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(12) **United States Design Patent** (10) **Patent No.:** **US D912,825 S**
Demarest et al. (45) **Date of Patent:** **** Mar. 9, 2021**

(54) **ILLUMINATED ORAL CARE DEVICE**

OTHER PUBLICATIONS

(71) Applicant: **Colgate-Palmolive Company**, New York, NY (US)

Barolet, 2008, "Light-Emitting Diodes (LEDs) in Dermatology," *Semin Cutan Med. Surg.* 27:227-238.

(Continued)

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(73) Assignee: **Colgate-Palmolive Company**, New York, NY (US)

(57) **CLAIM**

The ornamental design for an illuminated oral care device, as shown and described.

(**) Term: **15 Years**

DESCRIPTION

(21) Appl. No.: **29/684,803**

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

(22) Filed: **Mar. 25, 2019**

FIG. 1 is a front top perspective view of an illuminated oral care device according to a first embodiment of the new design;

Related U.S. Application Data

(62) Division of application No. 29/610,379, filed on Jul. 12, 2017, now Pat. No. Des. 849,942.

FIG. 2 is a front bottom perspective view thereof;

(51) **LOC (13) Cl.** **24-02**

FIG. 3 is a front view thereof;

(52) **U.S. Cl.**
USPC **D24/181**

FIG. 4 is a rear view thereof;

(58) **Field of Classification Search**
USPC D24/152, 156, 176-178, 180-182
(Continued)

FIG. 5 is a left-side view thereof;

FIG. 6 is a right-side view thereof;

FIG. 7 is a top view thereof;

FIG. 8 is a bottom view thereof;

FIG. 9 is a front top perspective view of an illuminated oral care device according to a second embodiment of the new design;

FIG. 10 is a front bottom perspective view thereof;

FIG. 11 is a front view thereof;

FIG. 12 is a rear view thereof;

FIG. 13 is a left-side view thereof;

FIG. 14 is a right-side view thereof;

FIG. 15 is a top view thereof; and,

FIG. 16 is a bottom view thereof.

The broken lines illustrate portions of the illuminated oral care device that form no part of the claimed design.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,758,374 A 8/1956 Fisher et al.

3,223,085 A 12/1965 Gores et al.

(Continued)

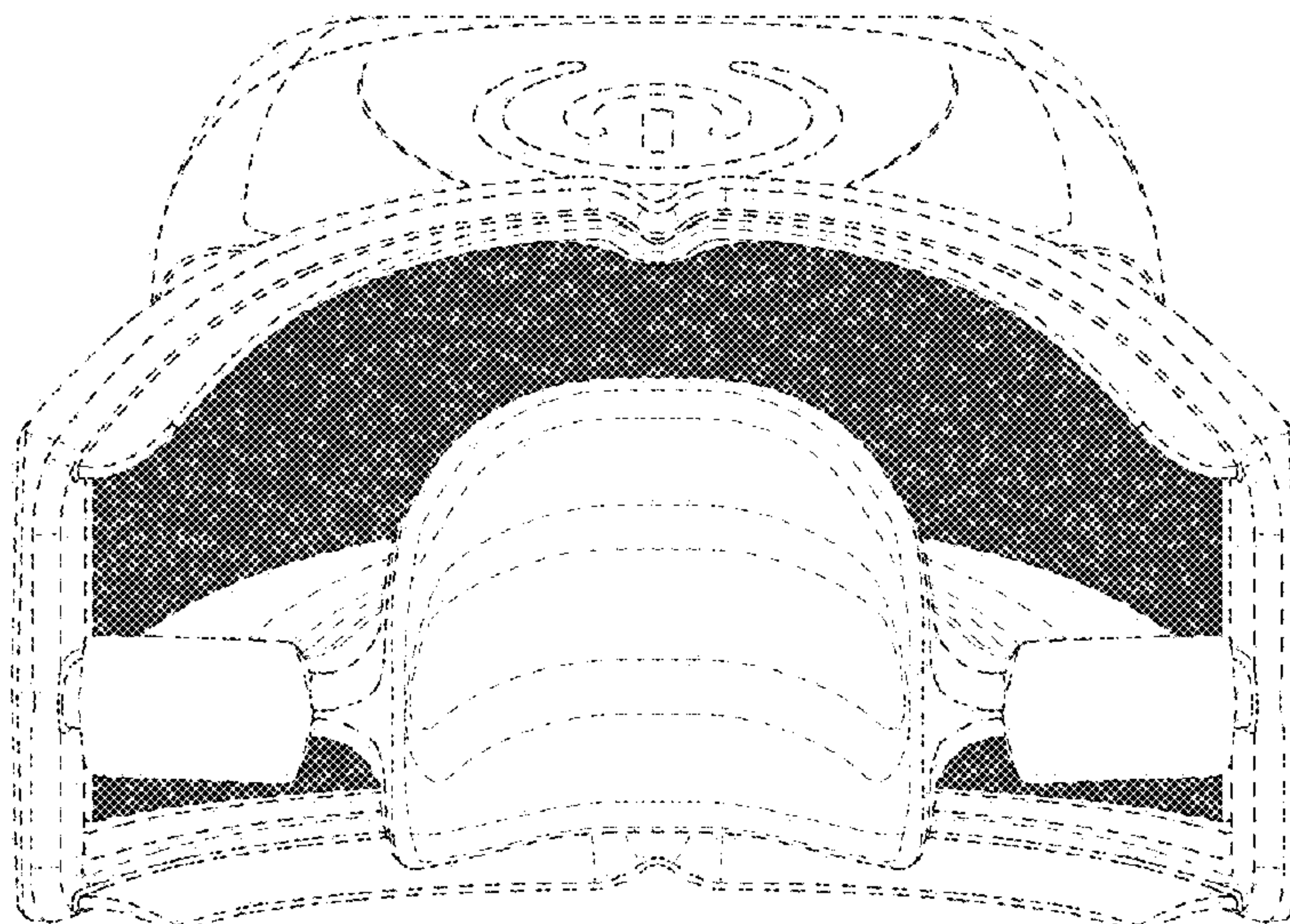
FOREIGN PATENT DOCUMENTS

CN 302663408 S 11/2013

EP 1054642 5/2008

(Continued)

1 Claim, 12 Drawing Sheets
(3 of 12 Drawing Sheet(s) Filed in Color)



(58) **Field of Classification Search**
 CPC A61N 5/0603; A61N 5/0613; A61N 5/06;
 A61N 2005/0606; A61N 2005/0644;
 A61N 2005/0645; A61C 19/063; A61C
 19/066
 See application file for complete search history.

(56) **References Cited**
 U.S. PATENT DOCUMENTS

3,234,942	A	2/1966	Simor
3,380,446	A	4/1968	Martin
D215,685	S	10/1969	Helmer
3,527,219	A	9/1970	Greenberg
D229,562	S	12/1973	Sturdivant
4,003,132	A	1/1977	Beck
4,237,574	A	12/1980	Kelly et al.
D277,605	S	2/1985	Werrin
5,104,315	A	4/1992	McKinley
5,211,559	A	5/1993	Hart et al.
5,265,624	A	11/1993	Bowman
5,316,473	A	5/1994	Hare
5,487,662	A	1/1996	Kipke et al.
5,490,520	A	2/1996	Schaefer et al.
5,520,539	A	5/1996	Divjak
5,562,449	A	10/1996	Jacobs et al.
5,642,737	A	7/1997	Parks
5,766,011	A	6/1998	Sibner
5,792,067	A	8/1998	Karell
D403,771	S	1/1999	Werrin
5,863,202	A	1/1999	Fontenot et al.
D413,386	S	8/1999	Werrin
D433,138	S	10/2000	Kesling
D434,501	S	11/2000	Redhage
6,280,196	B1	8/2001	Berghash
6,350,123	B1	2/2002	Rizoiu et al.
D456,515	S	4/2002	Dinu
6,398,713	B1	6/2002	Ewing et al.
D464,732	S	10/2002	Huffman
6,457,973	B1	10/2002	Fetz et al.
6,616,447	B1	9/2003	Rizoiu et al.
6,752,630	B2	6/2004	Roetzer
6,893,259	B1	5/2005	Reizenson
6,948,936	B2	9/2005	Miller et al.
D512,148	S	11/2005	Kwok
D521,150	S	5/2006	Kwok
D528,208	S	9/2006	Moriyama
D529,177	S	9/2006	Huffman
D529,178	S	9/2006	Huffman
7,331,784	B2	2/2008	Suzuki
D582,559	S	12/2008	Khawaled et al.
7,645,137	B2	1/2010	Wasluch
7,775,795	B2	8/2010	Khawaled et al.
7,802,988	B2	9/2010	Yarborough
7,810,503	B2	10/2010	Magnin
8,172,570	B2	5/2012	Baughman
D661,806	S	6/2012	Khawaled et al.
8,215,954	B2	7/2012	Levine
8,241,035	B2	8/2012	Jones et al.
8,602,774	B2	12/2013	Waslucha
8,608,786	B2	12/2013	Irge A61N 5/0613 607/88
9,299,887	B2	3/2016	Lowenthal et al.
9,492,257	B2	11/2016	Jablow et al.
9,636,198	B2	5/2017	Kodama
9,889,315	B2	2/2018	Demarest A61N 5/0603
9,901,744	B2 *	2/2018	Demarest A61N 5/0603
D849,956	S *	5/2019	Demarest D24/181
10,758,330	B2 *	9/2020	Vermeulen A61C 19/066
2001/0012608	A1	8/2001	Darnell
2003/0069626	A1	4/2003	Lattner et al.
2005/0048444	A1	3/2005	Creamer
2005/0153256	A1	7/2005	Livolsi
2005/0202363	A1	9/2005	Osterwalder
2005/0266370	A1	12/2005	Suzuki
2006/0019214	A1	1/2006	Lawrence et al.
2006/0039874	A1	2/2006	Wong

