



US00D478660S

(12) **United States Design Patent**
Mault

(10) **Patent No.:** **US D478,660 S**

(45) **Date of Patent:** **** Aug. 19, 2003**

(54) **DISPOSABLE MASK WITH SANITATION INSERT FOR A RESPIRATORY ANALYZER**

GB 2323292 9/1998
WO WO 96/40340 12/1996

(75) Inventor: **James R. Mault**, Evergreen, CO (US)

(73) Assignee: **Healthetech, Inc.**, Golden, CO (US)

(**) Term: **14 Years**

(21) Appl. No.: **29/163,269**

(22) Filed: **Jul. 1, 2002**

(51) **LOC (7) Cl.** **29-02**

(52) **U.S. Cl.** **D24/110.1**

(58) **Field of Search** D24/110.4, 110.6,
D24/110.2, 162, 164, 165; 600/529, 533,
532, 538, 543; 128/205.27, 205.29, 205.28,
205.25, 206.19, 206.21, 206.26, 206.12,
201.28

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,249,867 A	7/1941	Snelling	73/335
2,630,798 A	3/1953	White et al.	128/2.07
2,826,912 A	3/1958	Kritz	73/194
2,831,348 A	4/1958	Kritz	73/861.28
2,838,399 A	6/1958	Vogel, Jr.	99/48
2,845,927 A *	8/1958	Hill	D24/110.1
2,869,357 A	11/1959	Kritz	73/32
2,911,825 A	11/1959	Kritz	73/194
2,920,012 A	1/1960	Sanders et al.	167/51.5
3,213,684 A	10/1965	Seaton et al.	73/190
3,220,255 A	11/1965	Scranton et al.	73/204
3,250,270 A	5/1966	Bloom	128/2.07
3,306,283 A	2/1967	Arp	128/2.07
3,357,426 A	12/1967	Cohen	128/205
3,523,529 A	8/1970	Kissen	128/2.07
3,527,205 A	9/1970	Jones	128/2.08
3,681,197 A	8/1972	Smith	195/63

(List continued on next page.)

FOREIGN PATENT DOCUMENTS

DE	198 10 476	9/1998
EP	0459647 A2	12/1991
EP	0 712 638	12/1995

OTHER PUBLICATIONS

Medical Progress Through Technology, vol. 9, No. 1, 1982 Berlin (D), pp. 27-32, R. Salminen et al., "Computerized Breath-By-Breath Analysis of Respiratory Variables During Exercise".

British Journal Of Anaesthesia, vol. 49, 1977 London (GB) pp. 575-587, J. A. Bushman et al. "Closed Circuit Anaesthesia".

IEEE Transactions On Biomedical Engineering, vol. 35, No. 9, Sep. 1988, pp. 653-659, Capek et al., "Noninvasive Measurement of Cardiac Output Using Partial CO2 ReBreathing".

Clinics In Chest Medicine (Review), vol. 10, 1989, pp. 255-264, Heigenhauser et al., "Measurement of Cardiac Output by Carbon Dioxide Rebreathing Methods".

Primary Examiner—Ian Simmons

(74) *Attorney, Agent, or Firm*—Gifford, Krass, Groh, Sprinkle, Anderson & Citkowski, P.C.

(57) **CLAIM**

I claim the ornamental design for a disposable mask with sanitation insert for a respiratory analyzer, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a disposable mask with sanitation insert for a respiratory analyzer.

FIG. 2 is an elevational view of a back side of the disposable mask with sanitation insert.

