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$$(71) \quad , \quad -0773, \quad 18$$

(72) , -0773, 18

(74)

(54)

3

(systemic) , (vaccine)

(one aspect)

가 (cuff member)

member)

(cuff

,
(lobe)

(cuff member) ; ;

(cuff member)

22 20 ;
23 7 ;
24 23 가 ;
25 23 ;
26 23 ;
27 8 ;
28 27 가 ;
29 27 ;
30 27 ;
31 9 ;
32 31 가 ;
33 31 ;
34 31 ;
35 10 , ;
36 35 , ;
37 35 가 ;
38 35 ; , 가 , 가 ;
39 35 ;
40 11 , ;
41 40 , ;
42 40 가 ;
43 40 ; , 가 , 가 ;
44 40 , , , ; , 가 ;
45 40 ;
46 12 , ;
47 46 , ;
48 46 가 ;

, 27 23
 , , 27
 , 27
 , 27 23
 27 23
 , , 27
 , 17
 . 27 21
 , 27 21
 , 17
 , 27 21
 , 23
 , 27 27
 23
 가 29
 , (canister)가 25
 (HFA) 17
 , 29
 , 29
 , 29
 31 23
 29
 31 23
 29
 31 23
 29
 , 29
 , 29
 3 5
 3 , 17
 , 21
 , 2cm
 , 20
 , 19

(oropharyngeal velum)

가

, 19 (oropharyngeal velum)
 , 21 23 가
 , 27 19 4 23
 21 . 4 , 21 23 , 27
 , 29 23 , 31 25 23 , 31가
 , 23 19 , 17 27 5
 , 가 , 17가 가 , 17
 6 9 2
 1
 ,
 19 21 23 1 21 23 33 , 21 21 23 23 , 33
 19 가 19
 21 23 1 , 가 19
 10 13 3
 1
 ,
 2 27b 1 27a,27b , 27a,27b 17
 27b 가 21
 1
 14 16 4
 35, 39 37
 37 40, 41 37

37 가

, 41 39 39
, 43 , 45
43 45 45
, , , 45

, 43 (tip) 가

2cm, 3cm, , 41 2cm, 3cm,

, 37 가 47 , 41
, 47 가 , , 41
, 47 , 41
, 47 , , 41
47 (gel) , ,

47 , 41
47
(concha), (tubal ostia)

(tubal ostia) 가

, 47 54 , 54

⁴⁷ 47 41

47 47 , 41

가 49 (propellant), (canister)가 25 , (HFA)

17

29

49 , 51 , . . . (pre-primeable)

, 51 43
 49

, 51 43
 49

, 51 43 , 43
 49

, 49 ,
 , 49

, 49

15 16

15 , 37 41 , 2cm 40 , 39

, 39 43 (oropharyngeal velum)
 , 41 43 가

, 43 , 51 45 43 , 51 가

, 39 , 37
 , 가

, 37 가 , 49 , 37

17 19 5
 4

4 41 , 47 , 41 47

, 47 , 41 , 47
 1 (concha), (sinus infundibulum) (sinus ostia)

, 10 15% , FDA

(nasal polyposis)
(mecca)'

가

가
47
54a,54b
54a,54b

4

20 22 6

4

4 41 47

1 , 47 , , 41 , 47 , 4
(concha)

(BBB) 가 , 4 (CSF) 6cm²

가 (slit)

5% FDA , , 10 μm
s) , , 10 μm (velum) , , 가 (inhale

가

10 μm

47
54

4

23 26 7

, 57
 67 61
 67 67 71
 57 , 61
 , 67 61 67
 , 63
 67 67
 , 61
 67 61
 (concha), (epipharynx) (adenoids) (tubal
 ostia) (tubal ostia) 71
 , 67 74 , 74
 , 67 67 , 61
 57 69
 , 69
 69 69
 69 65
 , 71 ,
 69 71 63
 69 71 63
 71 63
 69 , 63

69

69

69

24

26

24 , 57 , 60 ,
61 2cm , 59 ,

59 , (oropharyngeal velum)
61 63
가

⁵⁹ 63

67 . 25 , 67

25 , 61 67

69 , 65 , 71 63 , , 711

63 , 67 26

59 , 57

가

가

69

57

27 30 8

7

7

61

67

1

(concha),

(sinus infundibulum)

(sinus ostia)

(drops)

, 67, 74a, 74b
, , 74a, 74b ,

7 .

31 34 9

7 61 67

, 67, 61
1 . , 67 6
(concha)

(BBB) , 4 6cm² (CSF)

가 (slit) . ,

5% FDA hales), 10 μm , 10 μm (velum), 10 μm , 가 (in

가

10 μ m

67 74
74

7

35 39 10

75, 77
79 .

77 80, (frusto)- 77
 , ,
 81 .
 , 81 82, 83 . 가
 .
 82 82
 , 82, 83 82 . 가 .
 , 85 가 , 85 82
 .
 , 83 89, 89, 89 가 .
 , 87 93 93 .
 , 87 95 , 85 가 87
 .
 7 가 95 97 , , 85 85 85 85 8
 87 87 91 1, (35 38 , (39) , 91 91 91 91
 97 (return biasing element) 99,
 .
 , 97 95 102, , , 103, 101
 97 101 가 101 가 1, 97
 2, (35 (36) , 38) 103 101 가 .
 , 79 105 , , 95 97
 , 97 85 가 87
 .
 , 105 79 95
 .
 , 105 79 95
 .
 , 105 , 107 , , 1 2 (35 37 97 109,111)
 112, 107 , 107 가 .
 , 101
 109 113 . 가 , 1 2 115,117

가

WO-A-00/51672

3

2

가

(vaccine)

(systemic)

(57)

1.

가

(cuff member)

;

;

2.

1 ,

가

3.

1 2 ,

가

가

4.

3 ,

가

가

5.

3 ,

가

;

가

가

;

가

6.

1 5 ,

7.

6 ,

8.

6 ,

9.

6 ,

(a jet)

10.

9 ,

11.

9 ,

12.

6 ,

13.

1 12 ,

가

14.

1 13 ,

가

15.

14 ,

가

,

16.

1 15 ,

가

,

17.

16 ,

가

,

가

18.

16 17 ,

19.

16 18 ,

20.

19 ,

21.

16 20 ,

22.

16 21 ,

23.

16 22 ,

24.

- 16 23 ,
- 25.**
16 24 ,
- 26.**
16 25 , (sinus ostia)
- 27.**
16 26 , (sinus infundibulum)
- 28.**
16 27 , (epipharynx)
- 29.**
16 28 ,
- 30.**
16 29 ,
- 31.**
1 30 , ｶ , ,
- 32.**
31 ,
- 33.**
31 ,
- 34.**
31 ,
- 35.**
31 34 , ｶ , ,
- 36.**
35 ,
- 37.**
35 ,
- 38.**
35 ,
- 39.**
1 38 ,
- 40.**
1 38 , ｶ

41. 40 , 가

42.

43. 1 40 , 가

44. 43 . (periphery)

45.

46. 1 2

46

49. 가

50.

52. 51 , 가 .

54.

48 53 ,

55.

54 ,

56.

54 ,

57.

54 , (a jet)

58.

57 ,

59.

57 ,

60.

54 ,

61.

48 60 ,

가

62.

48 61 ,

가 ,

63.

62 ,

가 ,

가

64.

62 63 ,

65.

62 64 ,

66.

65 ,

67.

62 66 ,

68.

62 67 ,

69.

62 68 ,

- 70.**
62 69 ,
- 71.**
62 70 ,
- 72.**
62 71 , (sinus ostia)
- 73.**
62 72 , (sinus infundibulum)
- 74.**
62 73 , (epipharynx)
- 75.**
62 74 ,
- 76.**
62 75 ,
- 77.**
48 76 , 가 ,
- 78.**
77 ,
- 79.**
77 ,
- 80.**
77 ,
- 81.**
77 80 , 가 ,
- 82.**
81 ,
- 83.**
81 ,
- 84.**
81 ,
- 85.**
48 84 ,
- 86.**

48 84 , 가

87. 48 86 , 가

88.

89. 48 88 , 가

90. 89 , (periphery)

91. .

92. 1 2

93.
92 ,

95.

96.

96 , 97. 가 .

94	98	,		
	100.			
99	,			
	101.			
99	,			
	102.			
99	,	(a jet)		
	103.			
102	,			
	104.			
102	,			
	105.			
99	,			
	106.			
94	99	,		
	107.			
106	,			
	108.			
94	99	,		
	109.			
108	,			
	110.			
108	109	,		
	111.			
108	109	,		
	112.			
106	111	,	1 μ m	80 μ m
	113.			
112	,	1 μ m	50 μ m	
	114.			
113	,	1 μ m	30 μ m	
	115.			

114	,	10 μ m	30 μ m
.	.	.	.
116.			
115	,	10 μ m	20 μ m
.	.	.	.
117.			
116	,	15 μ m	30 μ m
.	.	.	.
118.			
94	117	,	
.	.	.	.
119.			
94	118	,	
.	.	.	.
120.			
119	,		
.	.	.	.
121.			
94	120	,	
.	.	.	.
122.			
94	121	,	
.	.	.	.
123.			
94	122	,	
.	.	.	.
124.			
94	123	,	
.	.	.	.
125.			
94	124	,	
.	.	.	.
126.			
94	125	,	(sinus ostia)
.	.	.	.
127.			
94	126	,	(sinus infundibulum)
.	.	.	.
128.			
94	127	,	(epipharynx)
.	.	.	.
129.			
94	128	,	
.	.	.	.
130.			
94	129	,	
.	.	.	.

131.

94 130

,

가

,

132.

131

,

133.

131

,

134.

131

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135.

94 130

,

가

,

136.

135

,

137.

135

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138.

135

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139.

94 138

,

140.

139

,

141.

94 140

,

142.

141

,

(periphery)

143.