2006/0141422	A1	6/2006	Philp, Jr. et al.
2006/0172260	A1	8/2006	Allred et al.
2006/0234189	A1	10/2006	Duret
2007/0003905	A1	1/2007	Nguyen et al.
2007/0009856	A1	1/2007	Jones et al.
2007/0015112	A1	1/2007	Hochman et al.
2007/0054233	A1	3/2007	Rizoiu et al.
2007/0276455	A1	11/2007	Fiset
2008/0003540	A1	1/2008	Khawaled et al.
2008/0008978	A1	1/2008	Conrad et al.
2008/0032253	A1	2/2008	Montgomery et al.
2008/0063999	A1	3/2008	Osborn
2008/0115792	A1	5/2008	Burger
2008/0199830	A1	8/2008	Fontenot et al.
2008/0233541	A1	9/2008	DeVreese et al.
2009/0017422	A1	1/2009	Creamer
2009/0029311	A1	1/2009	Chan
2009/0114232	A1	5/2009	Landi et al.
2009/0117513	A1	5/2009	Nemeh et al.
2009/0208543	A1	8/2009	Nathoo
2010/0136498	A1	6/2010	Baughman
2010/0151407	A1	6/2010	Rizoiu et al.
2011/0076636	A1	3/2011	Wolff et al.
2012/0183919	A1	7/2012	Levine
2012/0214122	A1	8/2012	Dwyer et al.
2012/0244489	A1	9/2012	Carnahan
2012/0295218	A1	11/2012	Moll
2012/0322024	A1	12/2012	DeVreese et al.
2013/0004912	A1	1/2013	Brown et al.
2013/0026504	A1	1/2013	Marx et al.
2013/0045457	A1 *	2/2013	Chetiar A61C 19/066 433/29
2013/0175515	A1	7/2013	Ray et al.
2013/0209964	A1	8/2013	Nemeh et al.
2013/0280671	A1	10/2013	Brawn et al.
2014/0186789	A1	7/2014	Valoir
2014/0227657	A1	8/2014	Sanders
2014/0272770	A1	9/2014	Hurley
2014/0355251	A1	12/2014	Kahrs et al.
2015/0037749	A1	2/2015	Levine et al.
2015/0044628	A1	2/2015	Flyash
2015/0132709	A1	5/2015	Park et al.
2015/0164618	A1	6/2015	Heacock et al.
2015/0204490	A1	7/2015	Zheng et al.
2015/0360606	A1	12/2015	Thompson et al.
2016/0035924	A1	2/2016	Oraw et al.
2016/0271415	A1	9/2016	Min
2016/0331487	A1	11/2016	Newman et al.
2017/0173353	A1	6/2017	Demarest A61C 19/063
2017/0173358	A1 *	6/2017	Demarest A61N 5/0603
2019/0358009	A1 *	11/2019	Vermeulen A61C 19/066

FOREIGN PATENT DOCUMENTS

EP	2386264	11/2011
JP	2012-110500	6/2012
JP	1456420	10/2012
KR	100773379	B1 11/2007
KR	101525123	B1 6/2015
WO	WO 2005/107637	11/2005
WO	WO 2006/020128	2/2006
WO	WO 2010/098761	9/2010
WO	WO 2011/152585	12/2011
WO	WO 2011/159522	12/2011
WO	WO 2011/163220	12/2011
WO	WO 2013/093743	6/2013
WO	WO 2013/155366	10/2013

OTHER PUBLICATIONS

Belikov et al., 2010, "Study of the dynamics of the absorption spectra of human tooth enamel and dentine under heating and ablation by submillisecond pulse radiation of an erbium laser with a generation wavelength of 2.79 μm," Optics and Spectroscopy 109(2):211-216.
 Bosch et al., 1987, "Optical properties of dentin," Chapter 3, Dentine and Dentine Reactions in the Oral Cavity, pp. 34-40.

(56)

References Cited

OTHER PUBLICATIONS

Brodbelt et al., 1981, "Translucency of Human dental enamel," J. Dent. Res. 60:1749-1753.

De Moor et al., 2009, "The Use of the KTP Laser, an Added Value for Tooth Bleaching," J Oral Laser Applications 9:219-226.

Elliott, 2015, "Teeth Whitening, spot zapping, hair taming and even wrinkle erasing: so could BLUE technology be the future of beauty?" <http://www.dailymail.co.uk/femail/article-3099582/Teeth-whitening-spot-zapping-hair-taming-wrinkle-erasing-BLUE-technology-future-beauty.html>.

Hirmer et al., 2012, "Spectroscopic study of human teeth and blood from visible to terahertz frequencies for clinical diagnosis of dental pulp vitality," J Infrared Mill Terahz Waves 33:366-375.

International Preliminary Report on Patentability in International Application No. PCT/IL04/01174 dated Jul. 3, 2006.

International Search Report in International Application No. PCT/IL2004/001174, dated Nov. 24, 2005.

International Search Report and Written Opinion in International Application No. PCT/US2016/067573, dated Jul. 13, 2017.

International Search Report and Written Opinion of the International Searching Authority in International Application No. PCT/US2016/067564, dated Mar. 16, 2017.

Janine, 2012, "Power White: The Tanda Pearl Ionic Teeth Whitening System Works (and How)," BeautyGeeks website, <https://imabeautygeek.com/2012/08/21/power-white-the-tanda-pearl-ionic-teeth-whitening-system-works-and-how/>.

Joiner et al., 2003, "Tooth colour: a review of the literature," J of Dentistry 32:3-12.

Partial International Search Report issued in International Application No. PCT/US2016/067573, dated Mar. 22, 2017.

Spitzer et al., 1975, "The absorption and scattering of light in bovine and human dental enamel," Calcif. Tiss. Res. 17:129-137.

Written Opinion of the International Searching Authority in International Application No. PCT/IL2004/01174 dated Jun. 29, 2006.

Young et al., 2012, "A study of hydrogen peroxide chemistry and photochemistry in tea stain solution with relevance to clinical tooth whitening," J of Dentistry 40(Supp. 2):e11-e16.