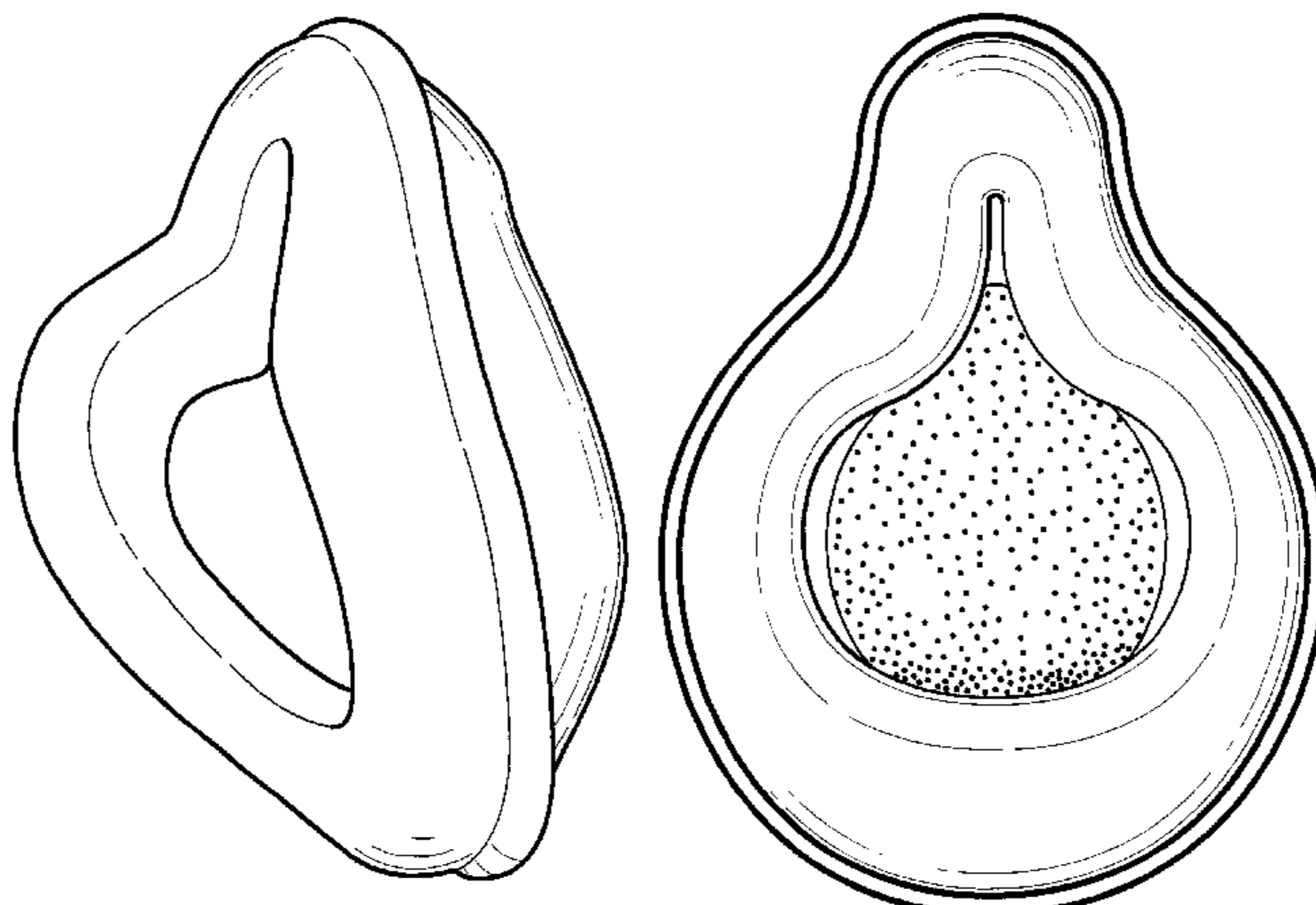
FIG. 3 is an elevational view of a front side of the disposable mask with sanitation insert.

FIG. 4 is an elevational side view of the disposable mask with sanitation insert.

FIG. 5 is an elevational top side view of the disposable mask with sanitation insert; and,

FIG. 6 is an elevational bottom side view of the disposable mask with sanitation insert.