142

,

144.

142

,

1 2

145.

144

,

146.

94 145

,

가

158 ,

162.

154 161 ,

,

163.

162 ,

,

,

가

164.

162 163 ,

,

165.

162 164 ,

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166.

165 ,

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167.

162 166 ,

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168.

162 167 ,

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169.

162 168 ,

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170.

162 169 ,

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171.

162 170 ,

,

172.

162 171 ,

,

(sinus ostia)

173.

162 172 ,

,

(sinus infundibulum)

174.

162 173 ,

,

(epipharynx)

175.

162 174 ,

,

176.

162 175 ,

,

177.154 176 , 가
가**178.**177 , 가
가**179.**177 , ;
가 ; 가
;**180.**

154 179 ,

181.

180 ,

182.

180 ,

183.

180 , (a jet)

184.

182 ,

185.

182 ,

186.

180 ,

187.

154 180 ,

188.

187 ,

189.

154 180 ,

190.

189 ,

191.

189 190 ,

192.

189	190	,		
	193.	,		
187	191	,	$1\mu\text{m}$	$80\mu\text{m}$
	194.	,	$1\mu\text{m}$	$50\mu\text{m}$
	195.	,	$1\mu\text{m}$	$30\mu\text{m}$
	196.	,	$10\mu\text{m}$	$30\mu\text{m}$
	197.	,	$10\mu\text{m}$	$20\mu\text{m}$
	198.	,	$15\mu\text{m}$	$30\mu\text{m}$
	199.	,		
154	198	,		
	200.	,		
199		,		
	201.	,		
154	198	,		
	202.	,	(periphery)	
	203.	,		
202		,		
	204.	,		
202		,		
	205.	,		
204		,		
	206.	,		
154	205	,		
가		,		
	207.	,	가	
206		,	가	

208.

206 207 , 가

209.

206 208 , 가

210.

209 , .

211.

209 , 가

212.

209 , .

213.

154 212 , .

214.

, 가 1 1 ; ,
 ; 2 2 ; ,

215.

214 , 가

216.

214 215 , 2

가

217.

216 , 2

가 1

218.

214 217 , 2

219.

218 , 1

220.

214 219 , .

가

221.

220 , 1

가

2

214	221	,					
222	,						
214	221	,					
224	,						
224	225	,					
224	225	,					
222	227	,			$1\mu\text{m}$	$80\mu\text{m}$	
228	,			$1\mu\text{m}$	$50\mu\text{m}$		
229	,			$1\mu\text{m}$	$30\mu\text{m}$		
230	,			$10\mu\text{m}$	$30\mu\text{m}$		
231	,			$10\mu\text{m}$	$20\mu\text{m}$		
232	,			$15\mu\text{m}$	$30\mu\text{m}$		
214 가 2	233 가	,	가	가	가	가	,
214 1	234	,			¹ 가		
234	235	,	가				,

237.

236 , 가

238.

236 , 가

239.

236 238 , 가 가

240.

239 , 가

241.

240 , 가 , 가

242.

214 241 ,

243.

214 241 ,

244.

214 243 , 1

245.

244 ,

246.

244 ,

247.

214 243 , 1 (a jet)

248.

214 233 ,

249.

214 233 ,

250.214 249 , 1
3 ,**251.**

250

,

3

1

252.

가

(cuff member)

;

(cuff member)

; ,

;

253.

252

,

가

254.

252

253

,

;

가

;

가

255.

254

,

가

가

256.

254

,

가

;

,

가

;

가

257.

252

256

,

가

258.

252

257

,

,

259.

258

,

가

260.

258

259

,

261.

258

260

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262.

261

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263.

258

262

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264.

258

263

,

- 265.**
258 264 ,
- 266.**
258 265 ,
- 267.**
258 266 ,
- 268.**
258 267 , (sinus ostia)
- 269.**
258 268 , (sinus infundibulum)
- 270.**
258 269 , (epipharynx)
- 271.**
258 270 ,
- 272.**
258 271 ,
- 273.**
252 272 , 가 ,
- 274.**
273 ,
- 275.**
273 ,
- 276.**
273 ,
- 277.**
252 272 , 가 ,
- 278.**
277 ,
- 279.**
277 ,
- 280.**
277 ,
- 281.**
277 ,

가 (cuff member)

1

282.

281 , 가

283.

281 282 , 가

284.

281 283 , ; 가 : 가

285

284 ,
285.

286

284 , 가 ;

287

281 286 287. 가

288

288. 281 287

289

288 , 289. 가

290.

288

291.

288 290

292.

291 ,

293.

288 292

294.

288

295.

- 288 294 ,
296.
 288 295 ,
297.
 288 296 ,
298.
 288 297 , (sinus ostia)
299.
 288 298 , (sinus infundibulum)
300.
 288 299 , (epipharynx)
301.
 288 300 ,
302.
 288 301 ,
303.
 281 302 , が ,
304.
 303 ,
305.
 303 ,
306.
 303 ,
307.
 281 302 , が ,
308.
 307 ,
309.
 307 ,
310.
 307 ,
311.
 ,

(cuff member)

;

;

312.

311

,

가

313.

311

312

,

;

가

;

가

314.

313

,

가

315.

314

,

가

;

,

가 ; 가

316.

311

315

,

317.

316

,

318.

311

315

,

319.

318

,

320.

318

319

,

321.

318

319

,

322.

311

320

,

 $1\mu\text{m}$ $80\mu\text{m}$ **323.**

322

,

 $1\mu\text{m}$ $50\mu\text{m}$ **324.**

323

,

 $1\mu\text{m}$ $30\mu\text{m}$ **325.**

324

,

 $10\mu\text{m}$ $30\mu\text{m}$ **326.**

325	,		10 μ m	20 μ m
327.				
326	,		15 μ m	30 μ m
328.				
311	327	,		
329.				
311	328	,		
330.				
329	,			
331.				
311	330	,		
332.				
311	331	,		
333.				
311	332	,		
334.				
311	333	,		
335.				
311	334	,		
336.				
311	335	,	(sinus ostia)	
337.				
311	336	,	(sinus infundibulum)	
338.				
311	337	,	(epipharynx)	
339.				
311	338	,		
340.				
311	339	,		
341.				
311	340	,	가	,
342.				
341	,			
343.				
341	,			

344.

341 ,

345.

311 340 , 가

346.

345 ,

347.

345 ,

348.

345 ,

349.

311 348 , 가

350.

(lobe)

351.

350 ,

352.

350 ,

353.

350 ,

354.

350 , 가

355.

354 ,

356.

354 ,

357.

354 ,

358.

350 357 ,

359.

358

,

가

360.

358

359

,

361.

358

360

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362.

361

,

363.

358

362

,

364.

358

363

,

365.

358

364

,

366.

358

365

,

367.

358

366

,

368.

358

367

,

(sinus ostia)

369.

358

368

,

(sinus infundibulum)

370.

358

369

,

(epipharynx)

371.

358

370

,

372.

358

371

,

373.

350

372

,

;

가

;

가

374.

373

,

가

가

375.

374	,	가	;	가	;	,
350	375	,				
376	,					
350	375	,				
378	,					
378	379	,				
378	379	,				
376	380	,		$1\mu\text{m}$	$80\mu\text{m}$	
382	,		$1\mu\text{m}$	$50\mu\text{m}$		
383	,		$1\mu\text{m}$	$30\mu\text{m}$		
384	,		$10\mu\text{m}$	$30\mu\text{m}$		
385	,		$10\mu\text{m}$	$20\mu\text{m}$		
386	,		$15\mu\text{m}$	$30\mu\text{m}$		
350	387	,			가	
389.		1	,		가	
	2					
390.	,		;		가	
389	,					

391.

389 390 , 2 가
1

392.

391 , 2 가 1

393.

389 392 , 2 ,
가 가

394.

389 393 , 가
가

395.

394 , 가 , 가
1 2

396.

389 395 ,

397.

396 ,

398.

389 395 ,

399.

398 ,

400.

398 399 ,

401.

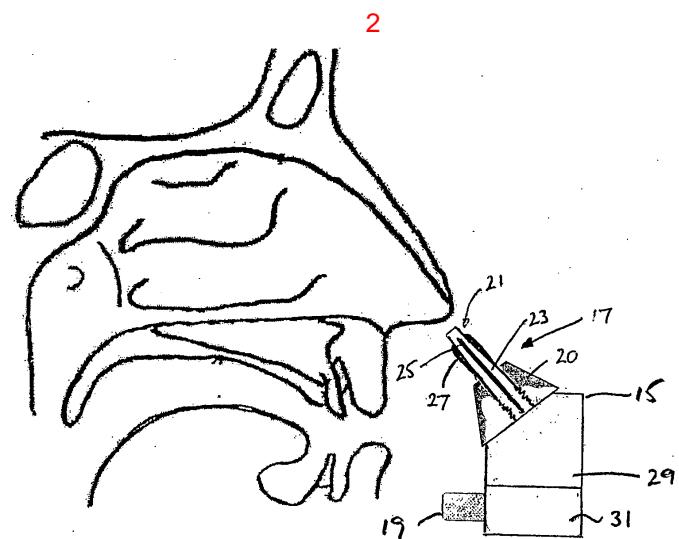
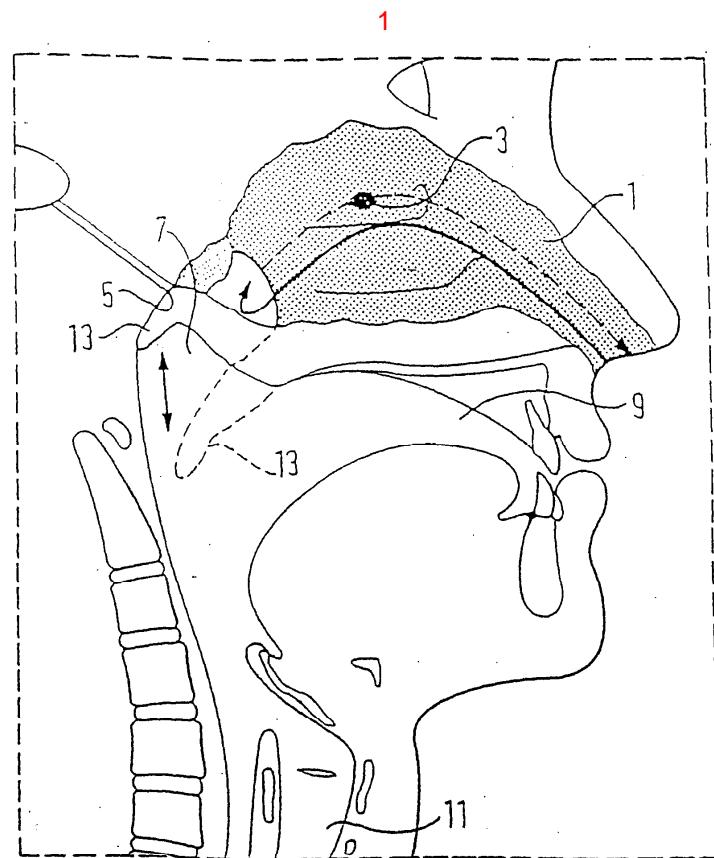
398 399 ,