* cited by examiner

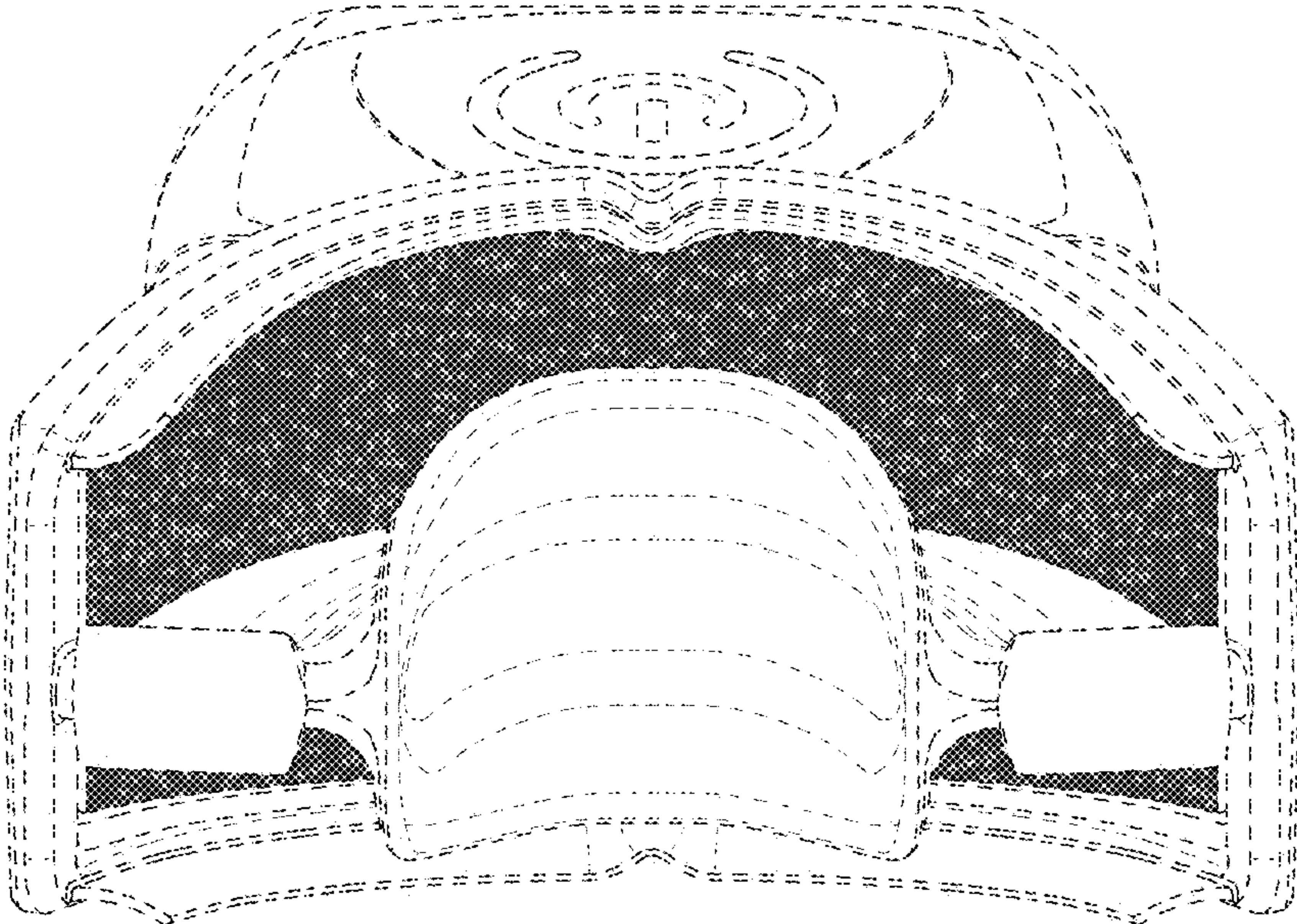


FIG. 1

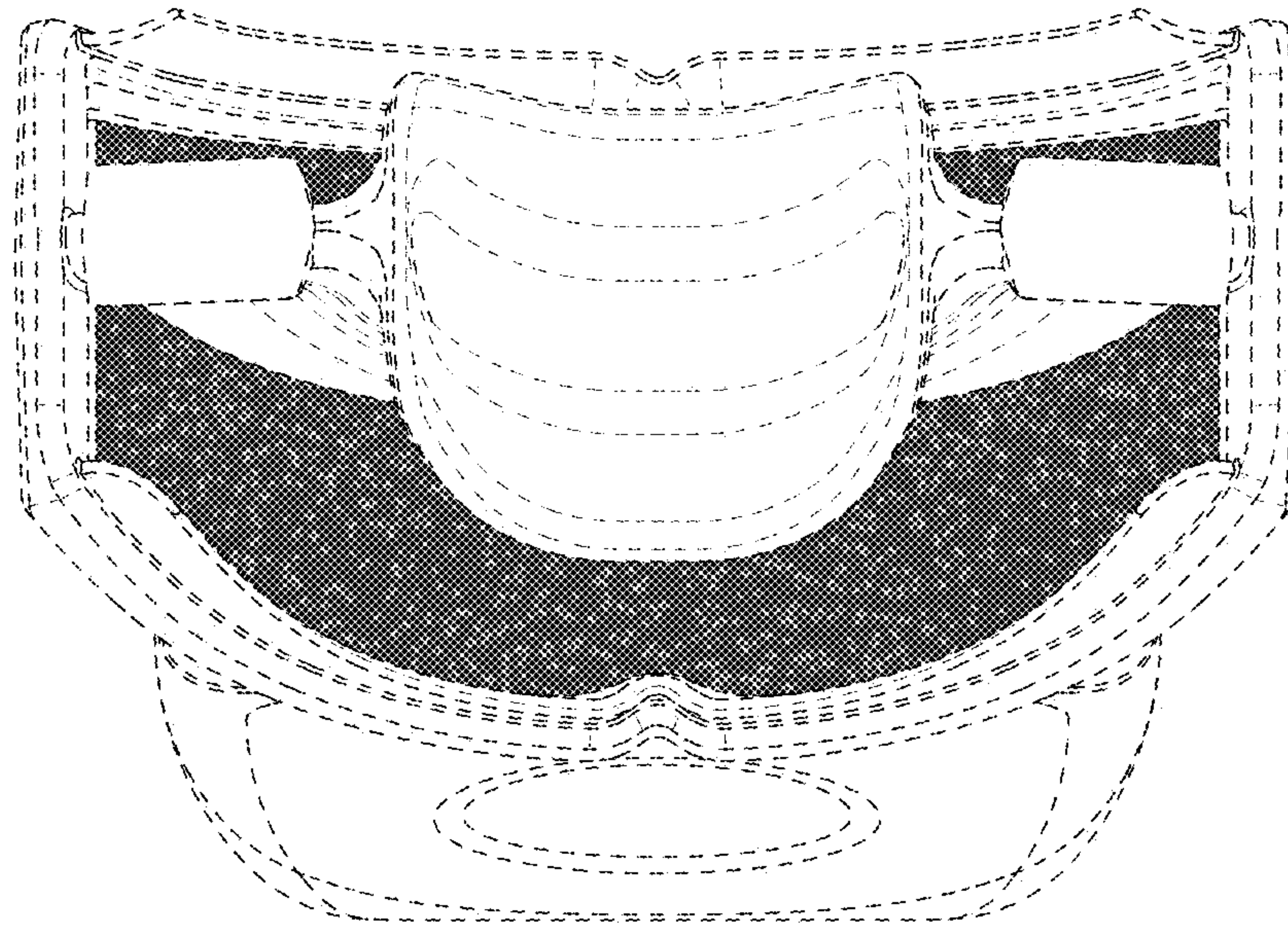


FIG. 2