1 Claim, 2 Drawing Sheets



US D478,660 S

Page 2

U.S. PATENT DOCUMENTS

3,726,270 A	4/1973	Griffis et al.	128/2.08	5,012,805 A	5/1991	Muckerheide	128/205.28
3,799,149 A	3/1974	Rummel et al.	128/2.07	5,022,406 A	6/1991	Tomlinson	128/719
3,814,091 A	6/1974	Henkin	128/188	5,038,773 A	8/1991	Norlien et al.	128/205.23
3,834,375 A	9/1974	Sanctuary et al.	128/2.07	5,038,792 A	8/1991	Mault	128/718
3,895,630 A	7/1975	Bachman	128/2.07	5,042,500 A	8/1991	Norlien et al.	600/532
3,902,485 A	9/1975	Wallace	128/142.6	5,042,501 A	8/1991	Kenny et al.	600/532
3,938,551 A	2/1976	Henkin	137/613	5,060,506 A	10/1991	Douglas	73/24.1
3,962,917 A	6/1976	Terada	73/204	5,060,655 A	10/1991	Rudolph	128/716
3,979,480 A	9/1976	Radici et al.	260/857 F	5,060,656 A	10/1991	Howard	128/718
3,980,080 A	9/1976	Muto	128/146.6	5,067,492 A	11/1991	Yelderman et al.	600/532
4,003,396 A	1/1977	Fleischmann	137/83	5,069,220 A	12/1991	Casparie et al.	128/719
4,051,847 A	10/1977	Henkin	128/145.6	5,072,737 A	12/1991	Goulding	128/718
4,078,554 A	3/1978	Le Maitre et al.	128/2.08	5,081,871 A	1/1992	Glaser	73/863.23
4,186,735 A	2/1980	Henneman et al.	128/201.25	5,095,900 A	3/1992	Fertig et al.	128/207.14
4,188,946 A	2/1980	Watson et al.	128/204.22	5,095,913 A	3/1992	Yelderman et al.	128/719
4,197,857 A	4/1980	Osborn	600/531	D325,780 S *	4/1992	Policappelli	D24/162
4,200,094 A	4/1980	Gedeon et al.	128/201.13	5,117,674 A	6/1992	Howard	73/31.07
4,201,205 A	5/1980	Bartholomew	128/205.25	5,119,825 A	6/1992	Huhn	600/529
4,211,239 A	7/1980	Raemer et al.	128/716	5,178,155 A	1/1993	Mault	128/718
4,221,224 A	9/1980	Clark	128/718	5,179,002 A	1/1993	Fehder	435/25
4,230,108 A	10/1980	Young		5,179,958 A	1/1993	Mault	128/718
4,273,119 A	6/1981	Marchello	128/201.13	5,197,464 A	3/1993	Babb et al.	128/207.14
4,326,514 A	4/1982	Eian	128/202.22	D334,633 S	4/1993	Rudolph	D24/110.4
4,328,797 A	5/1982	Rollins, III et al.	128/202.27	5,214,966 A	6/1993	Delsing	73/861.28
D265,006 S *	6/1982	Levy	D24/110.1	5,233,996 A	8/1993	Coleman et al.	600/529
4,341,867 A	7/1982	Johansen	435/189	5,235,972 A	8/1993	Strong	128/206.21
4,359,057 A	11/1982	Manzella	128/718	5,265,595 A	11/1993	Rudolph	128/204.18
4,368,740 A	1/1983	Binder	128/718	5,279,289 A	1/1994	Kirk	128/205.23
4,386,604 A	6/1983	Hershey	128/718	5,282,473 A	2/1994	Braig et al.	600/532
RE31,424 E	10/1983	Ernsting et al.	128/201.18	5,285,794 A	2/1994	Lynch	128/719
4,425,805 A	1/1984	Ogura et al.	73/861.29	5,293,875 A	3/1994	Stone	128/719
4,440,177 A	4/1984	Anderson et al.	600/532	5,297,544 A	3/1994	May et al.	128/202.22
4,444,201 A	4/1984	Itoh	128/716	5,299,579 A	4/1994	Gedeon et al.	600/532
4,454,880 A	6/1984	Muto et al.	128/205.25	5,303,712 A	4/1994	Van Duren	600/529
4,463,764 A	8/1984	Anderson et al.	600/532	5,309,921 A	5/1994	Kisner et al.	600/532
4,488,547 A	12/1984	Mason	128/202.22	5,326,973 A	7/1994	Eckerbom et al.	250/343
4,572,208 A	2/1986	Cutler et al.	128/718	5,353,789 A	10/1994	Schlobohm	128/206.24
4,582,054 A	4/1986	Ferrer	128/200.23	5,355,879 A	10/1994	Brain	
4,598,700 A	7/1986	Tamm	128/671	5,357,945 A	10/1994	Messina	128/200.14
4,608,995 A	9/1986	Linnarsson et al.	128/713	5,357,972 A	10/1994	Norlien	128/725
4,619,269 A	10/1986	Cutler et al.	128/719	5,363,857 A	11/1994	Howard	600/531
4,648,396 A	3/1987	Raemer	600/534	5,375,592 A	12/1994	Kirk et al.	128/207.14
4,658,832 A	4/1987	Brugnoli	600/532	5,386,625 A	2/1995	Tsukamoto	128/205.27
4,691,701 A	9/1987	Williams	128/207.14	5,398,695 A	3/1995	Anderson et al.	600/532
4,719,923 A	1/1988	Hartwell et al.	128/663	5,400,781 A	3/1995	Davenport	128/206.28
4,728,499 A	3/1988	Fehder	422/56	5,402,796 A	4/1995	Packer et al.	128/719
4,753,245 A	6/1988	Gedeon	128/718	5,419,326 A	5/1995	Harnoncourt	128/660.02
4,756,670 A	7/1988	Arai	417/43	5,425,374 A	6/1995	Ueda et al.	600/532
4,781,184 A	11/1988	Fife	128/205.12	5,450,193 A	9/1995	Carlsen et al.	356/301
4,796,639 A	1/1989	Snow et al.	600/532	5,454,369 A	10/1995	Muller et al.	128/206.24
4,799,477 A	1/1989	Lewis	128/206.24	5,464,982 A	11/1995	Drucker et al.	250/343
D300,272 S	3/1989	Rudolph et al.	D24/110.6	5,468,451 A	11/1995	Gedeon	422/58
D300,273 S	3/1989	Rudolph et al.	D24/110.6	5,468,961 A	11/1995	Gradon et al.	250/345
D300,274 S	3/1989	Rudolph et al.	D24/110.6	5,480,611 A	1/1996	Mills et al.	422/55
D301,774 S	6/1989	Rudolph et al.	D24/110.4	5,503,151 A	4/1996	Harnoncourt et al. ..	128/660.02
4,850,371 A	7/1989	Broadhurst et al.	600/532	5,513,648 A	5/1996	Jackson	128/721
4,856,531 A	8/1989	Merilainen	600/532	5,533,512 A	7/1996	Novotny et al.	600/532
4,865,027 A	9/1989	Laanen et al.	128/200.21	5,538,000 A	7/1996	Rudolph	128/205.25
D305,165 S	12/1989	Rudolph et al.	D24/110.6	5,545,897 A	8/1996	Jack	250/339.13
D306,086 S	2/1990	Rudolph et al.	D24/110.6	5,570,697 A	11/1996	Walker et al.	128/719
4,909,259 A	3/1990	Tehrani	600/531	5,603,317 A	2/1997	Farmer	128/205.27
4,914,959 A	4/1990	Mylvaganam et al. ...	73/861.28	5,632,281 A	5/1997	Rayburn	128/719
4,917,108 A	4/1990	Mault	600/531	5,645,071 A	7/1997	Harnoncourt et al.	128/719
4,938,209 A	7/1990	Fry	128/200.21	5,647,370 A	7/1997	Harnoncourt	128/725
4,945,918 A	8/1990	Abernathy	600/532	5,676,132 A	10/1997	Tillotson et al.	128/204.23
4,955,946 A	9/1990	Mount et al.	600/532	D385,960 S	11/1997	Rudolph	D24/110.4
4,986,268 A	1/1991	Tehrani	128/204	5,695,061 A	12/1997	Stompe	252/408.1
4,994,117 A	2/1991	Fehder	436/133	5,705,735 A	1/1998	Acorn	73/23.3
4,998,018 A	3/1991	Kurahashi et al.	250/343	5,754,288 A	5/1998	Yamamoto et al.	356/301
5,005,572 A	4/1991	Raemer et al.	128/207.14	5,758,642 A	6/1998	Choi	128/206.21
				5,765,553 A	6/1998	Richards et al.	128/203.29

