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(54) **FRAME FOR A BREATHING MASK**

FOREIGN PATENT DOCUMENTS

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AU 744593 2/2002
AU 2003246441 12/2003

(Continued)

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OTHER PUBLICATIONS

American Heritage Dictionary of the English Language, Fourth
Edition (2006) (selected portions).

(Continued)

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(57) **CLAIM**

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The ornamental design for a frame for a breathing mask, as
shown and described.

(51) **LOC (12) Cl.** **29-02**

(52) **U.S. Cl.**

USPC **D24/110.4**

(58) **Field of Classification Search**

USPC D24/110.1–110.4, 127

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See application file for complete search history.

DESCRIPTION

FIG. 1 is a front and left side perspective view of a first
embodiment of a frame for a breathing mask.

FIG. 2 is a left side view thereof.

FIG. 3 is a front view thereof.

FIG. 4 is a right side view thereof.

FIG. 5 is a rear view thereof.

FIG. 6 is a top view thereof.

FIG. 7 is a bottom view thereof.

FIG. 8 is a rear and left side perspective view thereof.

FIG. 9 is a front and left side perspective view of a second
embodiment of the frame for a breathing mask.

FIG. 10 is a left side view thereof.

FIG. 11 is a front view thereof.

FIG. 12 is a right side view thereof.

FIG. 13 is a rear view thereof.

FIG. 14 is a top view thereof.

FIG. 15 is a bottom view thereof; and,

FIG. 16 is a rear and left side perspective view thereof.

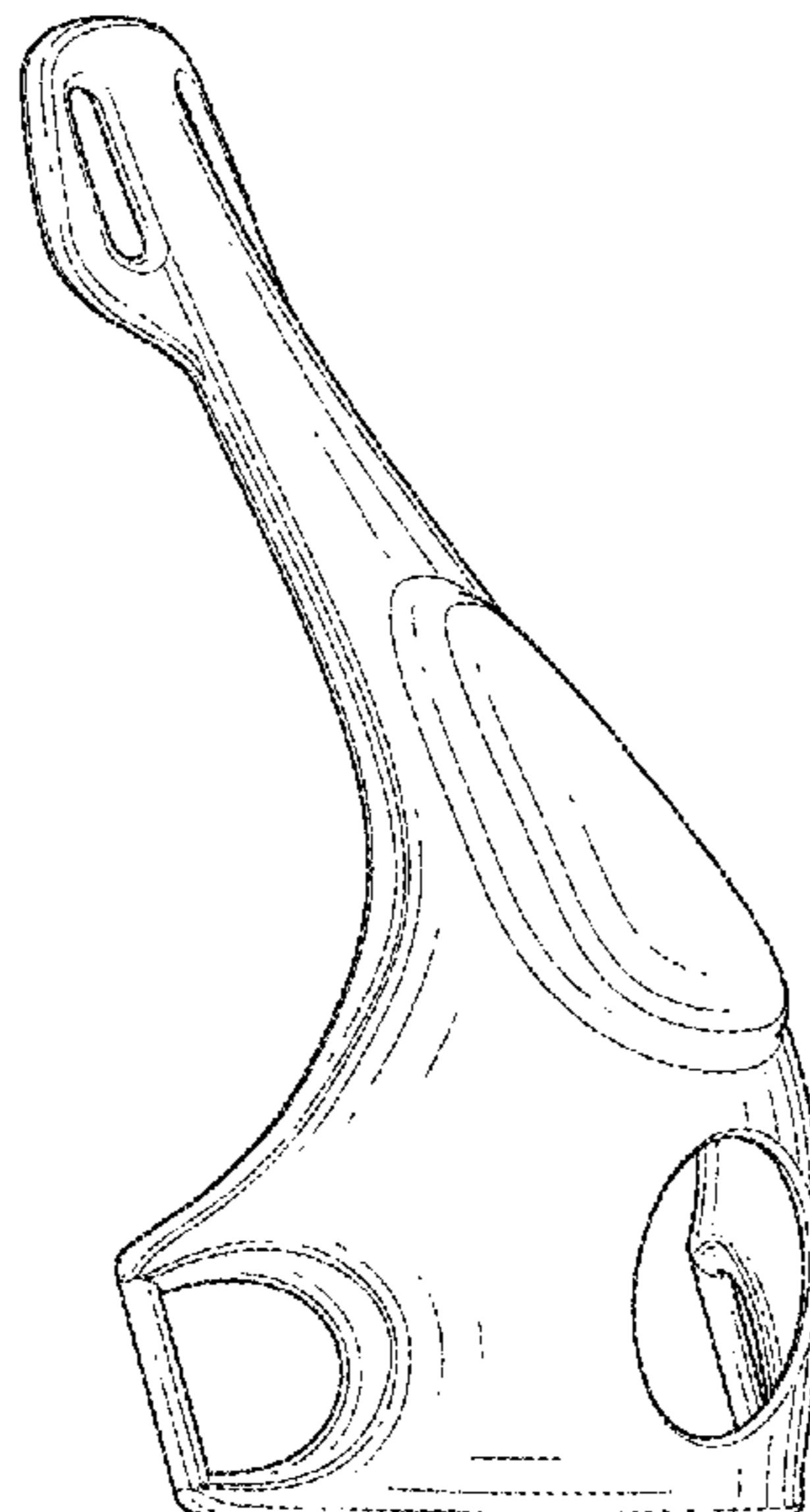
(56) **References Cited**

U.S. PATENT DOCUMENTS

301,111 A 7/1884 Genese
472,238 A 4/1892 Van Orden
577,926 A 3/1897 Miller
687,973 A 12/1901 Bohn
718,470 A 1/1903 Jones
751,091 A 2/1904 Moran
770,013 A 9/1904 Linn
1,635,545 A 7/1927 Drager
2,228,218 A 1/1941 Schwartz
2,296,150 A 9/1942 Dockson et al.

(Continued)

1 Claim, 10 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2,359,506 A	10/1944	Battley et al.	5,449,206 A	9/1995	Lockwood
2,376,871 A	5/1945	Fink	5,449,234 A	9/1995	Gipp et al.
2,388,604 A	11/1945	Eisenbud	5,477,852 A	12/1995	Landis et al.
2,508,050 A	5/1950	Valente	5,513,634 A	5/1996	Jackson
2,693,800 A	11/1954	Caldwell	5,518,802 A	5/1996	Colvin et al.
2,706,983 A	4/1955	Matheson et al.	5,533,506 A	7/1996	Wood
2,738,788 A	3/1956	Matheson et al.	5,540,223 A	7/1996	Starr et al.
2,843,121 A	7/1958	Hudson	5,542,128 A	8/1996	Lomas
2,858,828 A	11/1958	Matheson	5,551,419 A	9/1996	Froehlich et al.
2,859,748 A	11/1958	Hudson	5,558,090 A	9/1996	James
2,874,693 A	2/1959	Matheson	5,570,689 A	11/1996	Starr
2,881,444 A	4/1959	Fresh et al.	5,588,423 A	12/1996	Smith
2,893,387 A	7/1959	Gongoll et al.	5,595,174 A	1/1997	Gwaltney
2,939,458 A	6/1960	Lundquist	5,601,078 A	2/1997	Schaller et al.
2,999,498 A	9/1961	Matheson	5,647,355 A	7/1997	Starr et al.
3,037,501 A	6/1962	Miller	5,649,532 A	7/1997	Griffiths
3,424,633 A	1/1969	Corrigall et al.	5,657,752 A	8/1997	Landis et al.
3,490,452 A	1/1970	Greenfield	5,662,101 A	9/1997	Ogden et al.
3,850,171 A	11/1974	Ball et al.	5,664,566 A	9/1997	McDonald et al.
3,890,966 A	6/1975	Aspelin et al.	5,690,097 A	11/1997	Howard et al.
3,936,914 A	2/1976	Mancini	5,724,965 A	3/1998	Handke et al.
3,972,321 A	8/1976	Proctor	5,746,201 A	5/1998	Kidd
3,977,432 A	8/1976	Vidal	5,752,510 A	5/1998	Goldstein
3,982,532 A	9/1976	Halldin et al.	5,755,578 A	5/1998	Contant et al.
3,992,720 A	11/1976	Nicolinas	5,758,642 A	6/1998	Choi
4,069,516 A	1/1978	Watkins, Jr.	5,806,727 A	9/1998	Joseph
4,090,510 A	5/1978	Segersten	5,842,470 A	12/1998	Ruben
4,141,118 A	2/1979	Gudell	5,857,460 A	1/1999	Popitz
4,201,205 A	5/1980	Bartholomew	5,878,743 A	3/1999	Zdrojkowski et al.
4,258,710 A	3/1981	Reber	5,884,624 A	3/1999	Barnett et al.
4,266,540 A	5/1981	Panzik et al.	5,896,857 A	4/1999	Hely et al.
4,278,082 A	7/1981	Blackmer	5,904,278 A	5/1999	Barlow et al.
4,354,488 A	10/1982	Bartos	5,921,239 A	7/1999	McCall et al.
4,367,735 A	1/1983	Dali	5,937,851 A	8/1999	Serowski et al.
4,378,011 A	3/1983	Wamcke et al.	5,941,245 A	8/1999	Hannah et al.
4,437,462 A	3/1984	Piljay	5,943,473 A	8/1999	Levine
4,676,241 A	6/1987	Webb et al.	5,953,763 A	9/1999	Gouget
4,706,683 A	11/1987	Chilton et al.	6,006,748 A	12/1999	Hollis
4,739,755 A	4/1988	White et al.	6,016,804 A	1/2000	Gleason et al.
4,753,233 A	6/1988	Grimes	6,017,315 A	1/2000	Starr et al.
4,782,832 A	11/1988	Trimble et al.	6,019,101 A	2/2000	Cotner et al.
4,836,200 A	6/1989	Clark et al.	6,039,044 A	3/2000	Sullivan
4,856,508 A	8/1989	Tayebi	6,050,260 A	4/2000	Daniell et al.
4,915,104 A	4/1990	Marcy	6,050,294 A	4/2000	Makowan
4,915,105 A	4/1990	Lee	6,112,746 A	9/2000	Kwok et al.
4,919,128 A	4/1990	Kopala et al.	6,116,235 A	9/2000	Walters et al.
4,938,209 A	7/1990	Fry	6,119,693 A	9/2000	Kwok et al.
4,941,467 A	7/1990	Takata	6,119,694 A	9/2000	Correa et al.
4,944,310 A	7/1990	Sullivan	6,135,432 A	10/2000	Hebblewhite et al.
4,971,051 A	11/1990	Toffolon	6,192,886 B1	2/2001	Rudolph
4,974,586 A	12/1990	Wandel et al.	6,272,933 B1	8/2001	Gradon et al.
4,986,269 A	1/1991	Hakkinen	6,298,850 B1	10/2001	Argraves
5,010,925 A	4/1991	Atkinson et al.	6,302,105 B1	10/2001	Wickham et al.
5,016,625 A	5/1991	Hsu et al.	6,341,606 B1	1/2002	Bordewick et al.
5,031,261 A	7/1991	Fenner	6,347,631 B1	2/2002	Hansen et al.
5,042,478 A	8/1991	Kopala et al.	6,355,878 B1	3/2002	Kim
5,062,421 A	11/1991	Burns et al.	6,398,197 B1	6/2002	Dickinson et al.
5,065,756 A	11/1991	Rapoport	6,412,488 B1	7/2002	Barnett et al.
5,074,297 A	12/1991	Venegas	6,418,928 B1	7/2002	Bordewick et al.
5,094,236 A	3/1992	Tayebi	6,427,694 B1	8/2002	Hecker et al.
5,113,857 A	5/1992	Dickerman et al.	6,431,172 B1	8/2002	Bordewick
5,148,802 A	9/1992	Sanders et al.	6,435,181 B1	8/2002	Jones, Jr. et al.
5,164,652 A	11/1992	Johnson et al.	6,439,234 B1	8/2002	Curti et al.
5,231,979 A	8/1993	Rose et al.	6,457,473 B1	10/2002	Brostrom et al.
5,243,971 A	9/1993	Sullivan et al.	6,460,539 B1	10/2002	Japuntich et al.
5,245,995 A	9/1993	Sullivan et al.	6,467,483 B1	10/2002	Kopacko et al.
5,259,377 A	11/1993	Schroeder	6,478,026 B1	11/2002	Wood
5,269,296 A	12/1993	Landis	6,484,725 B1	11/2002	Chi et al.
5,349,949 A	9/1994	Schegerin	6,488,664 B1	12/2002	Solomon et al.
5,353,789 A	10/1994	Schlobohm	6,491,034 B1	12/2002	Gunaratnam et al.
5,355,878 A	10/1994	Griffiths et al.	6,513,526 B2	2/2003	Kwok et al.
5,400,776 A	3/1995	Bartholomew	6,530,373 B1	3/2003	Patron et al.
5,429,683 A	7/1995	Le Mitouard	6,557,555 B1	5/2003	Hollis
5,438,981 A	8/1995	Starr et al.	6,561,188 B1	5/2003	Ellis
5,441,046 A	8/1995	Starr et al.	6,561,190 B1	5/2003	Kwok
			6,561,191 B1	5/2003	Kwok
			6,581,594 B1	6/2003	Drew et al.
			6,581,601 B2	6/2003	Ziaee
			6,581,602 B2	6/2003	Kwok et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