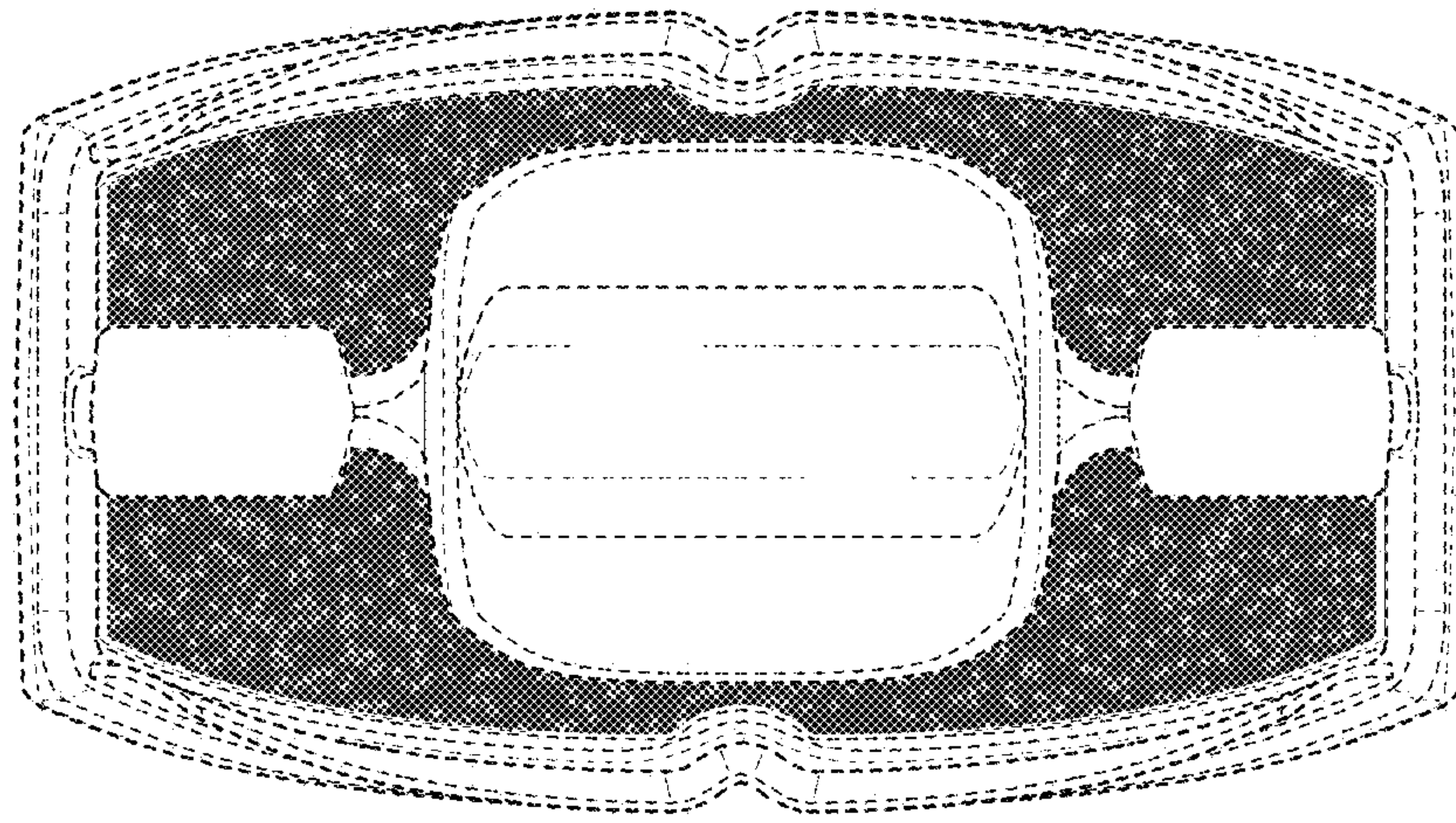


FIG. 3

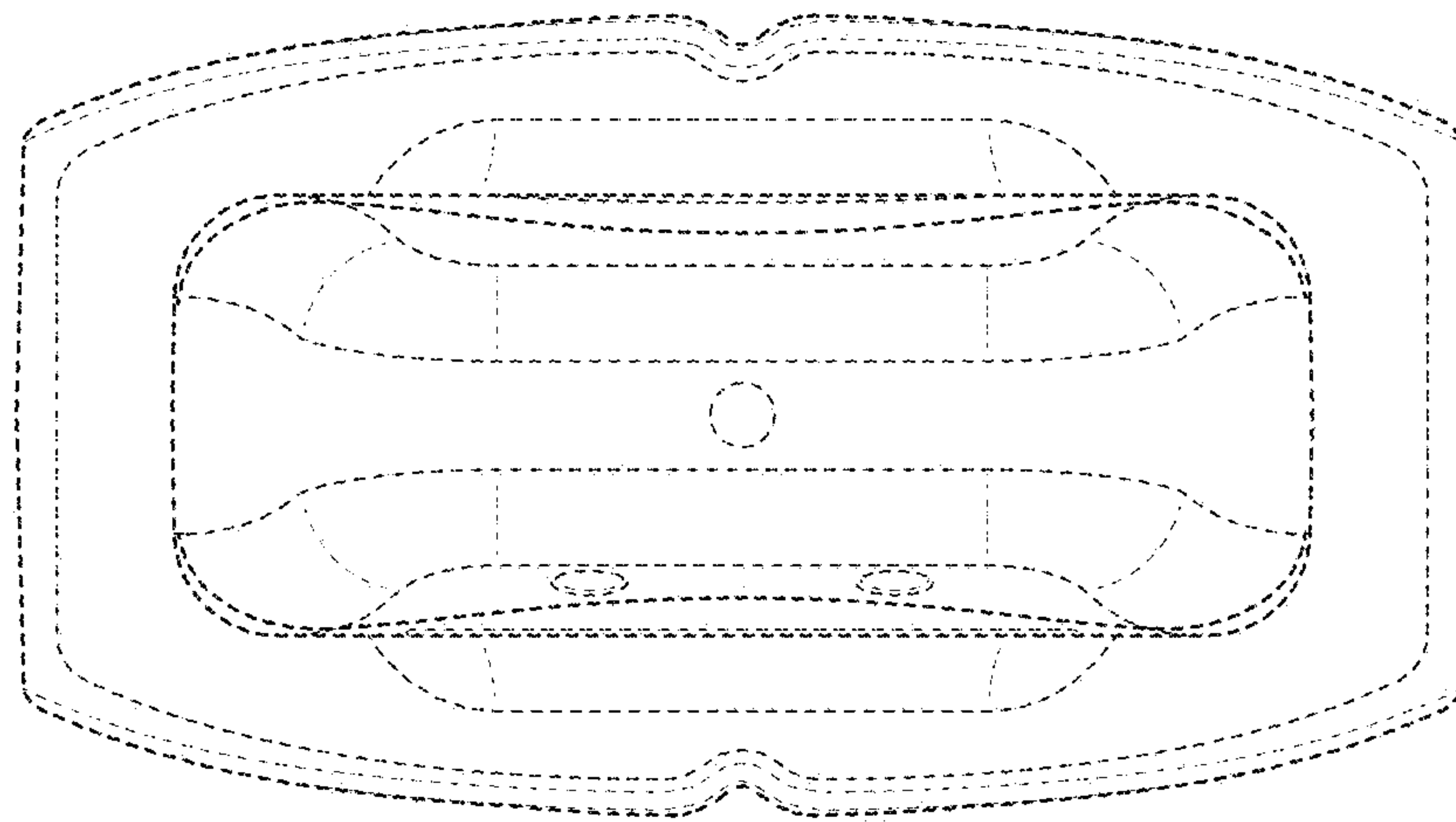


FIG. 4

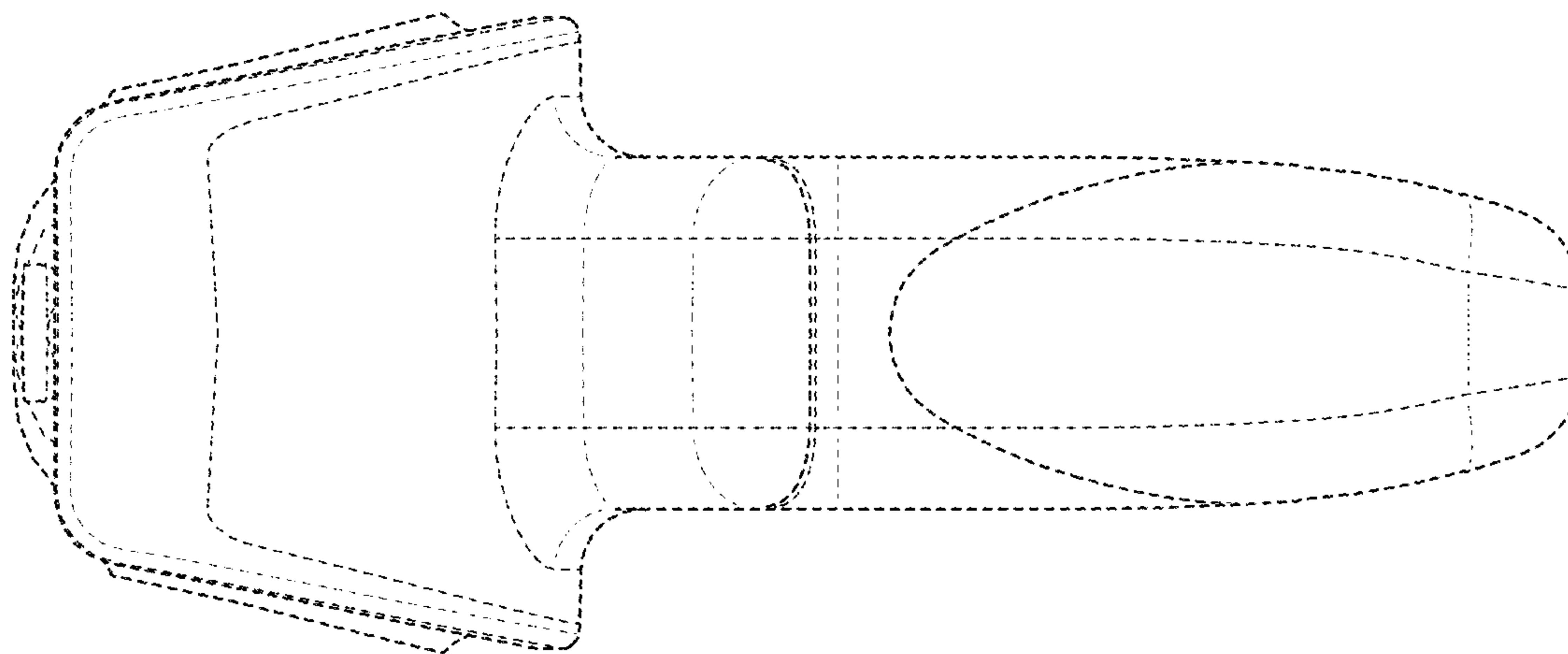


FIG. 5

