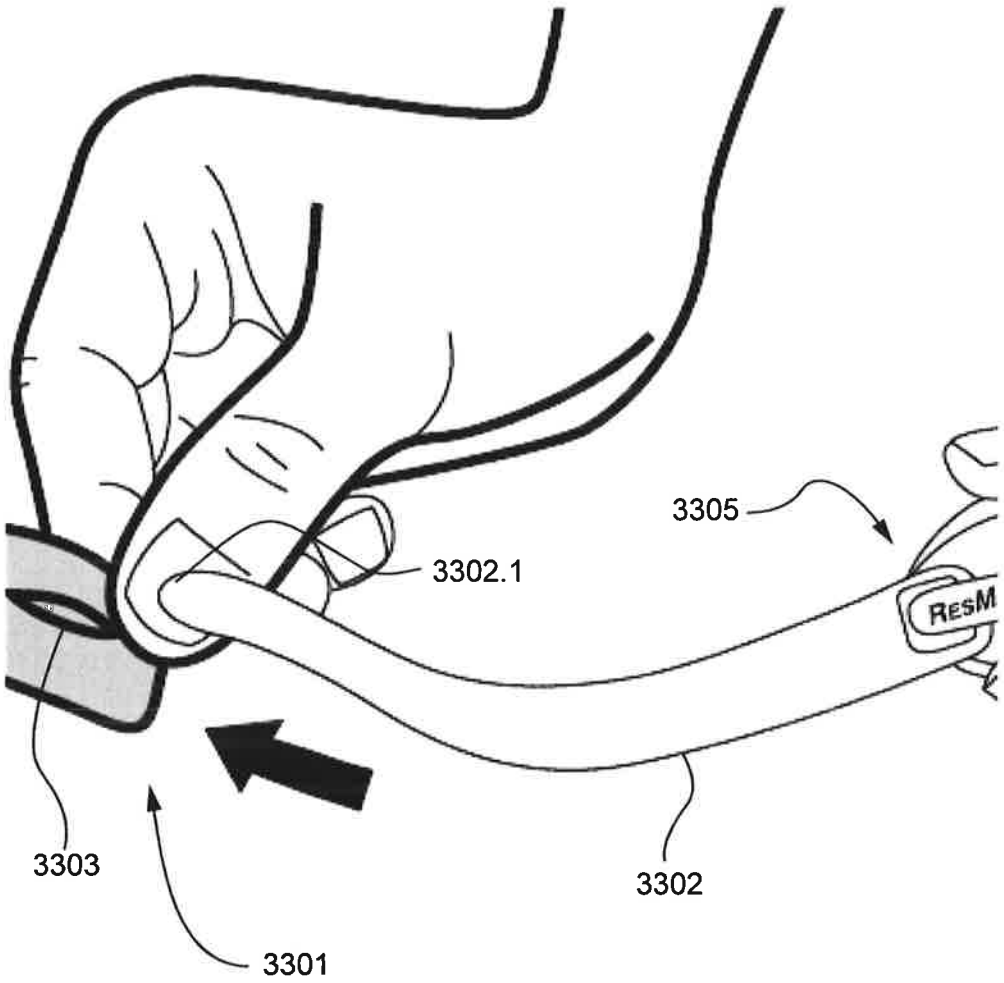


FIG. 184

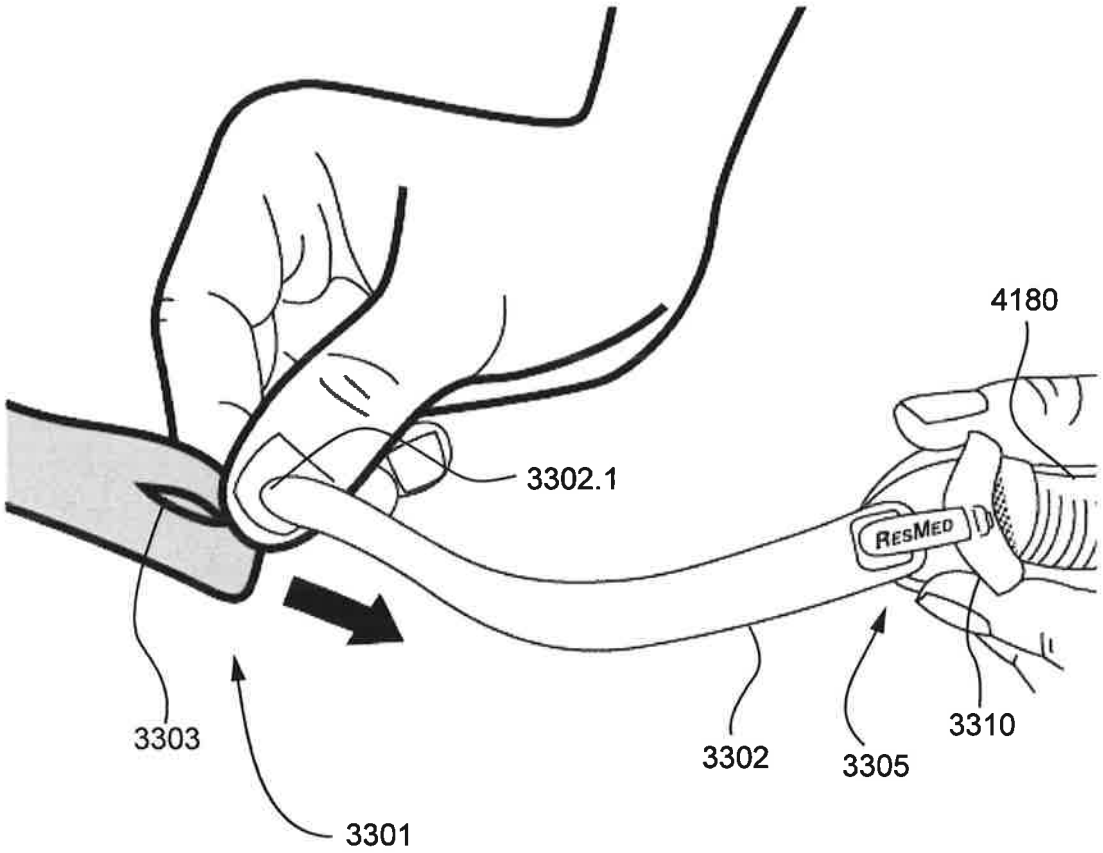


FIG. 185

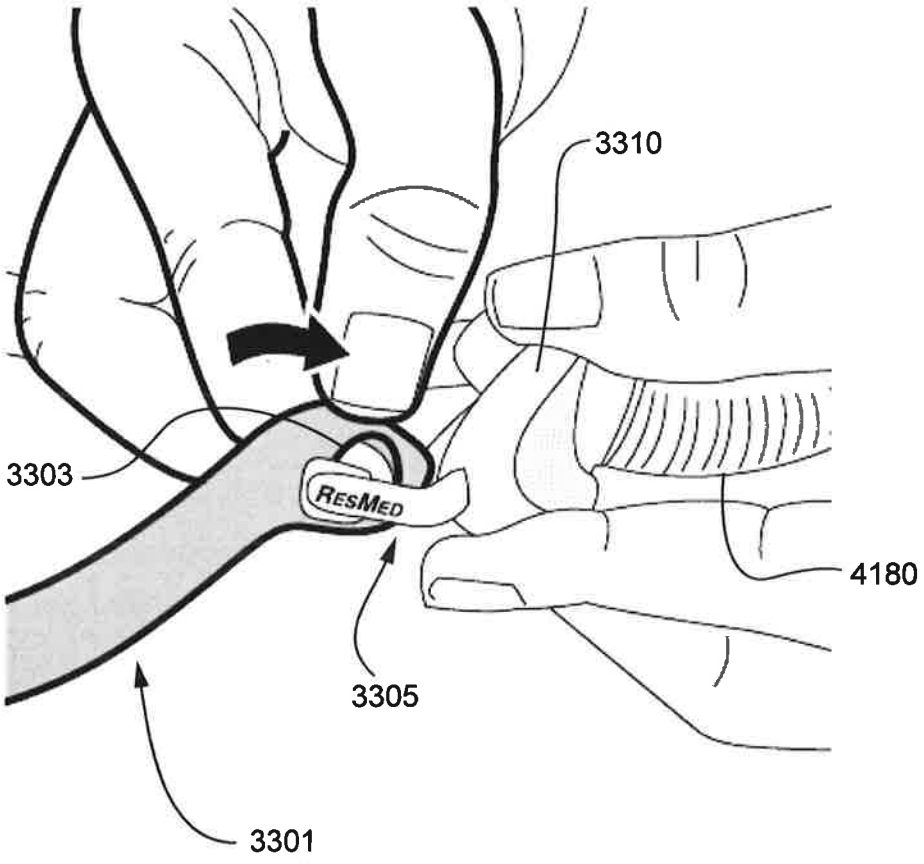


FIG. 186

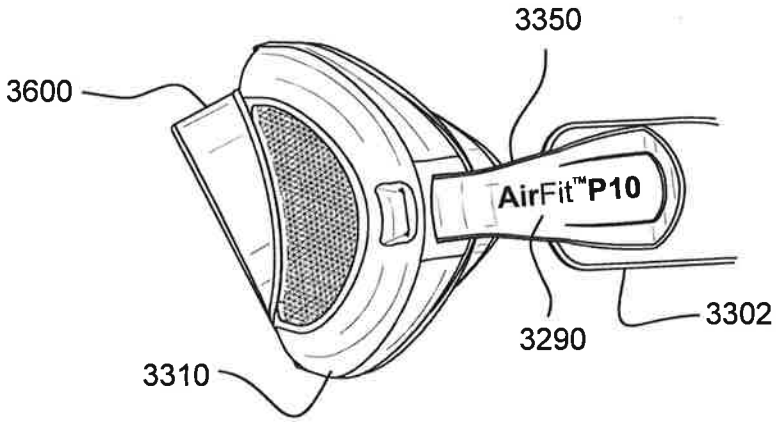


FIG. 187

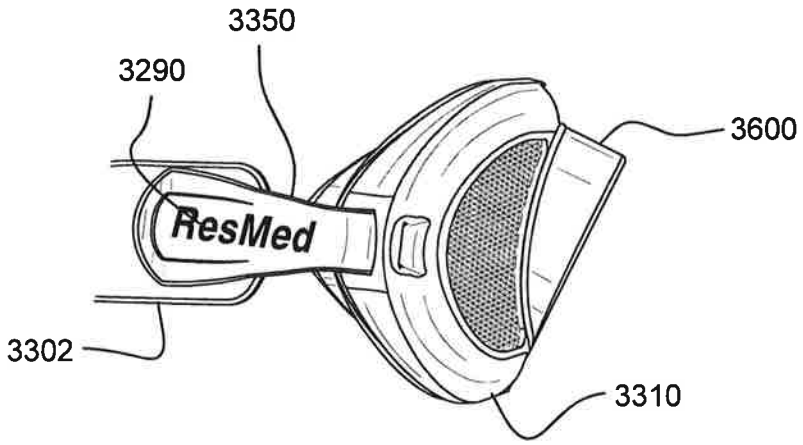


FIG. 188