6,584,977 B1	7/2003	Serowski	8,371,302 B2	2/2013	Ging et al.
6,588,424 B2	7/2003	Bardel	D681,192 S	4/2013	D'Souza et al.
6,615,832 B1	9/2003	Chen	D683,447 S	5/2013	Olsen et al.
6,631,718 B1	10/2003	Lovell	8,443,807 B2	5/2013	McAuley et al.
6,634,357 B1	10/2003	Hamilton	8,453,641 B2	6/2013	Payton et al.
6,634,358 B2	10/2003	Kwok et al.	8,479,726 B2	7/2013	McAuley
6,637,434 B2	10/2003	Noble	8,479,741 B2	7/2013	McAuley et al.
6,644,315 B2	11/2003	Ziaee	8,517,023 B2	8/2013	Henry
6,644,316 B2	11/2003	Bowman et al.	8,517,024 B2	8/2013	Selvarajan et al.
6,651,658 B1	11/2003	Hill et al.	8,550,072 B2	10/2013	Thudor et al.
6,651,663 B2	11/2003	Barnett et al.	8,550,084 B2 *	10/2013	Ng A61M 16/06 128/206.28
6,659,102 B1	12/2003	Sico	8,567,404 B2	10/2013	Davidson et al.
6,662,803 B2	12/2003	Gradon et al.	D693,459 S	11/2013	Prentice et al.
6,668,828 B1	12/2003	Figley et al.	D693,460 S *	11/2013	Rothermel D24/110.4
6,679,257 B1	1/2004	Robertson et al.	D693,461 S	11/2013	Rothermel
6,679,265 B2	1/2004	Strickland et al.	D693,462 S *	11/2013	Rothermel D24/110.4
6,691,707 B1	2/2004	Gunaratnam et al.	8,596,276 B2	12/2013	Omura et al.
6,712,072 B1	3/2004	Lang	8,631,793 B2	1/2014	Omura et al.
6,729,333 B2	5/2004	Barnett et al.	8,636,005 B2	1/2014	Gradon et al.
6,736,139 B1	5/2004	Wix	8,701,667 B1	4/2014	Ho et al.
6,772,761 B1	8/2004	Rucker, Jr.	8,714,157 B2	5/2014	McAuley et al.
6,796,308 B2	9/2004	Gunaratnam et al.	D707,349 S *	6/2014	D'Souza D24/110.1
6,851,425 B2	2/2005	Jaffre et al.	8,757,157 B2	6/2014	Price et al.
6,851,428 B2	2/2005	Dennis	8,783,257 B2	7/2014	McAuley et al.
6,883,177 B1	4/2005	Ouellette et al.	D716,440 S	10/2014	D'Souza et al.
6,889,692 B2	5/2005	Hollis	8,944,061 B2	2/2015	D'souza et al.
6,892,729 B2	5/2005	Smith et al.	8,950,404 B2	2/2015	Formica et al.
6,895,965 B2	5/2005	Scarberry et al.	8,960,196 B2	2/2015	Henry
6,907,882 B2	6/2005	Ging et al.	9,027,556 B2	5/2015	Ng et al.
6,918,390 B2	7/2005	Lithgow et al.	9,032,955 B2	5/2015	Lubke et al.
6,951,218 B2	10/2005	Gradon et al.	9,072,852 B2	7/2015	McAuley et al.
6,953,354 B2	10/2005	Edirisuriya et al.	9,119,929 B2	9/2015	McAuley et al.
7,004,165 B1	2/2006	Salcido	9,119,931 B2	9/2015	D'Souza et al.
7,007,696 B2	3/2006	Palkon et al.	9,132,256 B2	9/2015	Gunaratnam et al.
7,021,311 B2	4/2006	Gunaratnam et al.	9,138,555 B2	9/2015	McAuley et al.
7,066,178 B2	6/2006	Gunaratnam et al.	9,144,655 B2	9/2015	McAuley et al.
7,066,179 B2	6/2006	Eaton et al.	9,149,596 B2	10/2015	Valcic et al.
7,077,126 B2	7/2006	Kummer et al.	9,242,062 B2	1/2016	Melidis et al.
7,089,939 B2	8/2006	Walker et al.	9,265,902 B2	2/2016	Payton et al.
7,096,864 B1	8/2006	Mayer et al.	D751,188 S *	3/2016	Skipper D24/110.4
7,111,624 B2	9/2006	Thudor et al.	9,292,799 B2	3/2016	McAuley et al.
7,174,893 B2	2/2007	Walker et al.	D753,813 S	4/2016	Ozolins et al.
7,185,652 B2	3/2007	Gunaratnam et al.	9,320,566 B1	4/2016	Alston, Jr. et al.
7,201,169 B2	4/2007	Wilkie et al.	9,333,315 B2	5/2016	McAuley et al.
7,207,333 B2	4/2007	Tohara	9,339,621 B2	5/2016	McAuley et al.
7,210,481 B1	5/2007	Lovell et al.	9,339,624 B2	5/2016	McAuley et al.
7,219,669 B1	5/2007	Lovell et al.	9,375,545 B2	6/2016	Darkin et al.
7,225,811 B2	6/2007	Ruiz et al.	9,381,316 B2	7/2016	Ng et al.
7,290,546 B2	11/2007	Sprinkle et al.	D767,755 S *	9/2016	D'Souza D24/110.4
7,318,437 B2	1/2008	Gunaratnam et al.	D769,440 S *	10/2016	Amarasinghe D24/110.4
7,353,827 B2	4/2008	Geist	9,522,246 B2	12/2016	Frater et al.
7,406,966 B2	8/2008	Wondka et al.	D782,030 S	3/2017	Prentice et al.
D582,546 S	12/2008	Fujiura et al.	D782,031 S	3/2017	Prentice et al.
D586,906 S	2/2009	Stallard et al.	D784,516 S	4/2017	Prentice et al.
7,487,772 B2	2/2009	Ging et al.	D797,277 S *	9/2017	Blanch D24/110
7,523,754 B2	4/2009	Lithgow et al.	D809,132 S *	1/2018	Bornholdt D24/110.4
D595,841 S	7/2009	McAuley et al.	D809,649 S *	2/2018	Bornholdt D24/110.4
7,568,482 B2	8/2009	Jaffre et al.	D810,277 S *	2/2018	Amarasinghe D24/110.1
7,597,100 B2	10/2009	Ging et al.	D814,020 S *	3/2018	Bornholdt D24/110.4
7,665,464 B2	2/2010	Kopacko et al.	D821,569 S *	6/2018	Bornholdt D24/110.4
7,681,575 B2	3/2010	Wixey et al.	D824,021 S *	7/2018	Prentice D24/110.4
7,694,677 B2	4/2010	Tang	D824,511 S *	7/2018	Prentice D24/110.1
7,779,832 B1	8/2010	Ho et al.	D837,972 S *	1/2019	Bornholdt D24/110.4
7,814,911 B2	10/2010	Bordewick et al.	2001/0017134 A1	8/2001	Bahr
7,827,990 B1	11/2010	Melidis et al.	2001/0020474 A1	9/2001	Hecker et al.
7,896,003 B2	3/2011	Matula et al.	2002/0014241 A1	2/2002	Gradon et al.
D635,661 S	4/2011	Stallard et al.	2002/0020416 A1	2/2002	Namey
7,931,024 B2	4/2011	Ho et al.	2002/0026934 A1	3/2002	Lithgow et al.
D639,420 S	6/2011	D'Souza et al.	2002/0029780 A1	3/2002	Frater
8,042,539 B2	10/2011	Chandran et al.	2002/0053347 A1	5/2002	Ziaee
D652,914 S	1/2012	D'Souza et al.	2002/0100479 A1	8/2002	Scarberry et al.
8,091,547 B2	1/2012	Thudor et al.	2003/0019495 A1	1/2003	Palkon et al.
8,136,524 B2	3/2012	Ging et al.	2003/0019496 A1	1/2003	Kopacko et al.
8,186,345 B2	5/2012	Payton et al.	2003/0029454 A1	2/2003	Gelinas et al.
8,342,181 B2	1/2013	Selvarajan et al.	2003/0037788 A1	2/2003	Gallem et al.
			2003/0089373 A1	5/2003	Gradon et al.
			2003/0127101 A1	7/2003	Dennis
			2003/0149384 A1	8/2003	Davis et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

2003/0196655 A1 10/2003 Ging et al.
 2003/0196658 A1 10/2003 Ging et al.
 2003/0217746 A1 11/2003 Gradon et al.
 2003/0236015 A1 12/2003 Edirisuriya et al.
 2004/0025882 A1 2/2004 Madaus et al.
 2004/0035427 A1 2/2004 Bordewick et al.
 2004/0065328 A1 4/2004 Amarasinghe et al.
 2004/0067333 A1 4/2004 Amarasinghe
 2004/0094157 A1 5/2004 Dantanarayana et al.
 2004/0118406 A1 6/2004 Lithgow et al.
 2004/0118412 A1 6/2004 Piletti-Reyes
 2004/0134497 A1 7/2004 Gunaratnam et al.
 2004/0149280 A1 8/2004 Semeniuk
 2004/0182398 A1 9/2004 Sprinkle et al.
 2004/0226566 A1 11/2004 Gunaratnam et al.
 2005/0011524 A1 1/2005 Thomlinson et al.
 2005/0155604 A1 7/2005 Ging et al.
 2005/0199239 A1 9/2005 Lang et al.
 2006/0042629 A1 3/2006 Geist
 2006/0060200 A1 3/2006 Ho et al.
 2006/0096598 A1 5/2006 Ho et al.
 2006/0124131 A1 6/2006 Chandran et al.
 2006/0130844 A1 6/2006 Ho et al.
 2006/0169286 A1 8/2006 Eifler et al.
 2006/0201514 A1 9/2006 Jones et al.
 2006/0207599 A1 9/2006 Busch et al.
 2006/0254593 A1 11/2006 Chang
 2006/0283459 A1 12/2006 Geiselhart et al.
 2007/0044804 A1 3/2007 Matula, Jr. et al.
 2007/0125385 A1 6/2007 Ho et al.
 2007/0209663 A1 9/2007 Marque et al.
 2007/0215161 A1 9/2007 Frater et al.
 2007/0221227 A1 9/2007 Ho
 2007/0267017 A1 11/2007 McAuley et al.
 2008/0035152 A1 2/2008 Ho et al.
 2008/0110464 A1 5/2008 Davidson et al.
 2008/0178875 A1 7/2008 Henry
 2008/0223373 A1 9/2008 Chang
 2008/0257354 A1 10/2008 Davidson et al.
 2008/0302366 A1 12/2008 McGinnis et al.
 2009/0014008 A1 1/2009 Takishita et al.
 2009/0032024 A1 2/2009 Burz et al.
 2009/0038619 A1 2/2009 Ho et al.
 2009/0044808 A1 2/2009 Guney et al.
 2009/0065729 A1 3/2009 Worboys et al.
 2009/0095301 A1 4/2009 Hitchcock et al.
 2009/0114227 A1 5/2009 Gunaratnam et al.
 2009/0126739 A1 5/2009 Ng et al.
 2009/0139526 A1 6/2009 Melidis et al.
 2009/0139527 A1 6/2009 Ng et al.
 2009/0178679 A1 7/2009 Lithgow et al.
 2009/0188505 A1 7/2009 Smart et al.
 2009/0223519 A1 9/2009 Eifler et al.
 2009/0272380 A1 11/2009 Jaffre et al.
 2010/0108072 A1 5/2010 D'Souza et al.
 2010/0282265 A1 11/2010 Melidis et al.
 2010/0307502 A1 12/2010 Rummery et al.
 2010/0319700 A1 12/2010 Ng et al.
 2011/0048425 A1 3/2011 Chang
 2011/0072553 A1 3/2011 Ho et al.
 2011/0308526 A1 12/2011 Ho et al.
 2012/0138060 A1 6/2012 Barlow
 2012/0190998 A1 7/2012 Armitstead et al.
 2012/0234326 A1 9/2012 Mazzone et al.
 2012/0285452 A1 11/2012 Amirav et al.
 2013/0008449 A1 1/2013 Busch et al.
 2013/0092169 A1 4/2013 Frater et al.
 2013/0186404 A1 7/2013 Chien
 2013/0306066 A1 11/2013 Selvarajan et al.
 2014/0096774 A1 4/2014 Olen et al.
 2014/0174446 A1 6/2014 Prentice et al.
 2014/0283842 A1 9/2014 Bearne et al.
 2014/0305433 A1 10/2014 Rothermel
 2015/0090266 A1 4/2015 Melidis et al.
 2016/0001028 A1 1/2016 McAuley et al.