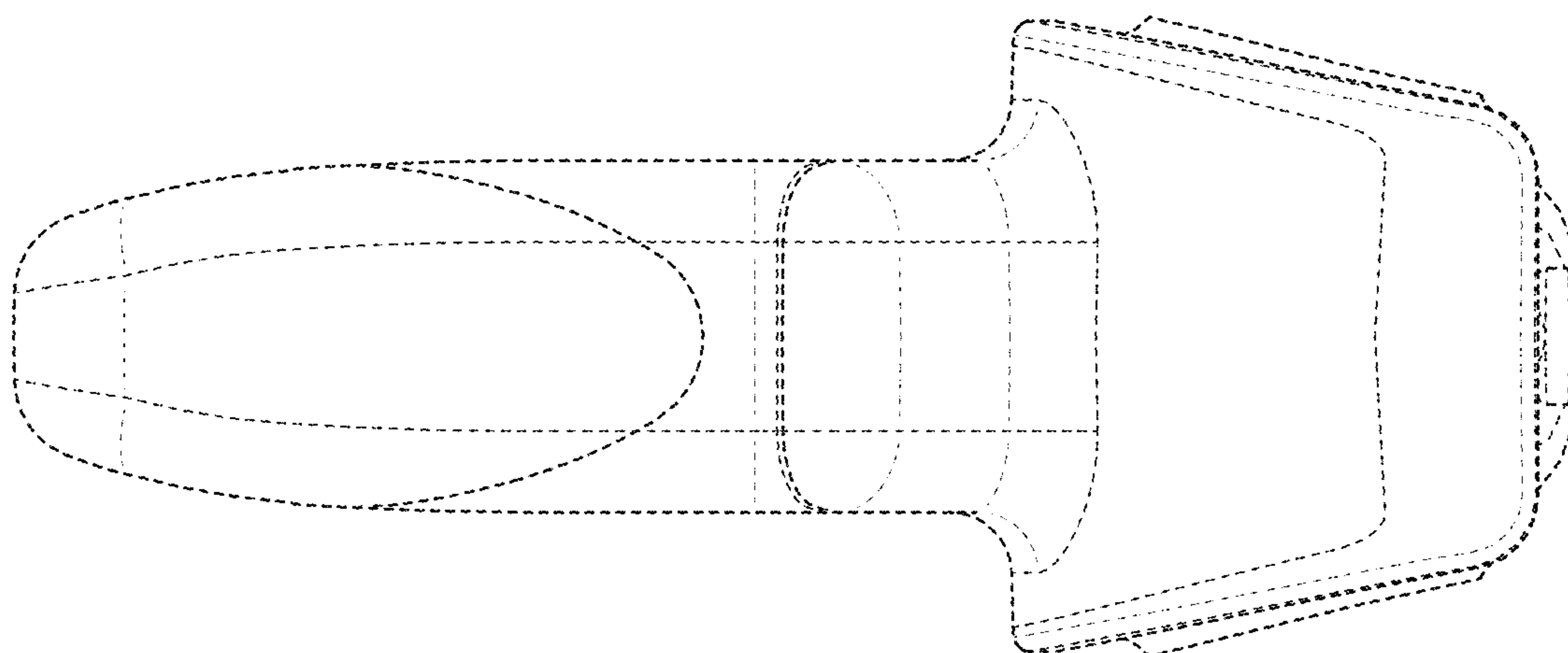


FIG. 6

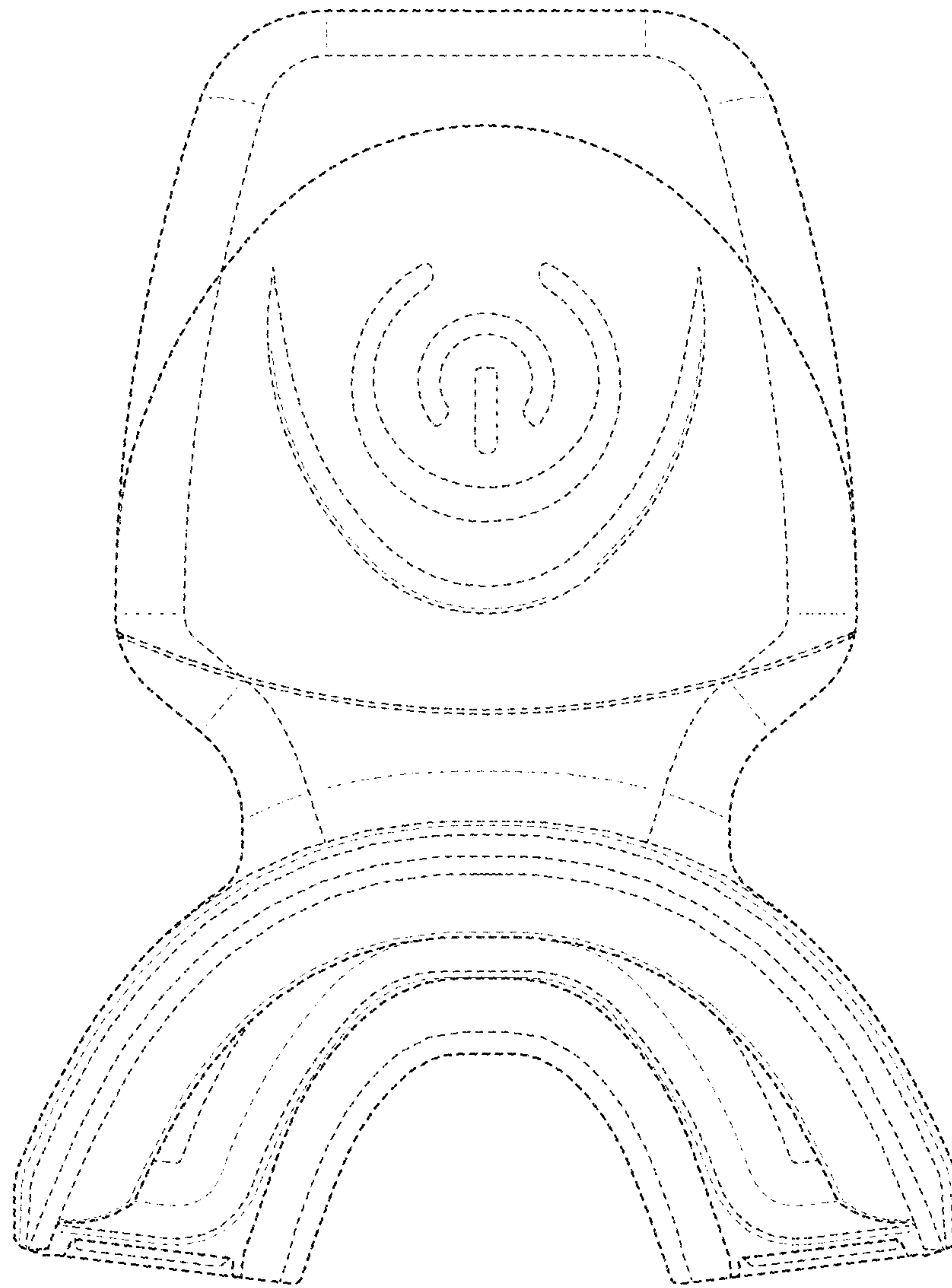


FIG. 7

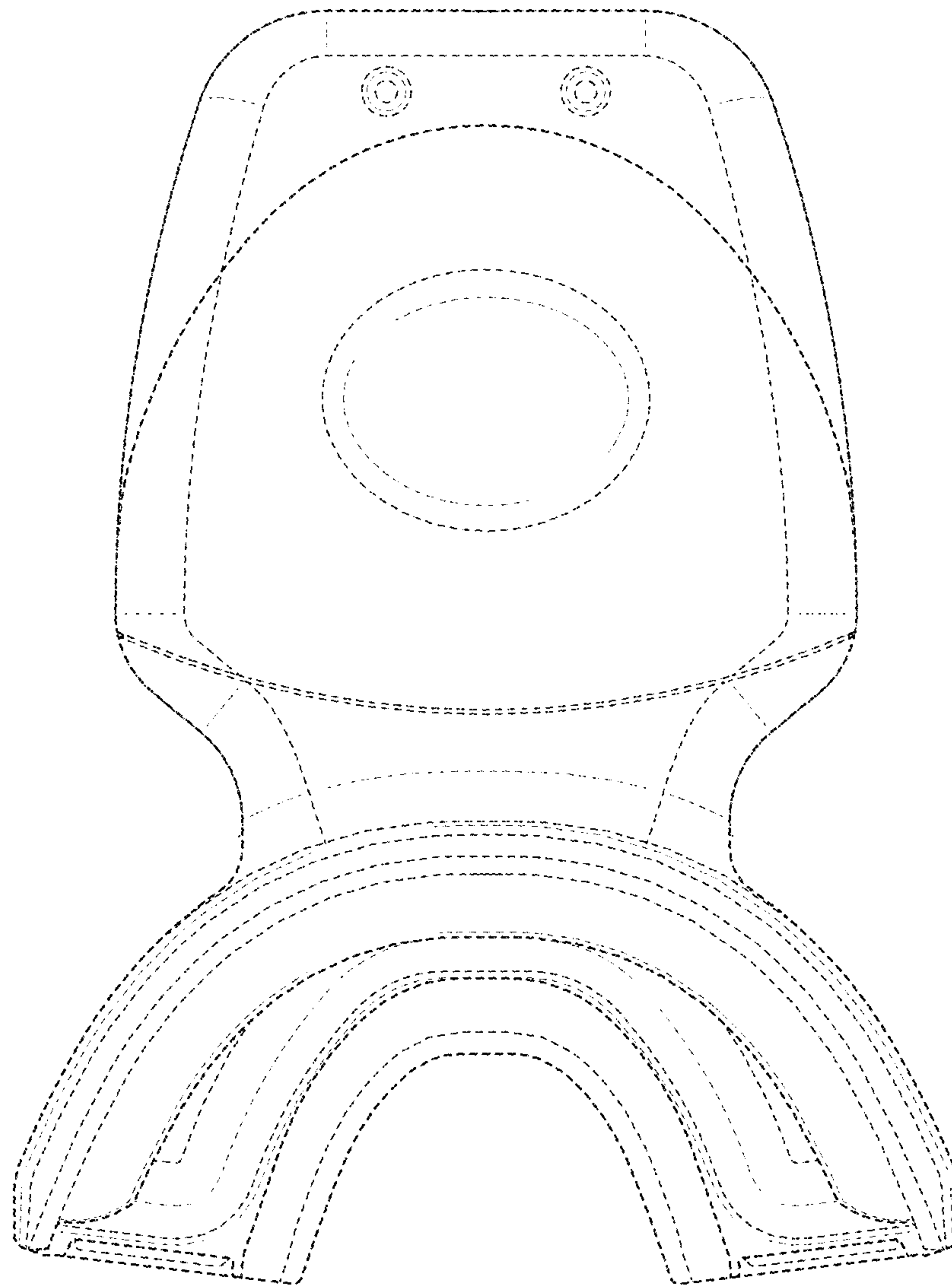