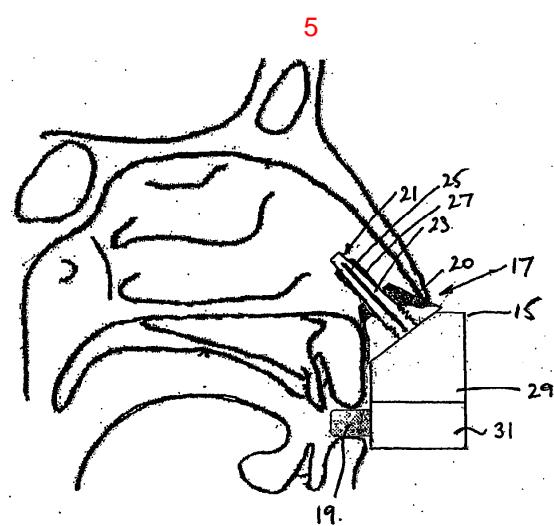
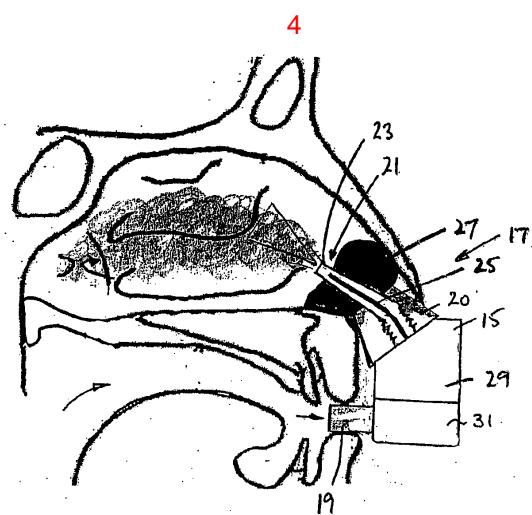
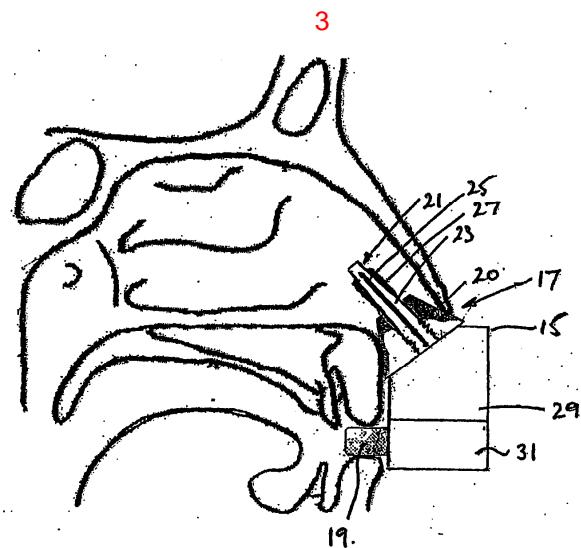
402.

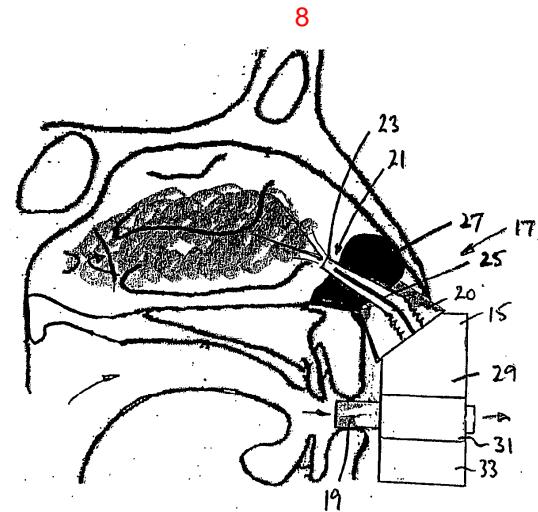
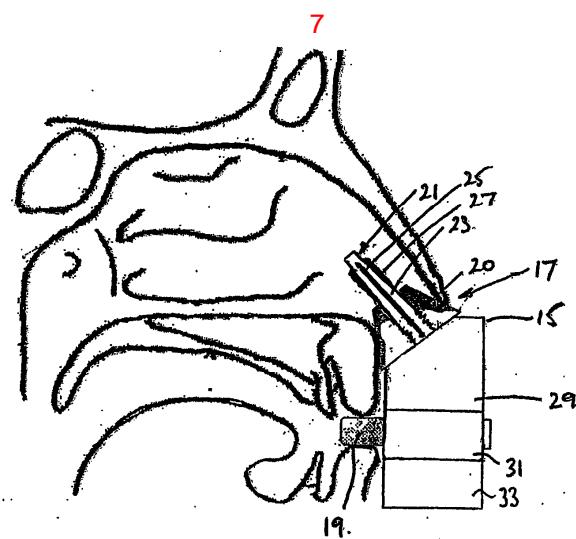
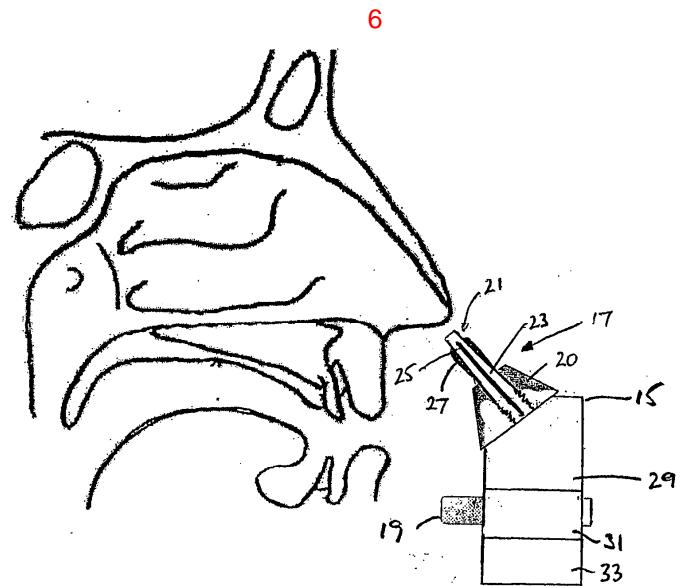
20 2 5 , 6 9 , 10 30 , 13 , 14 34 , 16 , 17 39 , 19 ,
22 , 23 26 , 27 31 34 , 35 39 , 40
45 , 46 51

403.

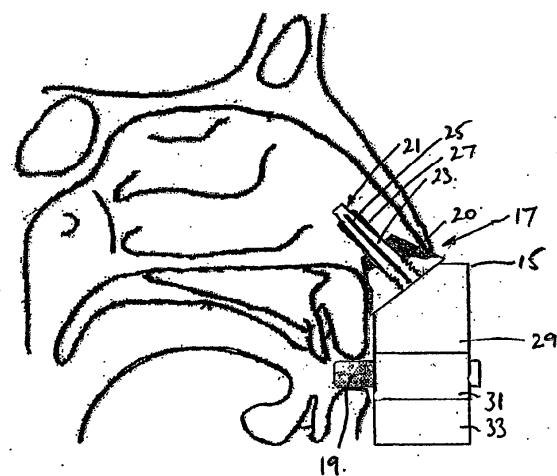
20 2 5 , 6 9 , 10 30 , 13 , 14 34 , 16 , 17 39 , 19 ,
22 , 23 26 , 27 31 34 , 35 39 , 40
45 , 46 51