2016/0008558 A1 1/2016 Huddart et al.
 2016/0051786 A1 2/2016 McAuley et al.
 2016/0067442 A1 3/2016 Salmon et al.
 2016/0213873 A1 7/2016 McAuley et al.
 2016/0213874 A1 7/2016 Davidson et al.
 2016/0220781 A1 8/2016 Arrowsmith et al.
 2016/0310687 A1 10/2016 McAuley et al.
 2016/0354572 A1 12/2016 Lim et al.
 2017/0028148 A1 2/2017 McAuley et al.
 2017/0065786 A1 3/2017 Stephenson et al.
 2018/0185598 A1* 7/2018 Olsen A62B 18/08
 2018/0361095 A1* 12/2018 Frerichs A61M 16/0605

FOREIGN PATENT DOCUMENTS

AU 2003257274 3/2004
 AU 2008906390 12/2008
 AU 2009900327 1/2009
 AU 2009902731 6/2009
 AU 2009904236 9/2009
 AU 2014202233 A1 5/2014
 CA 131 16 62 12/1992
 CN 2172538 7/1994
 CN 1784250 6/2006
 CN 1901961 1/2007
 CN 1988930 6/2007
 CN 101214402 7/2008
 CN 101378810 3/2009
 CN 101541380 9/2009
 CN 101951984 1/2011
 DE 895692 11/1953
 DE 3026375 2/1982
 DE 19603949 8/1997
 DE 19962515 7/2001
 DE 10312881 5/2004
 DE 102006011151 9/2007
 EP 0 427 474 11/1990
 EP 0 303 090 4/1992
 EP 0 747 078 12/1996
 EP 0 982 042 3/2000
 EP 1 099 452 5/2001
 EP 1 245 250 10/2002
 EP 1 258 266 11/2002
 EP 1 259 279 11/2007
 EP 1 488 820 9/2009
 EP 2 130 563 12/2009
 EP 2 417 994 2/2012
 EP 2 281 596 10/2012
 EP 2 668 971 A1 12/2013
 EP 2 818 194 12/2014
 EP 1 646 910 8/2015
 EP 2 954 920 A1 12/2015
 FR 1 299 470 6/1962
 FR 2 658 725 8/1991
 FR 2 749 176 12/1997
 GB 190 1 224 431 12/1902
 GB 190124 431 12/1902
 GB 309770 4/1929
 GB 823897 11/1959
 GB 880824 10/1961
 GB 979357 1/1965
 GB 1 467 828 3/1977
 GB 2133275 7/1984
 GB 2173274 10/1986
 GB 2393126 11/2004
 GB 2385533 8/2005
 JP H09-010311 1/1997
 JP 11-000397 1/1999
 JP 2000-325481 11/2000
 JP 2004-016488 1/2004
 JP 2005-529687 10/2005
 JP 2007-516750 6/2007
 JP 2007-527271 9/2007
 JP 2008-526393 7/2008
 NZ 573196 7/2010
 NZ 556198 10/2010
 NZ 556043 1/2011
 NZ 551715 2/2011
 RU 2186597 8/2002

(56)

References Cited

FOREIGN PATENT DOCUMENTS

SU	726692	9/1981
WO	WO 1982/003548	10/1982
WO	WO 98/04310	2/1998
WO	WO 1998/04311	2/1998
WO	WO 98/18514	5/1998
WO	WO 1998/024499	6/1998
WO	WO 1998/048878	11/1998
WO	WO 1998/57691	12/1998
WO	WO 99/04842	2/1999
WO	WO 1999/021618	5/1999
WO	WO 99/58181	11/1999
WO	WO 1999/058198	11/1999
WO	WO 00/50122	8/2000
WO	WO 2000/057942	10/2000
WO	WO 2000/069497	11/2000
WO	WO 00/78381	12/2000
WO	WO 2000/074758	12/2000
WO	WO 2000/078384	12/2000
WO	WO 2001/000266	1/2001
WO	WO 2001/041854	6/2001
WO	WO 2001/062326	8/2001
WO	WO 01/97892	12/2001
WO	WO 2001/097893	12/2001
WO	WO 2002/011804	2/2002
WO	WO 02/47749	6/2002
WO	WO 2002/074372	9/2002
WO	WO 2003/092755	11/2003
WO	WO 2004/007010	1/2004
WO	WO 2004/021960 A2	3/2004
WO	WO 2004/022146	3/2004
WO	WO 2004/022147	3/2004
WO	WO 2004/030736	4/2004
WO	WO 2004/041341	5/2004
WO	WO 2004/041342	5/2004
WO	WO 2004/071565	8/2004
WO	WO 2004/073778	9/2004
WO	WO 2005/018523	3/2005
WO	WO 2005/021075	3/2005
WO	WO 2005/051468	6/2005
WO	WO 2005/068002	7/2005
WO	WO 2005/079726	9/2005
WO	WO 2005/086946	9/2005
WO	WO 2005/123166	12/2005
WO	WO 2006/000046	1/2006
WO	WO 2006/069415	7/2006
WO	WO 2006/074513	7/2006
WO	WO 2006/074514	7/2006
WO	WO 2006/074515	7/2006
WO	WO 2006/096924	9/2006
WO	WO 2006/130903	12/2006
WO	WO 2006/138416	12/2006
WO	WO 2007/009182	1/2007
WO	WO 2007/022562	3/2007
WO	WO 2007/041751	4/2007
WO	WO 2007/041786	4/2007
WO	WO 2007/045008	4/2007
WO	WO 2007/048174	5/2007
WO	WO 2007/139531	12/2007
WO	WO 2007/147088	12/2007
WO	WO 2008/007985	1/2008
WO	WO 2008/030831	3/2008
WO	WO 2008/040050	4/2008
WO	WO 2008/060295	5/2008
WO	WO 2008/070929	6/2008
WO	WO 2008/106716	9/2008
WO	WO 2008/148086	12/2008
WO	WO 2009/002608	12/2008
WO	WO 2009/026627	3/2009
WO	WO 2009/052560	4/2009
WO	WO 2009/059353	5/2009
WO	WO 2009/092057	7/2009
WO	WO 2009/108995	9/2009
WO	WO 2009/139647	11/2009
WO	WO 2010/009877	1/2010
WO	WO 2010/066004	6/2010

WO	WO 2010/067237	6/2010
WO	WO 2010/071453	6/2010
WO	WO 2010/135785	12/2010
WO	WO 2011/014931	2/2011
WO	WO 2011/060479 A1	5/2011
WO	WO 2011/077254	6/2011
WO	WO 2011/078703	6/2011
WO	WO 2012/020359	2/2012
WO	WO 2012/040791	4/2012
WO	WO 2012/052902	4/2012
WO	WO 2012/140514	10/2012
WO	WO 2013/006899	1/2013
WO	WO 2013/064950	5/2013
WO	WO 2014/129913 A1	8/2014
WO	WO 2014/175753	10/2014
WO	WO 2015/022629	2/2015
WO	WO 2015/033287	3/2015
WO	WO 2015/057087	4/2015
WO	WO 2016/009393	1/2016
WO	WO 2016/032343	3/2016
WO	WO 2016/033857	3/2016
WO	WO 2017/049356	3/2017
WO	WO 2017/049357	3/2017

OTHER PUBLICATIONS

Australian Examination Report; Application No. 2007273324; dated May 22, 2012; 3 pages.

Australian Examination Report for Patent Application No. 2012265597 dated Dec. 19, 2013, in 5 pages.

Australian Examination Report; Application No. 20015201920; dated Jul. 20, 2015; 3 pages.

Australian Examination Report; dated Aug. 14, 2015; Application No. 2015202814; 8 pages.

Australian Examination Report; dated Aug. 5, 2016; Application No. 2016204384; 2 pages.

Australian Examination Report; dated Mar. 4, 2014; Application No. 2010246985; 5 pages.

Australian Examination Report; dated Sep. 28, 2016; Application No. 2010241390; 4 pages.

Australian Patent Application No. 2016202799 Office Action, dated May 31, 2016, in 2 pages.

Australian Patent Application No. 2016202801, Office Action, dated Jun. 20, 2016, in 2 pages.

Canadian Examination Report for Application No. 2655839 dated Oct. 4, 2013, in 2 pages.

Canadian Examination Report; Application No. 2890556; dated Jan. 27, 2016; 3 pages.

Canadian Office Action; Application No. 2,780,310; dated Jul. 26, 2016; 4 pages.

Canadian Office Action; Application No. 2918167; dated Oct. 3, 2016; 4 pages.

Chinese Examination Report; dated Jul. 17, 2015; Application No. 201080061122.1; 10 pages.

Chinese Examination Report; dated Mar. 27, 2014; Chinese Application No. 201080028029.0; 16 pages.

Chinese Examination Report; dated Sep. 14, 2015; Application No. 201080028029.0; 3 pages.

Chinese Examination Report; dated Sep. 3, 2014; Application No. 201080061122.1; English Translation, 9 pages.

Chinese First Office Action for Application No. 201210080441.8, English Translation, dated Mar. 24, 2014, in 4 pages.

Chinese Office Action (Second) for Chinese Patent Application No. 201210080441.8 dated Dec. 1, 2014 in 11 pages (with English translation).

Chinese Office Action (Second); dated Jan. 19, 2015; Application No. 201080028029.0; 16 pages.

Chinese Office Action (Third); Application No. 201080061122.1; dated Apr. 1, 2016; 5 pages.

Complaint for Patent Infringement, *ResMed Inc. v. Fisher & Paykel Healthcare Corp. Ltd.*, Case No. 3:16-cv-02072-JLS-MDD (S.D. Cal.) Aug. 16, 2016.

(56)

References Cited

OTHER PUBLICATIONS

- Complaint of ResMed Ltd, ResMed Inc., and ResMed Corp. Under Section 337 of the Tariff Act of 1930, as amended, Investigation No. 337-TA-1022, Aug. 17, 2016.
- EPO Search Report; dated Apr. 2, 2014; Application No. 09819444.2; 8 pages.
- European Examination Report; Application No. 07808683.2; dated Jul. 8, 2015; 8 pages.
- European Extended Search Report, Application No. EP12770681.0, Oct. 15, 2014, 6 pages.
- European Extended Search Report; dated Sep. 4, 2015; Application No. 10830251.4; 7 pages.
- European Extended Search Report; dated Sep. 8, 2015; Application No. 10774623.2; 7 pages.
- European Search Report and Written Opinion dated May 12, 2016; Application No. 09746823.5, 11 pages.
- GB Combined Search and Examination Report; dated May 7, 2014; Application No. GB1406401.8; 4 pages.
- GB Combined Search and Examination Report; dated May 7, 2014; Application No. GB1406402.6; 6 pages.
- International Preliminary Report on Patentability (IPRP), International Application No. PCT/NZ2009/000219, dated Apr. 12, 2011, 9 pages.
- International Preliminary Report on Patentability and Written Opinion of the ISA; International Application No. PCT/NZ2010/000229; dated May 22, 2012; 14 pages.
- International Search Report Aug. 13, 2012, for Application No. PCT/IB2012/000858 filed Apr. 13, 2012.
- International Search Report for International Application No. PCT/NZ2007/000185, dated Oct. 31, 2007, in 3 pages.
- International Search Report for International Application No. PCT/NZ2014/000021; filed Feb. 21, 2014.
- International Search Report for PCT/IB2016/054365, dated Feb. 2, 2017 in 8 pages.
- International Search Report, International Application No. PCT/NZ2009/000219, dated Feb. 2, 2010, 3 pages.
- International Search Report, PCT/IB2015/055412, dated Oct. 12, 2015 in 6 pages.
- International Search Report, PCT/NZ2015/050119, dated Nov. 20, 2015 in 6 pages.
- International Search Report; Application No. PCT/NZ2013/000138; dated Nov. 1, 2013; 5 pages.
- International Search Report; PCT/NZ2005/000062; dated May 27, 2005; 3 pages.
- International Search Report; PCT/NZ2009/000072; dated Jul. 28, 2009; 3 pages.
- International Search Report; PCT/NZ2010/000229; dated Mar. 18, 2011; 8 pages.
- International Search Report; PCT/NZ2012/000199; dated Jan. 21, 2013; 4 pages.
- Japanese Examination Report; dated Aug. 5, 2015; Application No. 2012-538784; 8 pages.
- Japanese Examination Report; dated Feb. 10, 2014; Application No. 2012-510418; English Translation, 4 pages.
- Japanese Examination Report; dated Jul. 22, 2015; Application No. 2015-098324; 8 pages.
- Japanese Office Action; Application No. 2012-538784; dated Jul. 25, 2016; 2 pages.
- JP Examination Report, Application No. 2012-538784; 3 pages dated Aug. 25, 2014.
- Malloy, Robert A., Plastic Part Design for Injection Molding: An Introduction, pp. 336-345 (Hanser Gardner Publications, Inc. 1994) (Malloy).
- May 27, 2005 International Search Report for Application No. PCT/NZ2005/000062.
- Merriam-Webster's Collegiate Dictionary, Eleventh Edition (2004) (selected portions).
- Oxford American College Dictionary Excerpts, 2002.
- Philips Respiroics "System One Heated Humidifier—User Manual", 2011, pp. 1-16, [retrivied on Nov. 25, 2013] from the internet: URL: <http://www.cpapxchange.com/cpap-machines-biap-machines/system-one-60-series-cpap-humidifier-manual.pdf> front cover, pp. 3-4 and 6.
- ResMed "Mirage Swift™ Nasal Pillows System from ResMed" publication, © 2004 ResMed Ltd.
- ResMed "Mirage Swift™ Nasal Pillows System: User's Guide" publication, © 2004 ResMed Ltd.
- ResMed "Mirage Vista™ Nasal Mask: Components Card" publication, © 2005 ResMed Ltd.
- ResMed Origins Brochure (Retrieved Apr. 17, 2016 from <http://www.resmed.com/us/dam/documents/articles/resmedorigins.pdf>).
- ResMed Ultra Mirage brochure, 2004.
- ResMed Webpage from Jun. 29, 1997 (Source: Wayback Machine Internet Archive); <http://web.archive.org/web/19970629053430/http://www.resmed.com/maskframes/mask.htm>.
- Statutory Declaration made by Alistair Edwin McAuley, Apr. 9, 2015, in the matter of an Opposition by Fisher & Paykel Healthcare Limited of Australian patent application 2009221630 in the name of ResMed Limited.
- UK Examination Report; dated May 9, 2013; Application No. GB1119385.1; 4 pages.
- UK Search and Examination Report; dated Mar. 14, 2013; Application No. GB1210075.6; 2 pages.
- Webster's II New College Dictionary Excerpts, 3rd ed.
- Written Opinion of the International Searching Authority dated Aug. 13, 2012; for Application No. PCT/IB2012/000858 filed Apr. 13, 2012.
- Written Opinion of the International Searching Authority; PCT/NZ2010/000229; dated Mar. 18, 2011; 13 pages.
- Written Opinion of the International Searching Authority; PCT/NZ2012/000199; dated Jan. 21, 2013; 4 pages.
- U.S. Appl. No. 60/842,741, filed Sep. 7, 2006, Ho et al.
- U.S. Appl. No. 61/064,406, filed Mar. 4, 2008, Wehbeh.
- U.S. Appl. No. 61/071,893, filed May 23, 2008, Wehbeh et al.
- U.S. Appl. No. 61/136,617, filed Feb. 23, 2009, Wehbeh et al.
- Answer of ResMed Corp. to Complaint for Patent Infringement and Counterclaims, *Fisher & Paykel Healthcare Ltd. v. ResMed Corp.*, Case No. 3:16-cv-02068-DMS-WVG (S.D. Cal.), filed Oct. 27, 2016, 9 pages.
- Chinese Examination Report; Application No. 2007800266164, English Translation, 5 pages, dated Feb. 17, 2011.
- File History of U.S. Pat. No. 8,944,061, filed Mar. 15, 2013, Excerpts, 437 pages.
- File History of U.S. Pat. No. 8,950,404, filed Apr. 19, 2011, Excerpts, Part 1, 233 pages.
- File History of U.S. Pat. No. 8,950,404, filed Apr. 19, 2011, Excerpts, Part 2, 247 pages.
- File History of U.S. Pat. No. 8,950,404, filed Apr. 19, 2011, Excerpts, Part 3, 186 pages.
- File History of U.S. Pat. No. 8,960,196, filed May 29, 2013 Excerpts, 51 pages.
- File History of U.S. Pat. No. 9,119,931, Excerpts, Part 1, 263 pages.
- File History of U.S. Pat. No. 9,119,931, Excerpts, Part 2, 264 pages.
- File History of U.S. Pat. No. 9,119,931, filed Jul. 31, 2014 Excerpts, Part 3, 222 pages.
- File History of U.S. Pat. No. 9,381,316, filed Jan. 30, 2009 Excerpts, Part 1, 285 pages.
- File History of U.S. Pat. No. 9,381,316, filed Jan. 30, 2009 Excerpts, Part 2, 266 pages.
- File History of U.S. Pat. No. 9,381,316, filed Jan. 30, 2009 Excerpts, Part 3, 104 pages.
- File History of U.S. Pat. No. 9,522,246 filed Feb. 6, 2015, Excerpts, 261 pages.
- Fisher & Paykel HC200 Series Nasal CPAP Blower & Heated Humidifier User Manual by Fischer & Paykel Healthcare, May 1998, 17 Pages.
- Fisher & Paykel MR810 Respiratory Humidifier Technical Manual, Revision C, 2004, Fischer & Paykel Healthcare Ltd, Auckland New Zealand, 43 pages.
- Patent Owner's Complaint for *Fisher & Paykel Healthcare Ltd. v. ResMed Corp.*, Case No. 2:16-cv-06099-R-AJW (C.D. Cal.), filed Aug. 15, 2016, 29 pages.