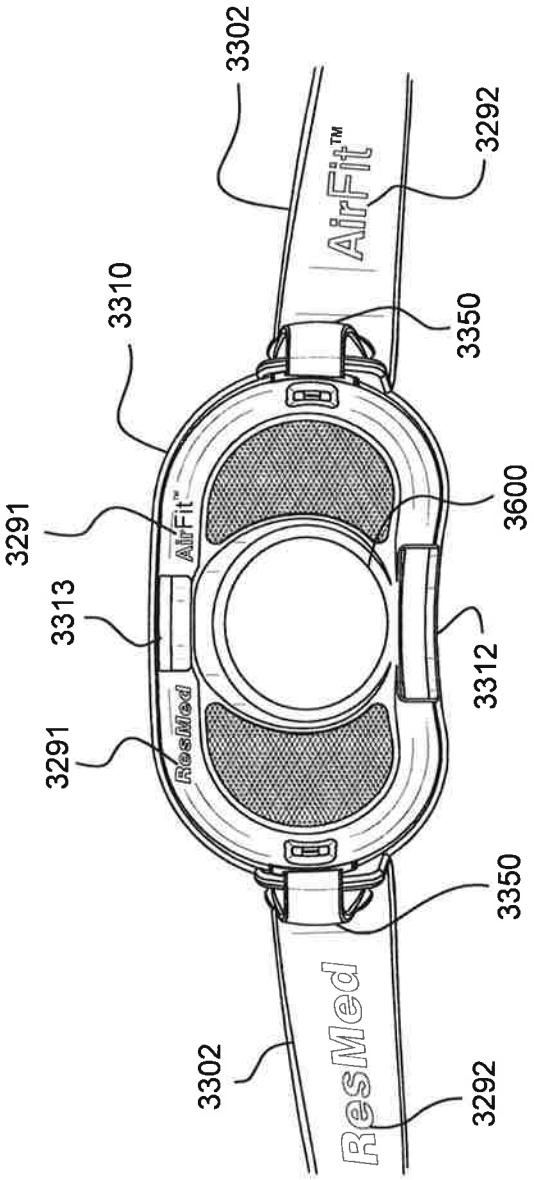

3302
3292
3310
3350
3291
3600
3313
3312
3291
3350
3302
3292
AirFit™
ResMed

FIG. 189

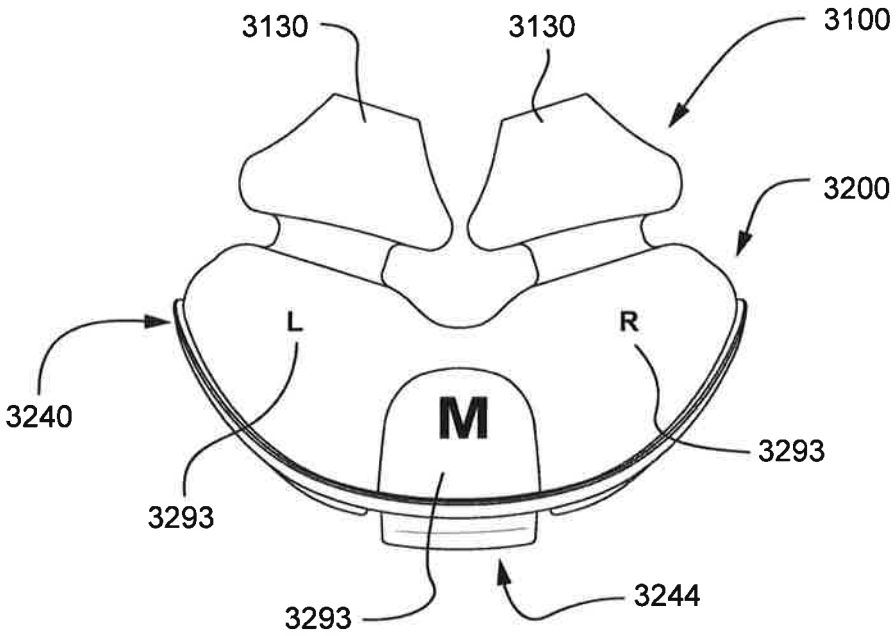


FIG. 190

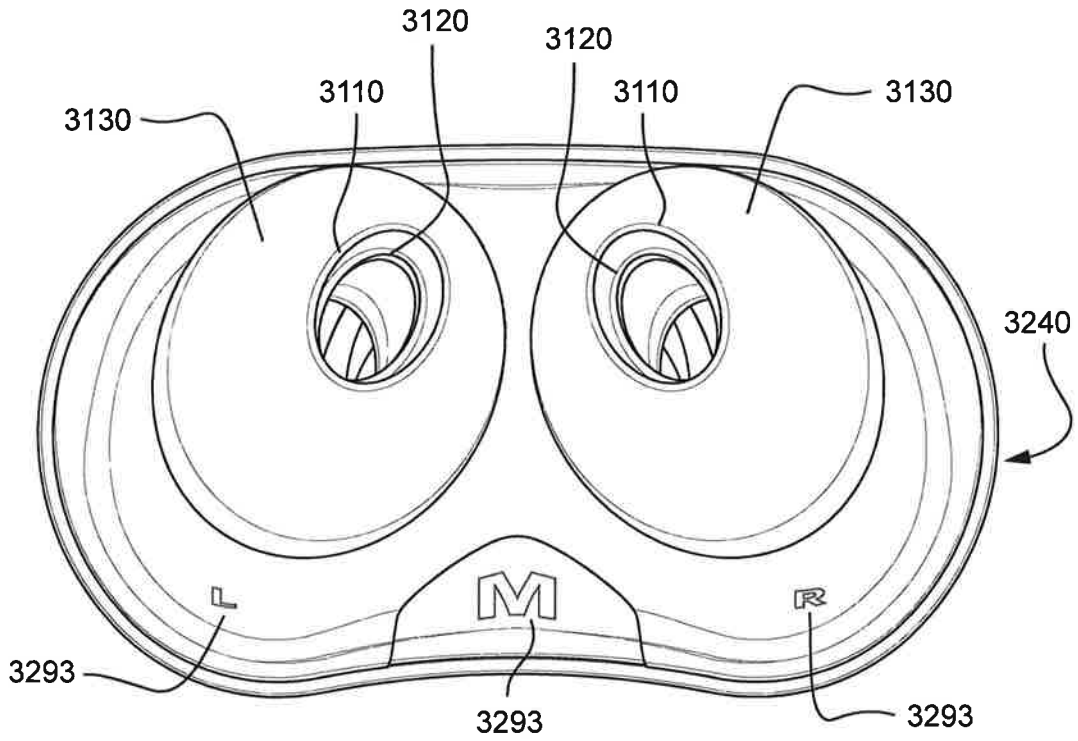


FIG. 191

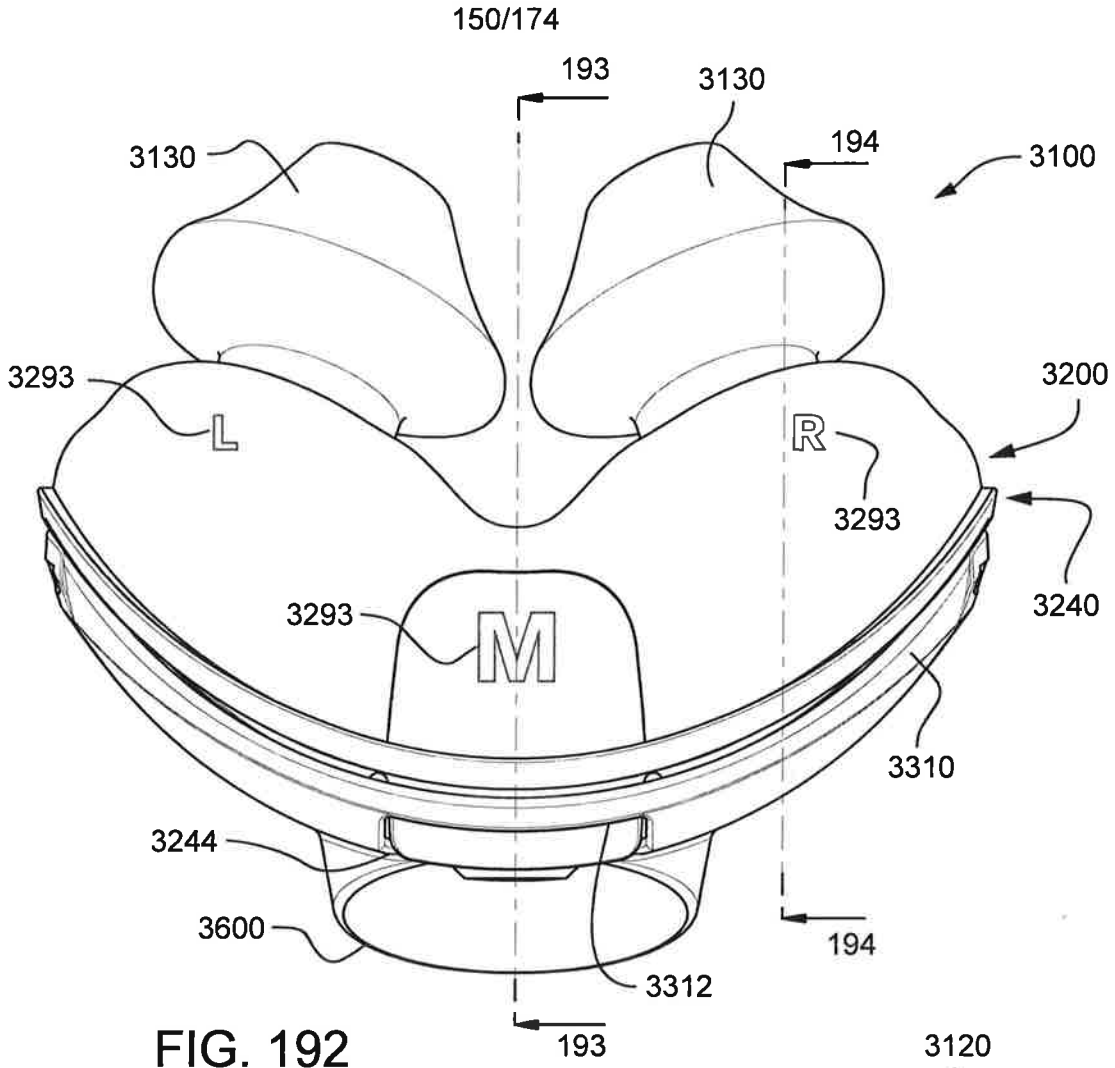


