



US00D881380S

(12)

United States Design Patent

Cartwright

(10)

Patent No.:

US D881,380 S

(45)

Date of Patent:

** Apr. 14, 2020

(54) **RESPIRATOR**

(71) Applicant: **GENTEX CORPORATION**, Simpson,
PA (US)

D421,118 S 2/2000 Reischel et al.
6,035,451 A 3/2000 Burns et al.
D426,298 S 6/2000 Grannis et al.
(Continued)

(72) Inventor: **Richard Cartwright**, Herts (GB)

(73) Assignee: **GENTEX CORPORATION**, Simpson,
PA (US)

FOREIGN PATENT DOCUMENTS

EP 0338714 10/1989
EP 0338714 A2 10/1989
(Continued)

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

Primary Examiner — Lilyana Bekic
(74) *Attorney, Agent, or Firm* — Morgan, Lewis &
Bockius LLP

(21) Appl. No.: **29/622,325**

(22) Filed: **Oct. 16, 2017**

(57) **CLAIM**

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

The ornamental design for a respirator, as shown and described.

(52) **U.S. Cl.**
USPC **D24/110.3**; D29/107; D29/110

DESCRIPTION

(58) **Field of Classification Search**
USPC D24/110.1–110.4; D29/102, 107, 110,
D29/122
CPC A62B 18/006; A62B 7/10; A62B 18/08;
A62B 23/02; A62B 18/02; A62B 18/045;
A62B 18/04; A62B 18/00
See application file for complete search history.

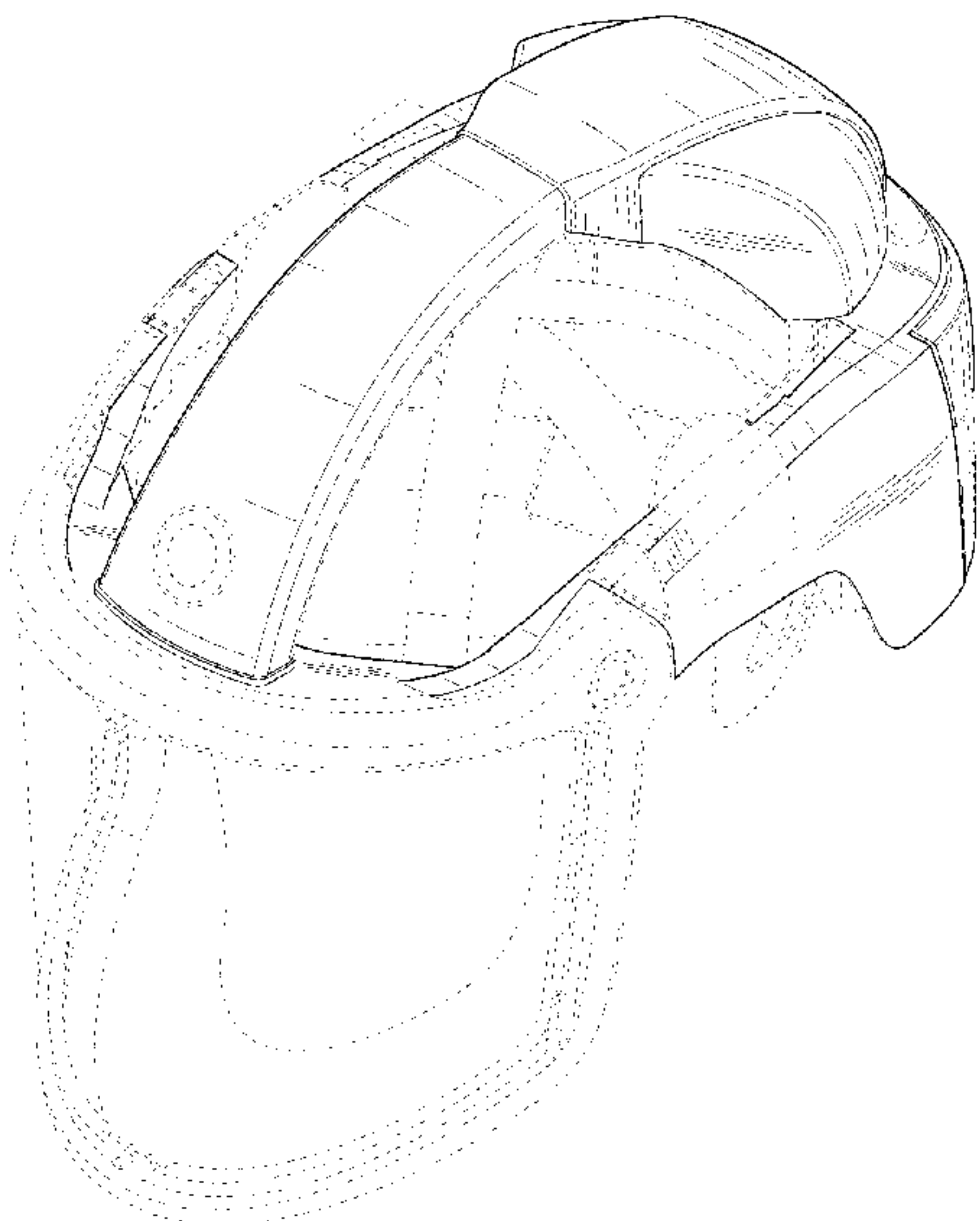
FIG. 1 is a front perspective view of a respirator showing my new design;
FIG. 2 is a rear perspective view of the respirator shown in FIG. 1;
FIG. 3 is a front elevational view of the respirator shown in FIG. 1;
FIG. 4 is a rear elevational view of the respirator shown in FIG. 1;
FIG. 5 is a right-side elevational view of the respirator shown in FIG. 1;
FIG. 6 is a left-side elevational view of the respirator shown in FIG. 1;
FIG. 7 is a top plan view of the respirator shown in FIG. 1; and,
FIG. 8 is a bottom plan view of the respirator shown in FIG. 1.
The broken lines immediately adjacent the shaded areas define the bounds of the claimed design while all other broken lines depict portions of the respirator that form no part of the claimed design.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,917,961 A	7/1933	Fee	
2,579,942 A *	12/1951	MacLean	A61F 9/068 128/201.25
5,054,479 A	10/1991	Yelland et al.	
5,404,577 A	4/1995	Zuckerman et al.	
5,577,495 A	11/1996	Murphy	
5,689,833 A	11/1997	Cook et al.	
D388,872 S	1/1998	Grannis et al.	
5,720,281 A	2/1998	Cook et al.	
5,878,742 A	3/1999	Figueredo et al.	
D409,744 S	5/1999	Grannis et al.	
D416,649 S	11/1999	Burns et al.	
6,014,971 A	1/2000	Danisch et al.	
6,016,805 A	1/2000	Burns et al.	