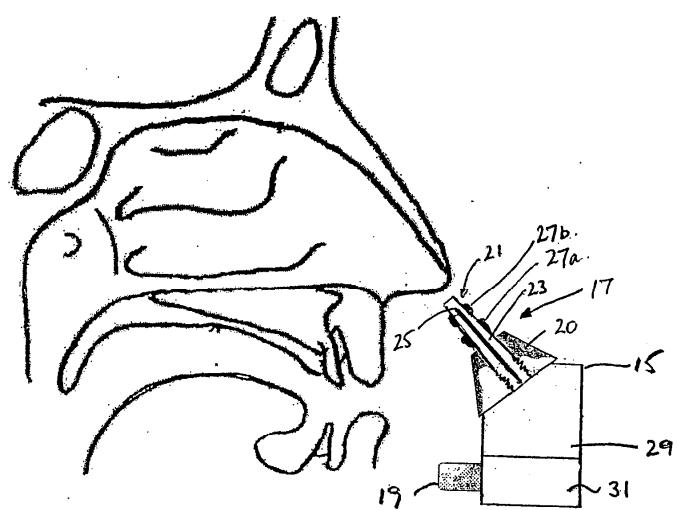




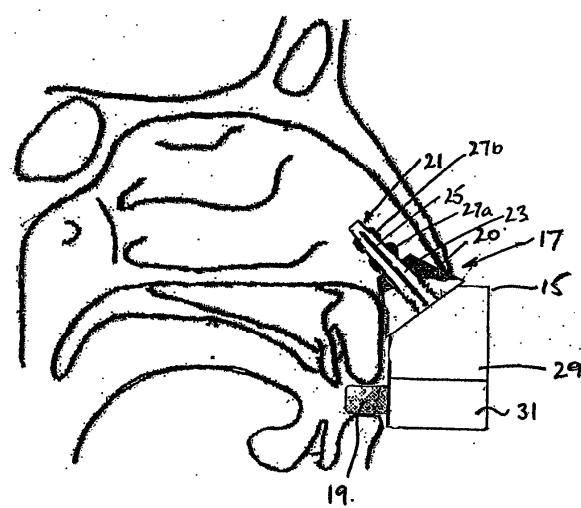
9

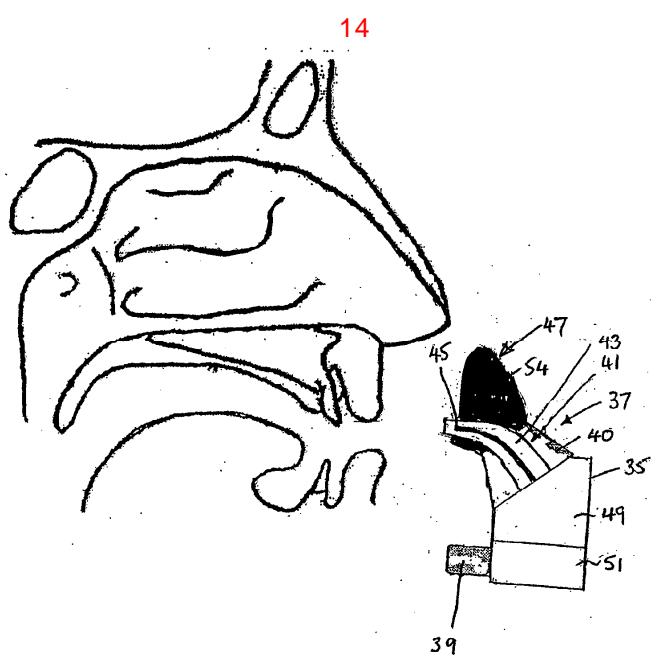
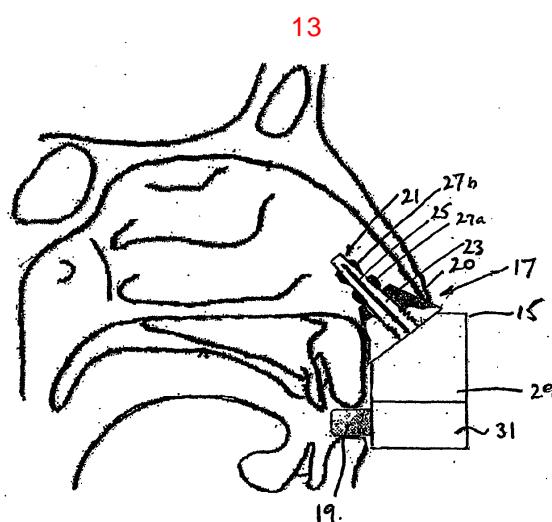
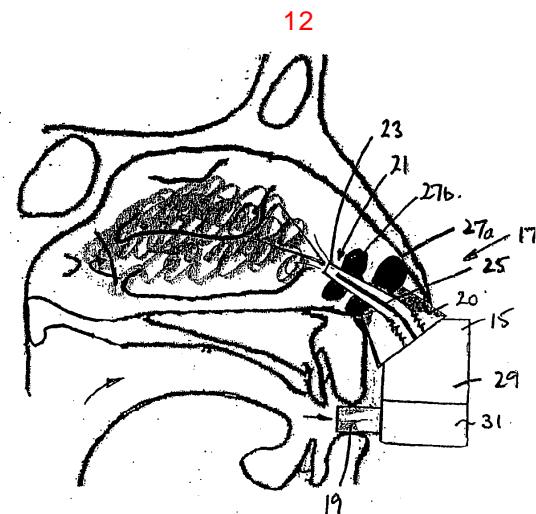


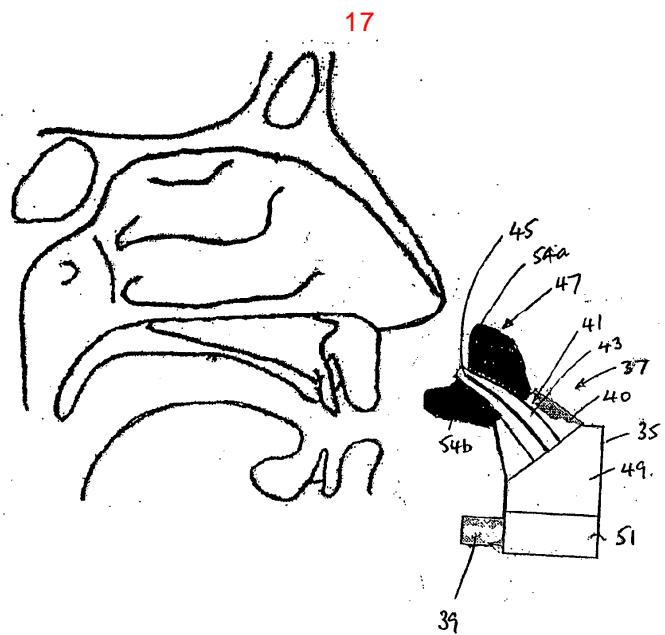
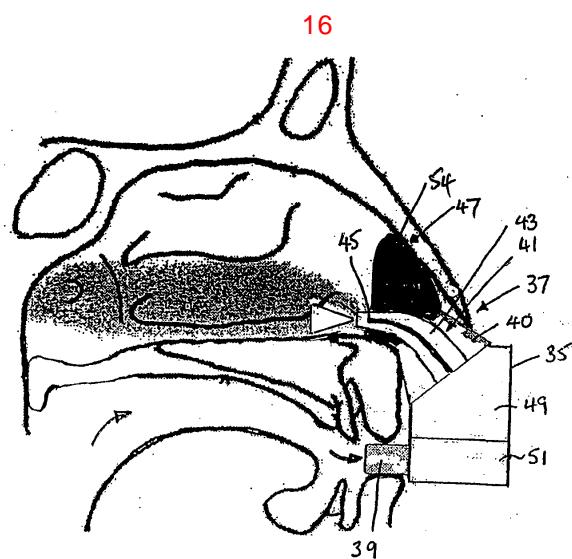
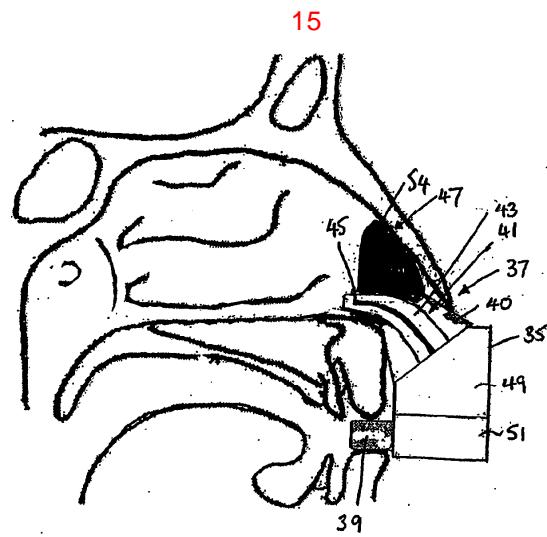
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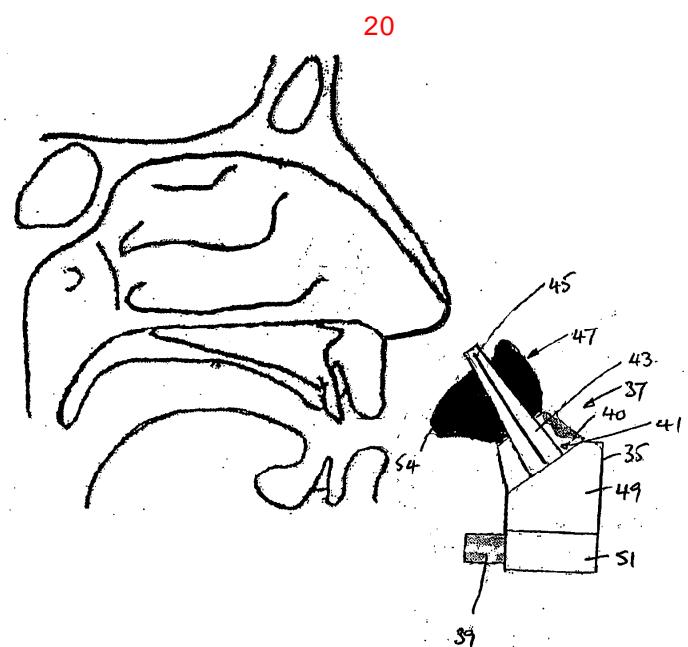
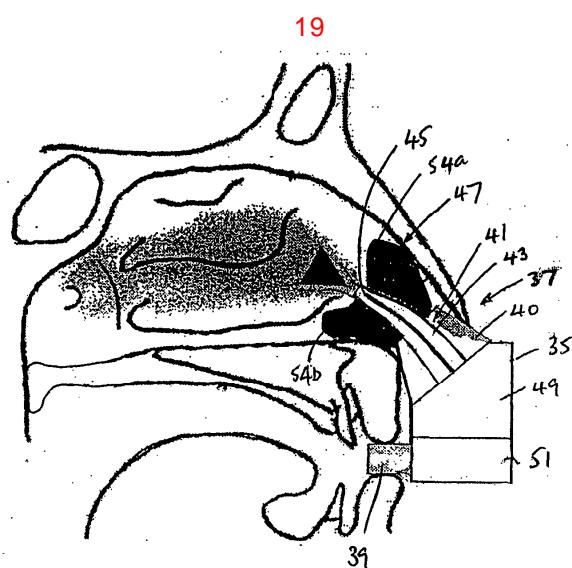
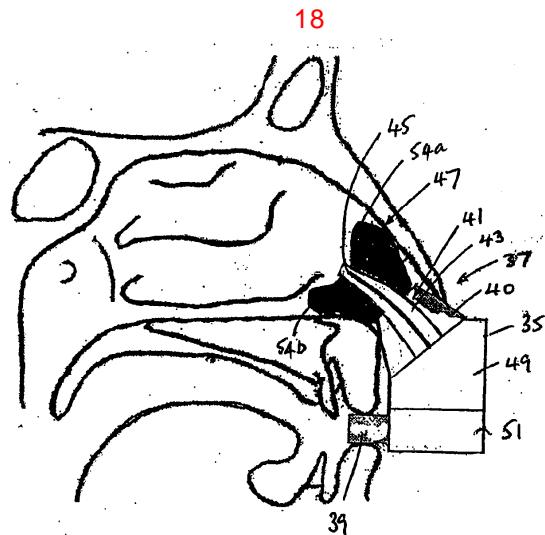