FIG. 192

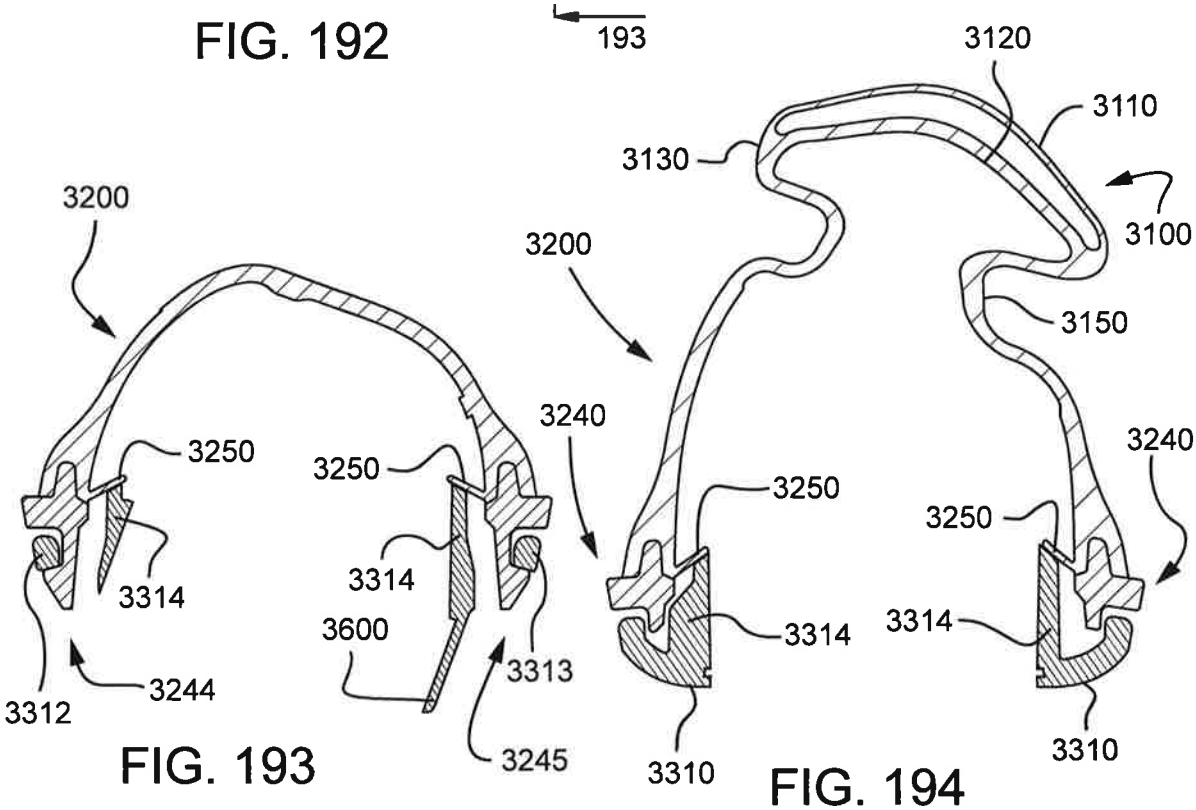


FIG. 193

FIG. 194

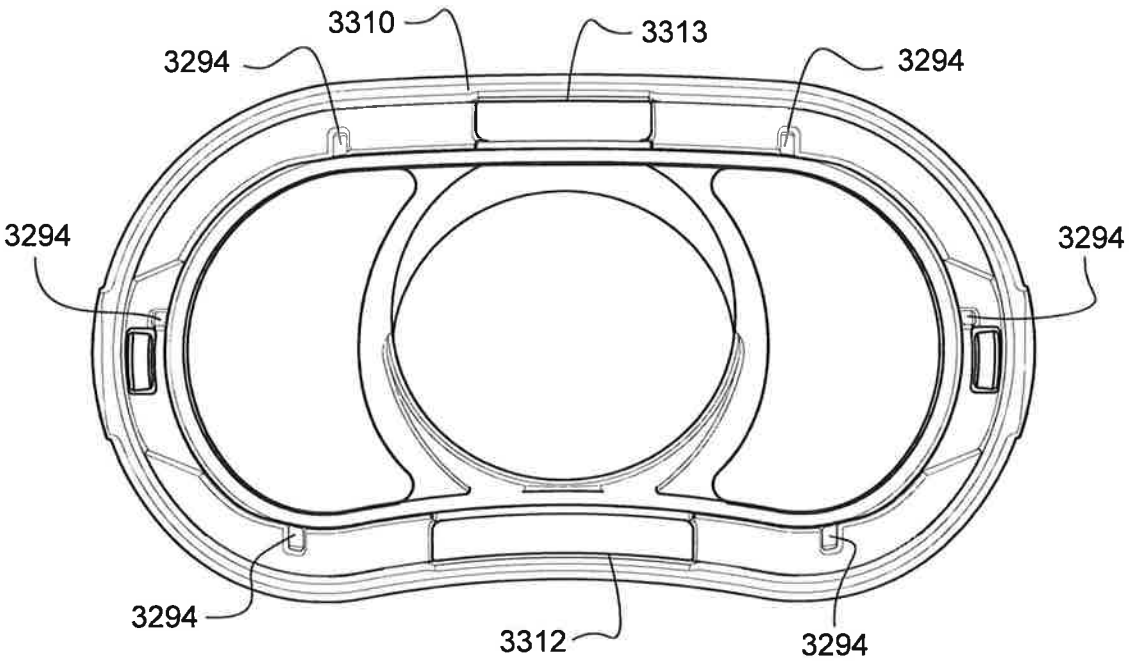


FIG. 195

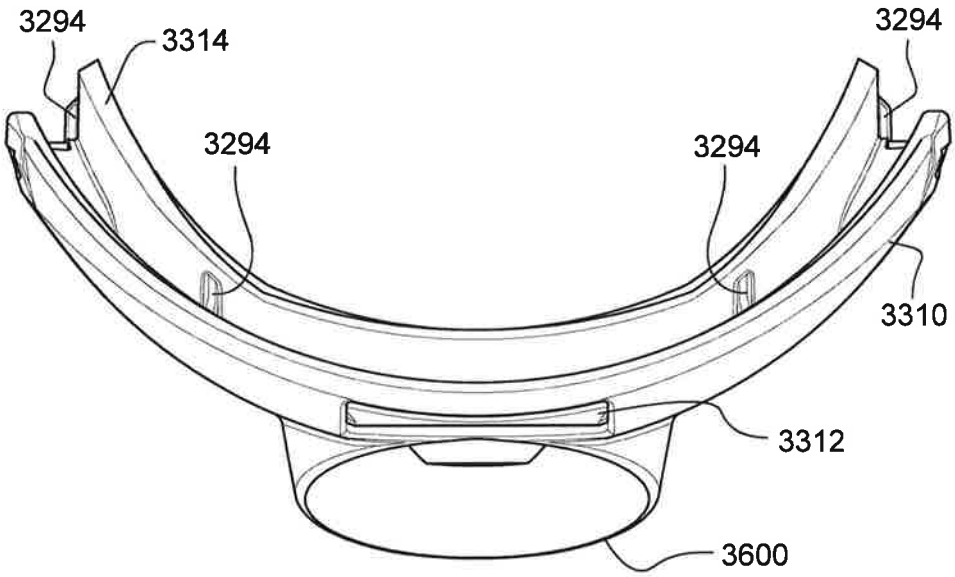


FIG. 196

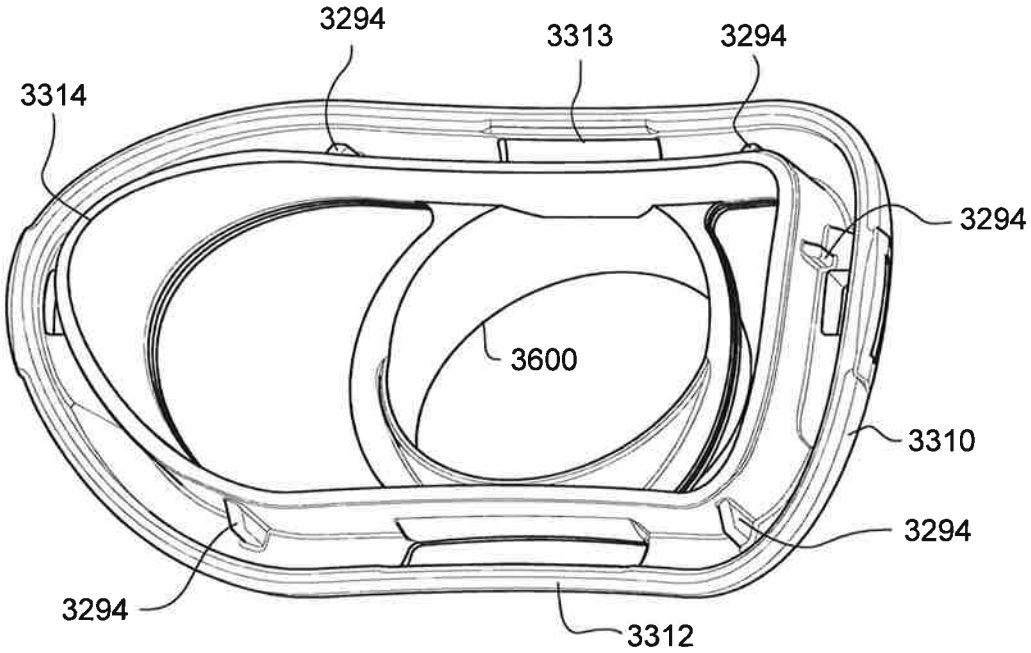


FIG. 197