(56)

References Cited

OTHER PUBLICATIONS

Patent Owner's Complaint for *Fisher & Paykel Healthcare Ltd. v. ResMed Corp.*, Case No. 3:16-cv-02068-GPC-WVG (S.D. Cal.) filed Aug. 16, 2016, 29 pages.

Petition for Inter Partes Review of U.S. Pat. No. 8,443,807 Pursuant to 35 U.S.C. §§ 311-19, 37 C.F.R. § 42, IPR2016-01726, filed Sep. 7, 2016, 74 pages.

Petition for Inter Partes Review of U.S. Pat. No. 8,443,807 Pursuant to 35 U.S.C. §§ 311-19, 37 C.F.R. § 42, IPR2016-01734, filed Sep. 7, 2016, 74 pages.

Petition for Inter Partes Review of U.S. Pat. No. 8,479,741 Pursuant to 35 U.S.C. §§ 311-19, 37 C.F.R. § 42, IPR2016-01714, filed Sep. 7, 2016, 61 pages.

Petition for Inter Partes Review of U.S. Pat. No. 8,479,741 Pursuant to 35 U.S.C. §§ 311-19, 37 C.F.R. § 42, IPR2016-01718, filed Sep. 7, 2016, 65 pages.

Petitioners' Complaint for *ResMed Inc., et al. v. Fisher & Paykel Healthcare Corp. Ltd., et al.*, Case No. 3:16-cv-02072-JAH-MDD (S.D. Cal.), filed Aug. 16, 2016, 65 pages.

European Search Report, Application No. EP 16758540.5, dated Sep. 27, 2018, in 7 pages.

International Search Report, Application No. PCT/IB2016/051212, dated Jun. 8, 2016, in 10 pages.