1 Claim, 8 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

6,102,033 A 8/2000 Baribeau et al.
D436,234 S 1/2001 Saez et al.
6,250,299 B1 6/2001 Danisch et al.
6,279,572 B1 8/2001 Danisch et al.
6,298,498 B1 10/2001 Burns et al.
6,442,767 B1 9/2002 Meckes et al.
6,615,828 B1 9/2003 Petherbridge
6,619,286 B2 9/2003 Patel
6,810,532 B2 11/2004 Wang Lee
D503,497 S 3/2005 Canavan et al.
D503,498 S 3/2005 Canavan et al.
D511,227 S 11/2005 Canavan et al.
D512,187 S 11/2005 Canavan et al.
7,007,306 B2 3/2006 Howard et al.
7,051,732 B2 5/2006 Uusitalo et al.
7,093,302 B1 8/2006 Burns
7,104,264 B2 9/2006 Lee et al.
D529,606 S * 10/2006 Hind D24/110.3
7,120,939 B1 10/2006 Howard et al.
D539,485 S 3/2007 Huh
D539,987 S 4/2007 Love
7,197,774 B2 4/2007 Curran et al.
D545,426 S 6/2007 Church
D567,366 S 4/2008 Betz et al.
D574,486 S 8/2008 Betz et al.
D578,208 S 10/2008 Abel et al.
7,454,800 B2 11/2008 Taylor et al.
D589,607 S 3/2009 Ungar
7,594,510 B2 9/2009 Betz et al.
7,810,492 B2 10/2010 Church et al.
7,819,120 B2 10/2010 Taylor et al.
7,860,662 B2 12/2010 Parham et al.
8,015,970 B2 9/2011 Klun et al.
8,056,152 B2 11/2011 Brace
D657,918 S 4/2012 Lee
D666,365 S 8/2012 Wright
D668,327 S 10/2012 Sumner et al.
D668,758 S * 10/2012 Hall D24/110.2
8,528,560 B2 9/2013 Duffy et al.
8,534,279 B2 9/2013 Davies et al.
D692,187 S 10/2013 Isobe et al.
8,631,794 B2 1/2014 Busch et al.
D701,649 S * 3/2014 Church D29/107
8,667,960 B2 3/2014 Ausen
D707,894 S 6/2014 Mehra et al.
D708,394 S 7/2014 Mehra et al.
D712,598 S 9/2014 Mehra et al.
8,839,788 B2 9/2014 Flannigan et al.
D716,505 S * 10/2014 Wu D24/110.4
D716,506 S * 10/2014 Wu D24/110.4
8,936,022 B2 1/2015 Curran et al.
D728,777 S 5/2015 Spear
D730,584 S 5/2015 Paulson
9,032,952 B2 5/2015 Grilliot et al.
D731,123 S * 6/2015 Spear D29/122
D732,746 S 6/2015 Wu
9,119,975 B2 9/2015 Krepel et al.
9,127,691 B2 9/2015 Hagen et al.
9,132,299 B2 9/2015 Sutton et al.
D742,075 S 10/2015 Zhou
9,162,088 B2 10/2015 Venagro et al.
9,192,793 B2 11/2015 Patil et al.
9,192,794 B2 11/2015 Venagro et al.
9,192,796 B2 11/2015 Patil et al.
9,220,930 B2 12/2015 Robey et al.
D753,345 S 4/2016 Yang
D755,952 S 5/2016 Klockseth
D755,953 S 5/2016 Klockseth
9,358,409 B2 6/2016 Ausen
9,428,237 B2 8/2016 Toftner et al.
9,481,424 B2 11/2016 Hagen et al.
D774,702 S * 12/2016 Brose D29/110
D802,117 S * 11/2017 Whitwood D24/110.3
D825,739 S * 8/2018 Hare D24/110.3
D857,999 S * 8/2019 Hanner D29/110

2004/0055601 A1 3/2004 De Luca et al.
2005/0016540 A1 1/2005 Jumpertz
2005/0103335 A1 5/2005 Fabin
2006/0101552 A1 5/2006 Curran et al.
2006/0283455 A1 12/2006 Walker et al.
2007/0235031 A1 10/2007 Betz
2007/0235033 A1 10/2007 Reier et al.
2010/0108067 A1 5/2010 Curran et al.
2010/0224194 A1 9/2010 Curran et al.
2010/0263671 A1 10/2010 Williams et al.
2010/0294270 A1 11/2010 Curran et al.
2011/0016595 A1 1/2011 Brace et al.
2011/0048416 A1 * 3/2011 Brace A62B 18/045
128/201.24
2011/0114093 A1 5/2011 Patil et al.
2011/0265790 A1 11/2011 Curran et al.
2012/0260918 A1 10/2012 Curran et al.
2012/0298104 A1 11/2012 Schlobohm et al.
2013/0014751 A1 1/2013 Ausen
2013/0014752 A1 * 1/2013 Ausen A62B 7/10
128/201.25
2013/0087151 A1 4/2013 Klockseth et al.
2013/0206139 A1 8/2013 Krepel et al.
2015/0083134 A1 3/2015 Walker et al.
2015/0090257 A1 4/2015 Larsen
2016/0001106 A1 1/2016 Townsend
2016/0008639 A1 1/2016 MacLeod et al.
2016/0016018 A1 1/2016 Townsend et al.
2016/0016019 A1 1/2016 Townsend
2016/0059048 A1 3/2016 Kanakala et al.
2016/0175624 A1 6/2016 Balke et al.
2016/0329922 A1 11/2016 Volmer et al.
2018/0242679 A1 * 8/2018 Johnstone A42B 3/225