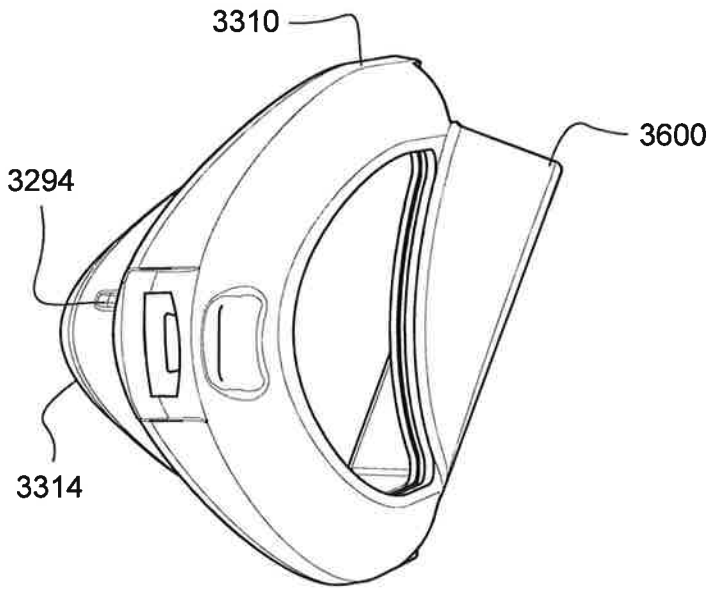


FIG. 198

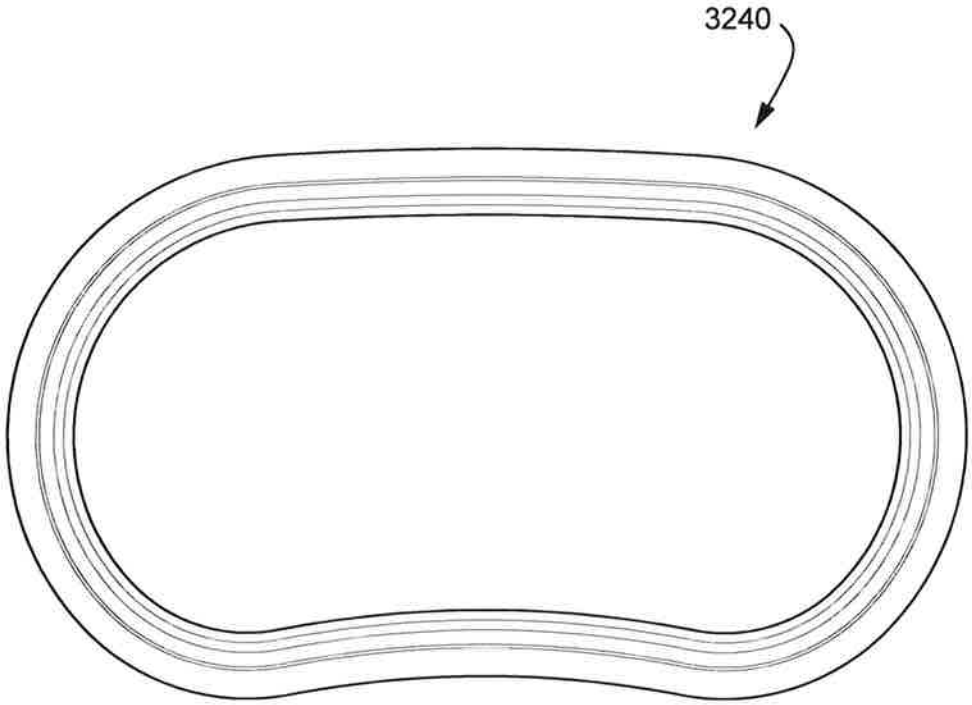


FIG. 199

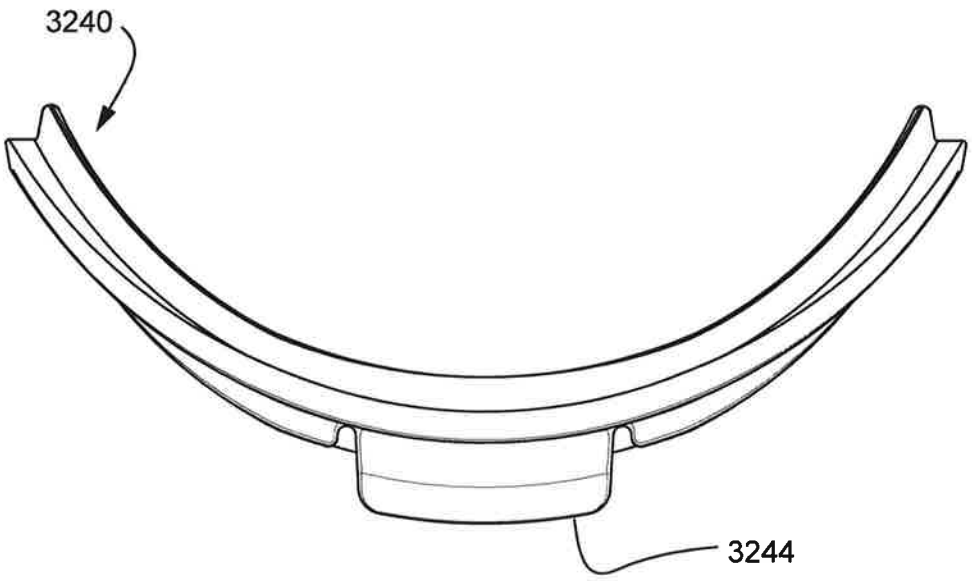


FIG. 200

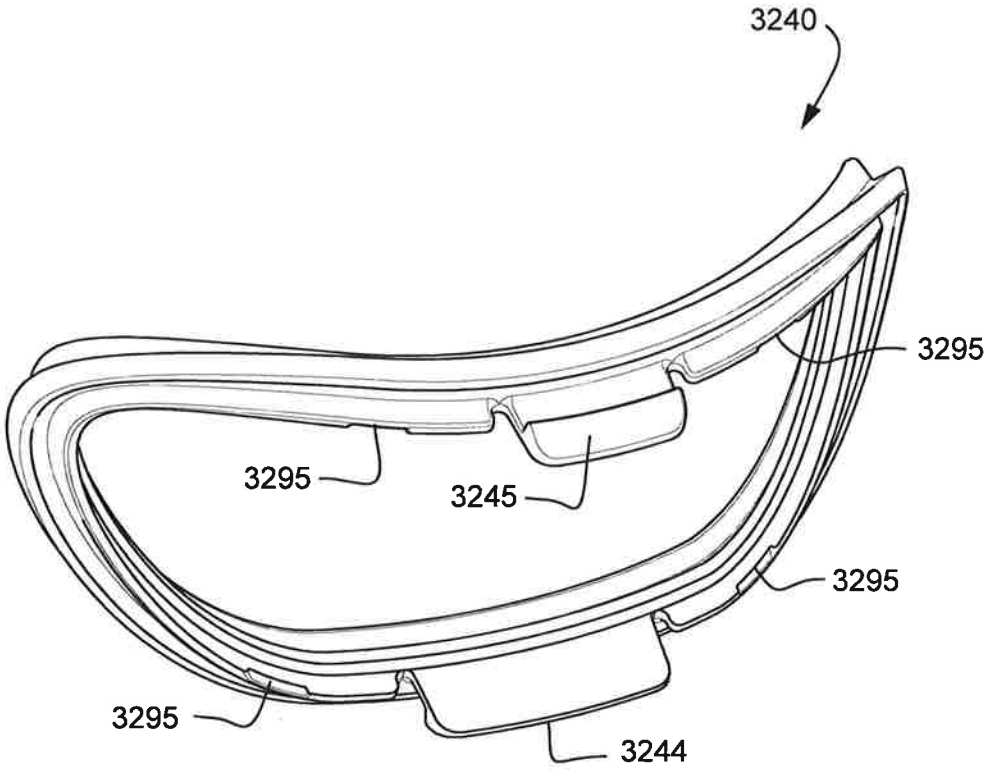


FIG. 201

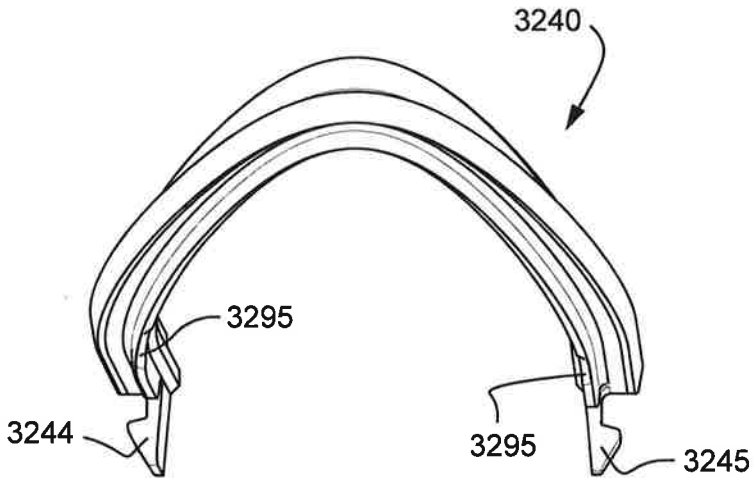


FIG. 202