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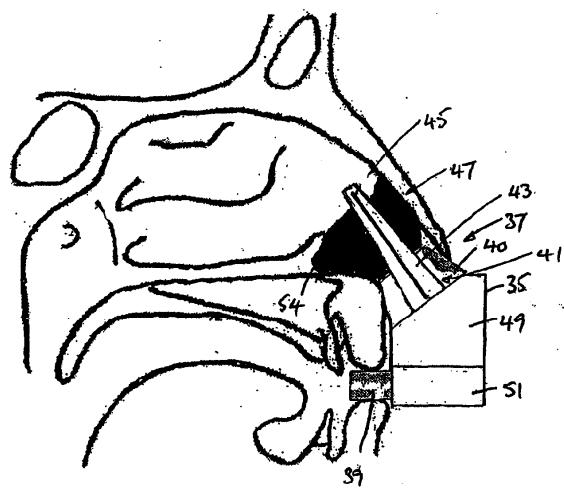




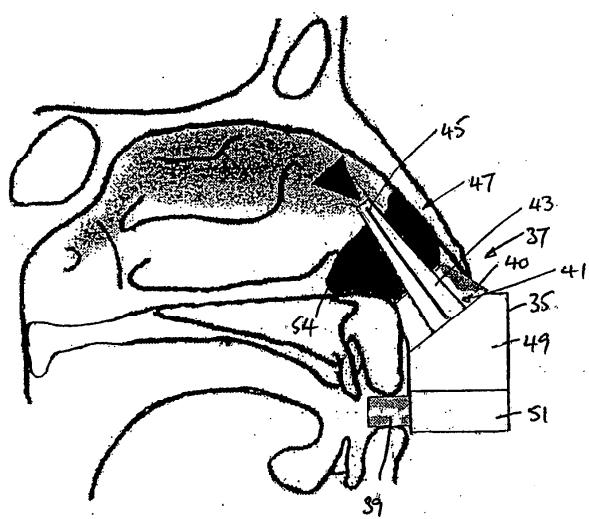




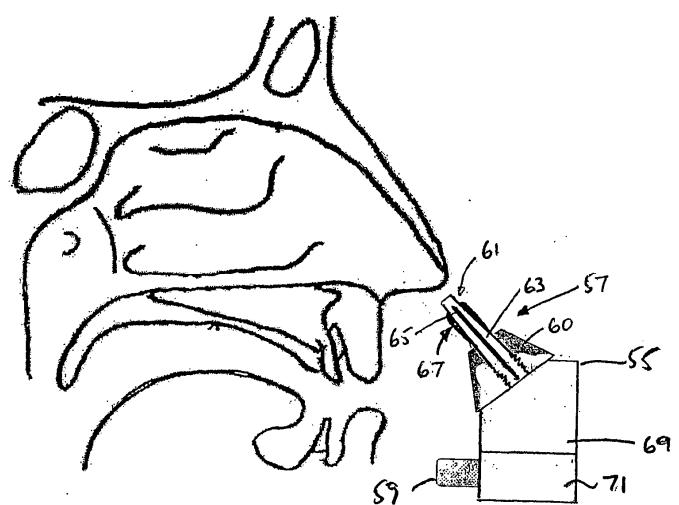
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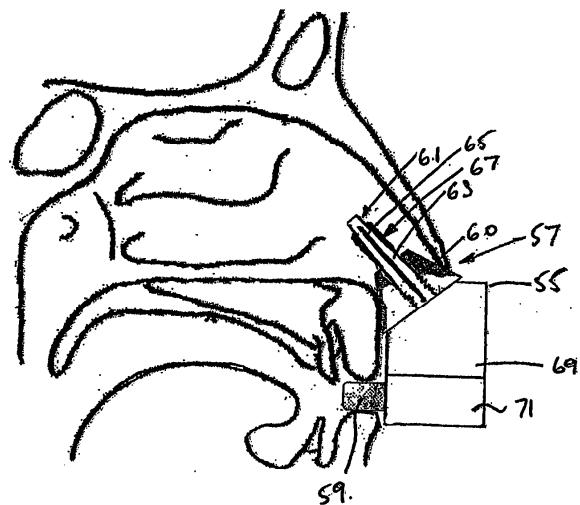
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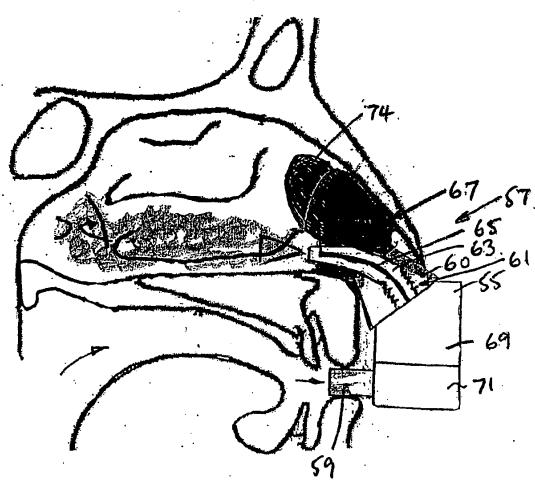
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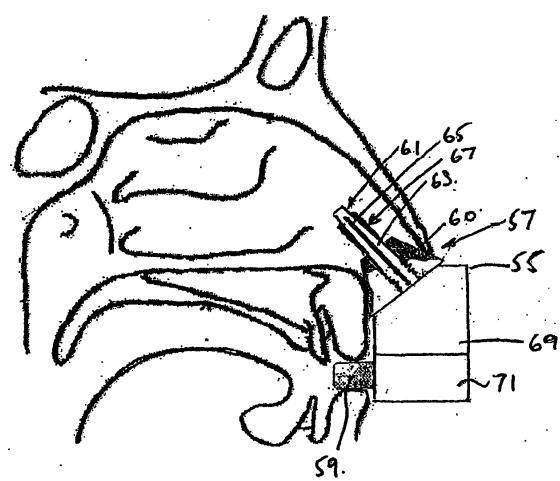
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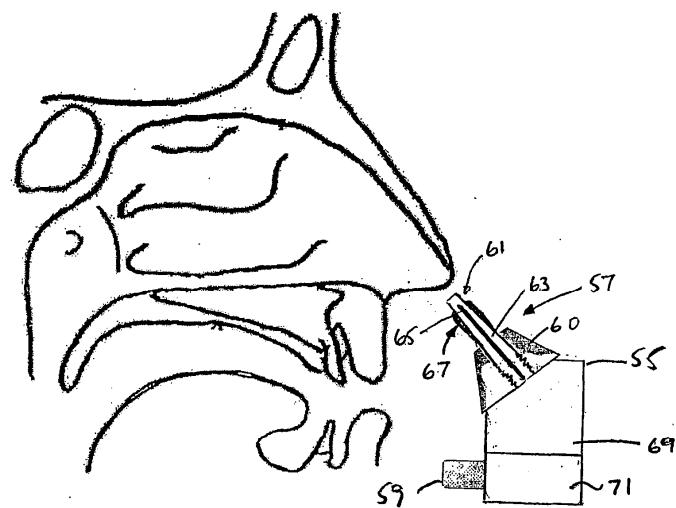
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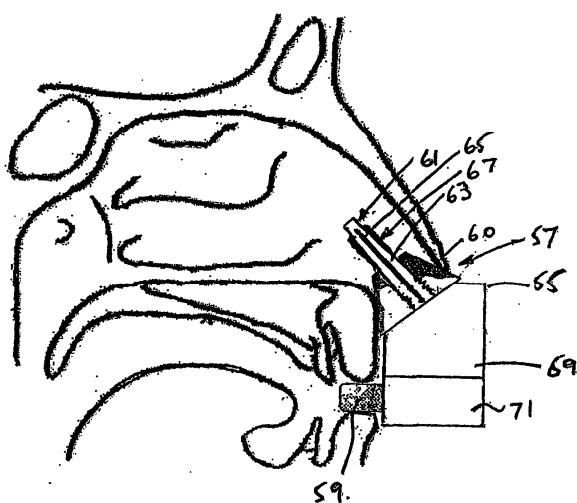
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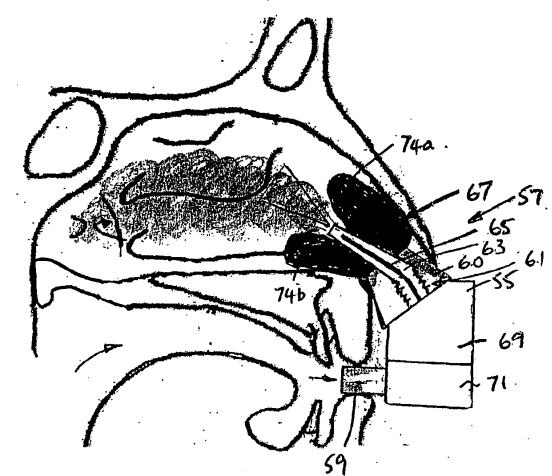
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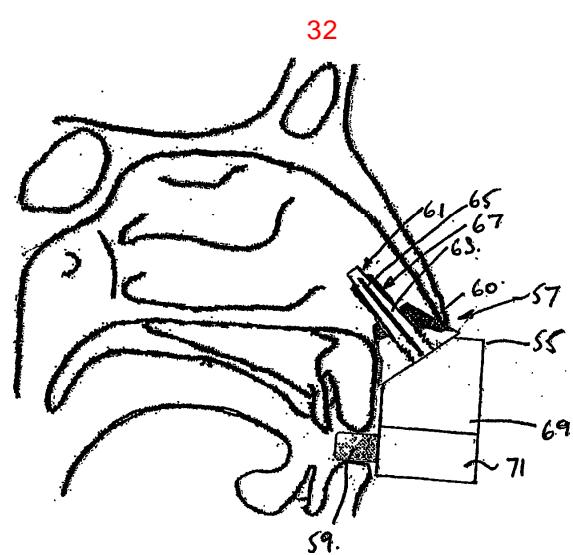
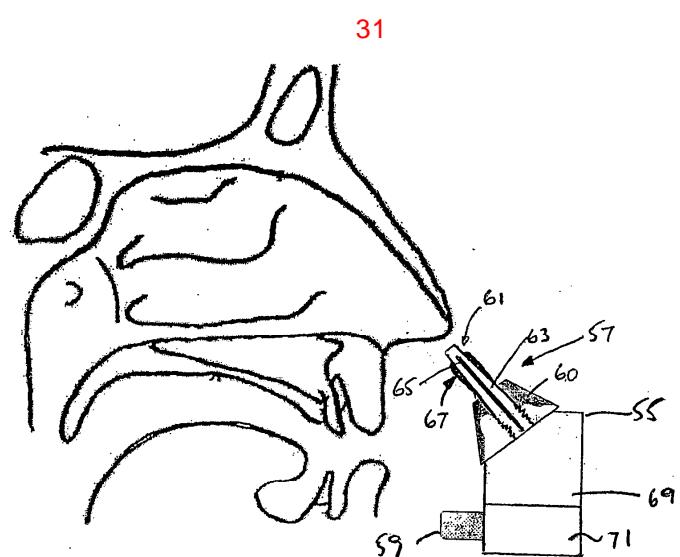
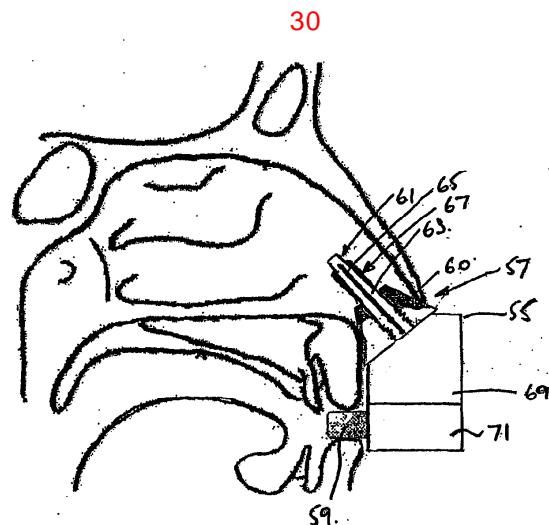