FIG. 8

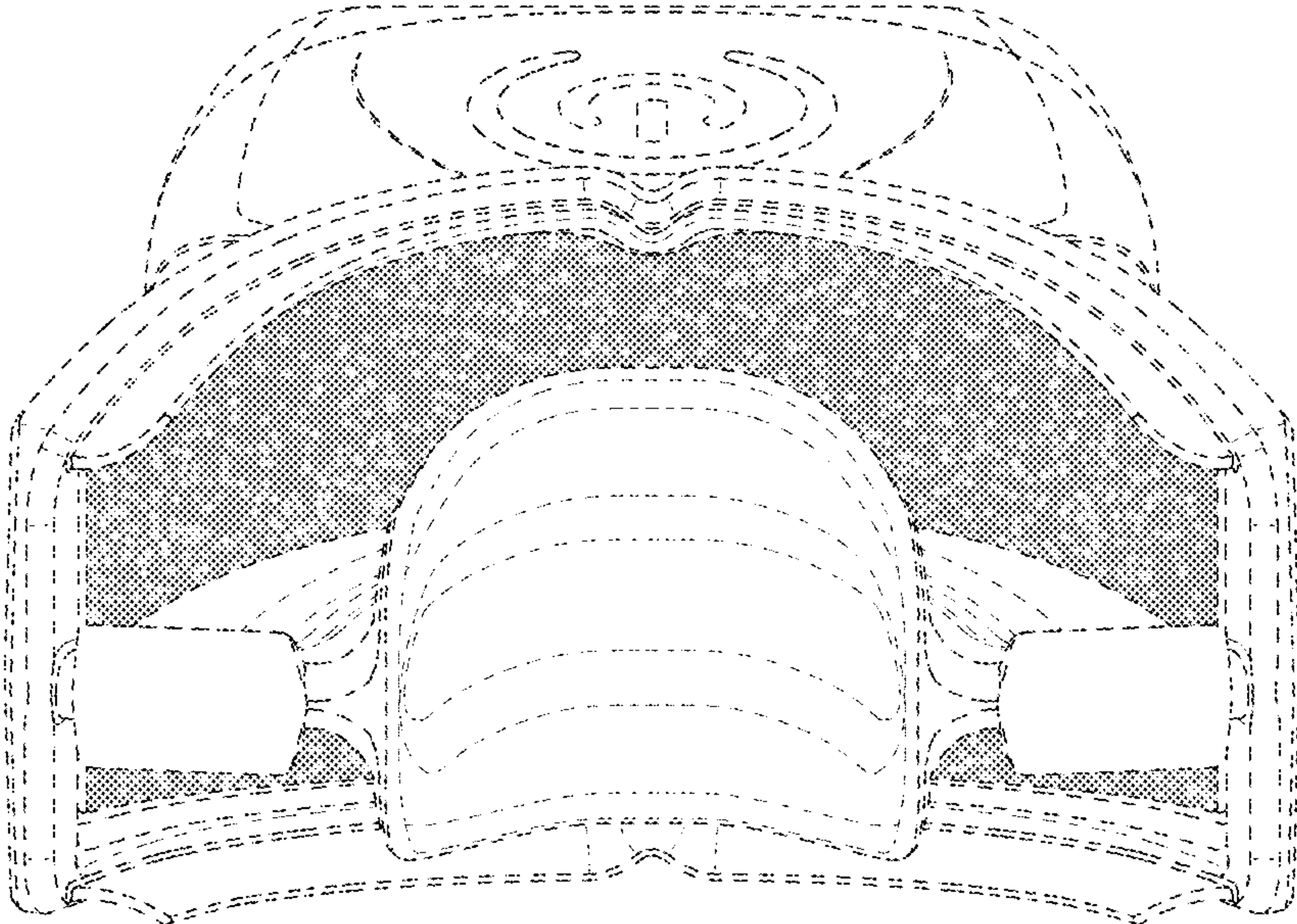


FIG. 9

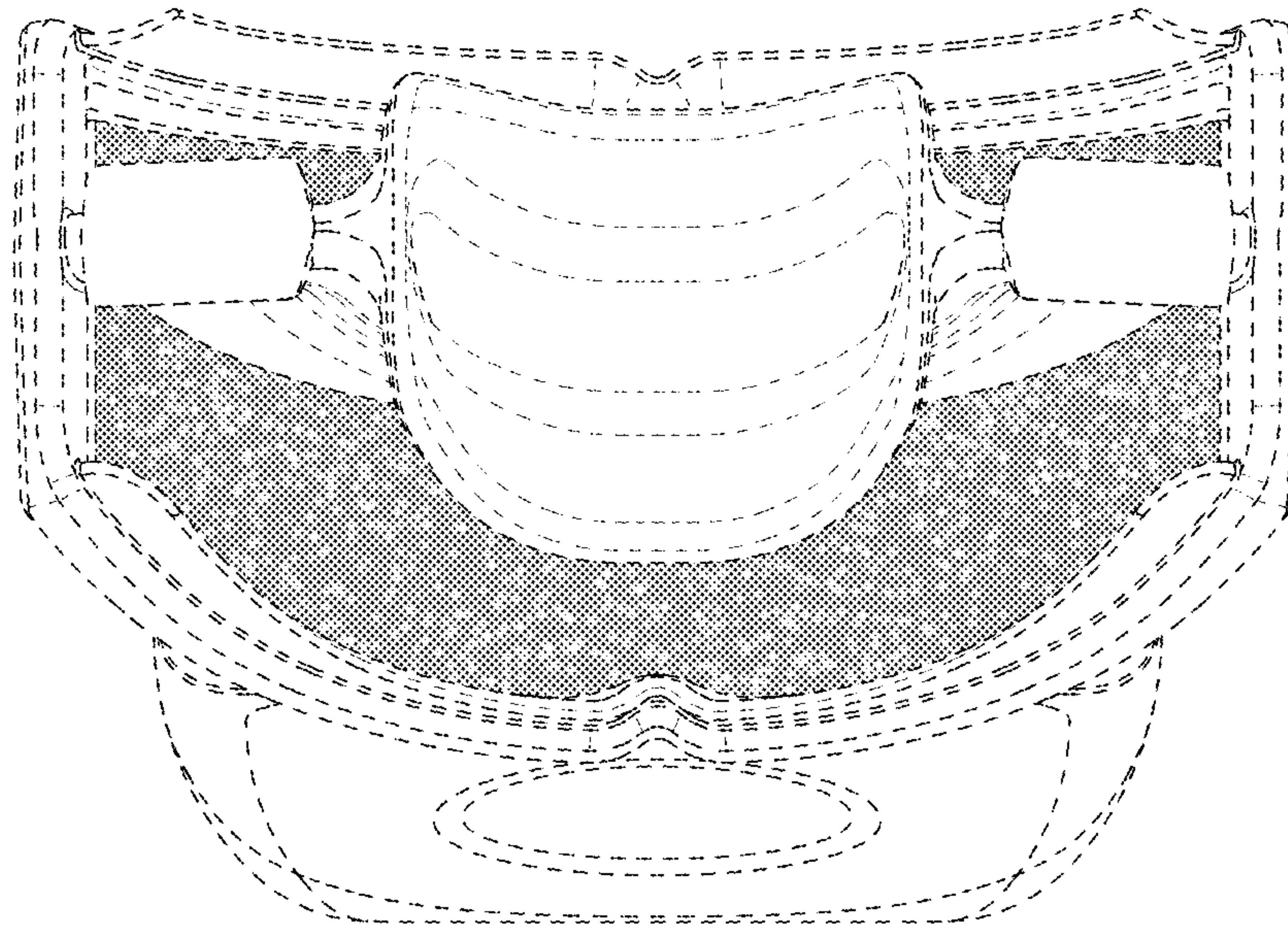


FIG. 10

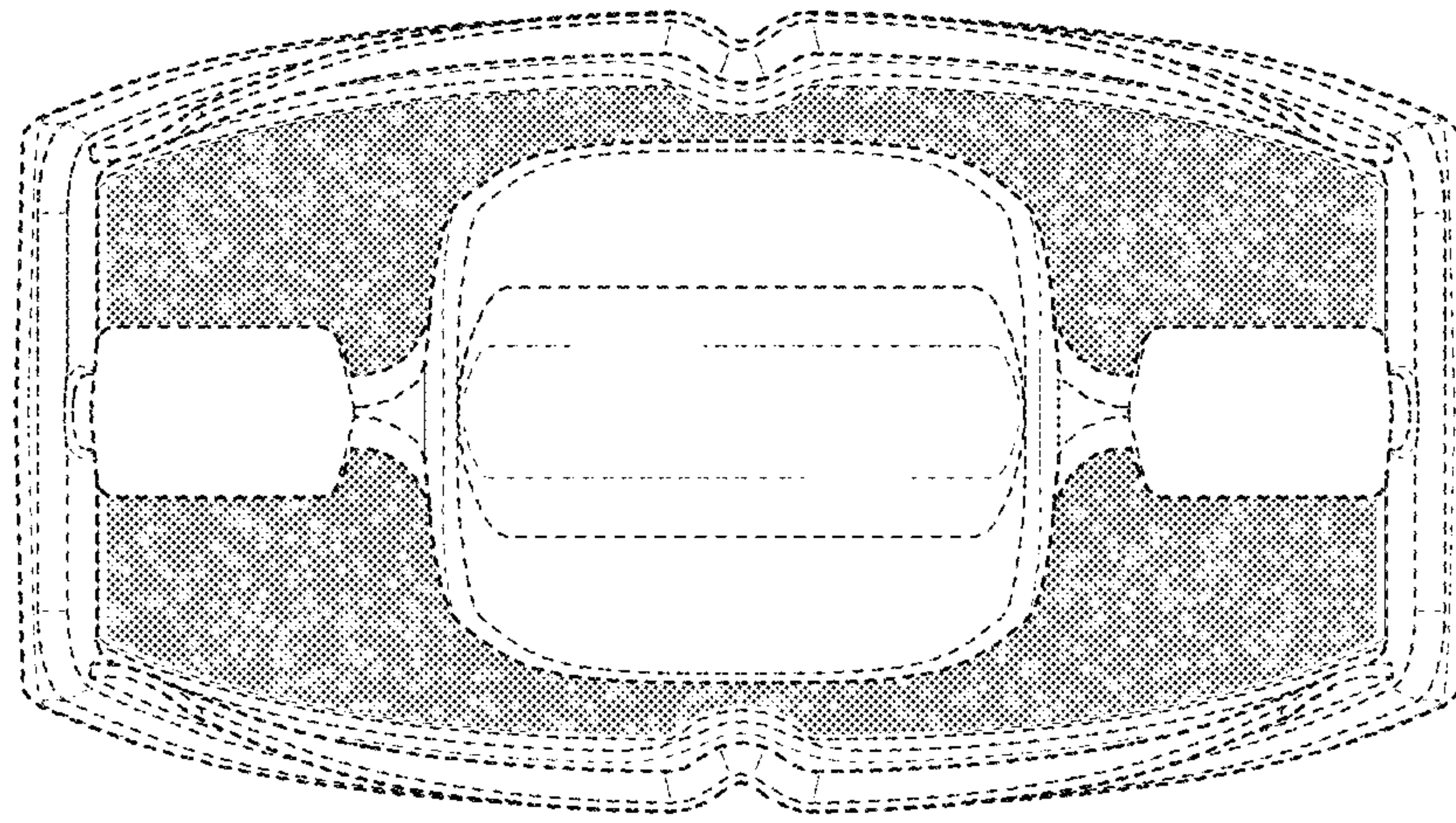