* cited by examiner

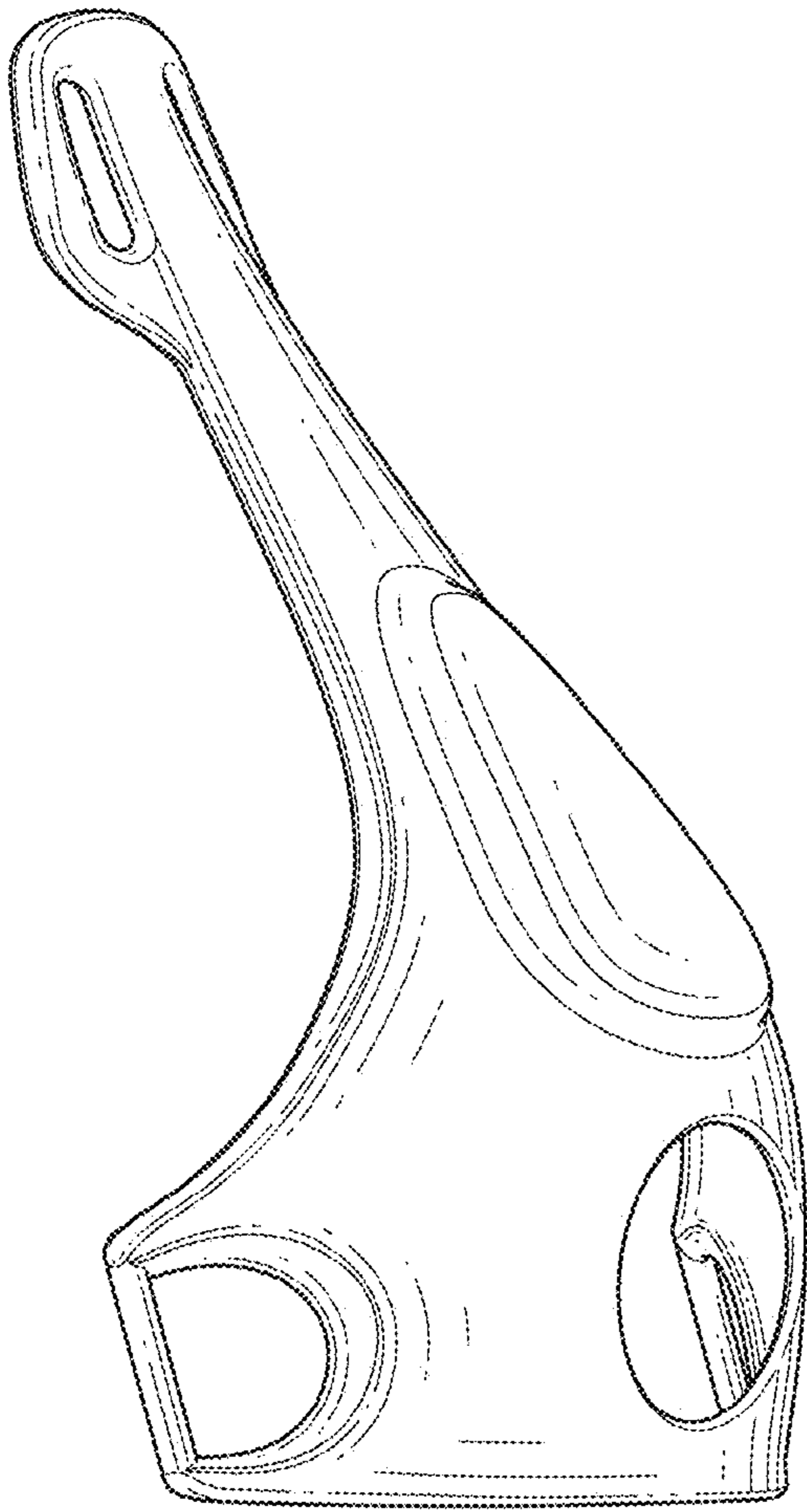


FIG. 1

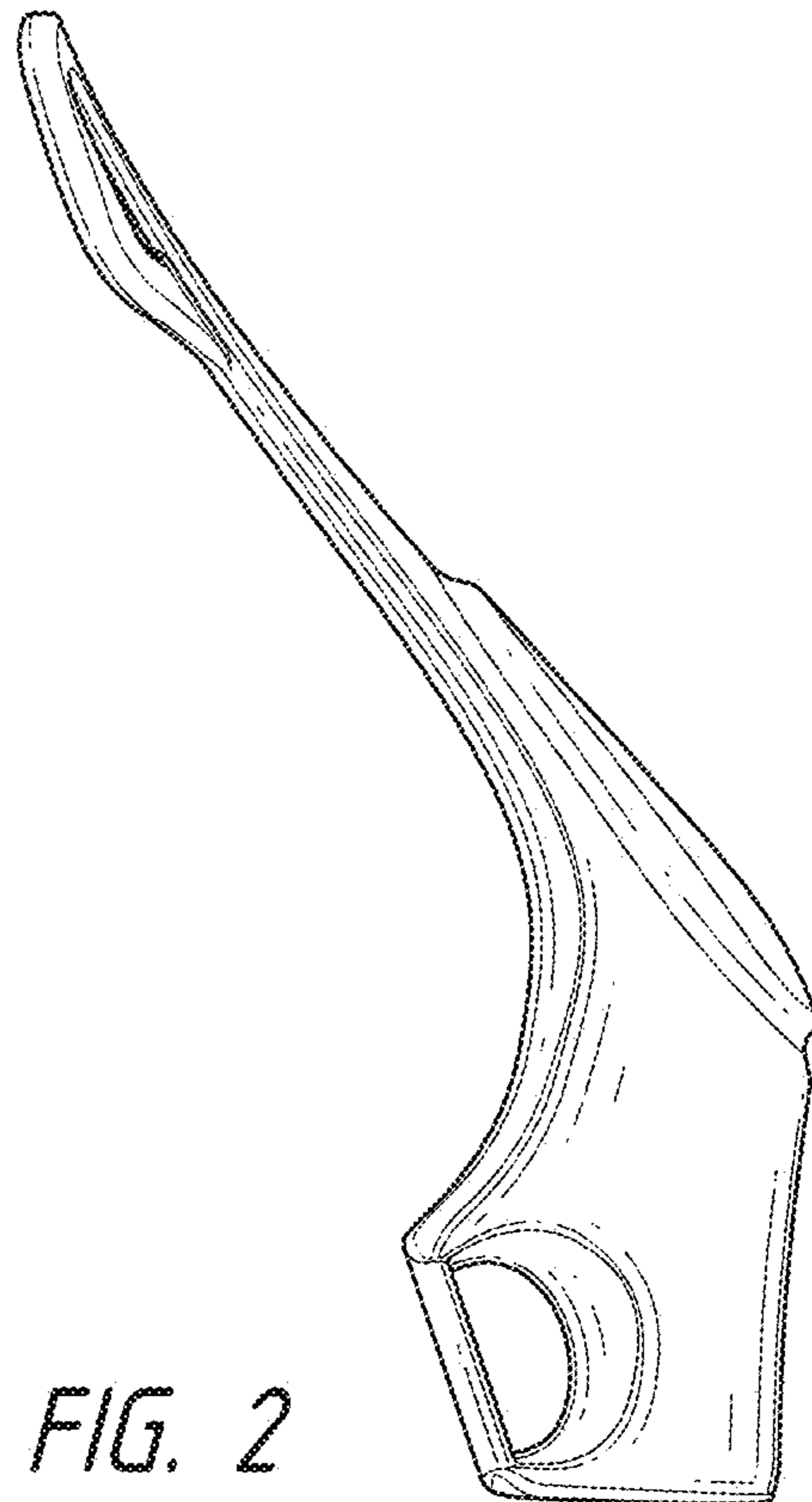


FIG. 2

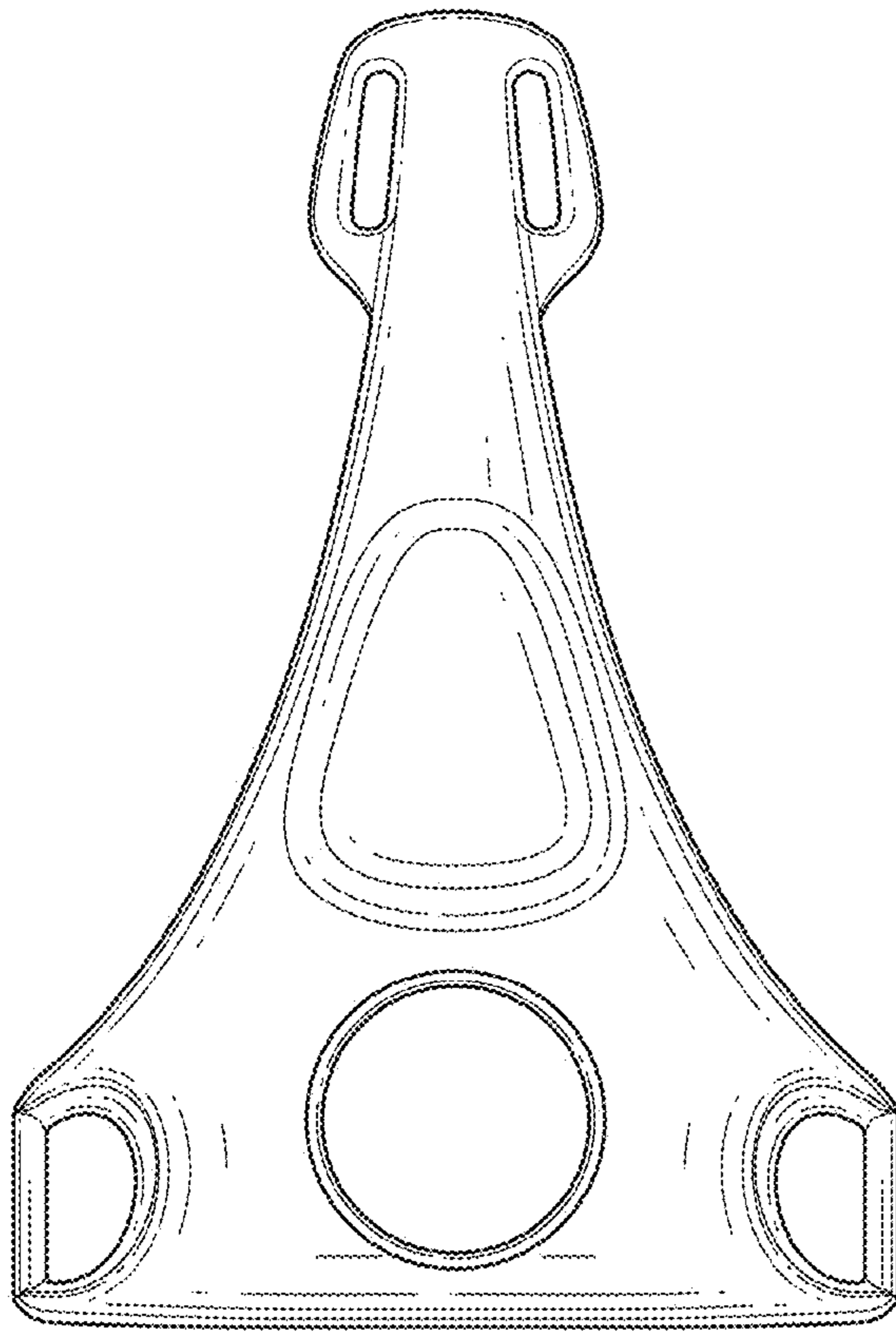


FIG. 3

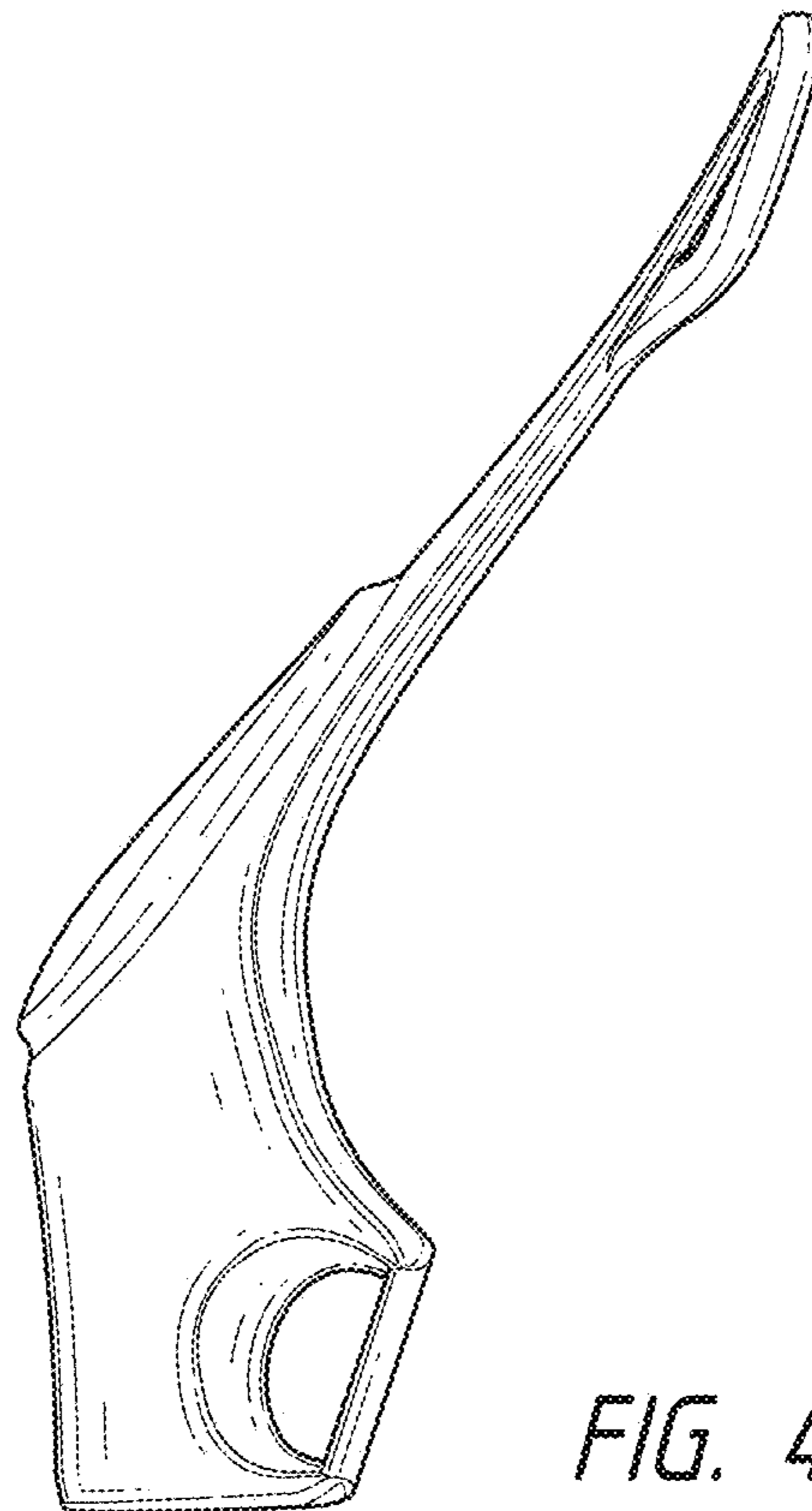