FOREIGN PATENT DOCUMENTS

EP 0465971 A2 1/1990
EP 0814678 8/1990
EP 0465971 1/1992
EP 0652790 10/1996
EP 0652790 B1 10/1996
EP 0720497 1/1998
EP 0720497 B1 1/1998
EP 0814678 B1 8/1999
EP 0823853 3/2003
EP 0823853 B1 3/2003
EP 1061822 4/2003
EP 1061822 B1 4/2003
EP 1061823 4/2003
EP 1061823 B1 4/2003
EP 1061824 10/2003
EP 1061824 B1 10/2003
EP 1385414 2/2004
EP 1385414 A2 2/2004
EP 1363706 8/2004
EP 1363706 B1 8/2004
EP 1003590 B1 11/2004
EP 1003590 3/2005
EP 1127588 3/2005
EP 1127588 B1 3/2005
EP 1038553 10/2005
EP 1038553 B1 10/2005
EP 1699373 9/2006
EP 1699373 A2 9/2006
EP 1699531 8/2007
EP 1699531 B1 8/2007
EP 1812122 8/2007
EP 1812122 A1 8/2007
EP 1294448 4/2008
EP 1294448 B1 4/2008
EP 2001563 12/2008
EP 2001563 A1 12/2008
EP 2001564 12/2008
EP 2001564 A1 12/2008
EP 1353728 5/2009
EP 1353728 B1 5/2009
EP 1613398 6/2009
EP 1613398 B1 6/2009
EP 1511539 8/2009

(56)

References Cited

FOREIGN PATENT DOCUMENTS

EP	1511539	B1	8/2009	EP	3077062	A1	10/2016
EP	2129443		12/2009	EP	3077063		10/2016
EP	2129443	A1	12/2009	EP	3077063	A1	10/2016
EP	2131928		12/2009	WO	9403235		2/1994
EP	2131928	A1	12/2009	WO	9403235	A1	2/1994
EP	1729856		3/2010	WO	9509675		4/1995
EP	1729856	B1	3/2010	WO	9509675	A2	4/1995
EP	2179307		4/2010	WO	9628987		9/1996
EP	2179307	A1	4/2010	WO	9628987	A1	9/1996
EP	2185244		5/2010	WO	9634658		11/1996
EP	2185244	A1	5/2010	WO	9634658	A1	11/1996
EP	2205324		7/2010	WO	9908752		2/1999
EP	2205324	A1	7/2010	WO	9908752	A1	2/1999
EP	1809386		8/2010	WO	9945808		9/1999
EP	1809386	B1	8/2010	WO	9945808	A1	9/1999
EP	2217333		8/2010	WO	9945809		9/1999
EP	2217333	A1	8/2010	WO	9945809	A1	9/1999
EP	2537560	A1	8/2010	WO	9945810		9/1999
EP	1529505		9/2010	WO	9945810	A1	9/1999
EP	1529505	B1	9/2010	WO	0197914		12/2001
EP	1899017		9/2010	WO	0197914	A1	12/2001
EP	1899017	B1	9/2010	WO	02056965		7/2002
EP	2248558		11/2010	WO	02056965	A1	7/2002
EP	2248558	A1	11/2010	WO	02056966		7/2002
EP	2271229		1/2011	WO	02056966	A1	7/2002
EP	2271229	A2	1/2011	WO	02056966	A1	7/2002
EP	2271407		1/2011	WO	03000109		1/2003
EP	2271407	A2	1/2011	WO	03000109	A2	1/2003
EP	2314353		4/2011	WO	03103774		12/2003
EP	2314353	A1	4/2011	WO	03103774	A1	12/2003
EP	2322249		5/2011	WO	04087260		10/2004
EP	2322249	A1	5/2011	WO	04087260	A1	10/2004
EP	2537560		12/2012	WO	05065558		7/2005
EP	2555830		2/2013	WO	05065558	A2	7/2005
EP	2555830	A2	2/2013	WO	05065780		7/2005
EP	2555849		2/2013	WO	05089876		9/2005
EP	2555849	A2	2/2013	WO	05089876	A1	9/2005
EP	2556260		2/2013	WO	06055114		5/2006
EP	2556260	A1	2/2013	WO	06055114	A1	5/2006
EP	2582435		4/2013	WO	06055152		5/2006
EP	2582435	A1	4/2013	WO	06055152	A1	5/2006
EP	2611506		7/2013	WO	06138065		12/2006
EP	2611506	A2	7/2013	WO	06138065	A1	12/2006
EP	2001562		9/2013	WO	07117836		10/2007
EP	2001562	B1	9/2013	WO	07117836	A1	10/2007
EP	2217332		8/2014	WO	07117871		10/2007
EP	2217332	B1	8/2014	WO	07117871	A1	10/2007
EP	2961489		9/2014	WO	08036435		3/2008
EP	2814578		12/2014	WO	08036435	A1	3/2008
EP	2814578	A2	12/2014	WO	05065780	A1	7/2008
EP	2814579		12/2014	WO	08118768		10/2008
EP	2273898		1/2015	WO	08118768	A1	10/2008
EP	2273898	B1	1/2015	WO	08118770		10/2008
EP	2209530		2/2015	WO	08118770	A1	10/2008
EP	2209530	B1	2/2015	WO	09014798		1/2009
EP	2365858		2/2015	WO	09014798	A1	1/2009
EP	2365858	B1	2/2015	WO	09029364		3/2009
EP	2457617		8/2015	WO	09029364	A1	3/2009
EP	2457617	B1	8/2015	WO	09045674		4/2009
EP	2939711		11/2015	WO	09045674	A1	4/2009
EP	2939711	A1	11/2015	WO	09045954		4/2009
EP	2961487		1/2016	WO	09045954	A1	4/2009
EP	2961487	A2	1/2016	WO	09064555		5/2009
EP	2961488		1/2016	WO	09064555	A1	5/2009
EP	2961488	A2	1/2016	WO	09070403		6/2009
EP	2961489	A2	1/2016	WO	09070403	A1	6/2009
EP	2961490		1/2016	WO	09123809		10/2009
EP	2961490	A2	1/2016	WO	09123809	A2	10/2009
EP	2991052		3/2016	WO	09123947		10/2009
EP	2991052	A1	3/2016	WO	09123947	A2	10/2009
EP	2361656		6/2016	WO	09137177		11/2009
EP	2361656	B1	6/2016	WO	09137177	A2	11/2009
EP	3072410		9/2016	WO	10078002		7/2010
EP	3072410	A1	9/2016	WO	10078002	A1	12/2010
EP	3077062		10/2016	WO	11126884		10/2011
				WO	11126884	A2	10/2011
				WO	11126887		10/2011
				WO	11126887	A2	10/2011
				WO	11127116		10/2011
				WO	11127116	A1	10/2011

(56)