FIG. 11

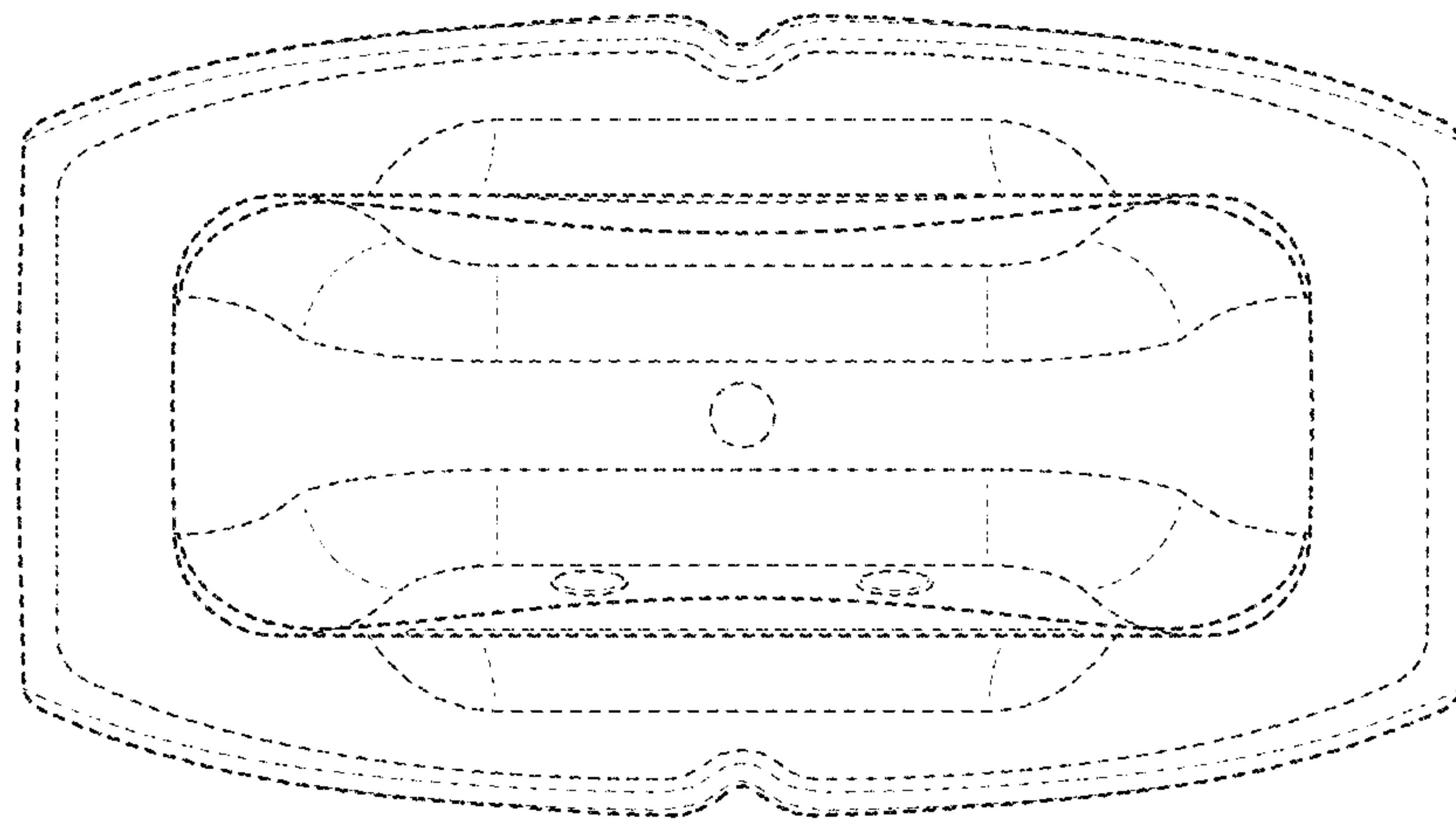


FIG. 12

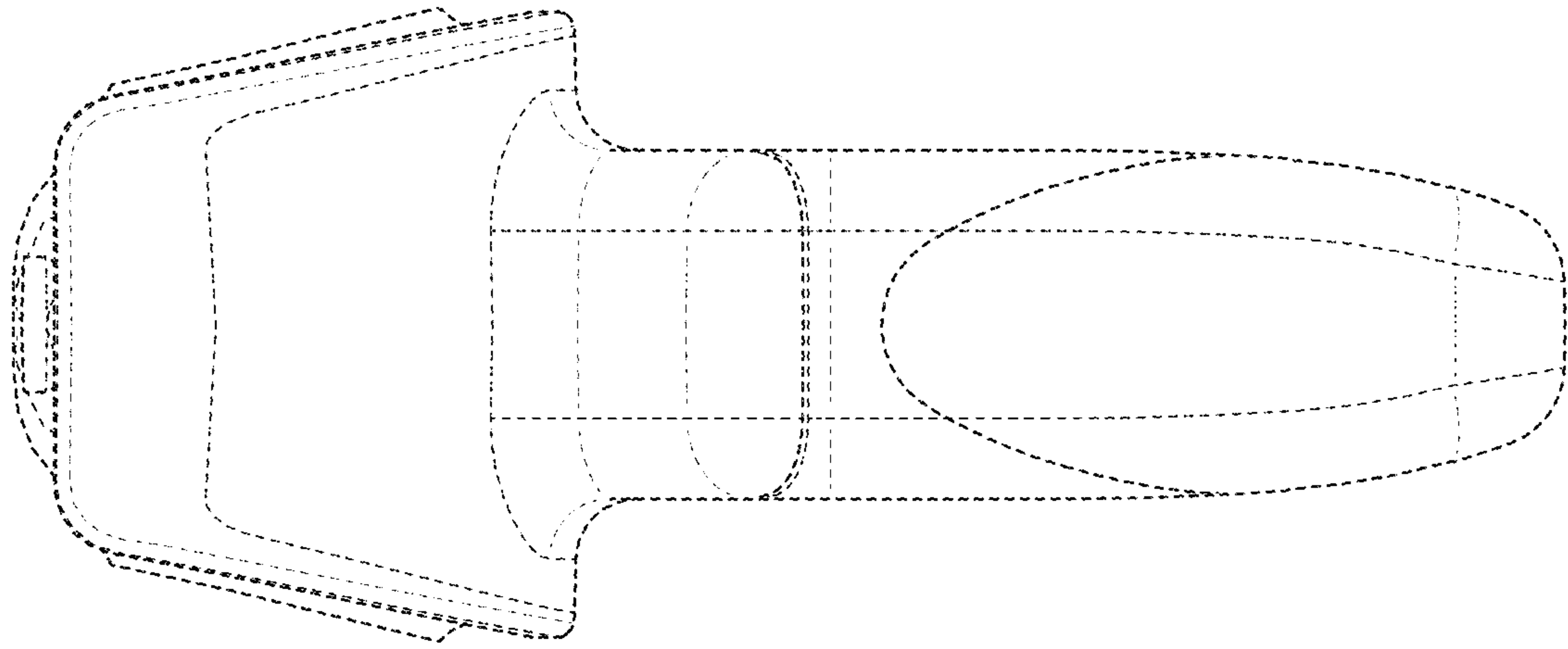


FIG. 13