FIG. 4

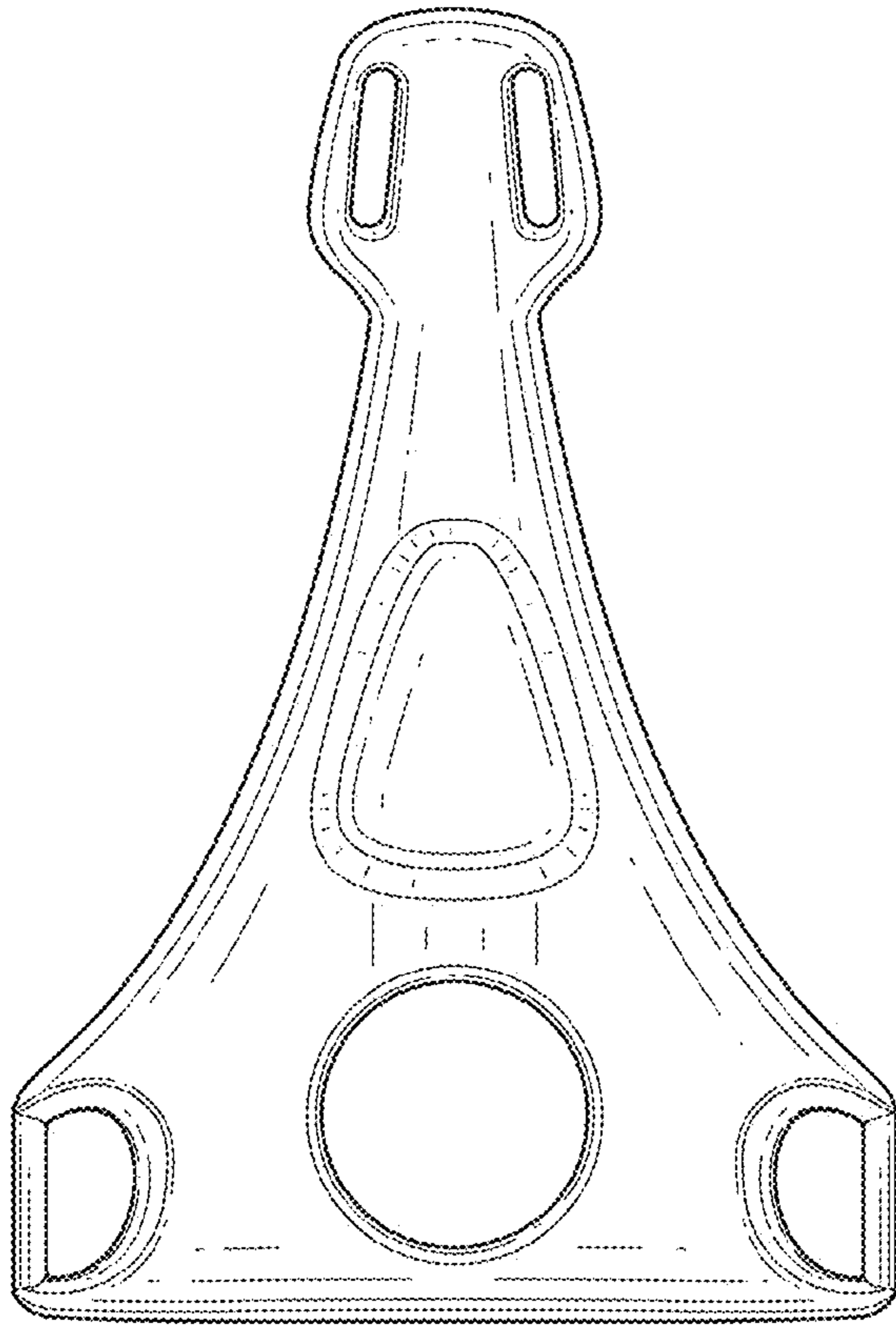


FIG. 5

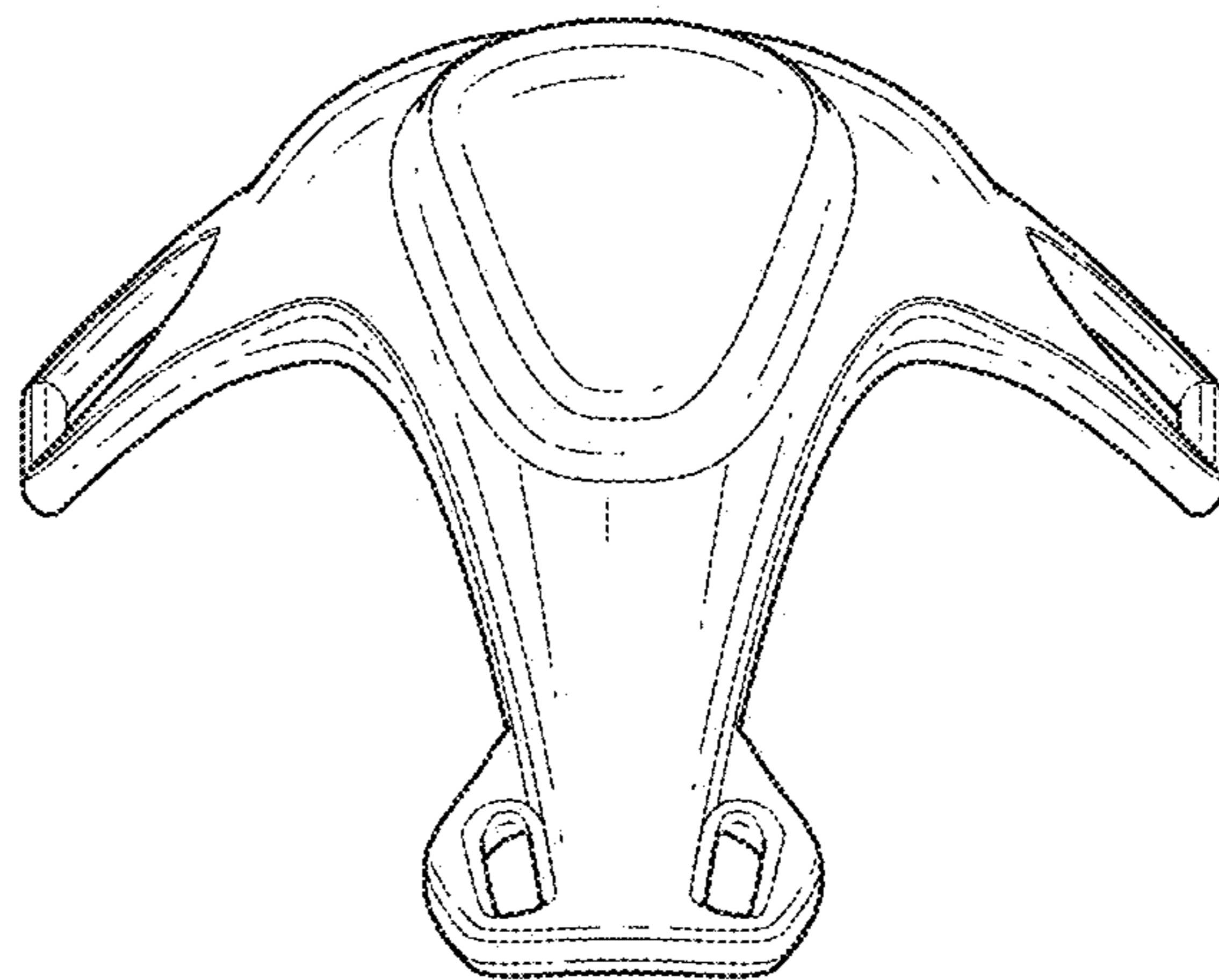


FIG. 6

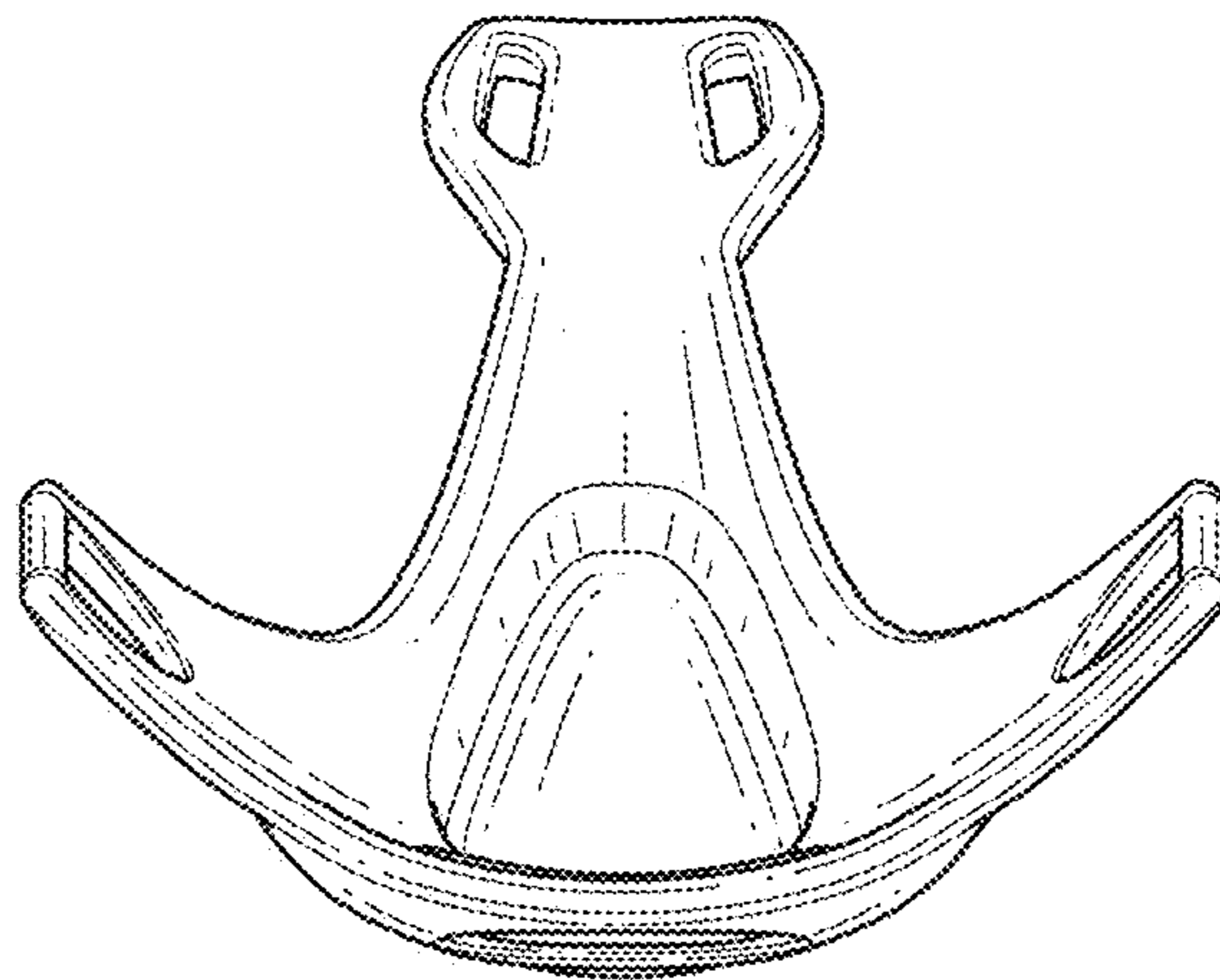


FIG. 7

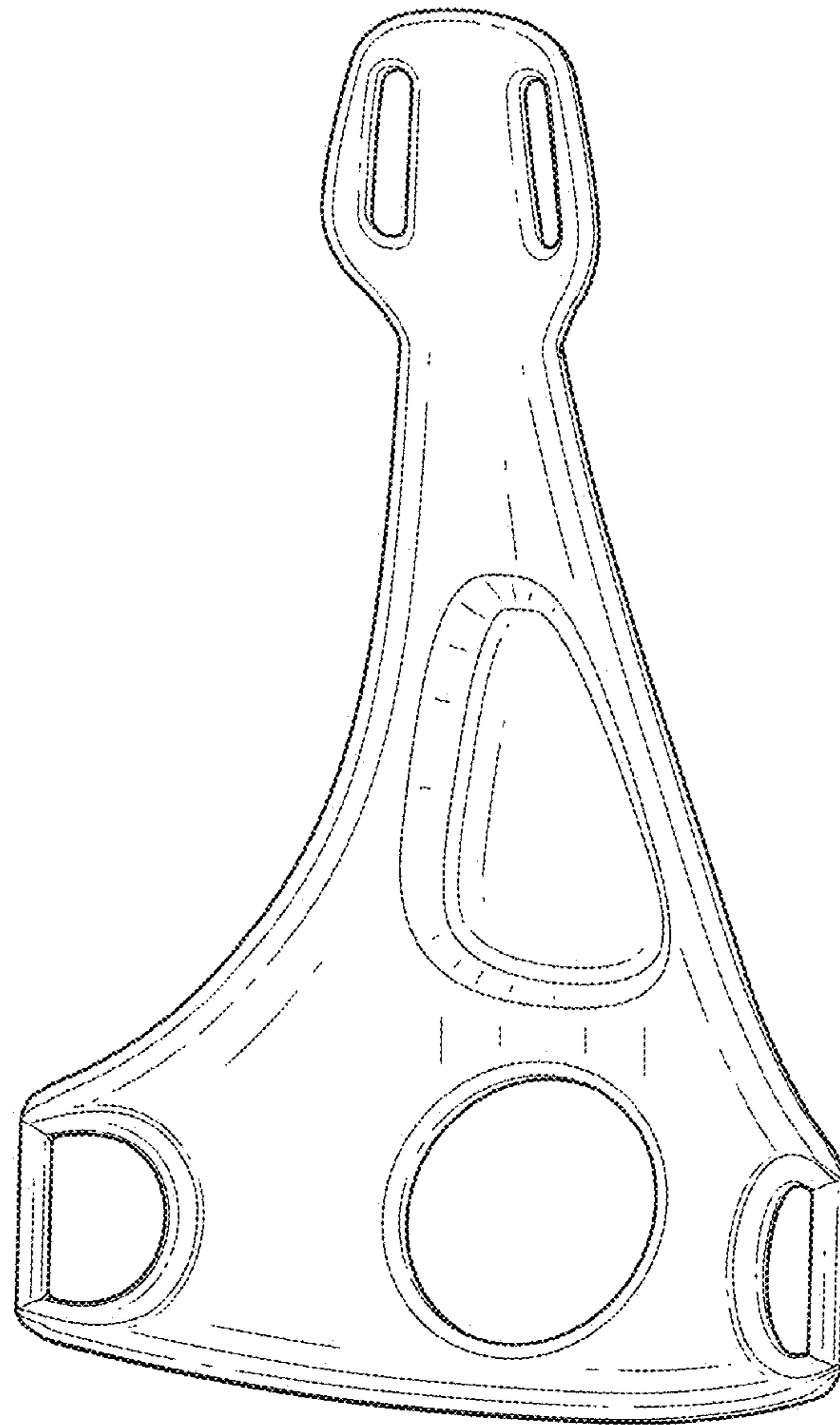