US D478,660 S

Page 3

5,771,885 A	6/1998	Putrello	128/205.27	6,082,360 A	7/2000	Rudolph et al.	128/206.25
5,782,234 A	7/1998	Bates	128/205.27	6,095,986 A	8/2000	Braig et al.	600/532
5,789,660 A	8/1998	Kofoed et al.	73/23.3	6,099,481 A	8/2000	Daniels et al.	600/538
5,796,009 A	8/1998	Delsing	73/861.28	6,120,784 A	9/2000	Snyder, Jr.	424/404
5,800,360 A	9/1998	Kisner et al.	600/532	6,135,107 A	10/2000	Mault	128/204.23
5,816,246 A	10/1998	Mirza	128/726	6,173,712 B1	1/2001	Brunson	128/206.19
5,831,175 A	11/1998	Fletcher-Haynes	73/861.28	6,190,327 B1	2/2001	Isaacson et al.	600/529
5,834,626 A	11/1998	De Castro et al.	73/23.3	6,191,421 B1	2/2001	Yamamori et al.	250/343
5,836,300 A	11/1998	Mault	600/532	6,192,886 B1	2/2001	Rudolph	128/207.13
5,841,021 A	11/1998	De Castro et al.	73/23.2	6,197,577 B1	3/2001	Jeffrey et al.	435/288.7
5,857,460 A	1/1999	Popitz	128/206.21	6,199,550 B1	3/2001	Wiesmann et al.	128/204.23
5,922,610 A	7/1999	Alving et al.	436/116	6,206,837 B1	3/2001	Brugnoli	600/529
5,932,812 A	8/1999	Delsing	73/861.02	6,341,606 B1	1/2002	Bordewick et al.	128/206.25
5,957,858 A	9/1999	Micheels et al.	600/532	2001/0016733 A1	8/2001	Frey et al.	606/5
5,992,413 A	11/1999	Martin, Jr. et al.	128/201.13	2002/0023647 A1	2/2002	Hansen et al.	128/205.25
6,010,459 A	1/2000	Silkoff et al.	600/532	2002/0026943 A1	3/2002	Castiglione	128/206.19
6,044,843 A	4/2000	O'Neil et al.	128/204.23				
6,055,982 A	5/2000	Brunson et al.	128/206.12				