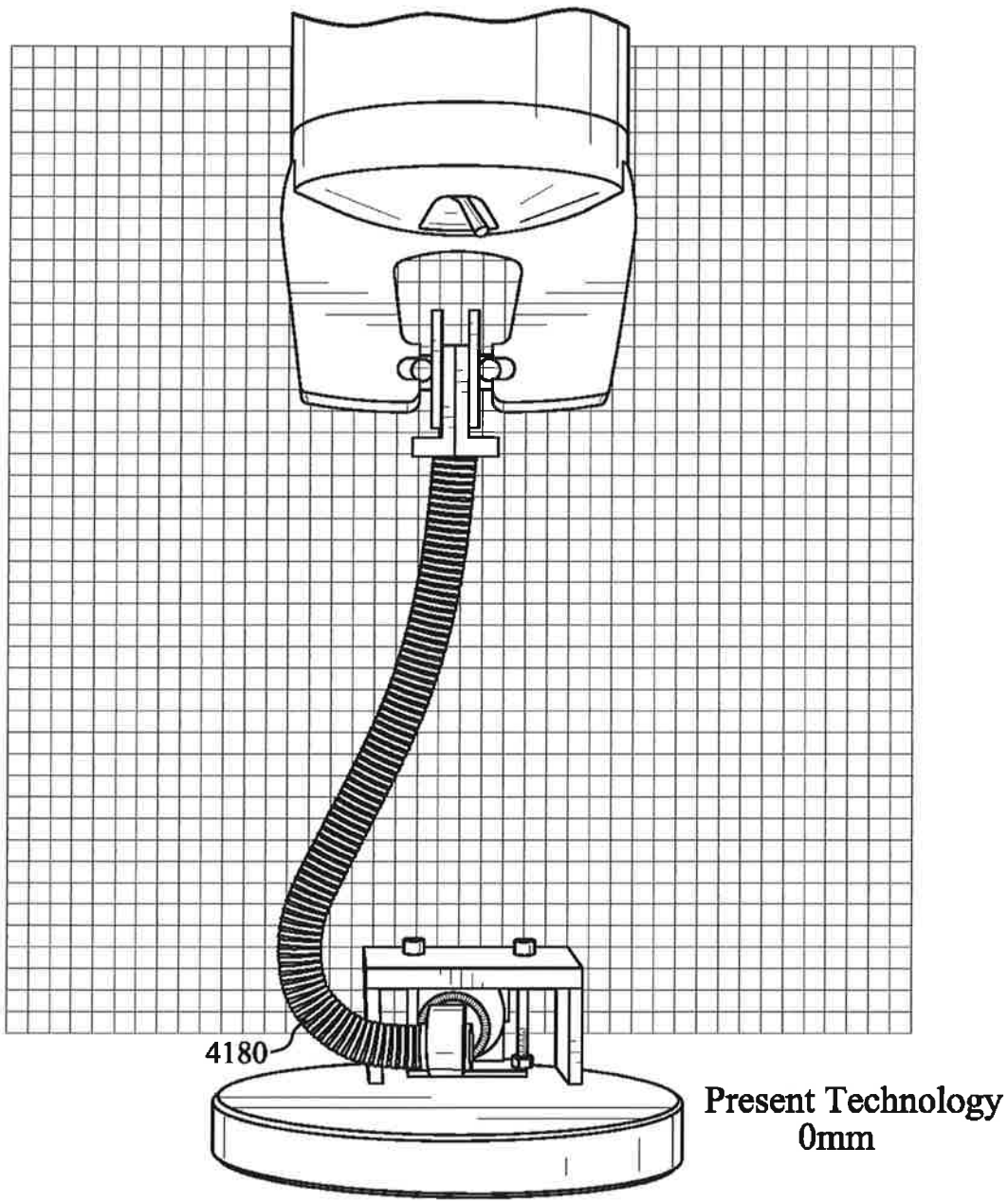


FIG. 203

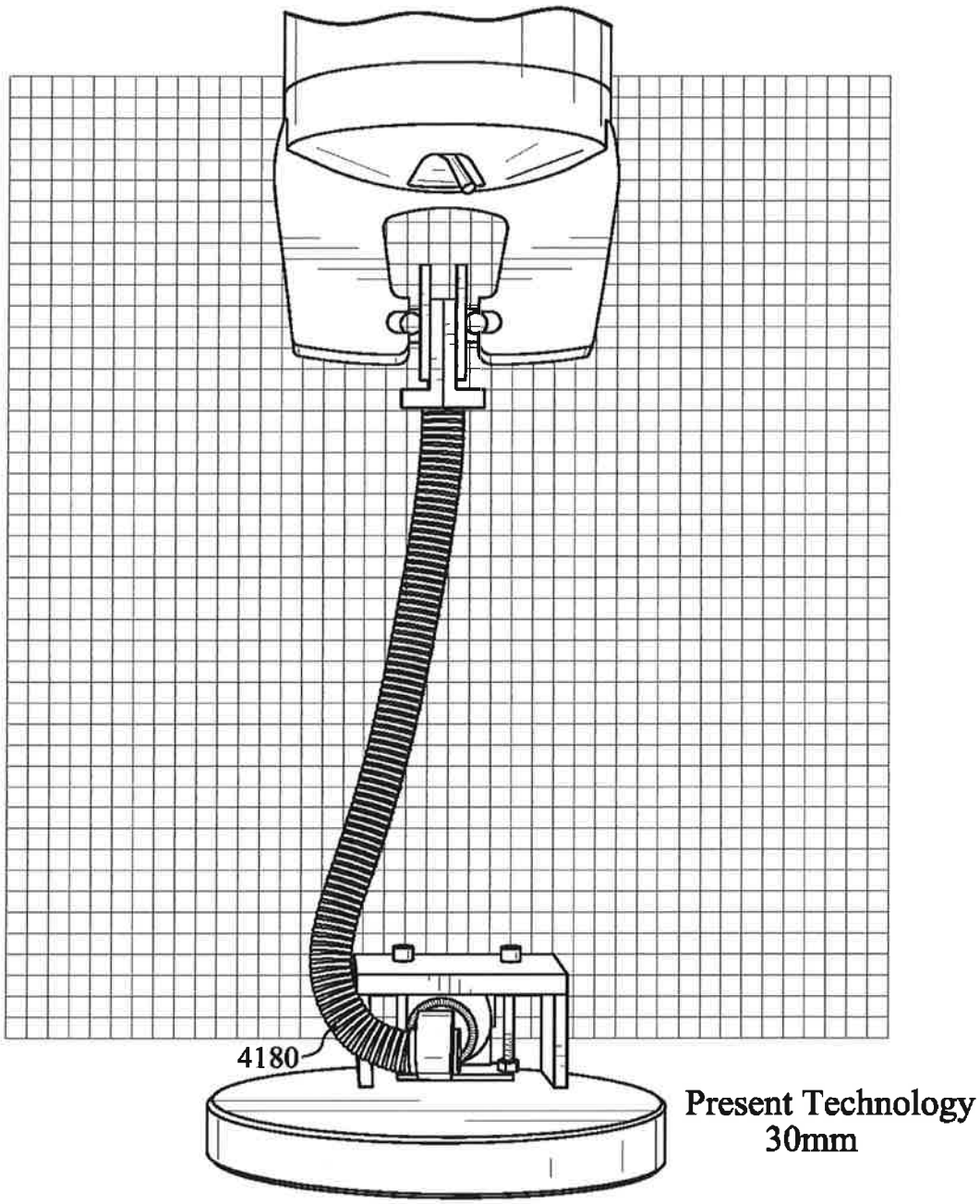


FIG. 204

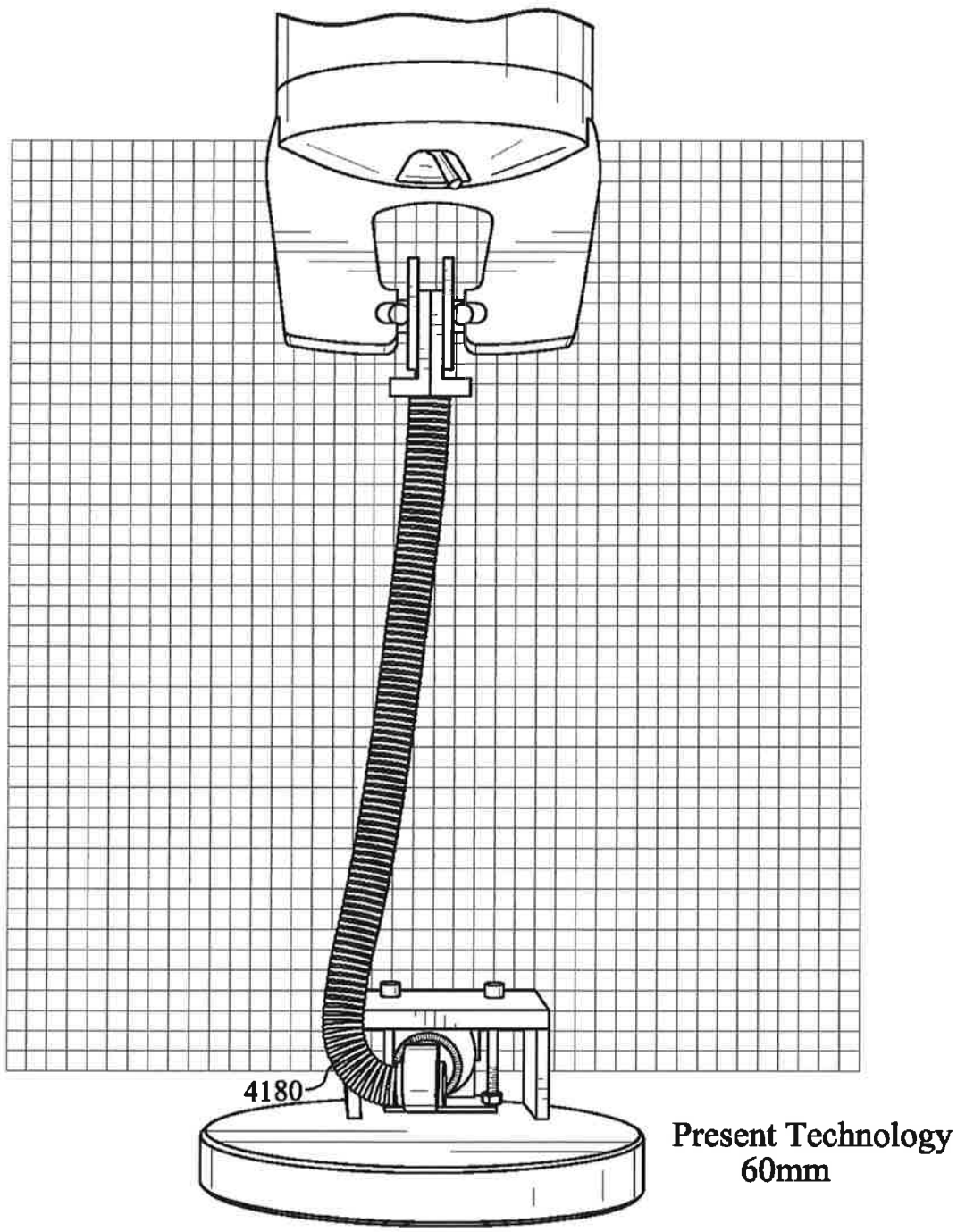


FIG. 205

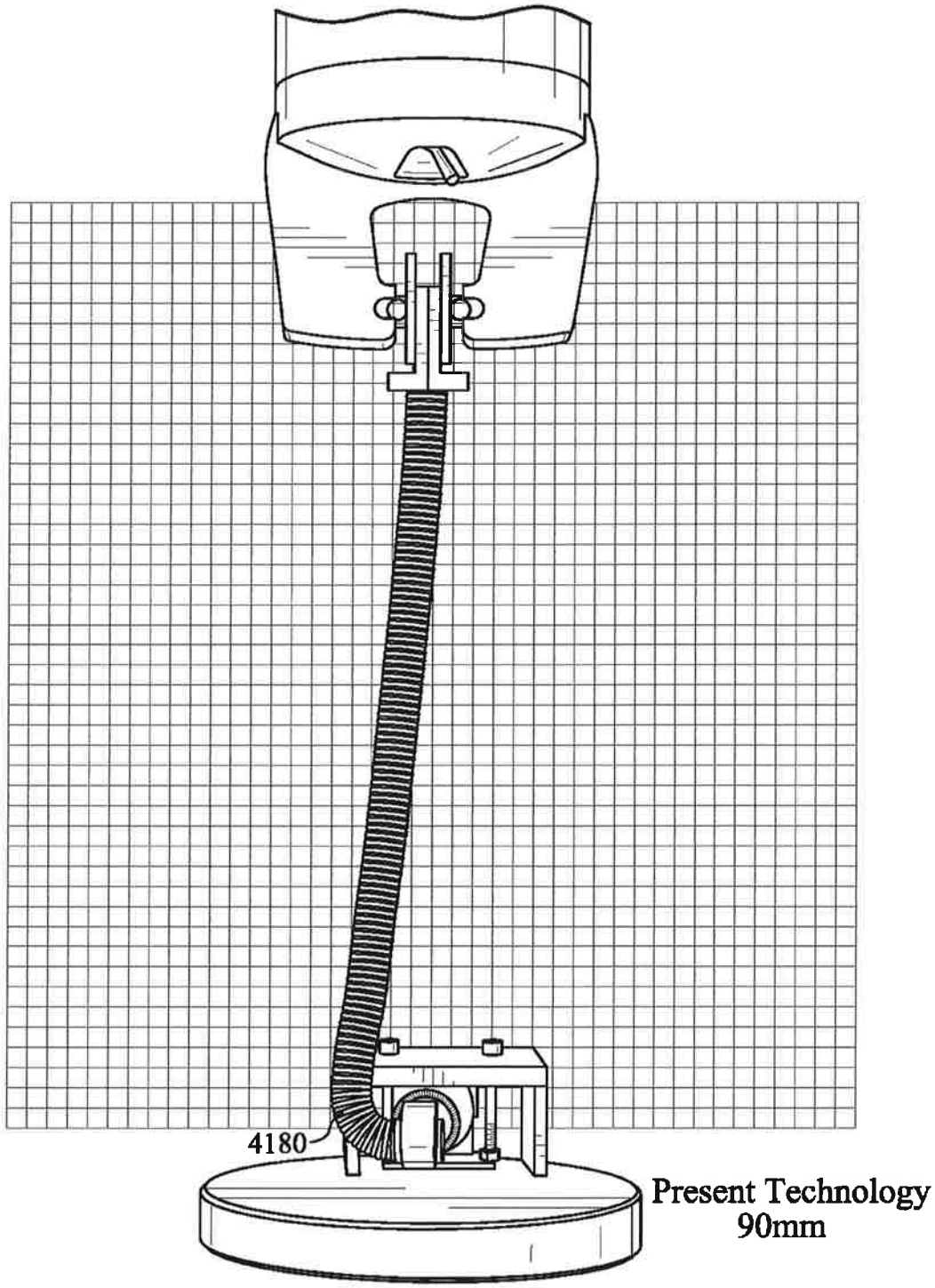


FIG. 206

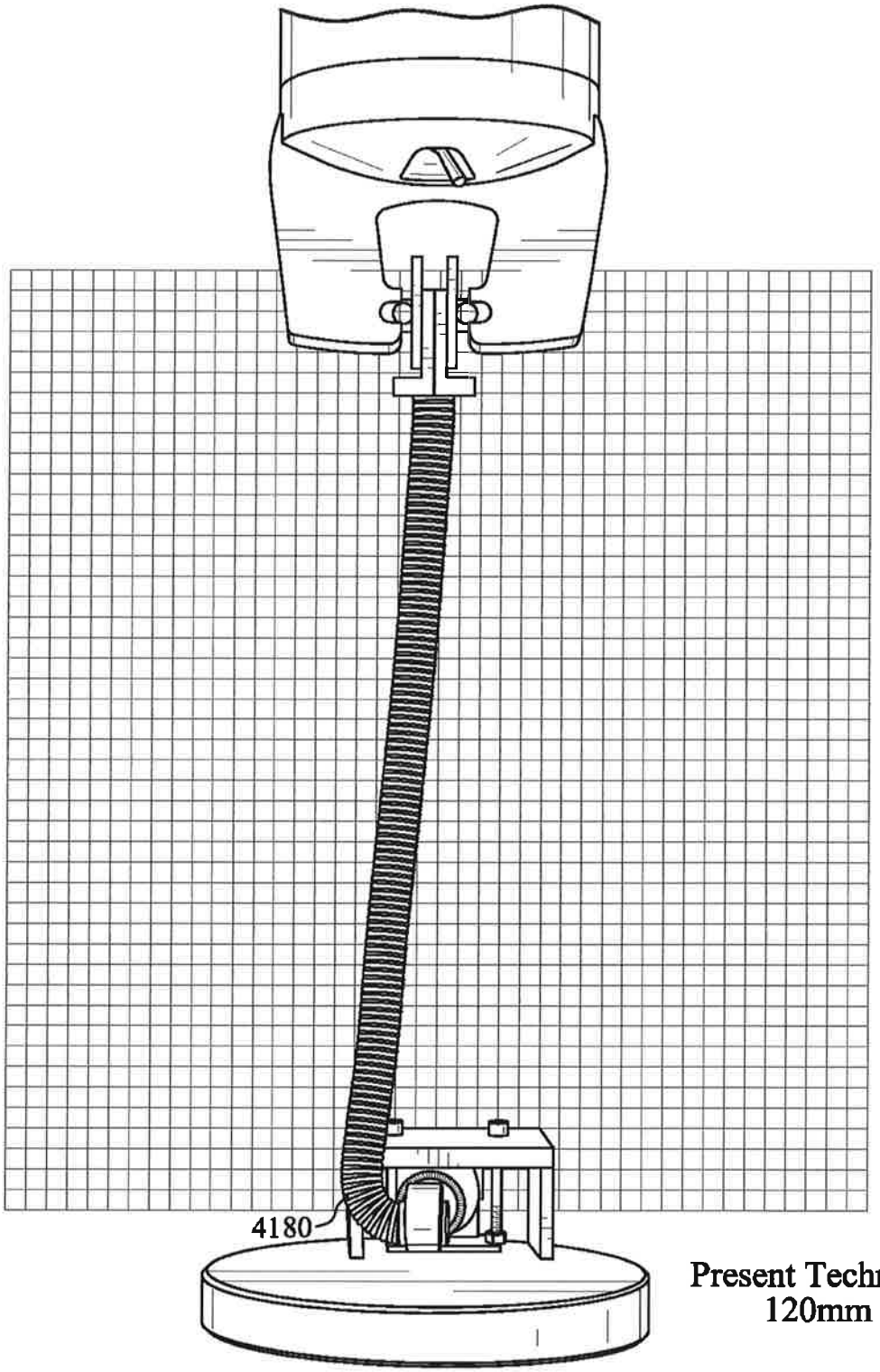


FIG. 207