FIG. 8

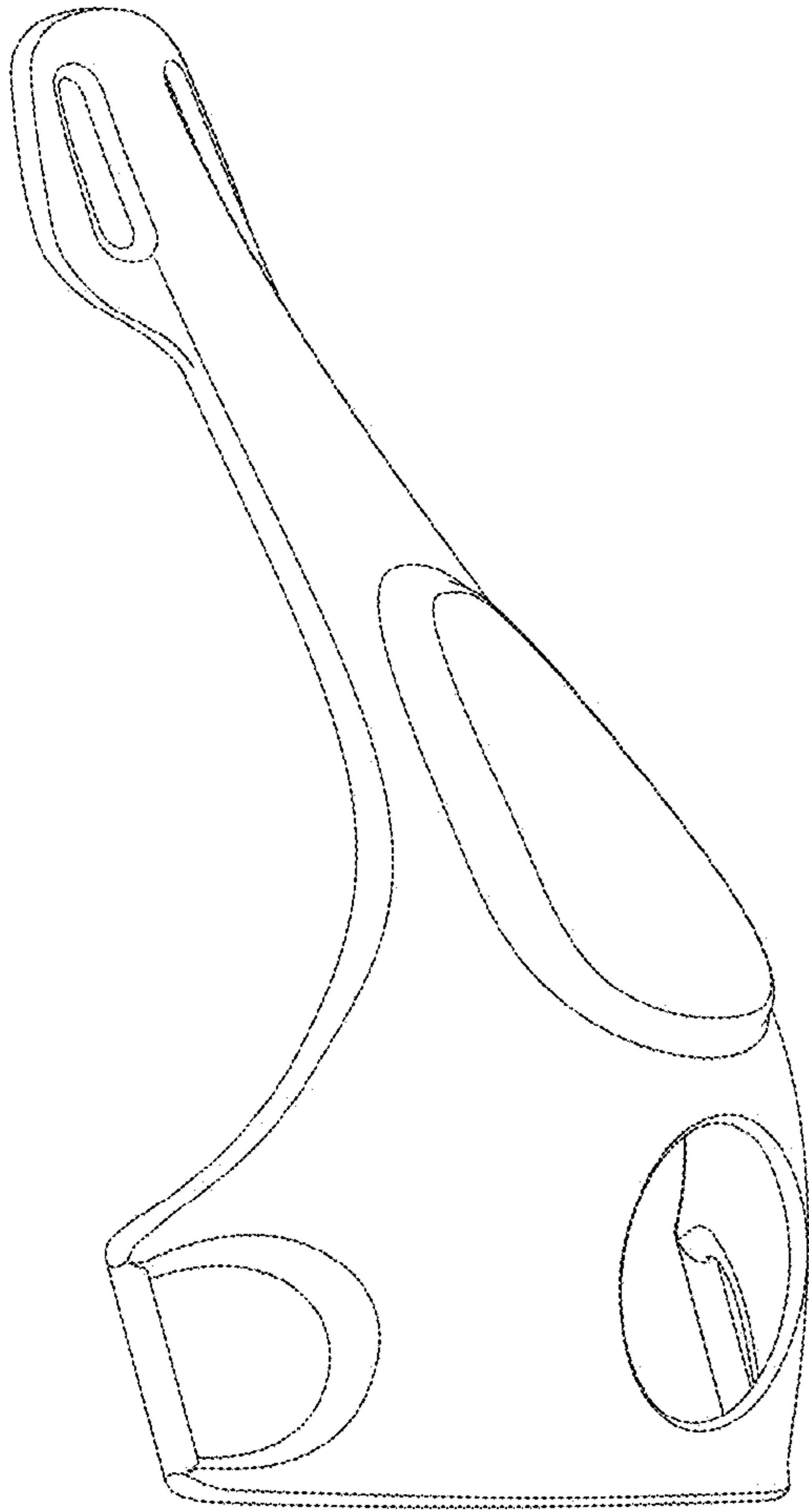


FIG. 9

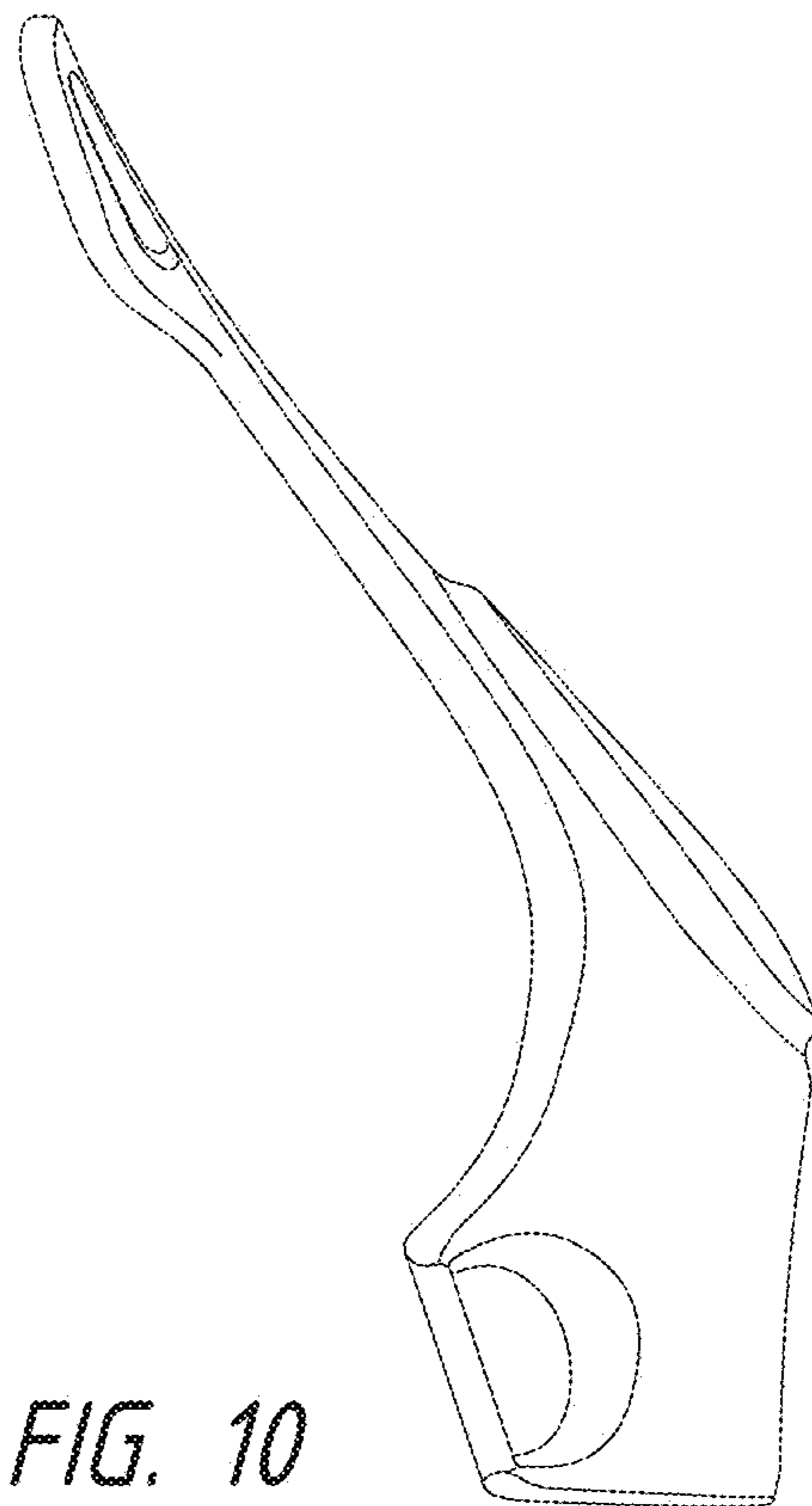


FIG. 10

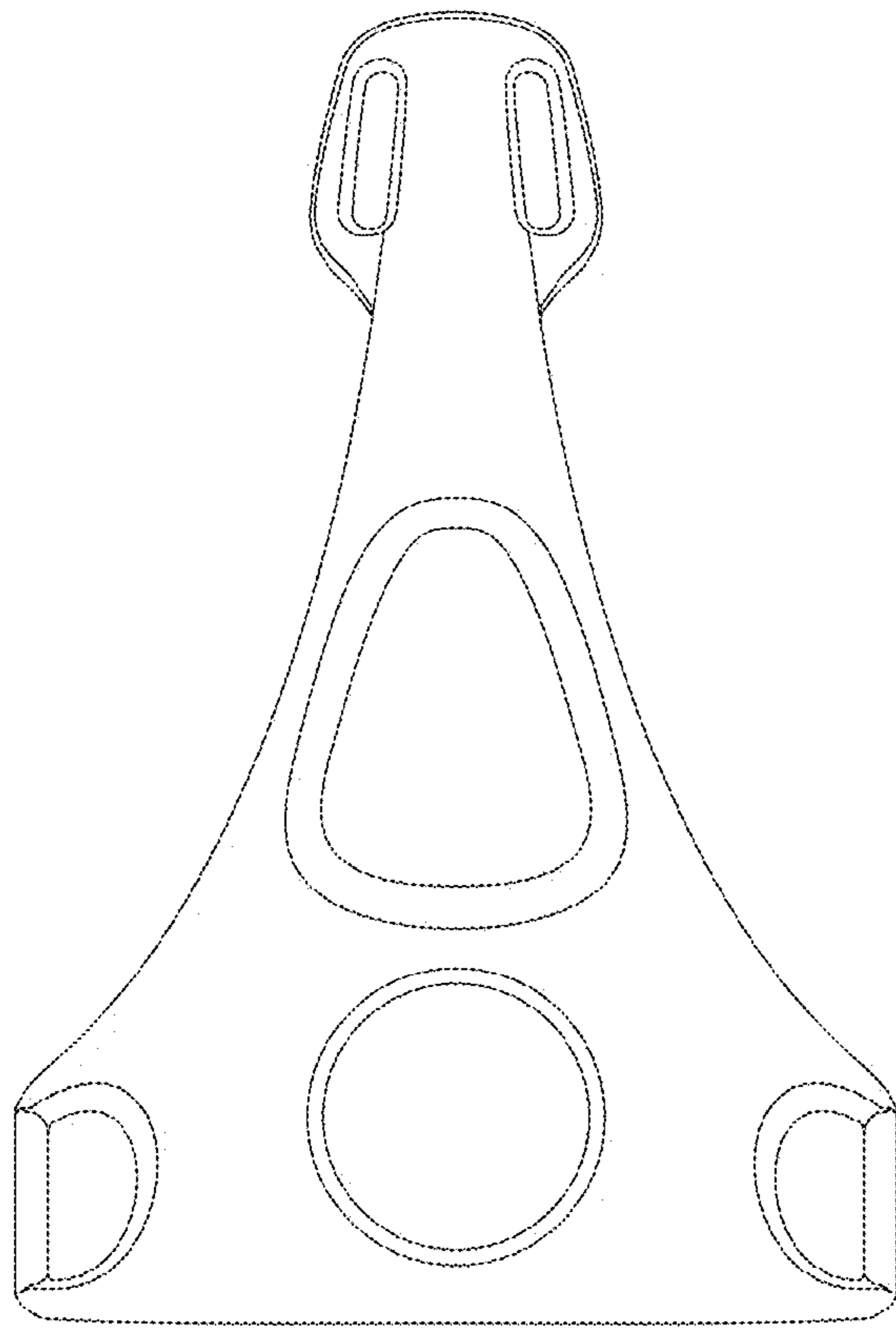


FIG. 11

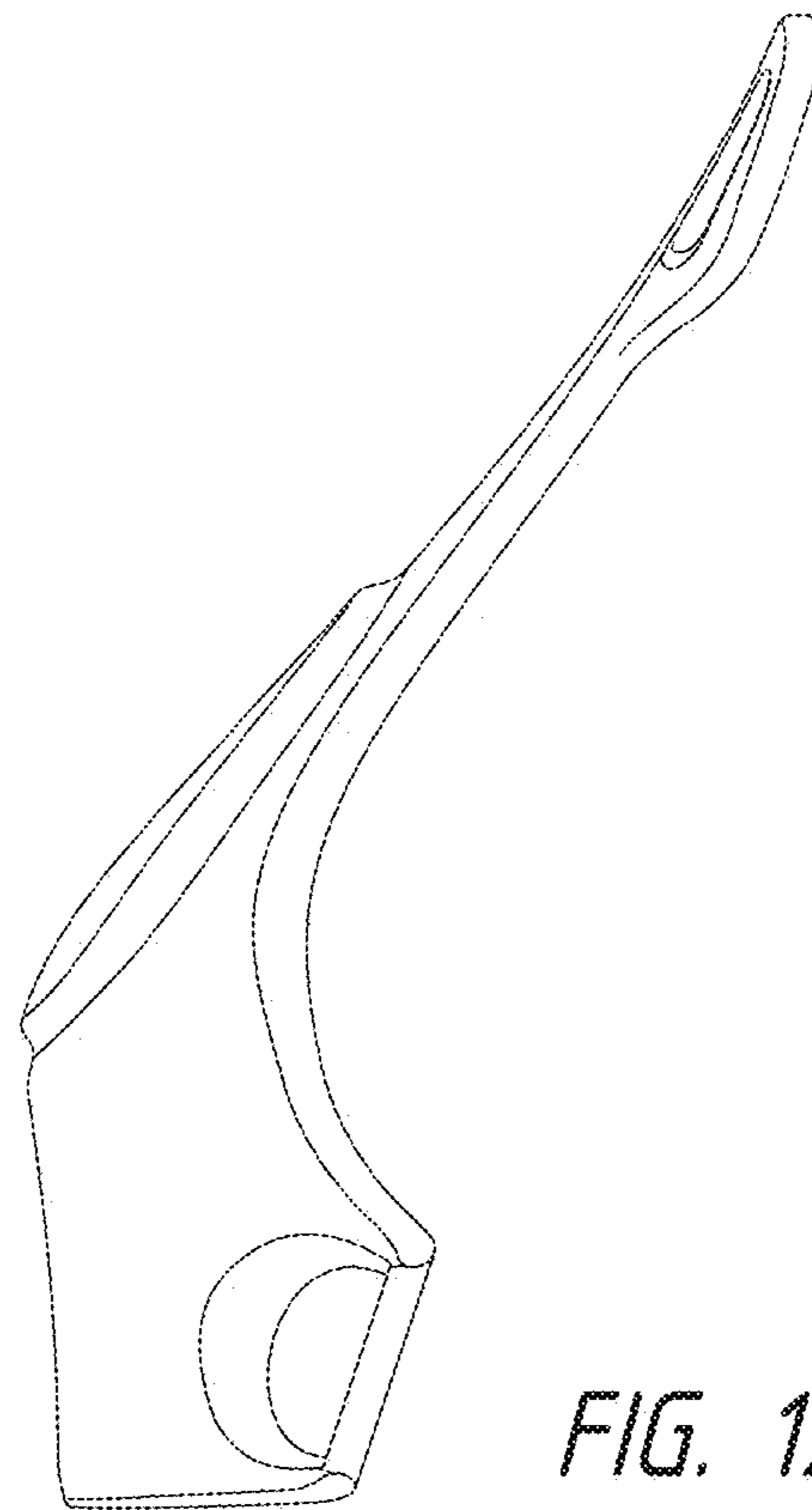