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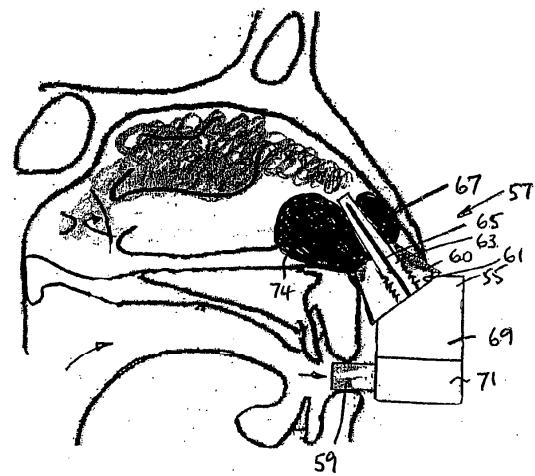


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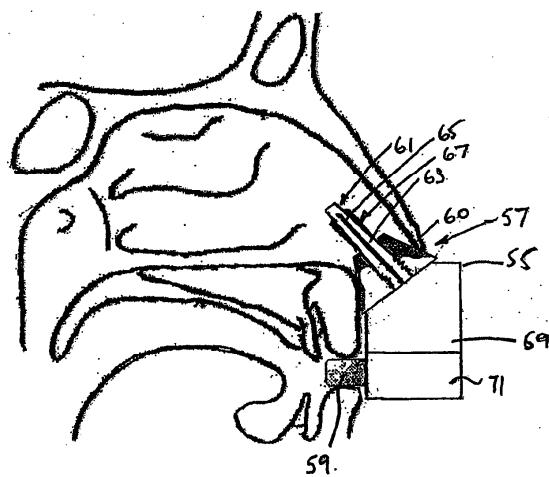