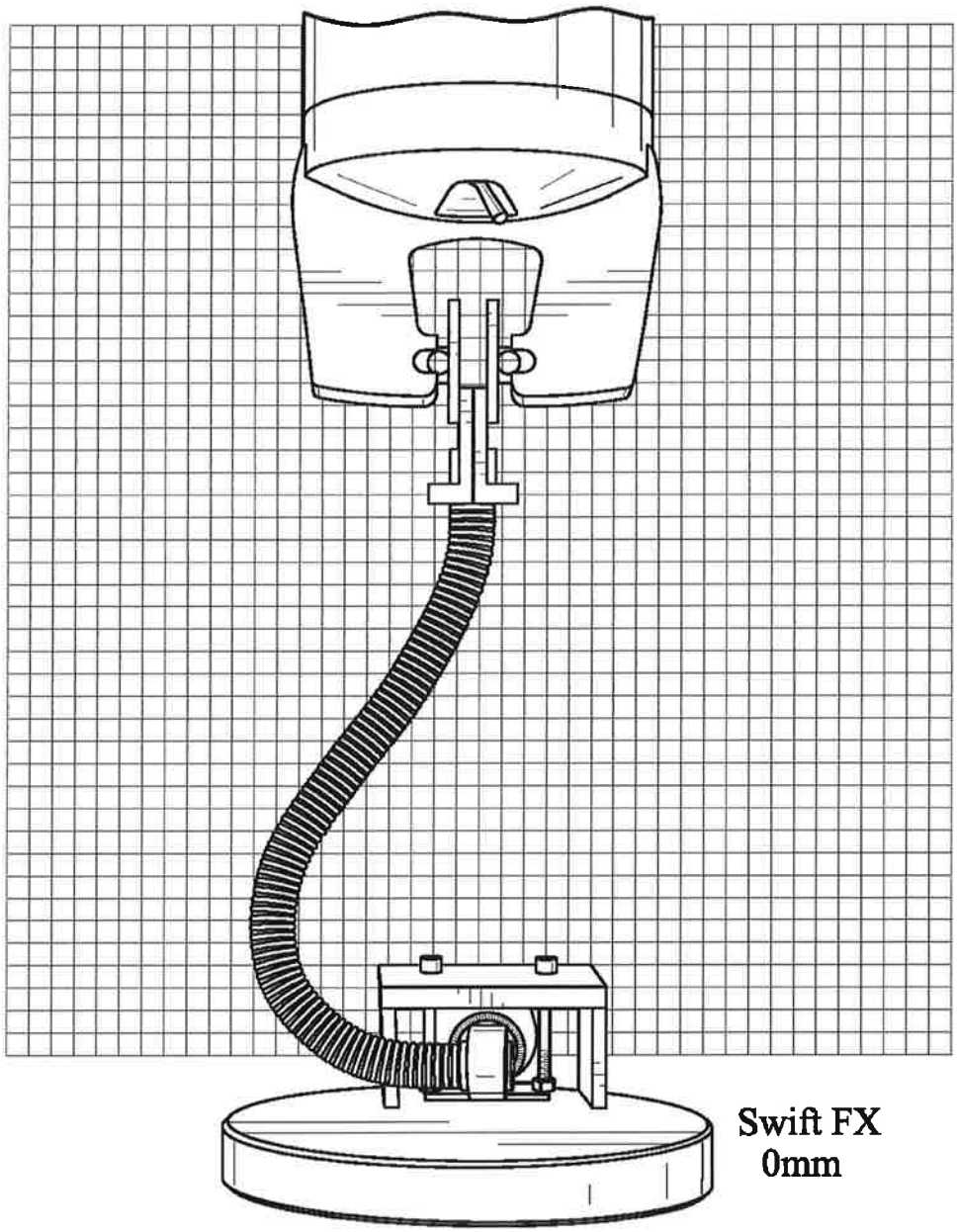


FIG. 208

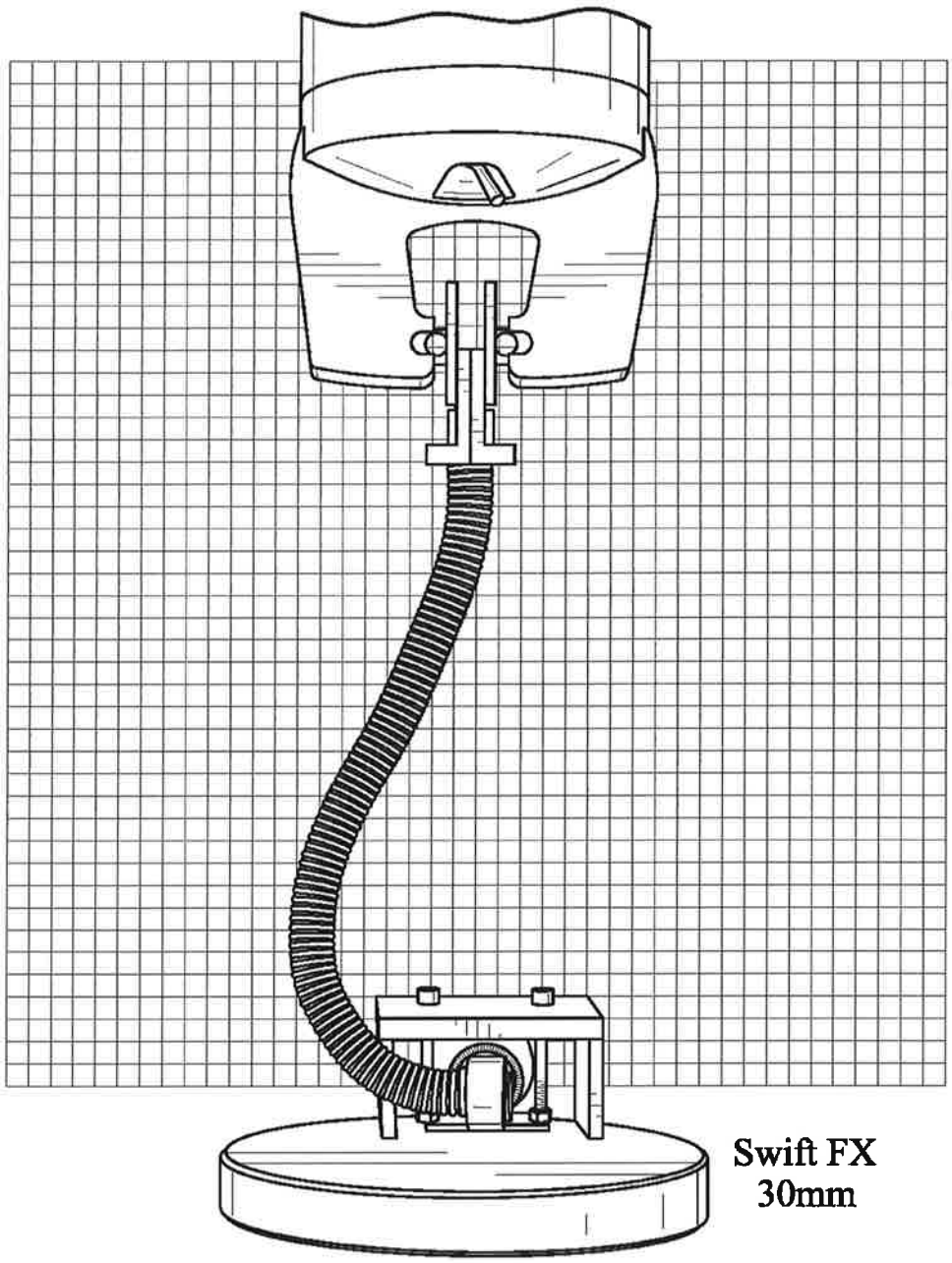


FIG. 209

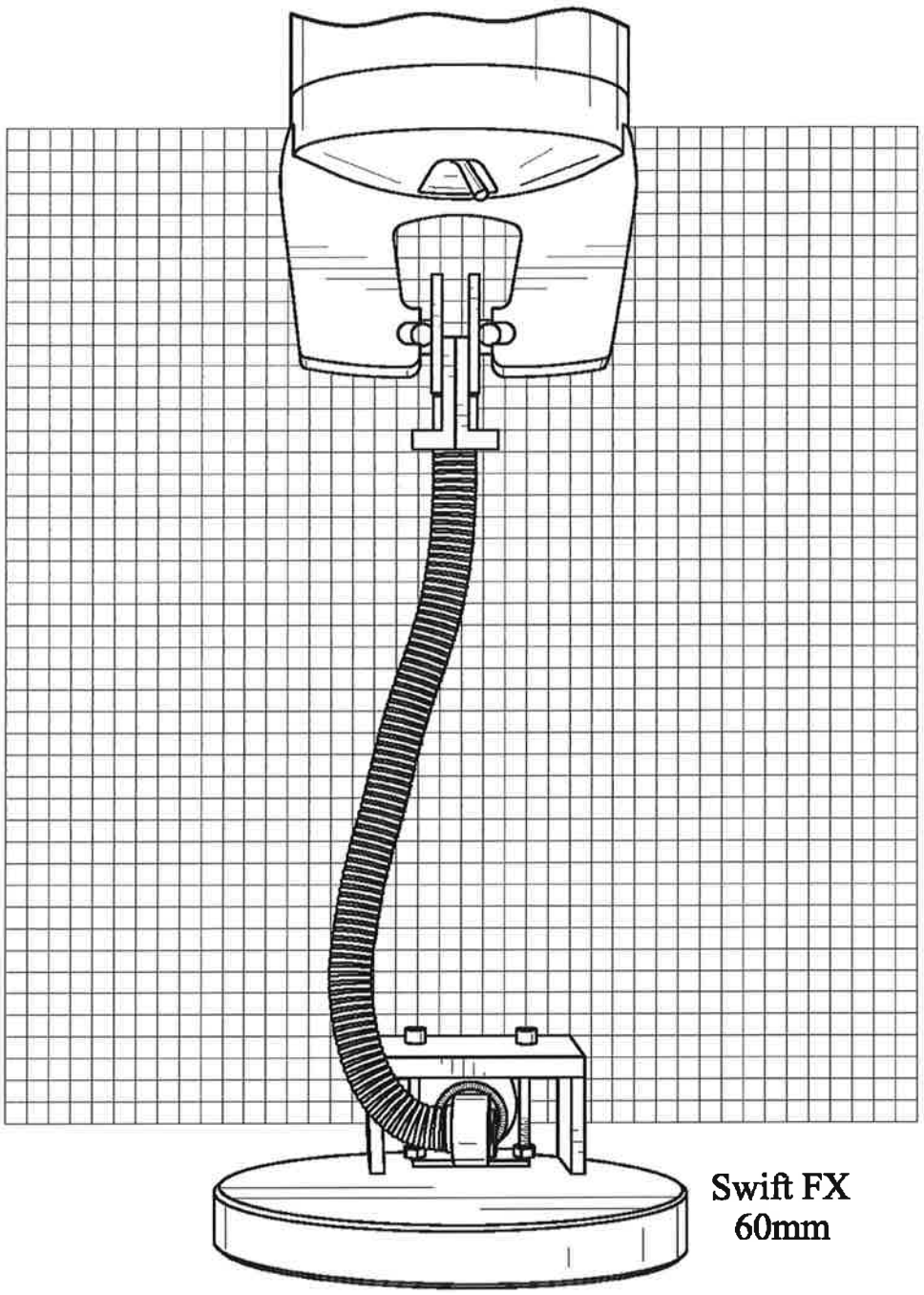


FIG. 210

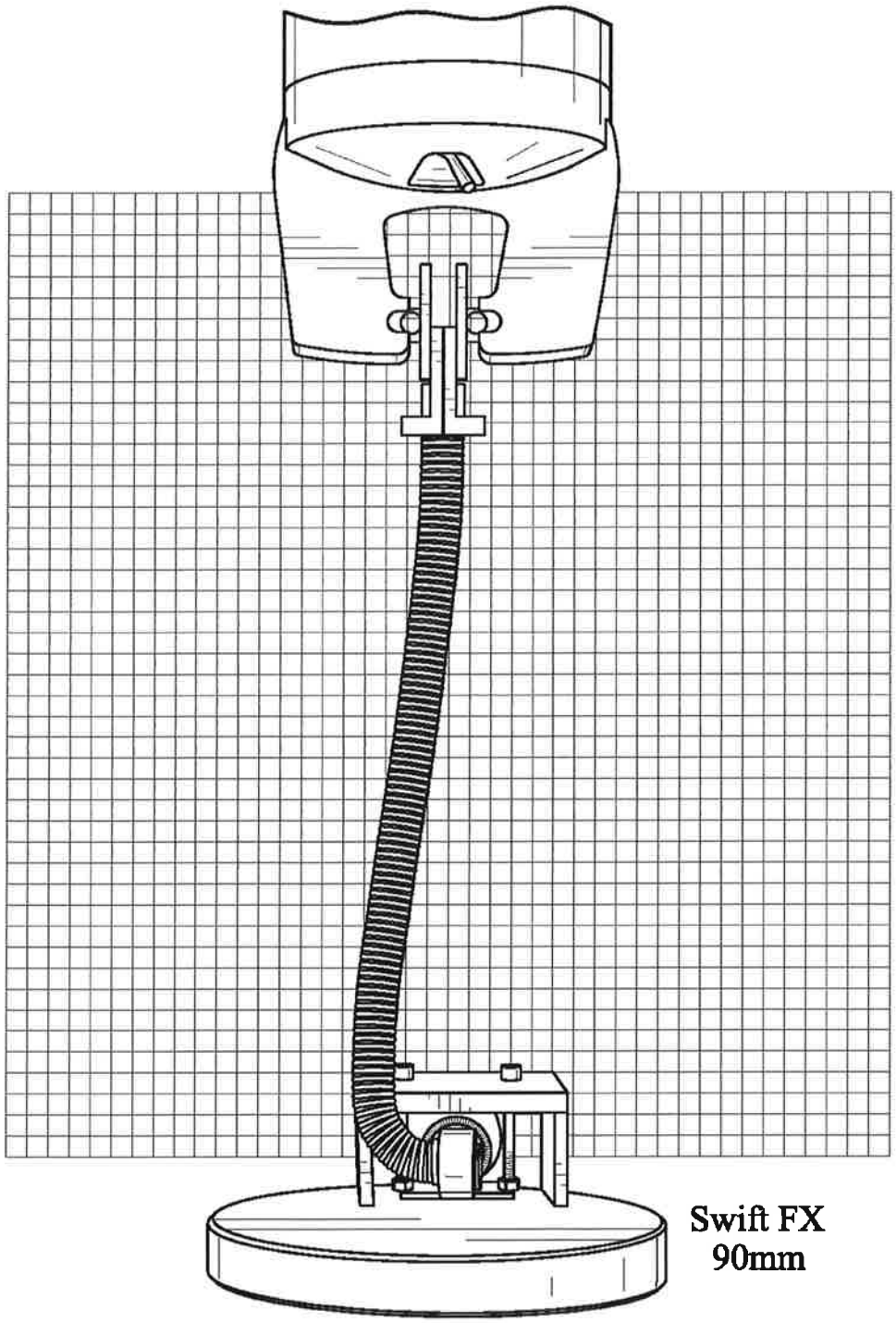


FIG. 211

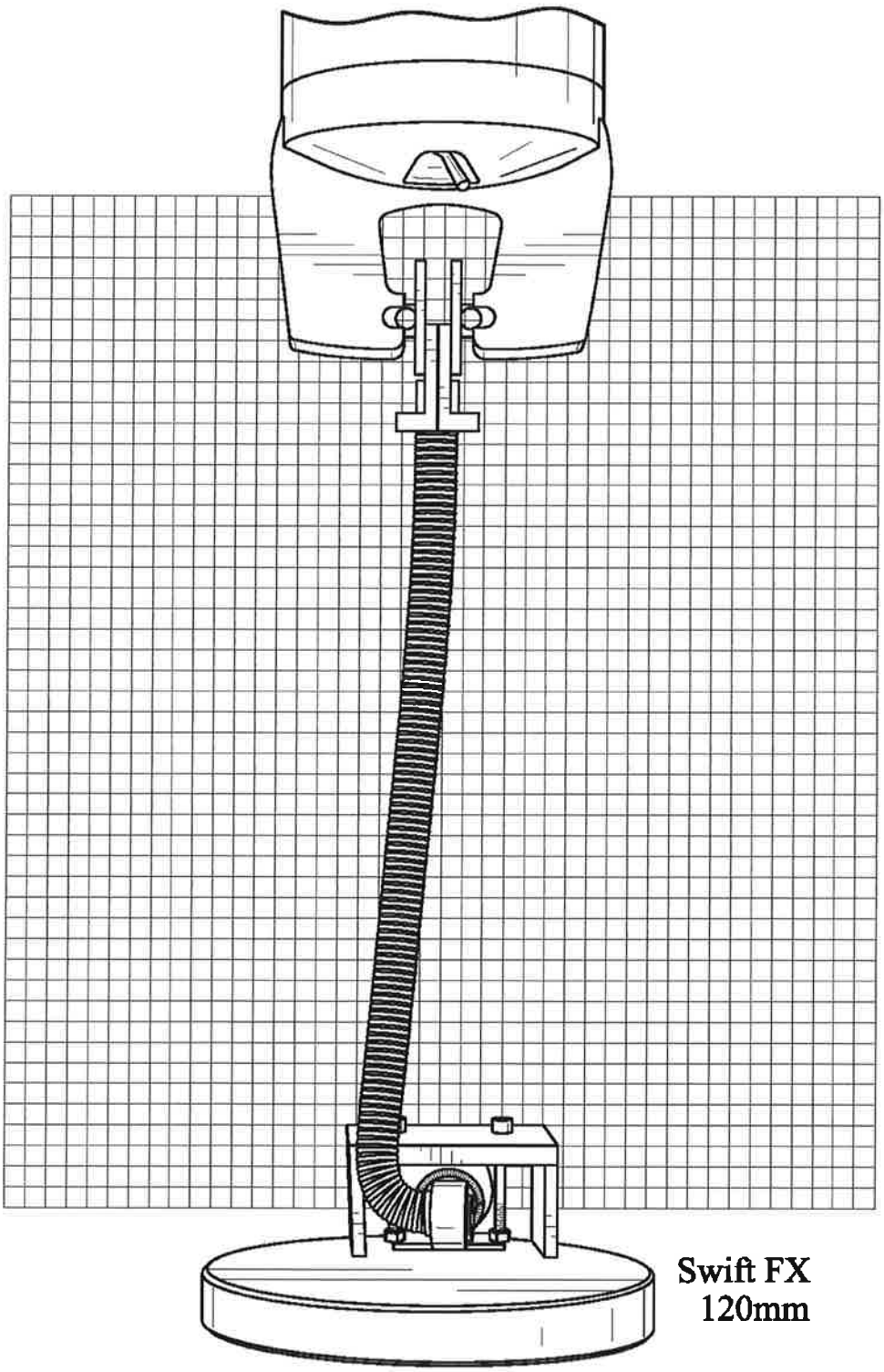


FIG. 212