* cited by examiner

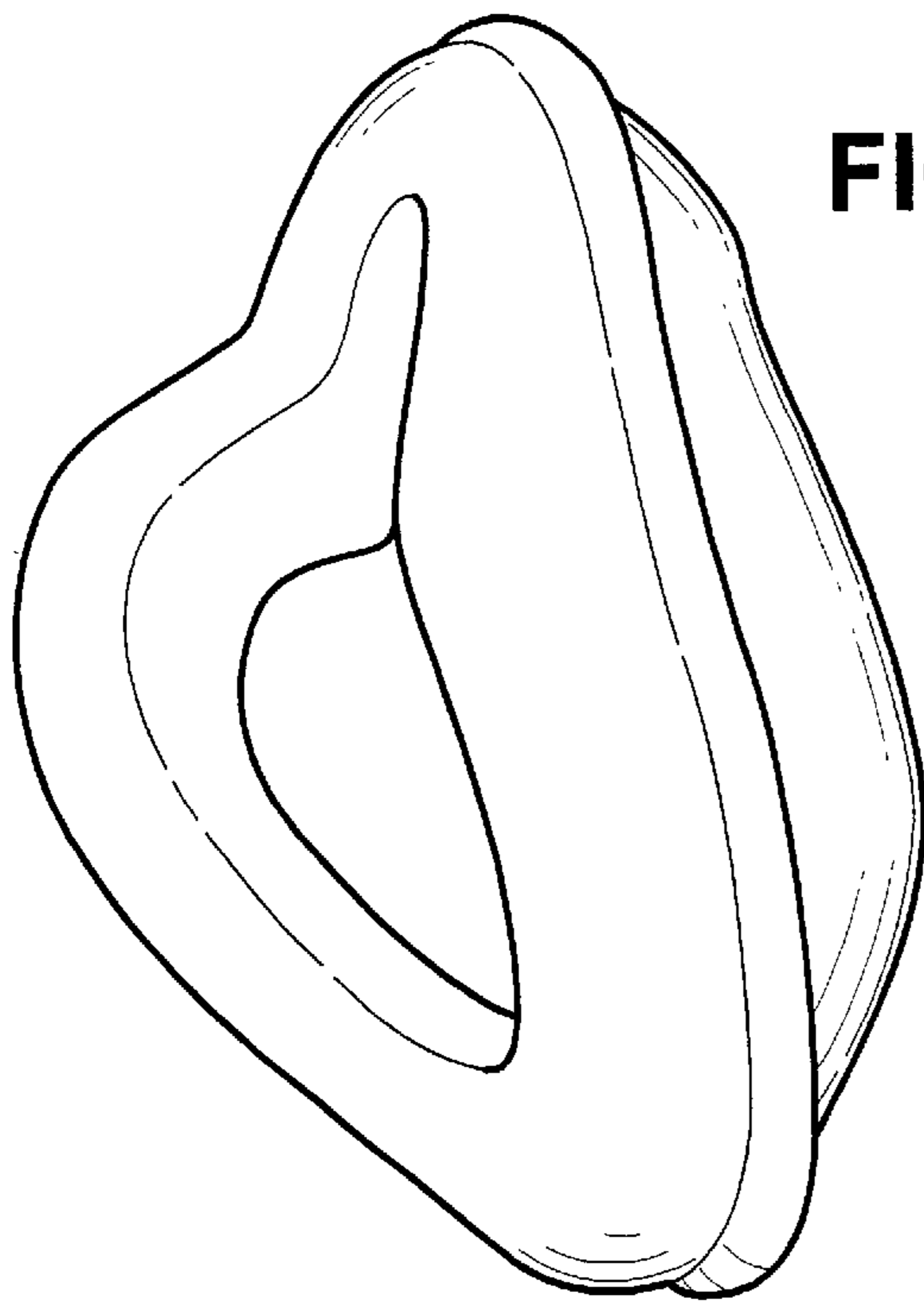


FIG - 1