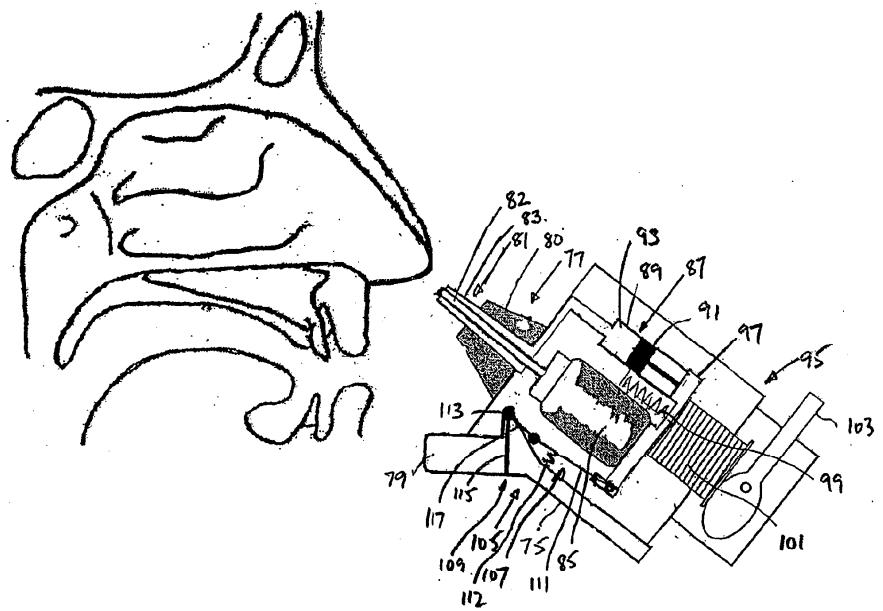
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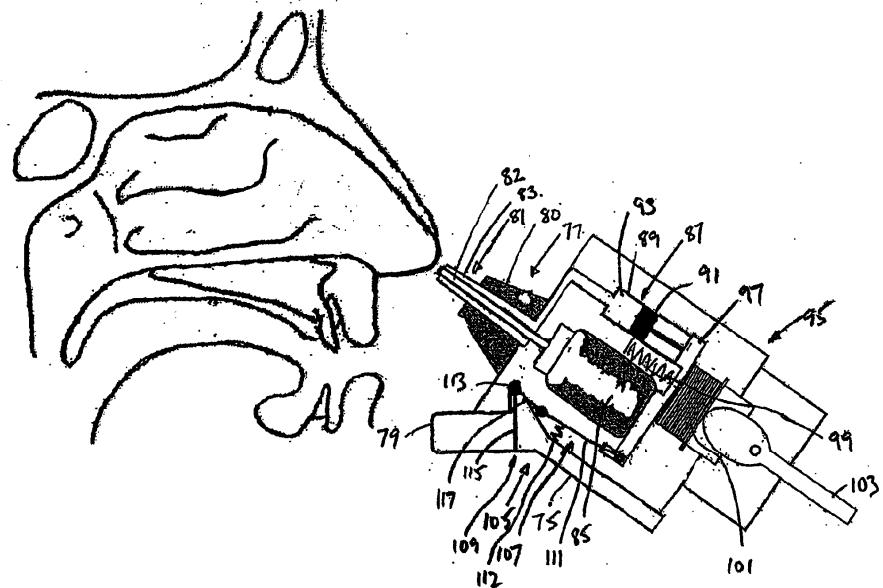
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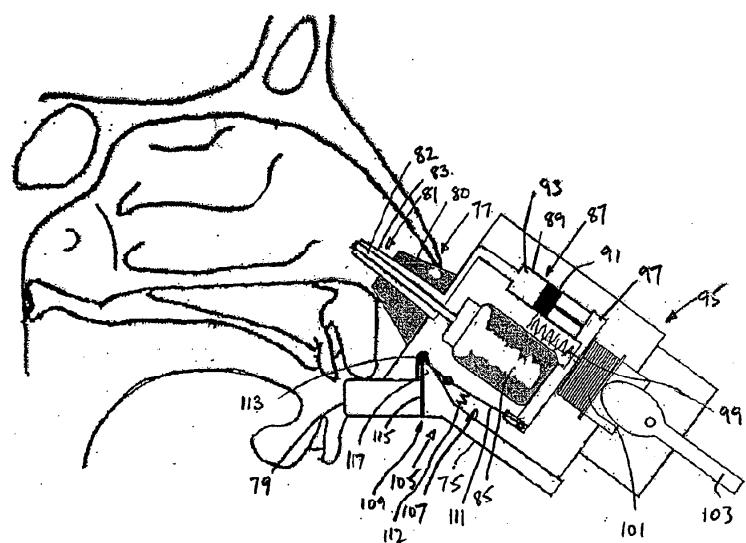
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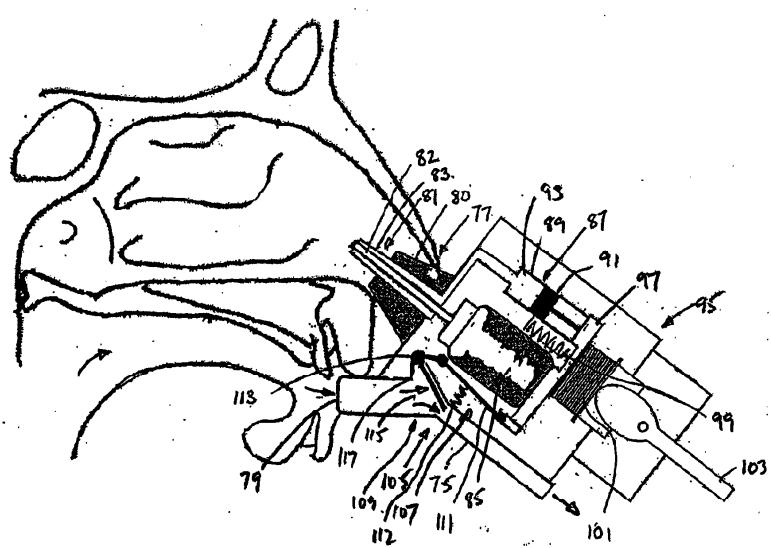
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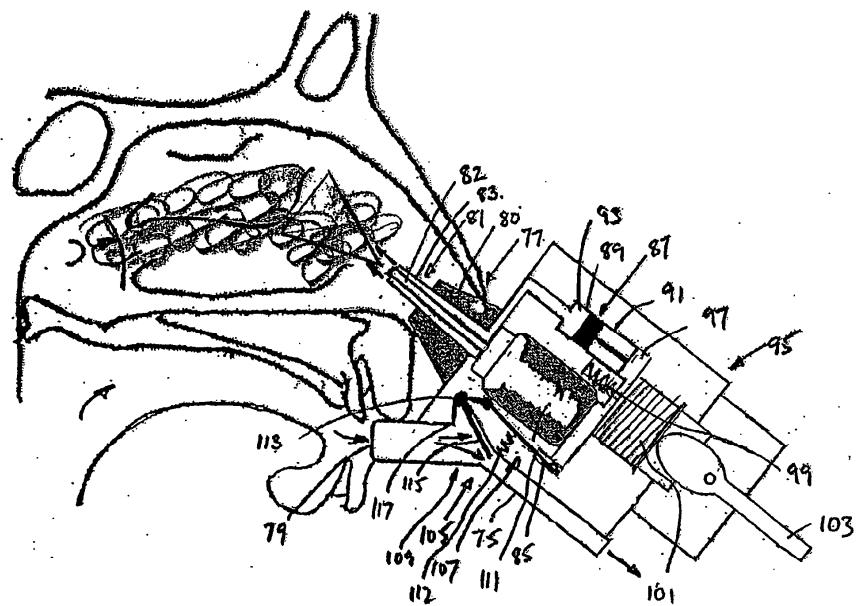
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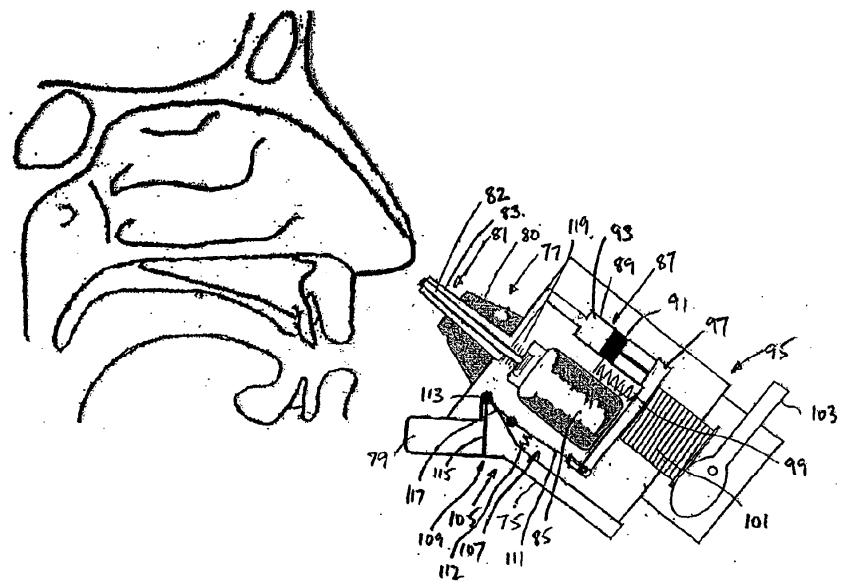
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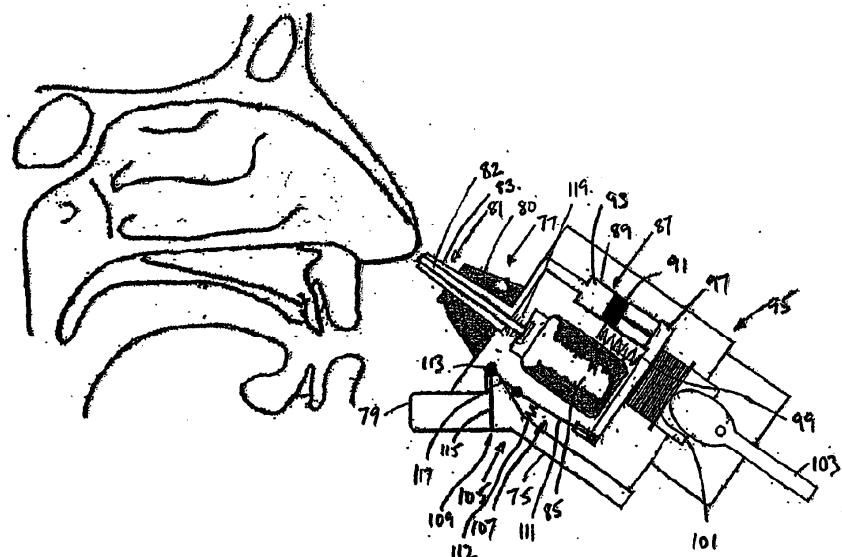
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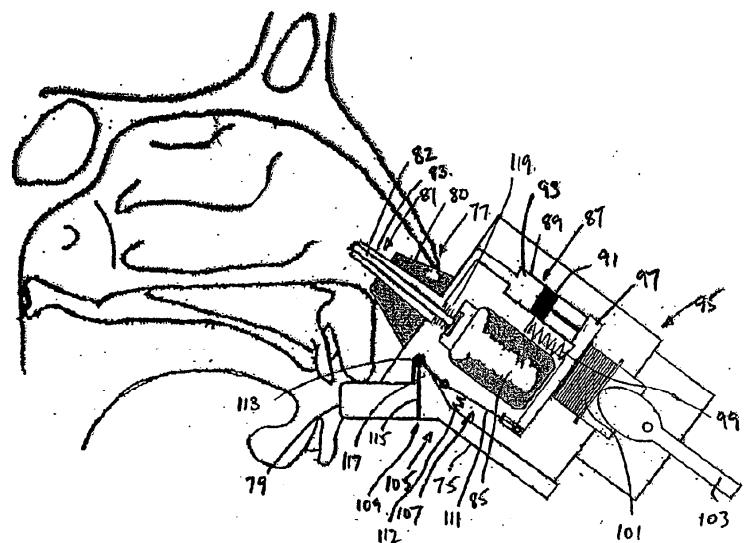
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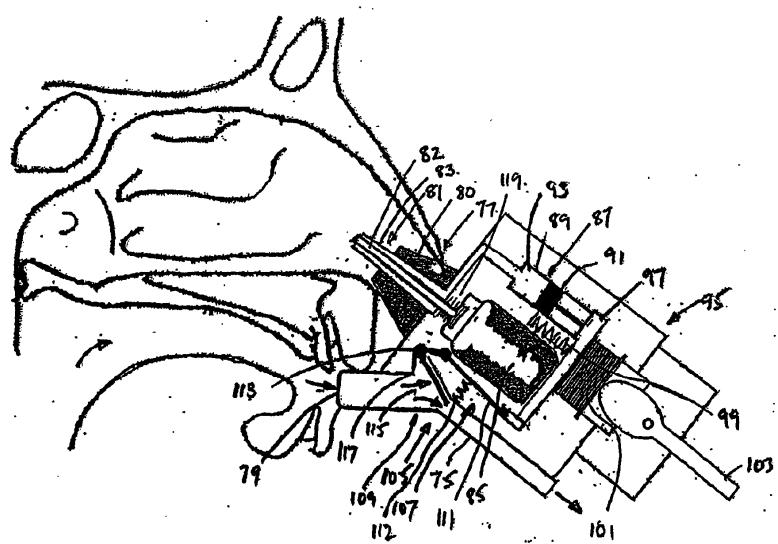