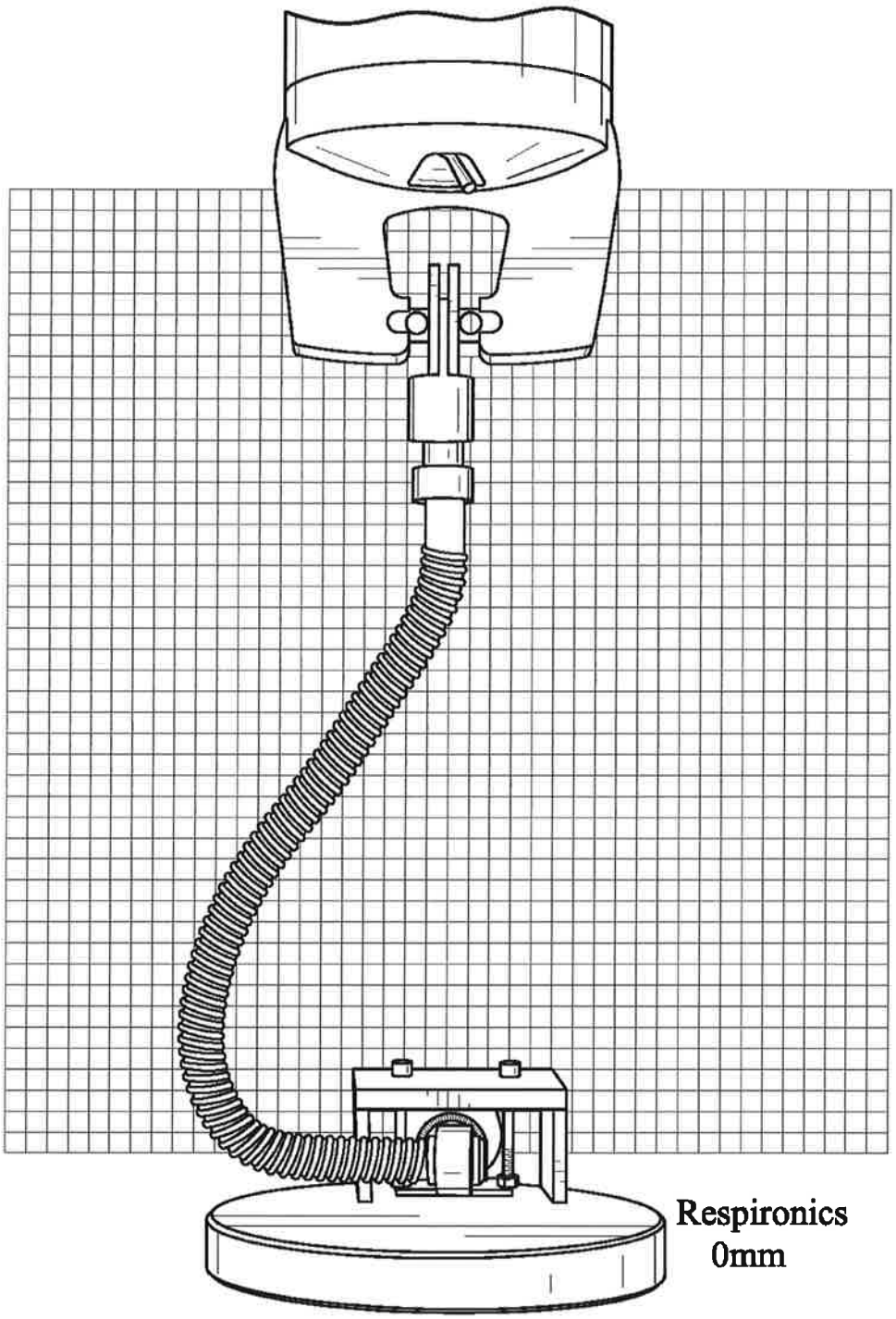


FIG. 213

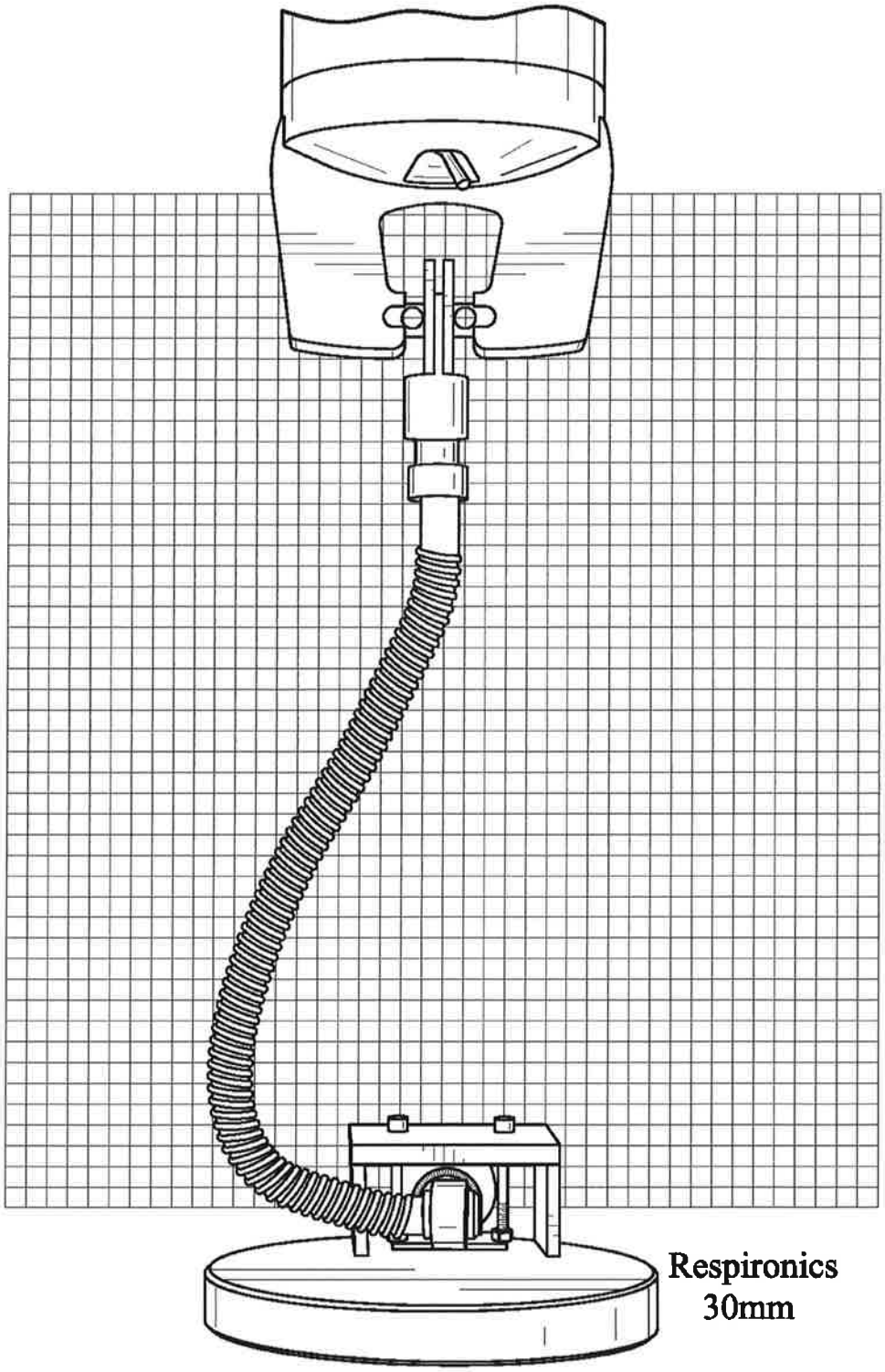


FIG. 214

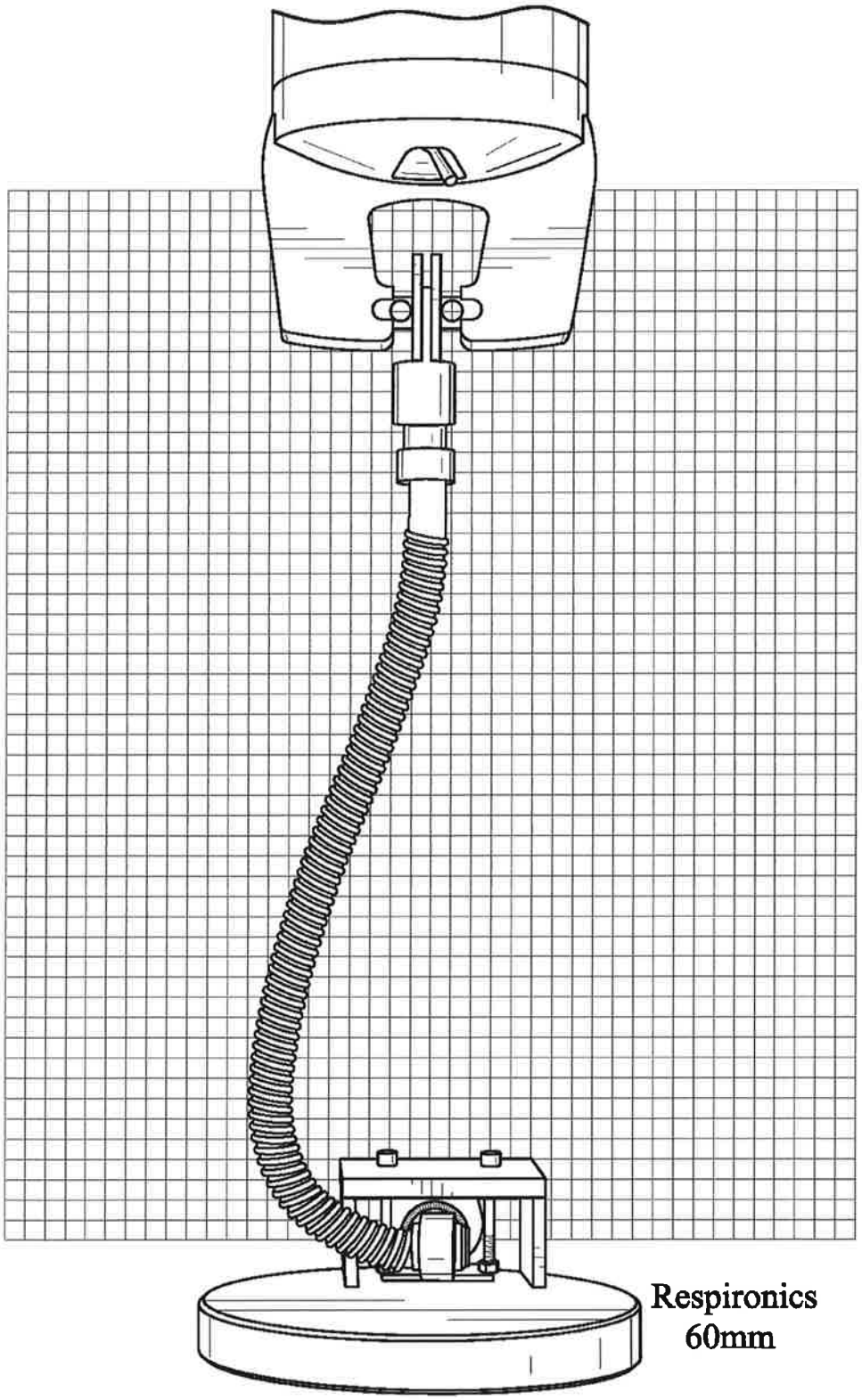


FIG. 215

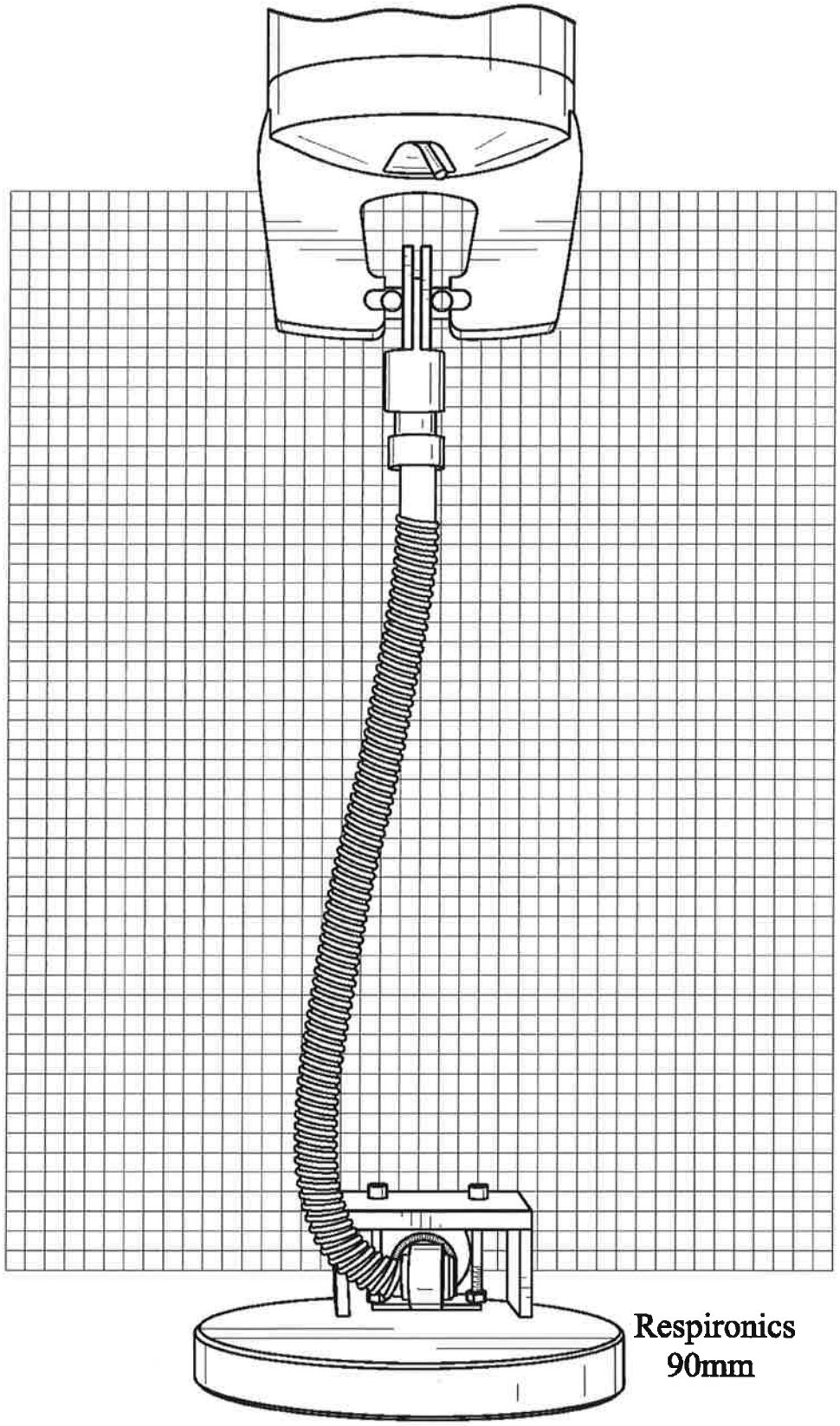


FIG. 216

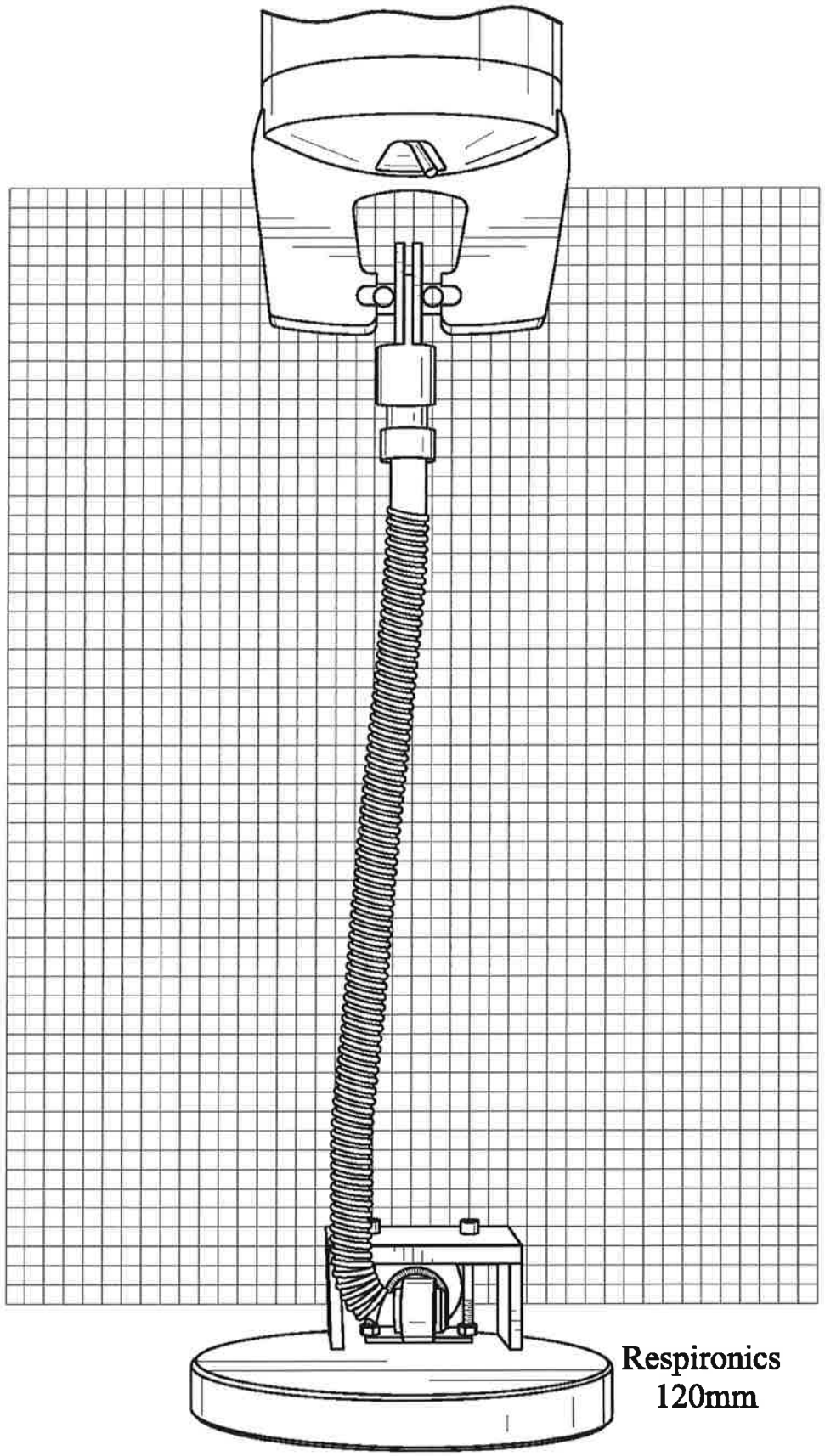


FIG. 217