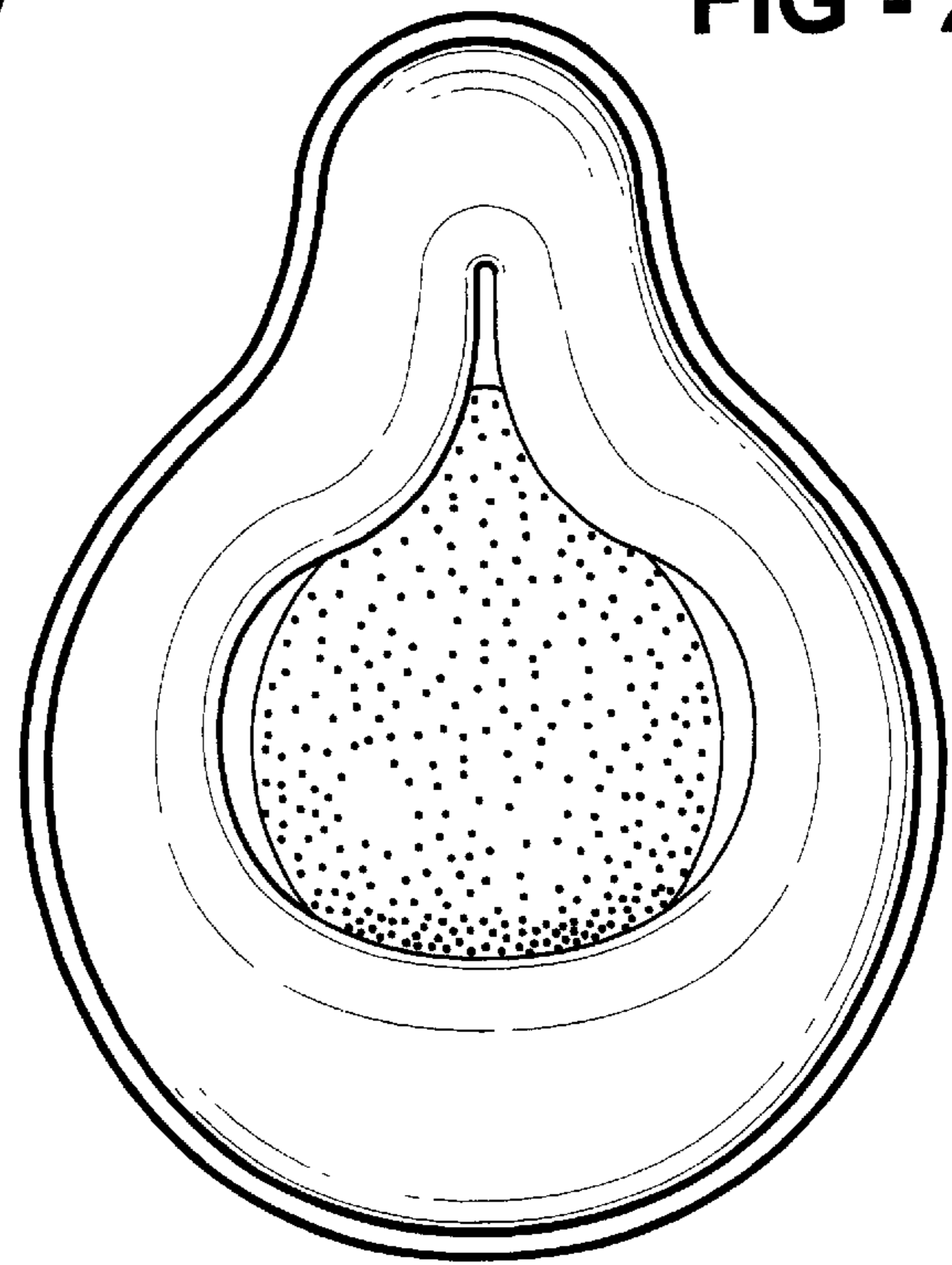


FIG - 2

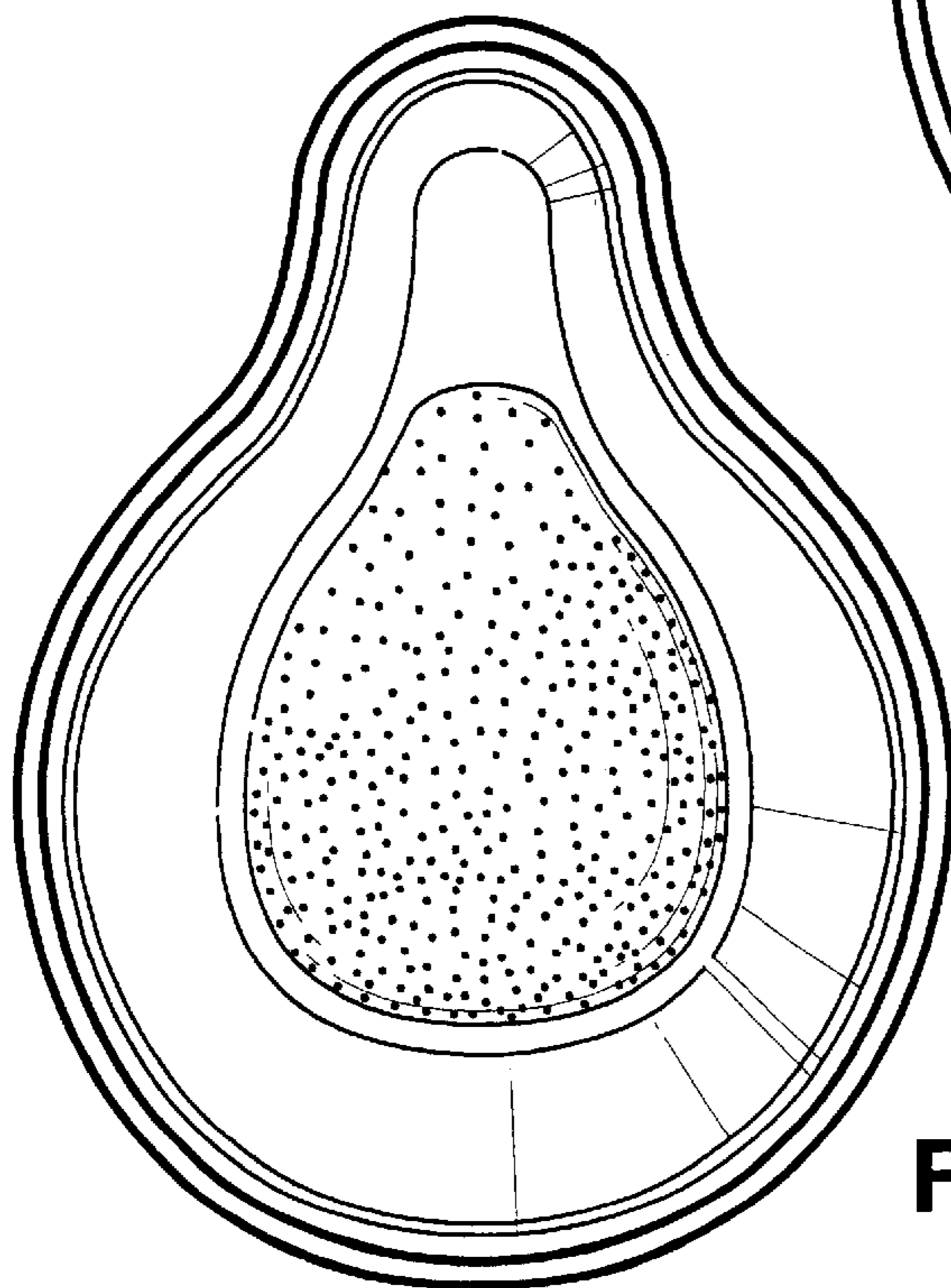