FIG. 12

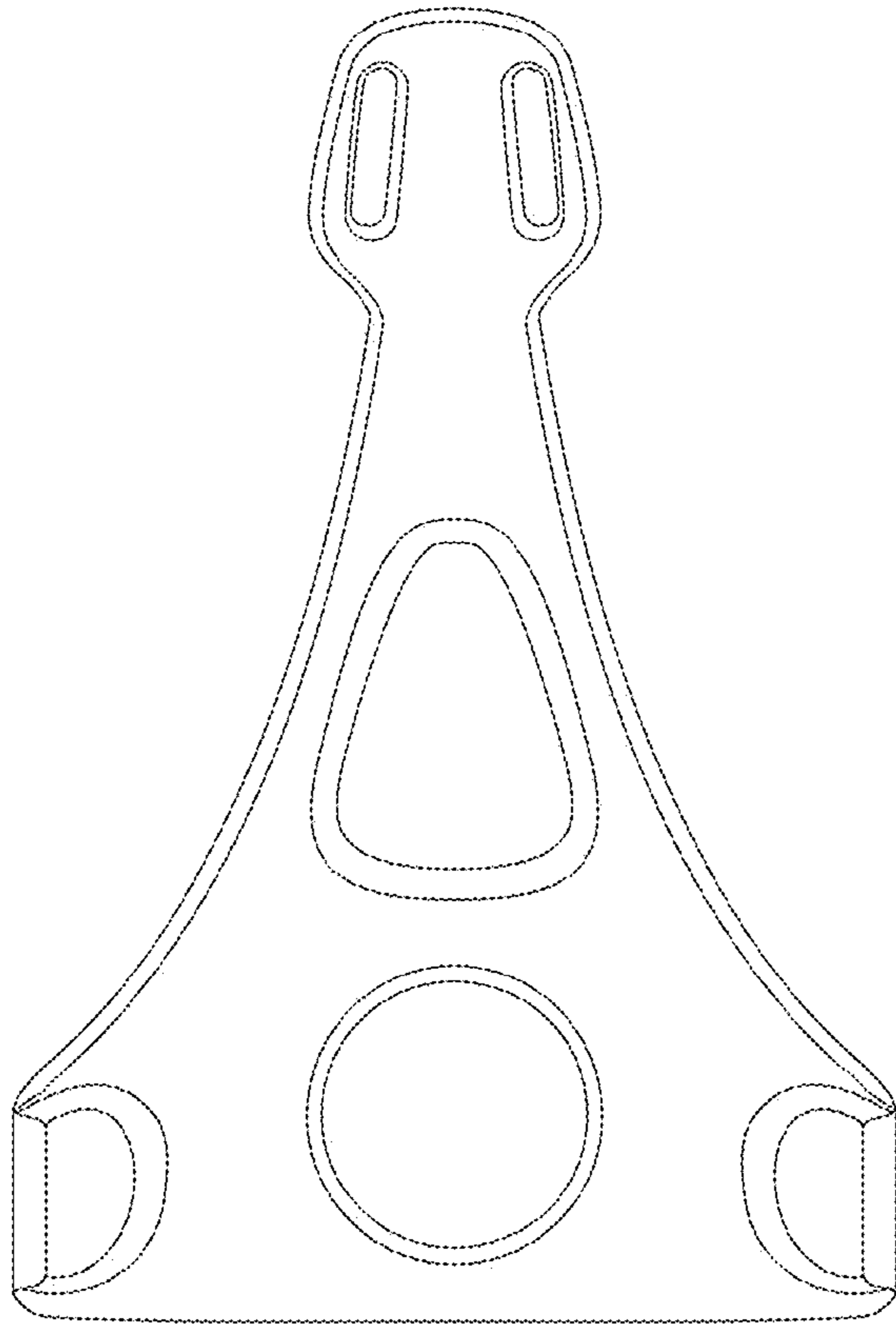


FIG. 13

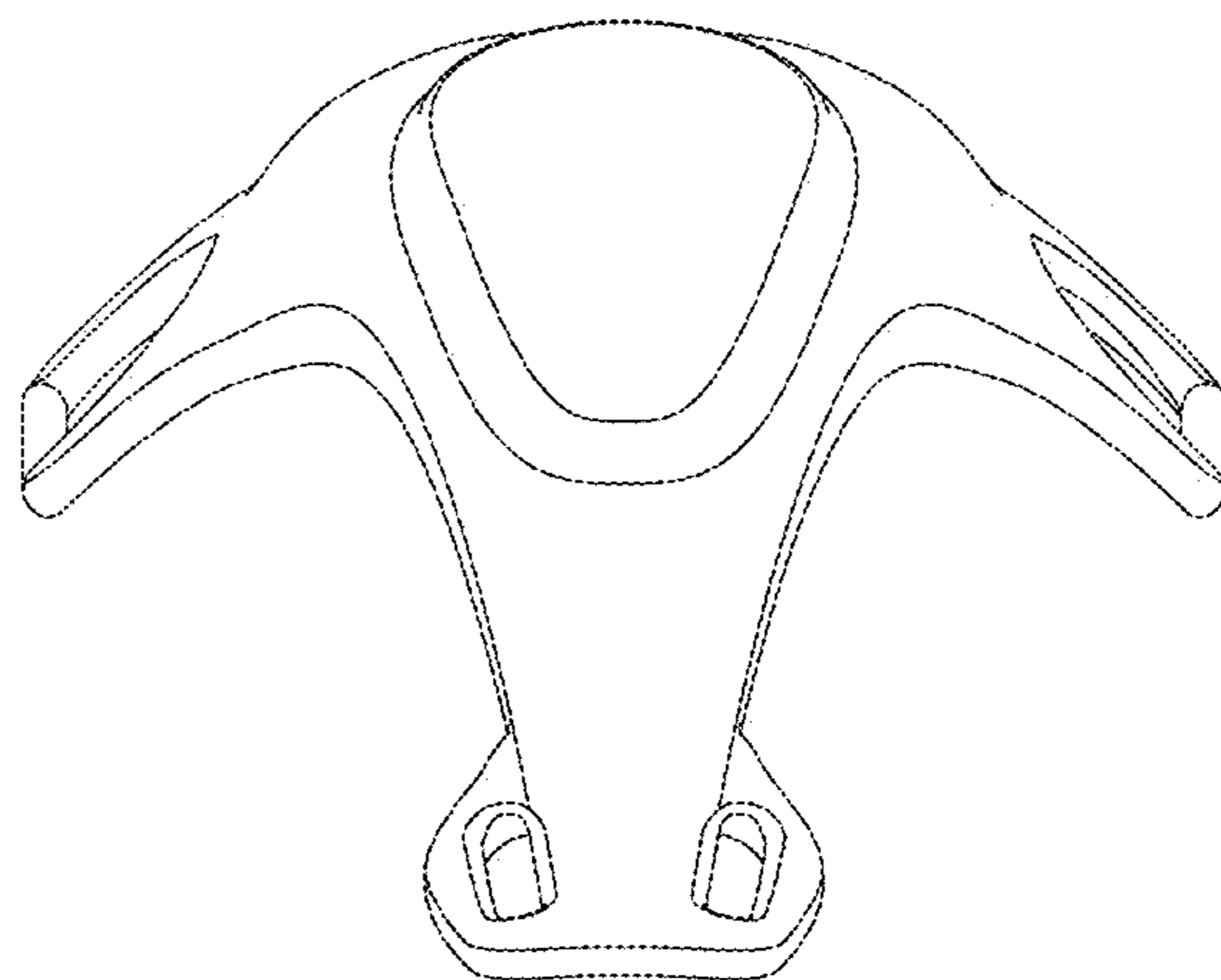


FIG. 14

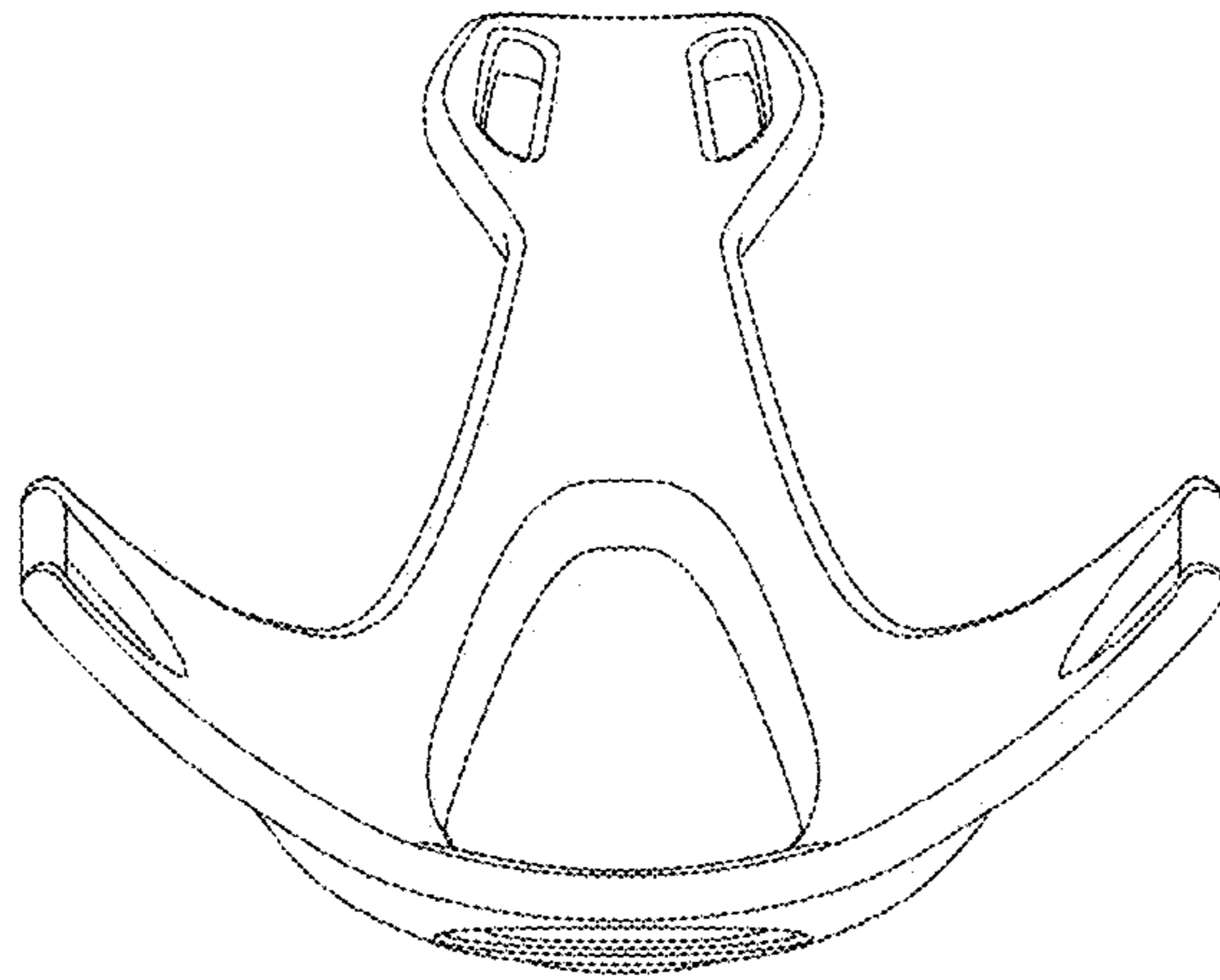


FIG. 15

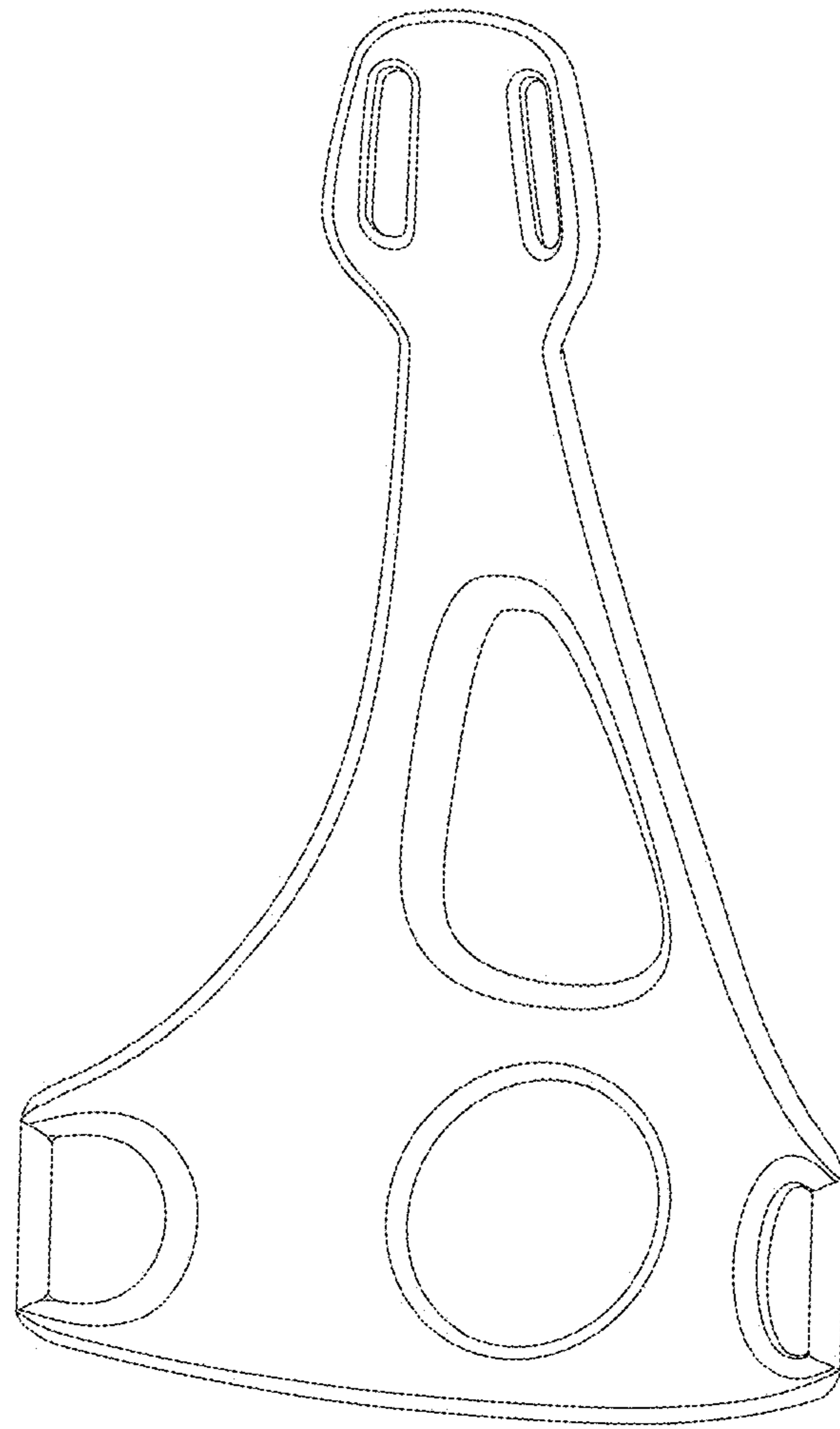


FIG. 16