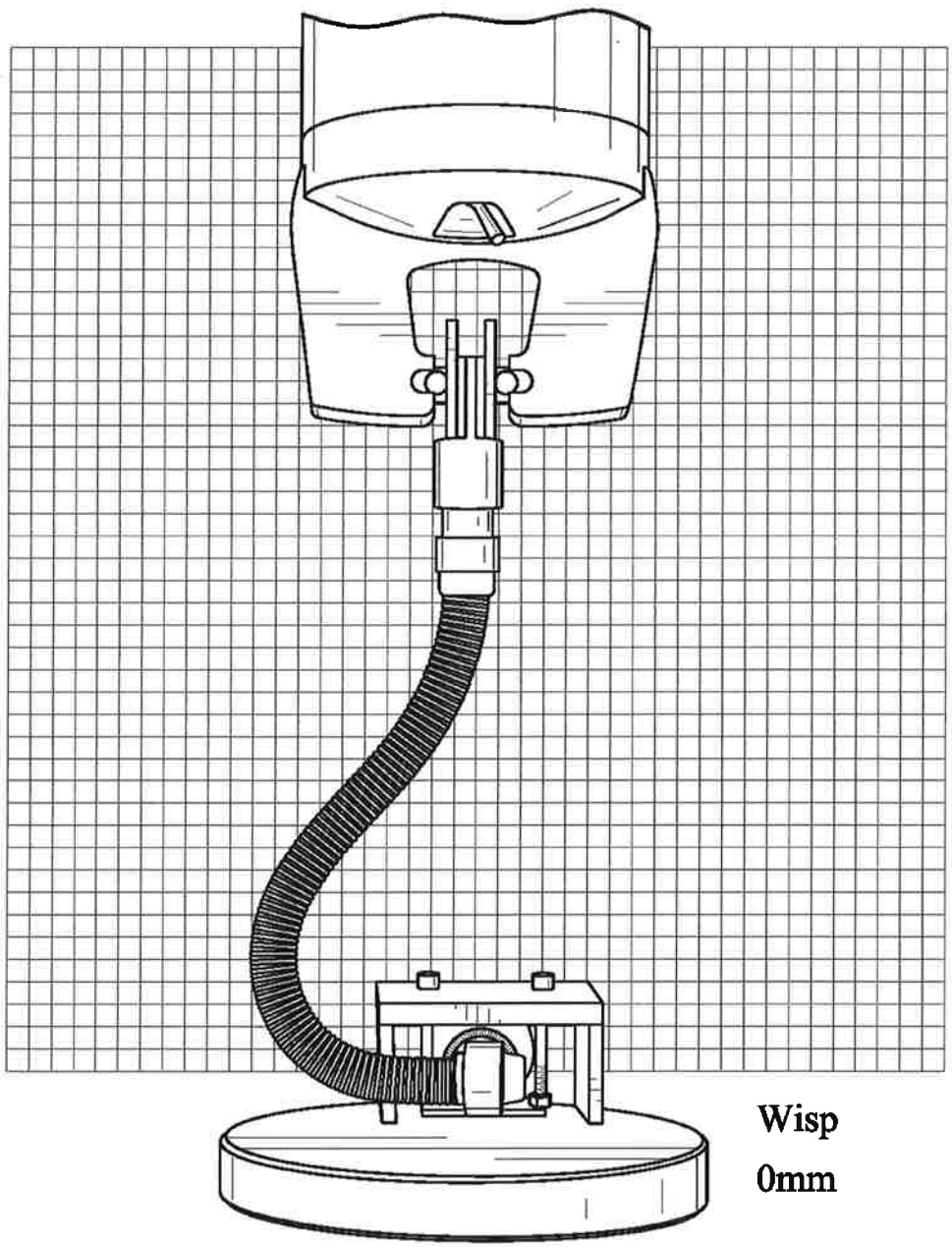


FIG. 218

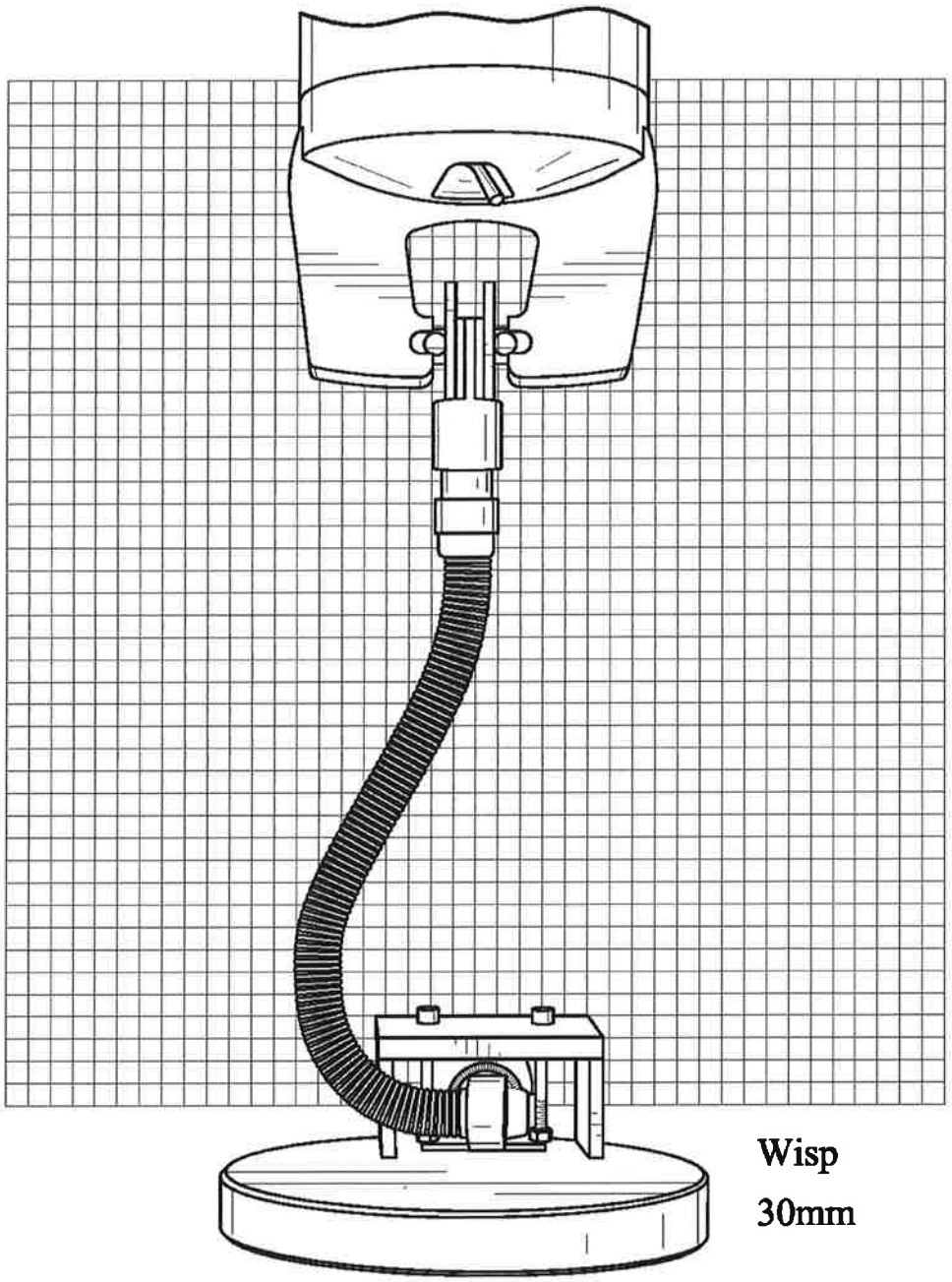


FIG. 219

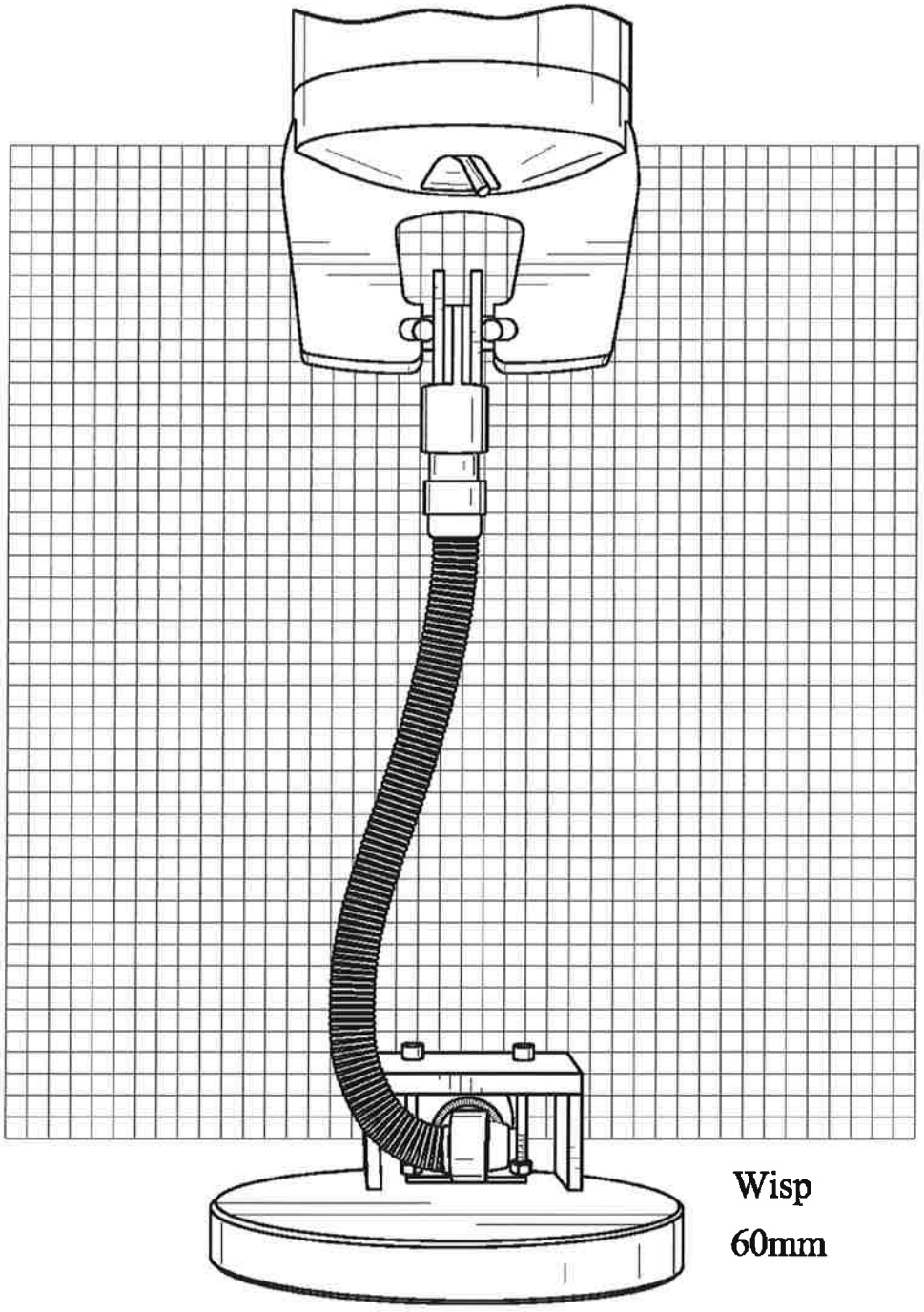


FIG. 220

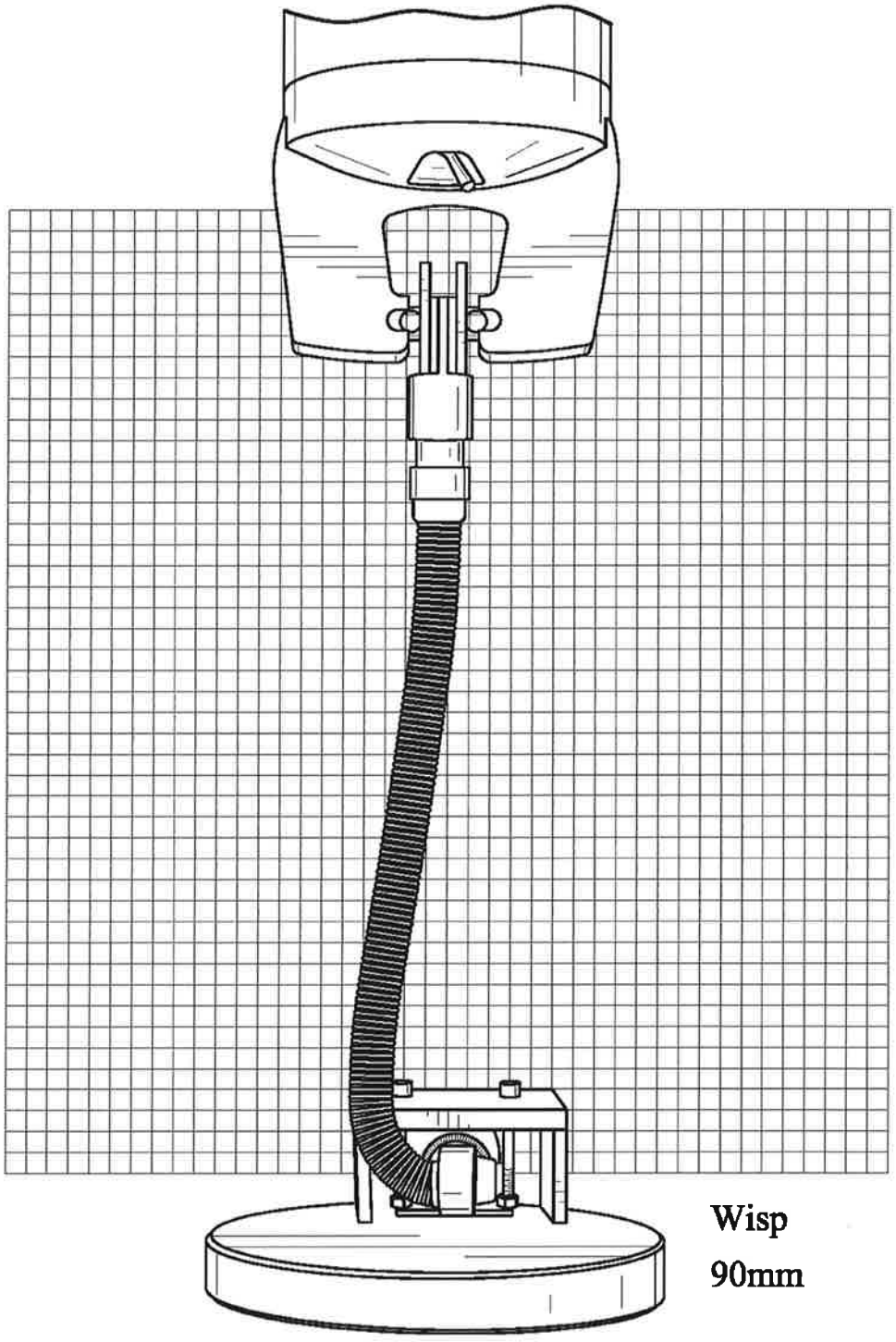


FIG. 221

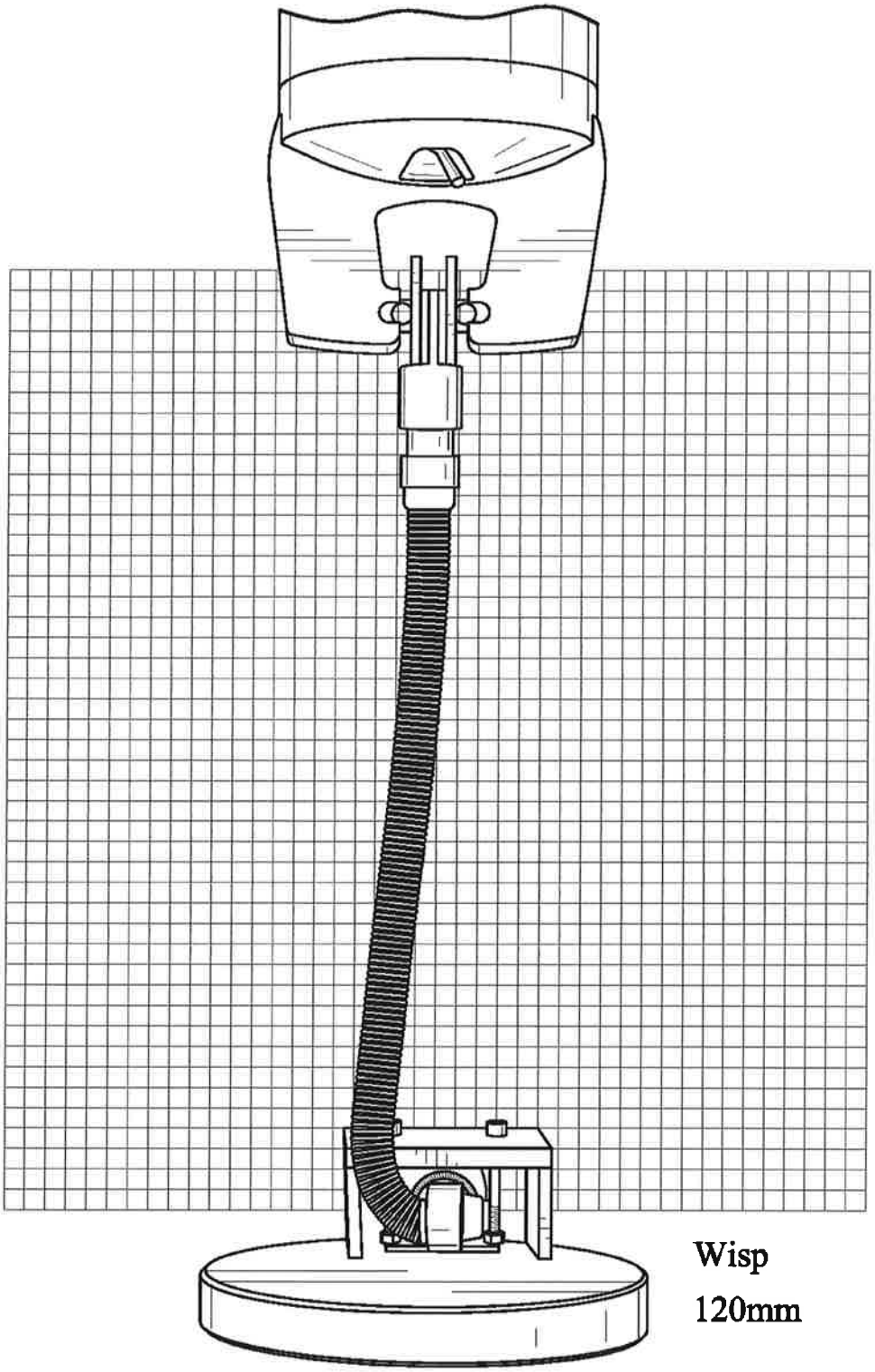


FIG. 222