FIG - 3

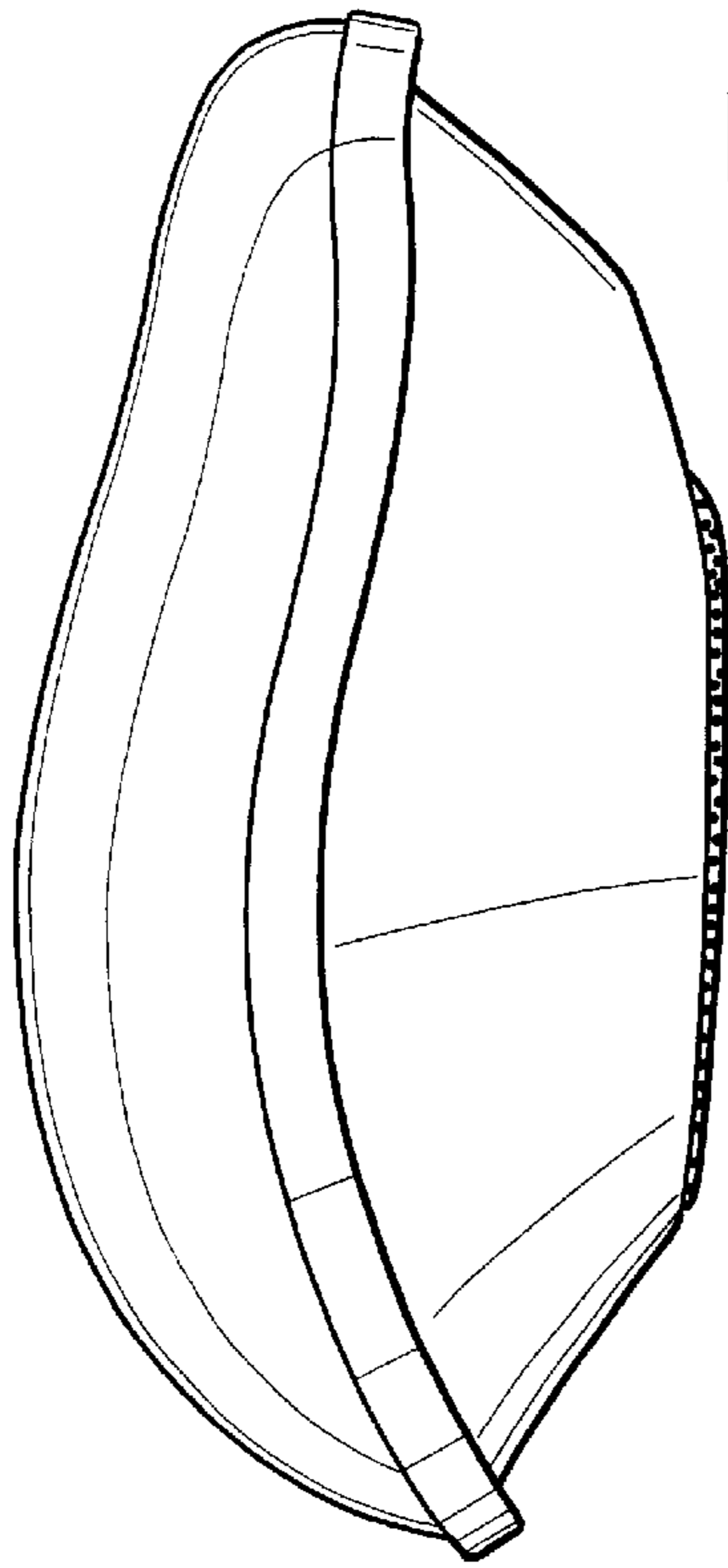


FIG - 4