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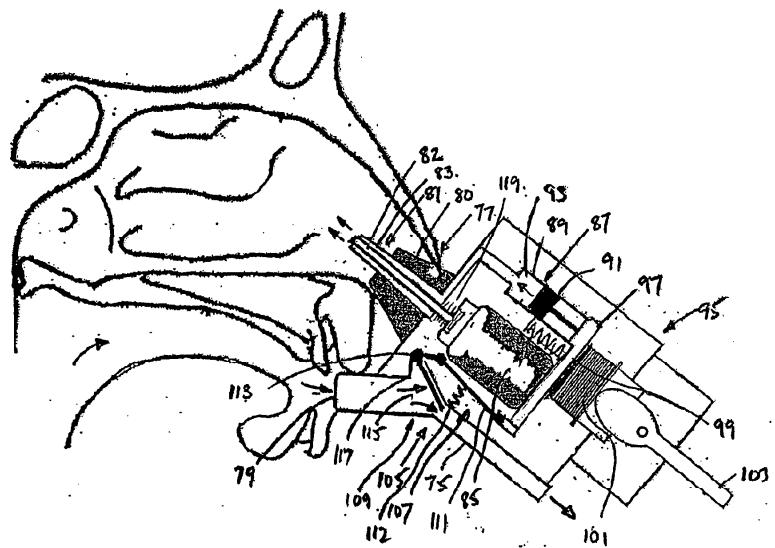
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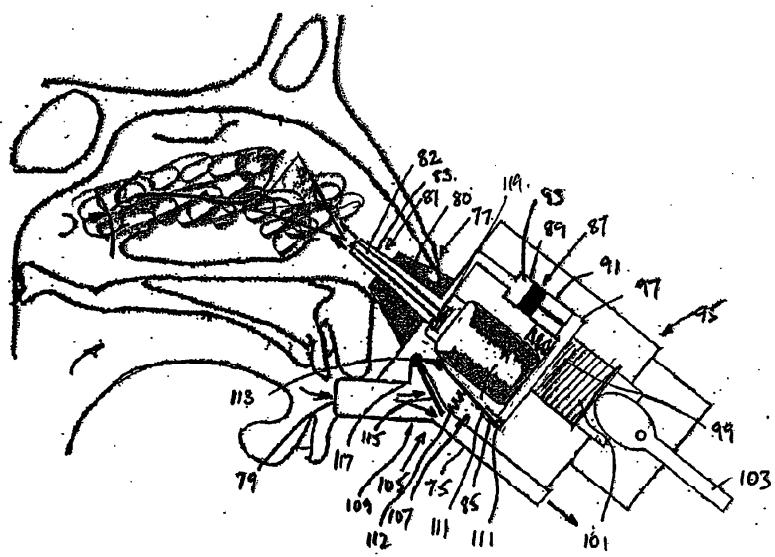
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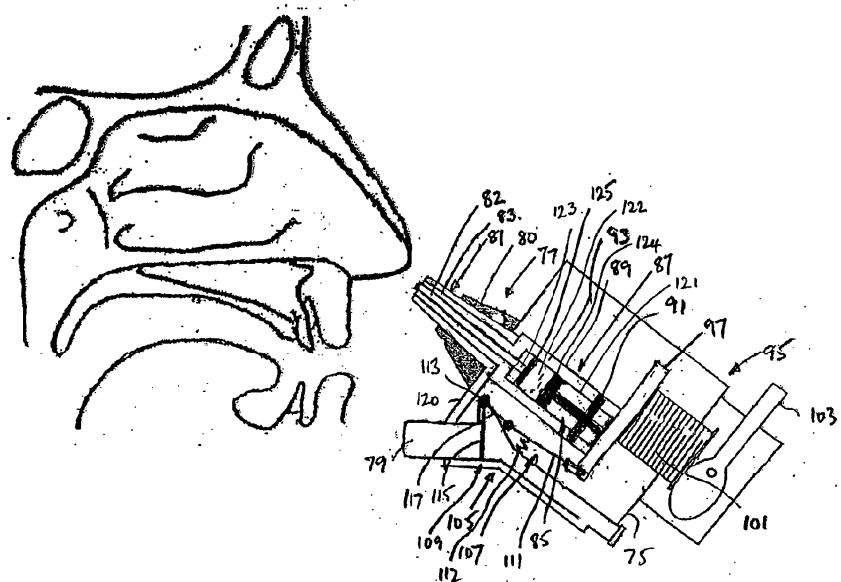
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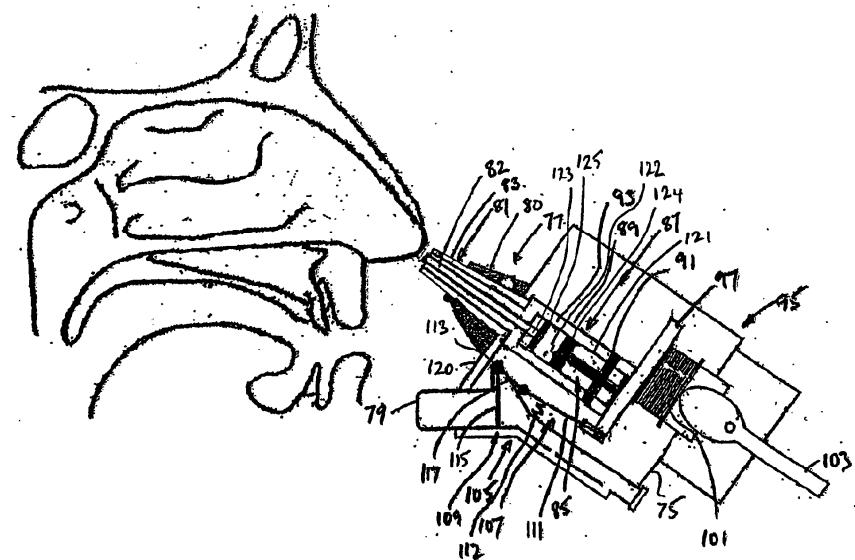
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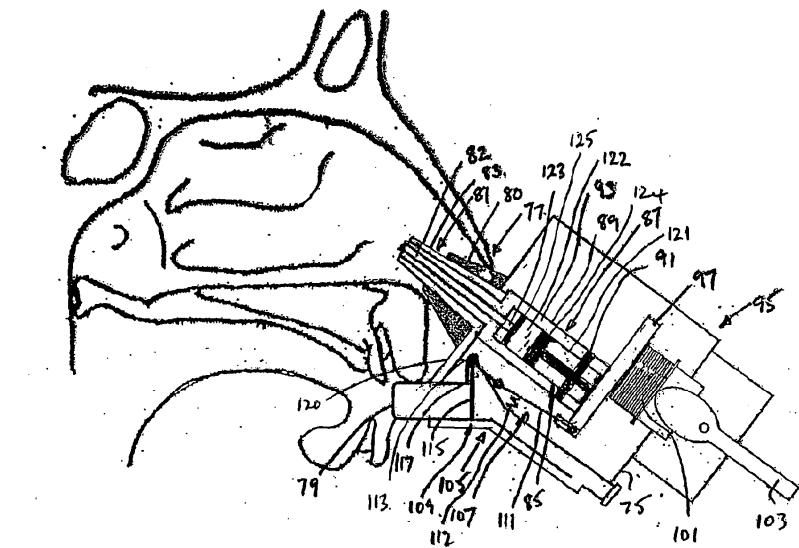
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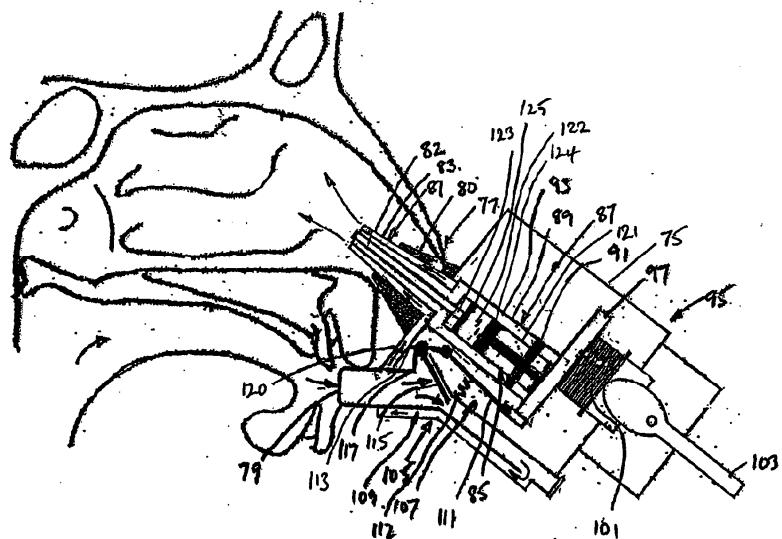
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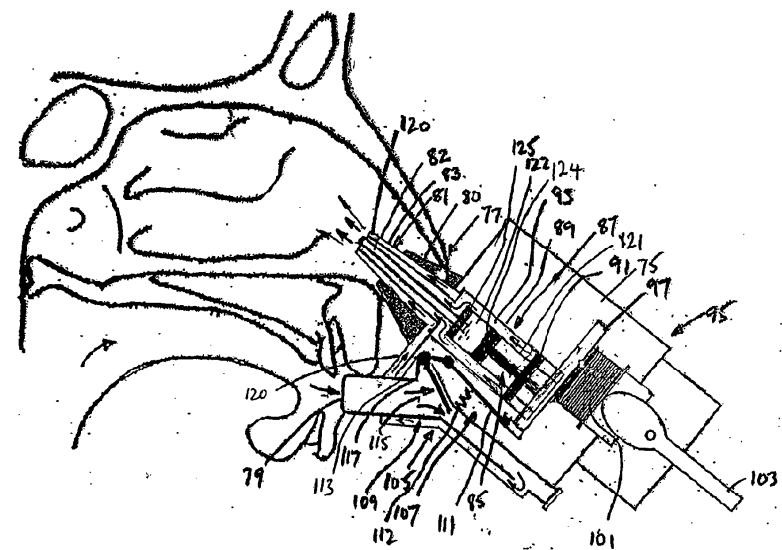
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