References Cited

FOREIGN PATENT DOCUMENTS

WO	11159233	12/2011
WO	11159233 A1	12/2011
WO	12031105	3/2012
WO	12031105 A2	3/2012
WO	13122764	8/2013
WO	13122764 A2	8/2013
WO	13122824	8/2013
WO	13122824 A2	8/2013
WO	14132033	9/2014
WO	14132033 A2	9/2014
WO	14132057	9/2014
WO	14132057 A2	9/2014
WO	14132058	9/2014
WO	14132058 A2	9/2014
WO	14132059	9/2014
WO	14132059 A2	9/2014
WO	2814579 A2	12/2014
WO	15039321	3/2015
WO	15039321 A1	3/2015
WO	15078571	6/2015
WO	15078571 A1	6/2015
WO	15082882	6/2015
WO	15082882 A1	6/2015
WO	15082883	6/2015
WO	15082883 A1	6/2015
WO	16064587	4/2016
WO	16064587 A1	4/2016

* cited by examiner

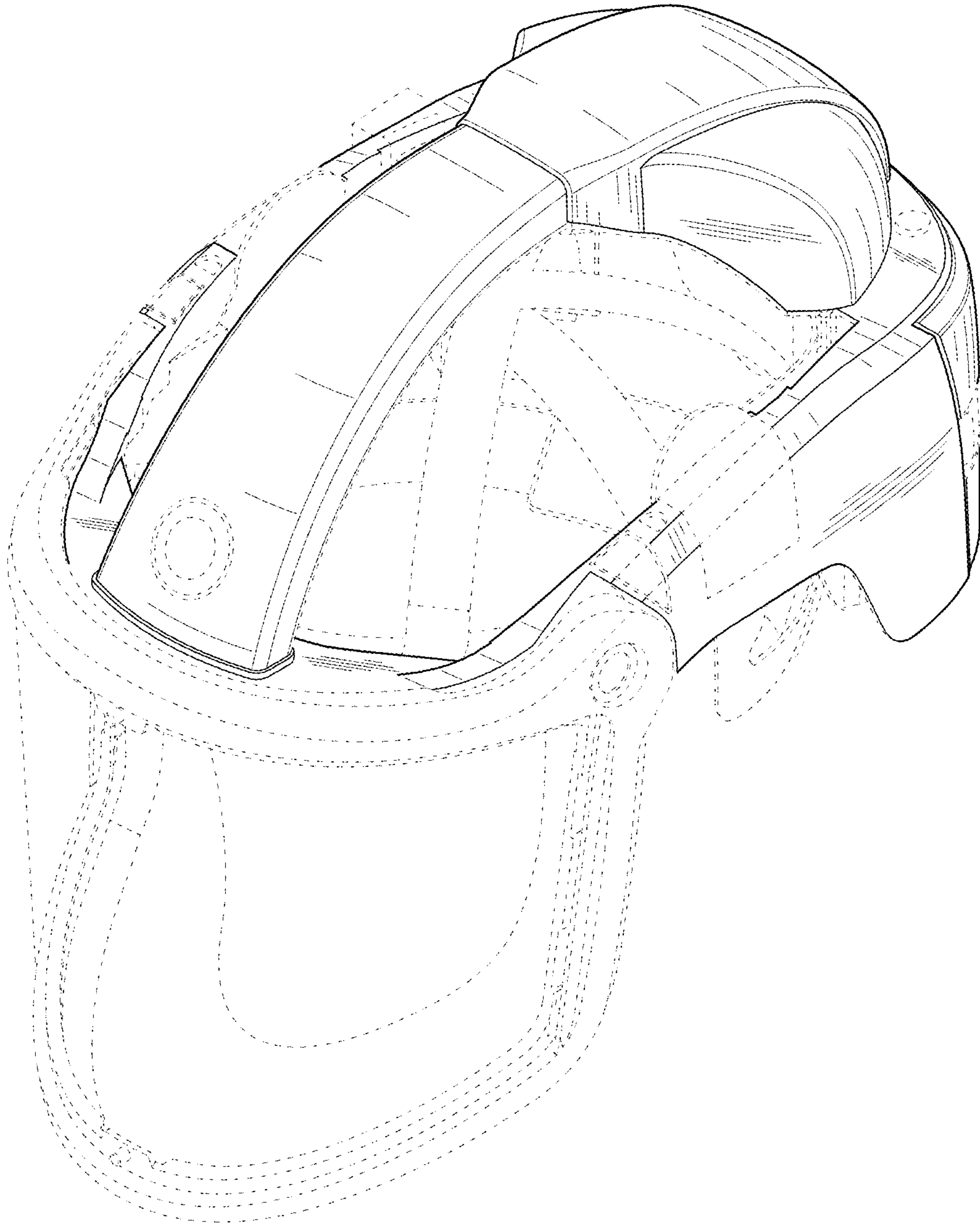


FIG. 1

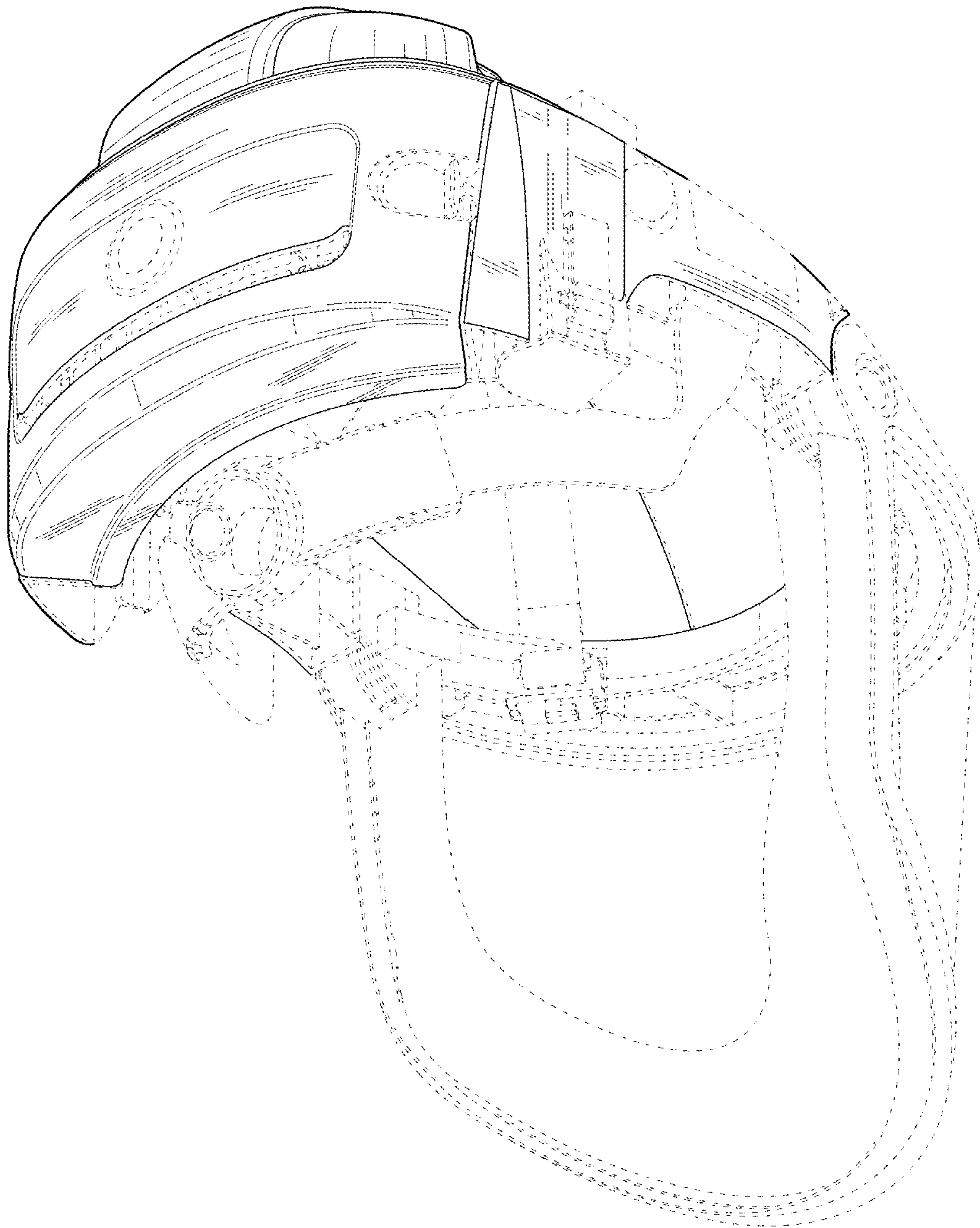


FIG. 2

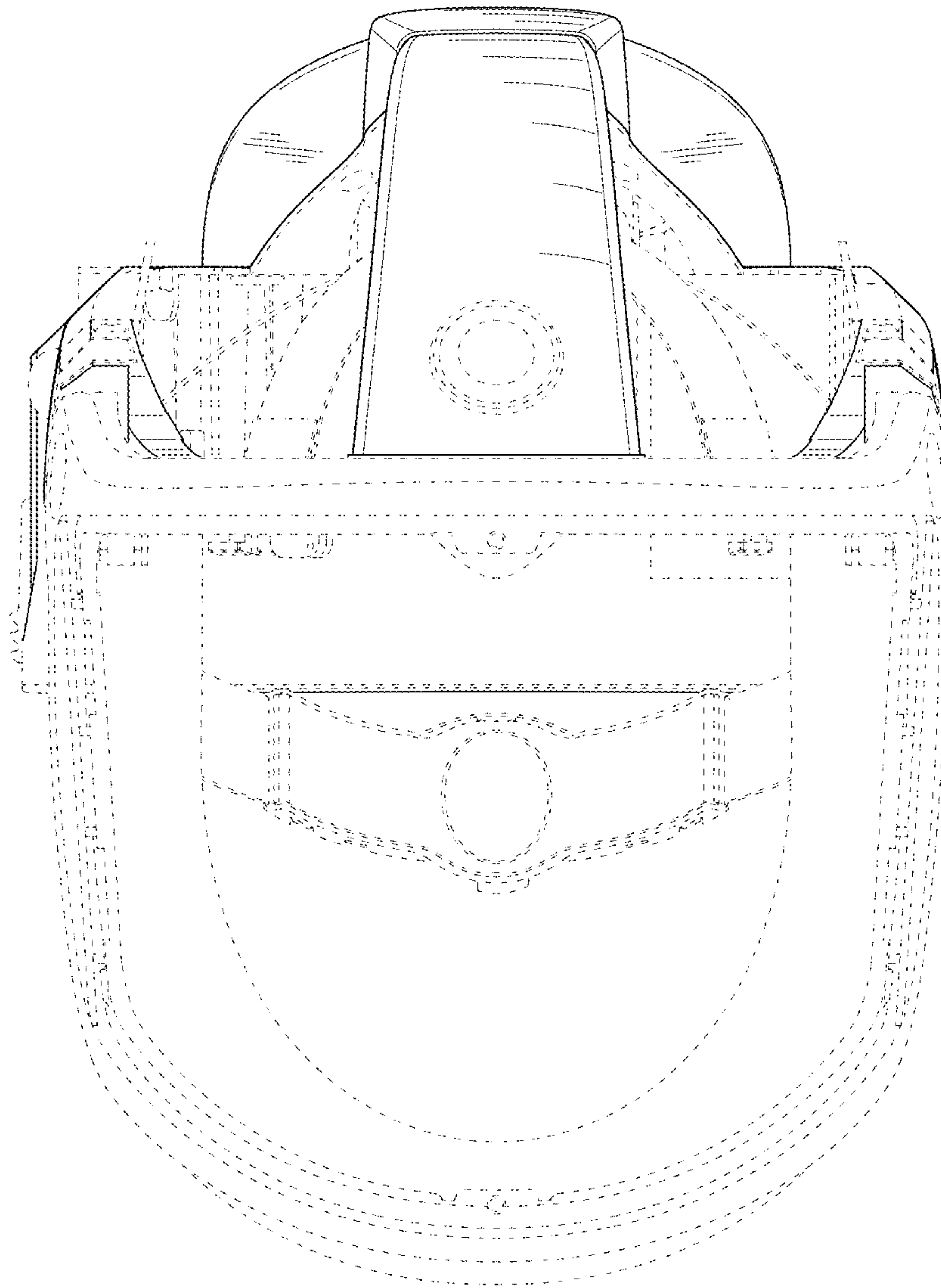


FIG. 3

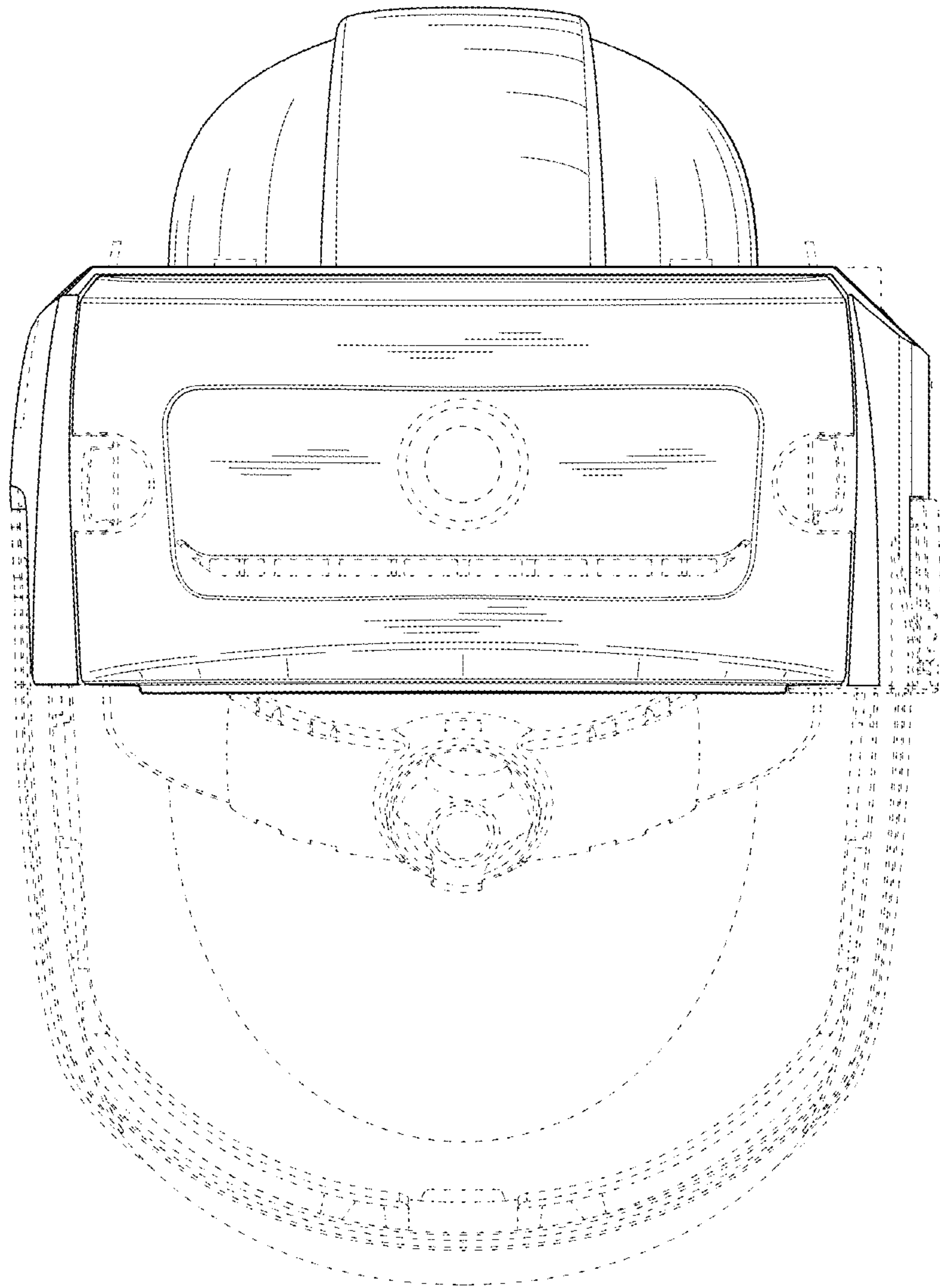


FIG. 4