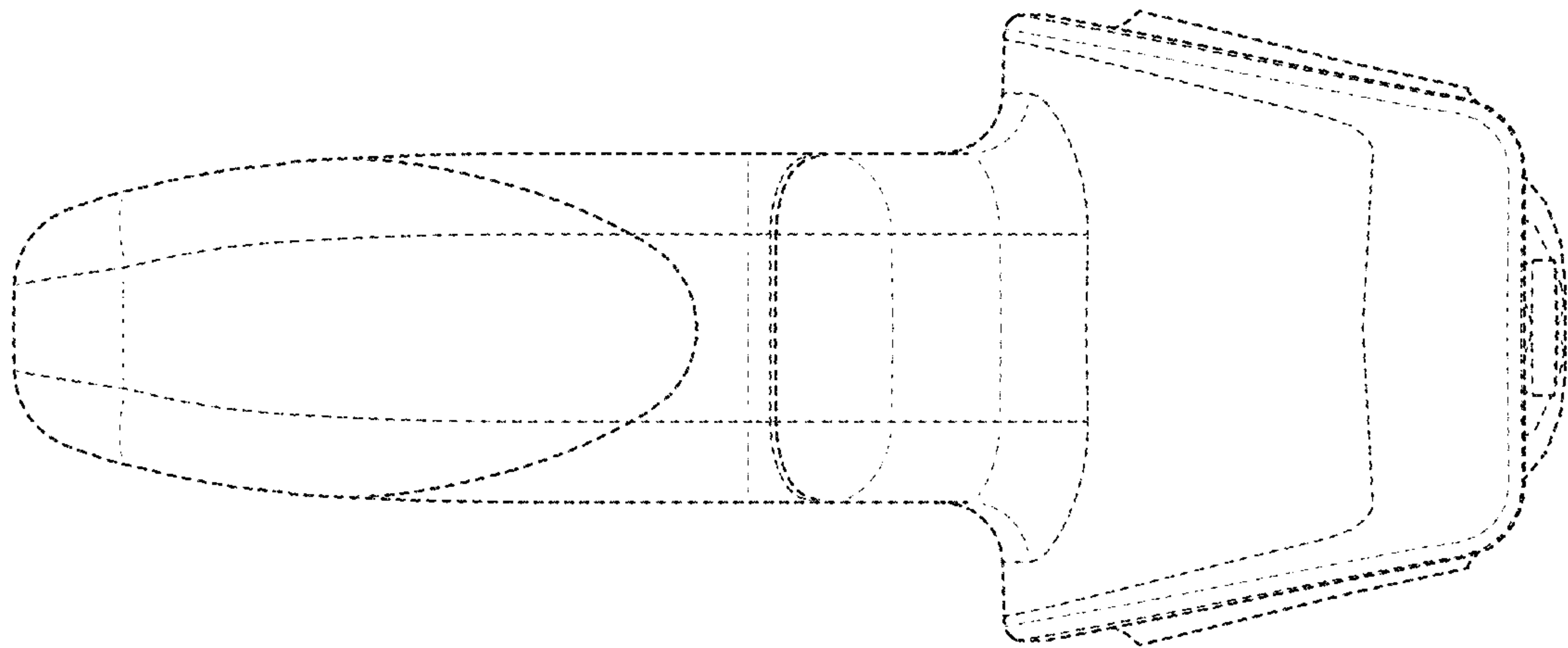


FIG. 14

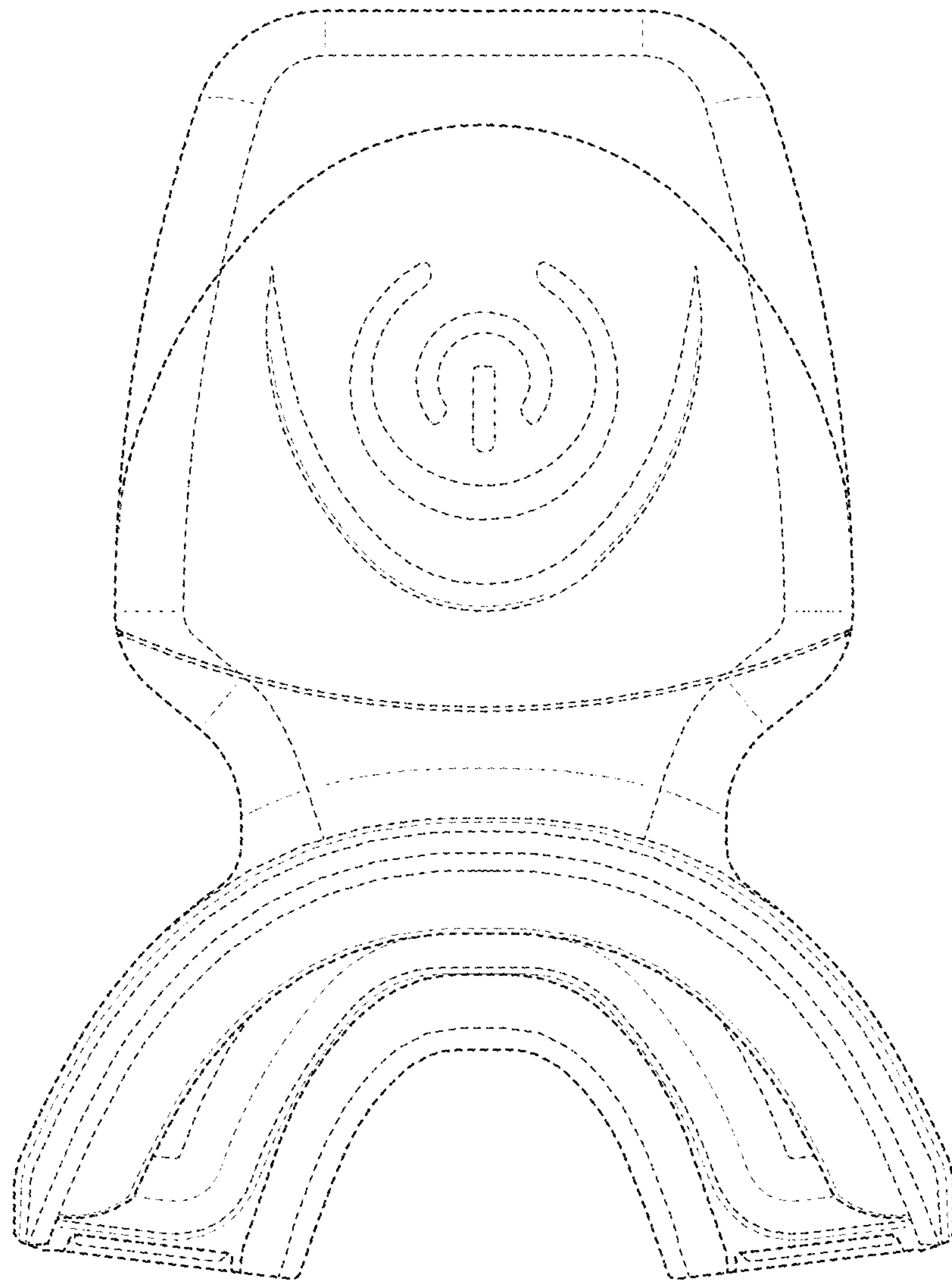


FIG. 15

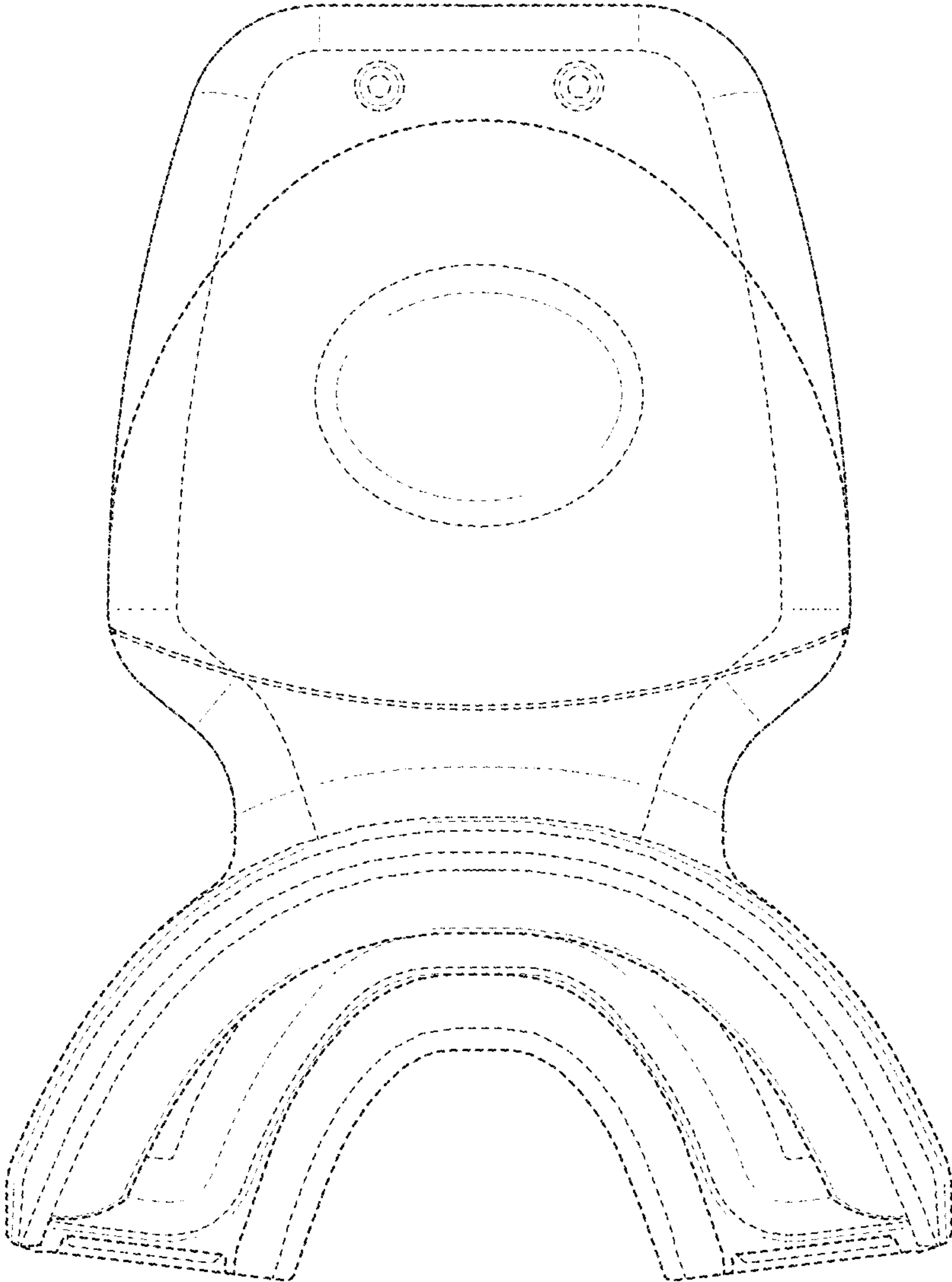


FIG. 16