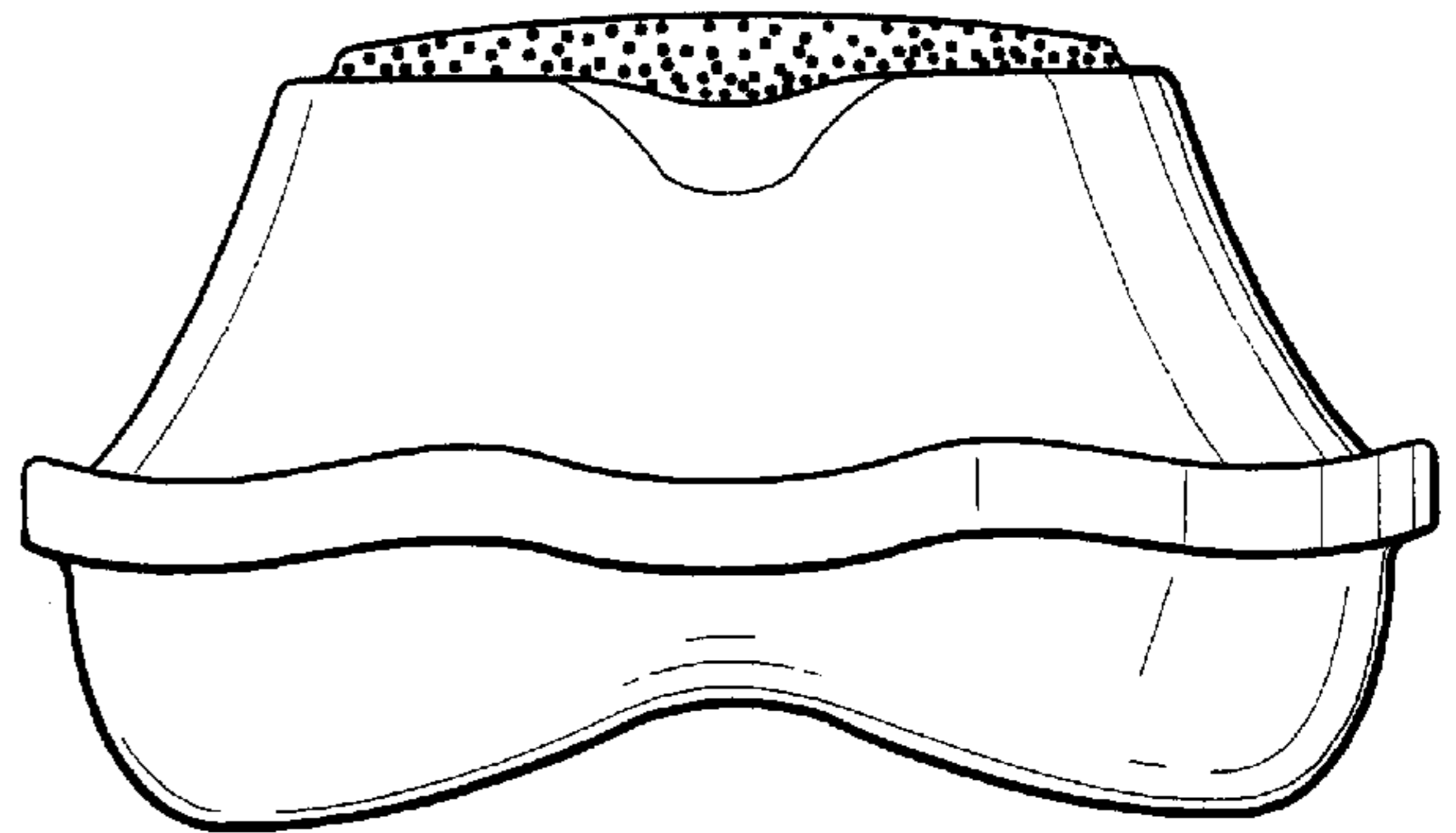


FIG - 5

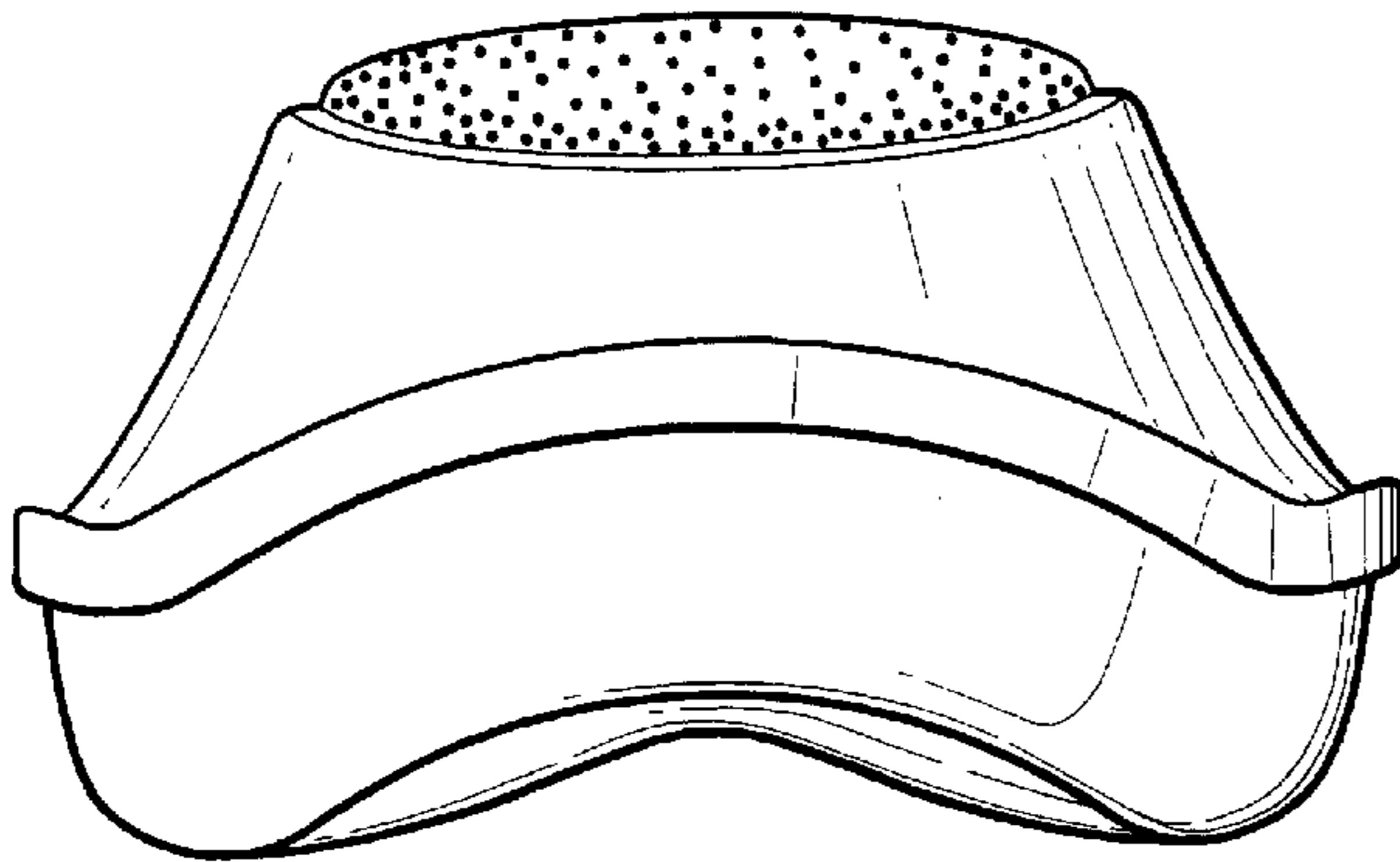


FIG - 6