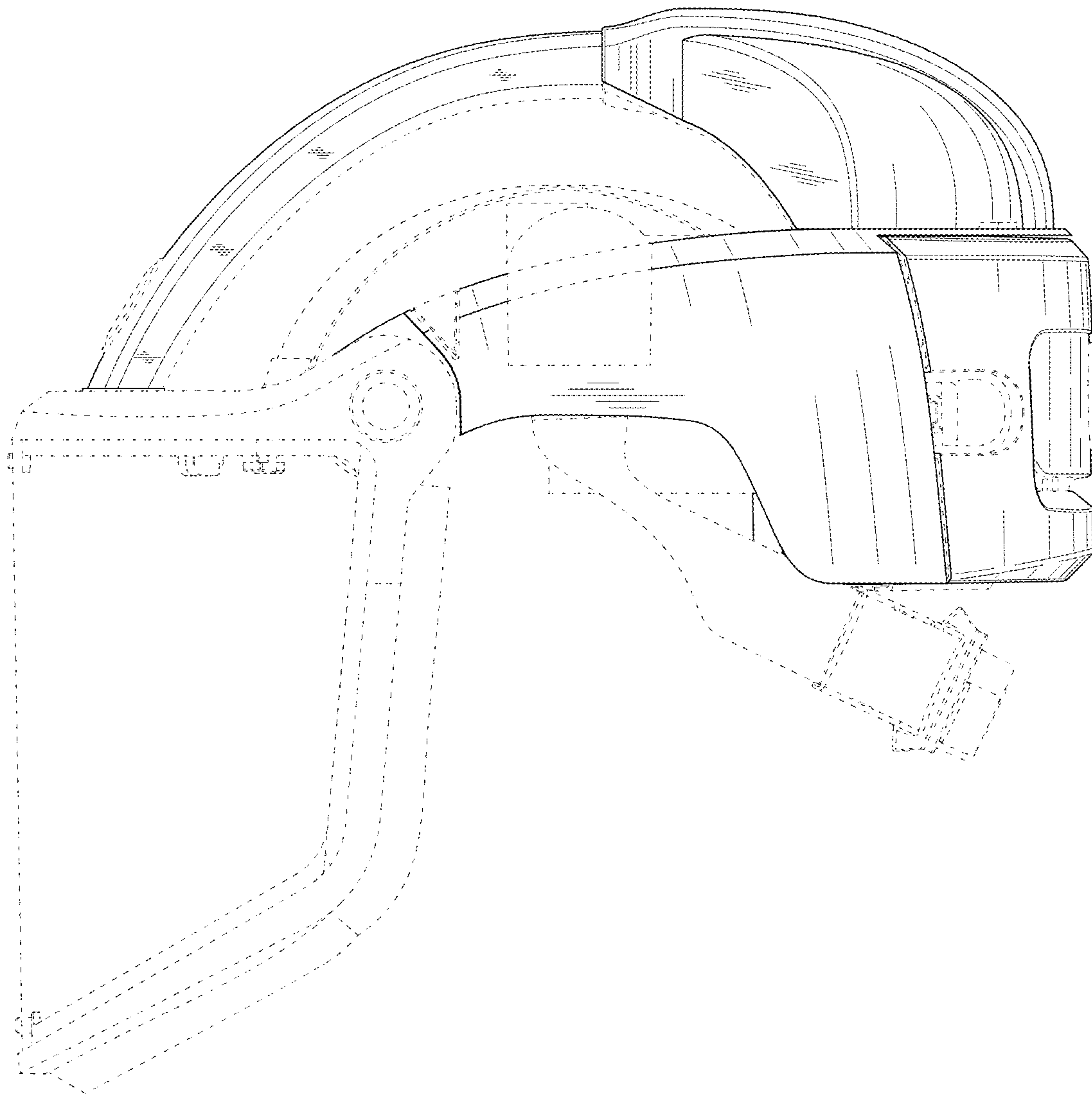


FIG. 5

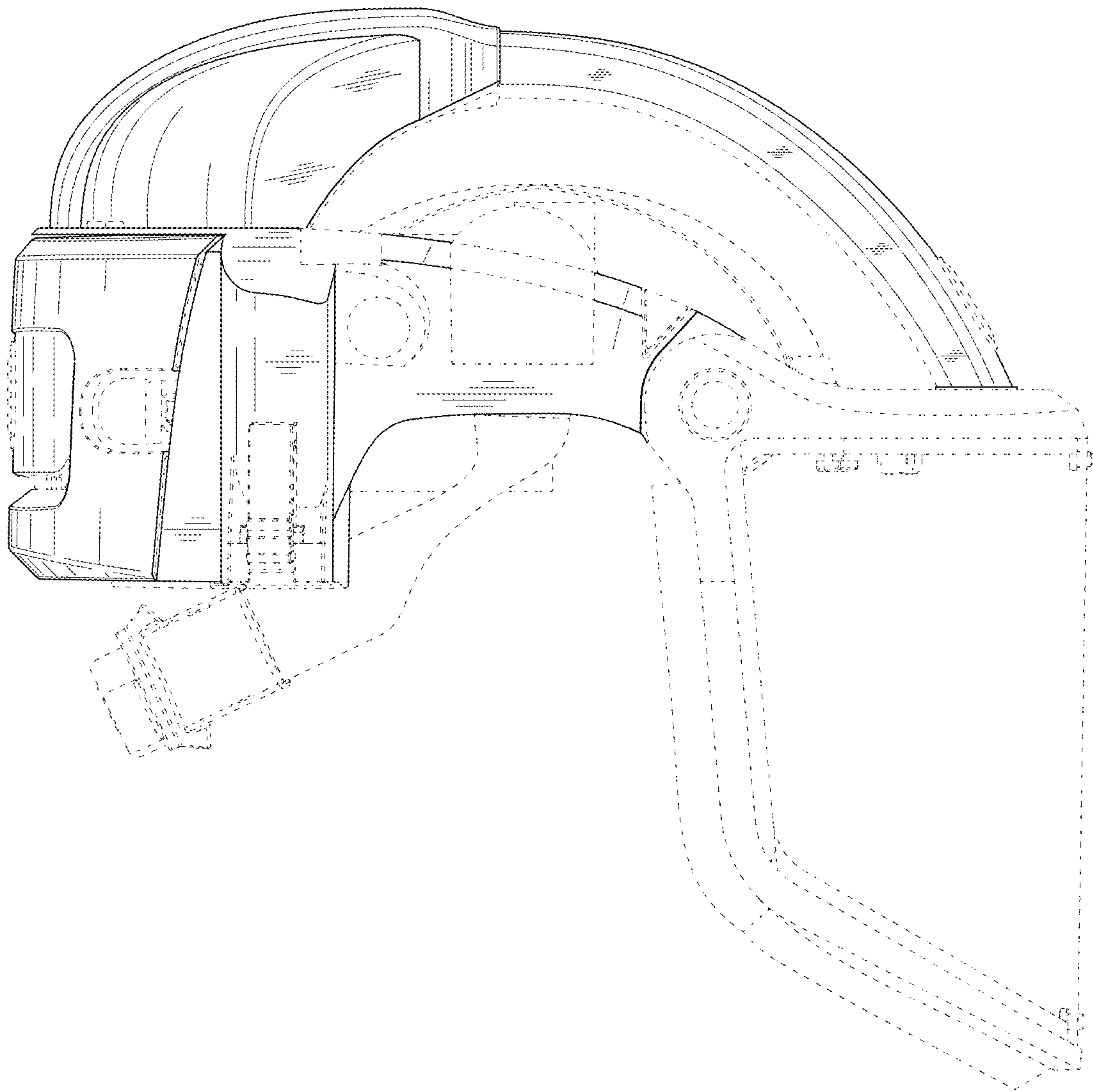


FIG. 6

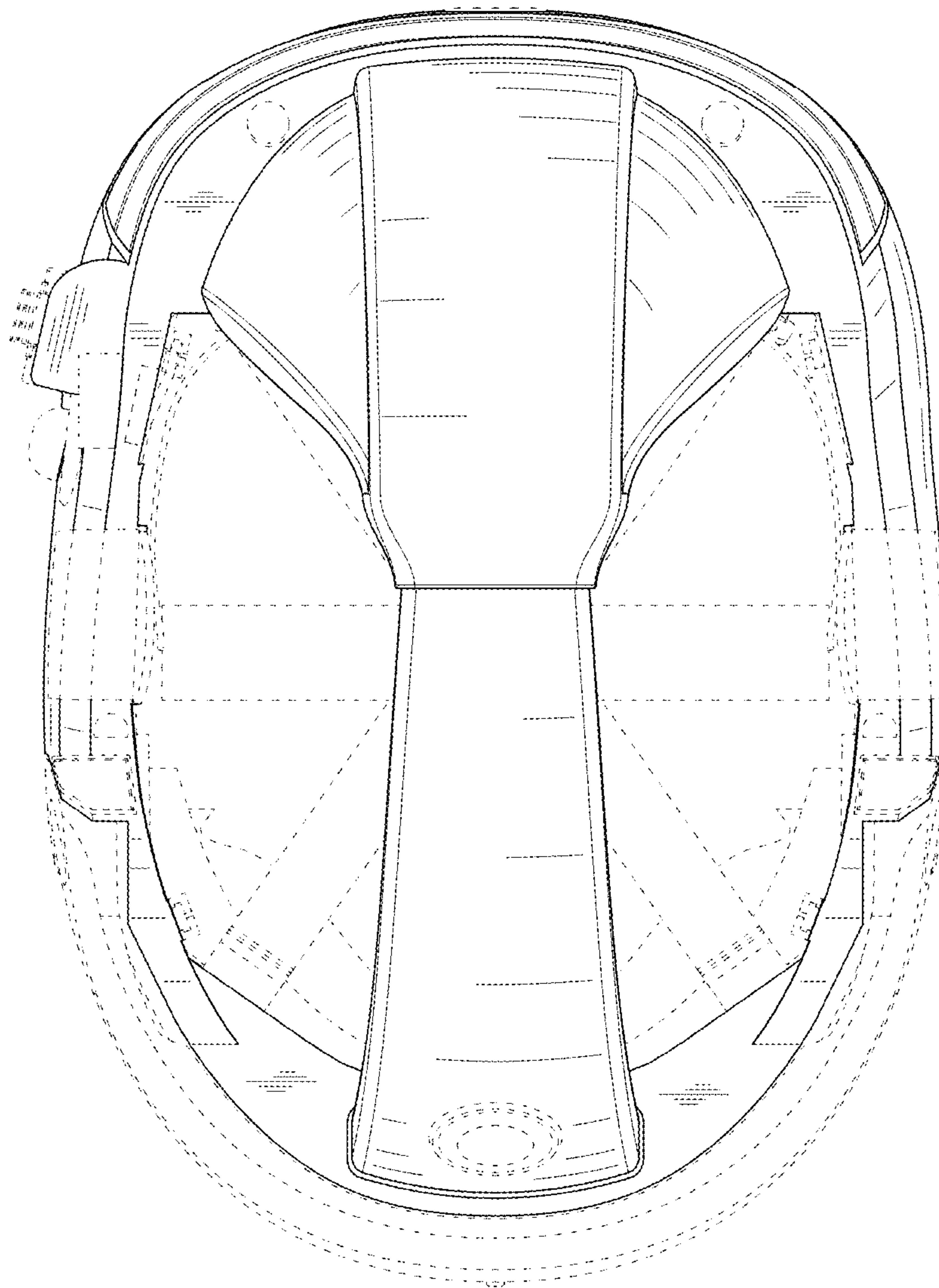


FIG. 7

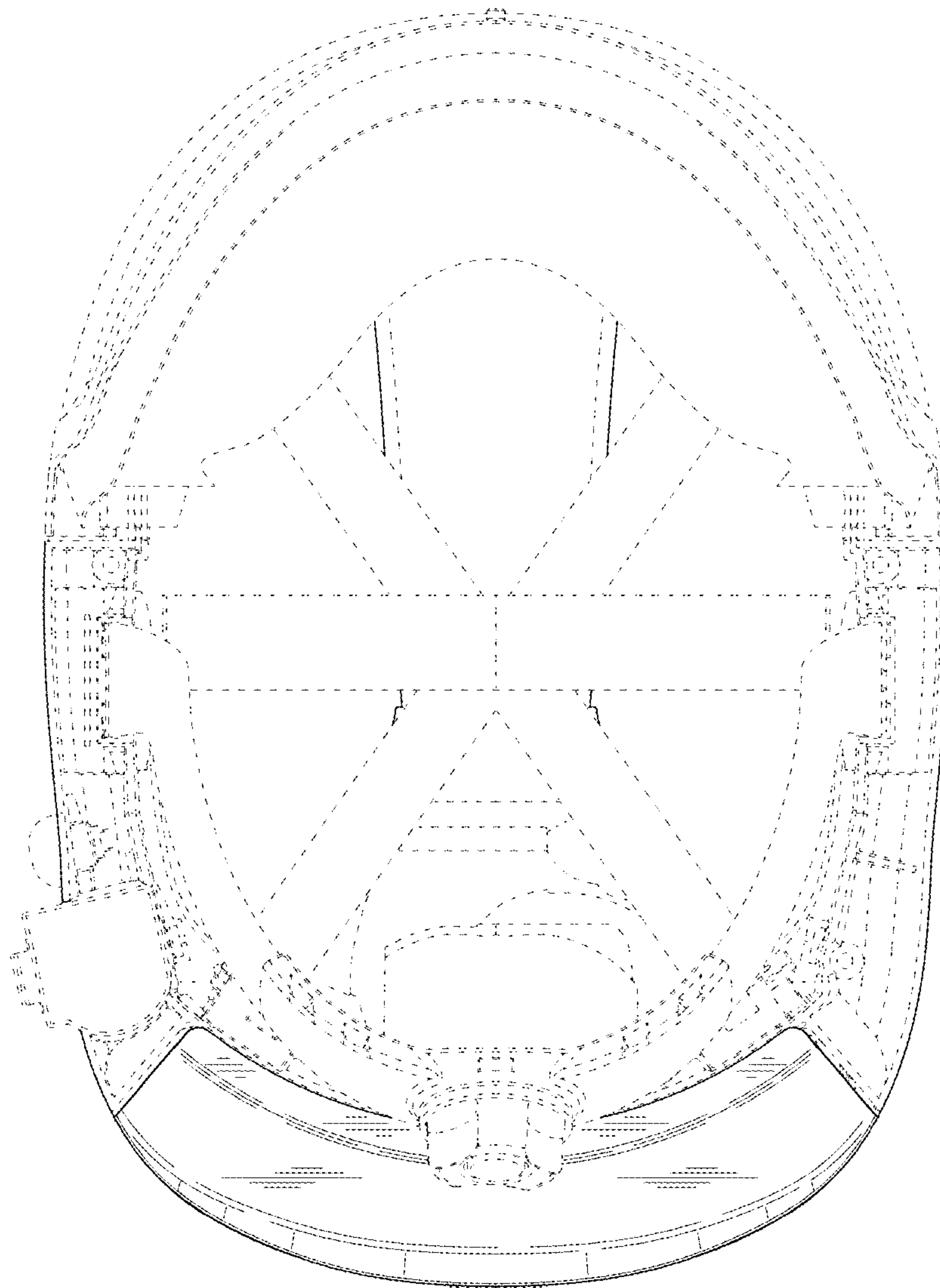


FIG. 8