



US00D776802S

(12) **United States Design Patent** (10) **Patent No.:** **US D776,802 S**
Loew et al. (45) **Date of Patent:** **** Jan. 17, 2017**

(54) **POSITIVE AIRWAY PRESSURE SYSTEM CONSOLE**

FOREIGN PATENT DOCUMENTS

(71) Applicant: **HANCOCK MEDICAL, INC.**,
Mountain View, CA (US)

CN 101678220 A 3/2010
FR 2853838 A1 10/2004
(Continued)

(72) Inventors: **Christopher Loew**, Palo Alto, CA (US); **Thomas G. Goff**, Mountain View, CA (US); **Kirby Chiang**, Mountain View, CA (US)

OTHER PUBLICATIONS

Goff et al.; U.S. Appl. No. 14/762,683 entitled "Position devices and methods for use with positive airway pressure systems," filed Aug. 22, 2015.

(73) Assignee: **HANCOCK MEDICAL, INC.**,
Mountain View, CA (US)

(Continued)

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

Primary Examiner — Barbara Fox

Assistant Examiner — Lilyana Bekic

(21) Appl. No.: **29/519,711**

(74) *Attorney, Agent, or Firm* — Shay Glenn LLP

(22) Filed: **Mar. 6, 2015**

(51) **LOC (10) Cl.** **24-01**

(57) **CLAIM**

(52) **U.S. Cl.**
USPC **D24/108**

The ornamental design for a positive airway pressure system console, as shown and described.

(58) **Field of Classification Search**
USPC D24/107, 108, 110, 111, 164; D15/9
CPC A61M 11/02; A61M 16/0063; A61M 16/0057; A61M 16/00; A61M 16/0066; A61M 16/16; A61M 15/002; A61M 15/0085; A61M 11/005; A61B 5/097
See application file for complete search history.

DESCRIPTION

FIG. 1 is a front perspective view of a positive airway pressure system console.

FIG. 2 is a back perspective view of the console illustrated in FIG. 1.

FIG. 3 is a front view of the console of FIG. 1.

FIG. 4 is a back view of the console of FIG. 1.

FIG. 5 is a first side view of the console of FIG. 1.

FIG. 6 is a second side view of the console of FIG. 1.

FIG. 7 is a top view of the console of FIG. 1; and,

FIG. 8 is a bottom view of the console of FIG. 1.

The broken lines in the drawings illustrate portions of the positive airway pressure system console that form no part of the claimed design.

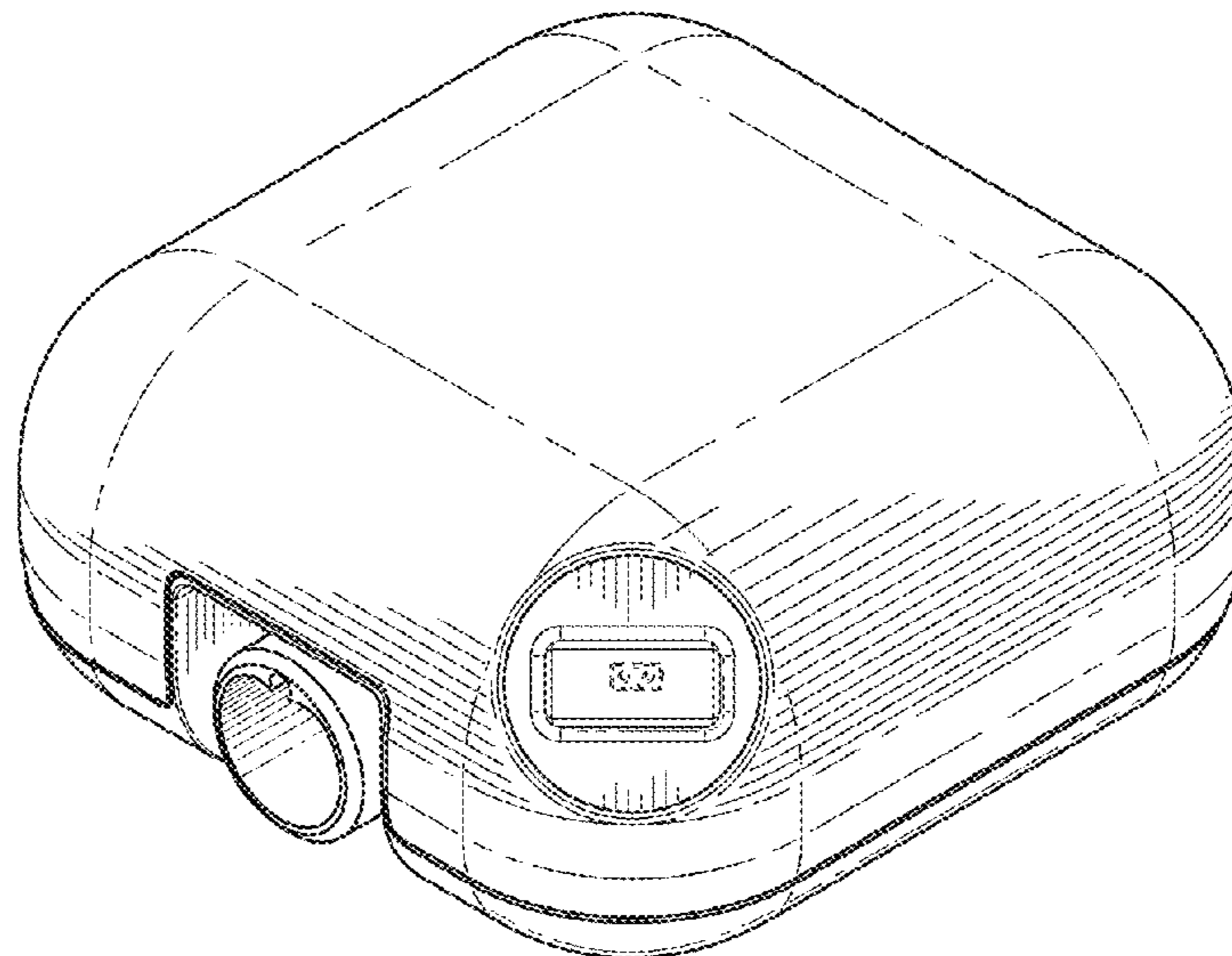
(56) **References Cited**

U.S. PATENT DOCUMENTS

3,649,964 A 3/1972 Schoelz et al.
3,721,233 A 3/1973 Montgomery et al.
3,736,927 A 6/1973 Misaqi
3,822,698 A 7/1974 Guy
3,881,198 A 5/1975 Waters
3,998,213 A 12/1976 Price
4,019,508 A 4/1977 Der Estephanian et al.

(Continued)

1 Claim, 4 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

4,233,972	A	11/1980	Hauff et al.	6,895,962	B2	5/2005	Kullik et al.	
4,297,999	A	11/1981	Kitrell	6,920,877	B2	7/2005	Remmers et al.	
4,381,267	A	4/1983	Jackson	6,932,084	B2	8/2005	Estes et al.	
4,430,995	A	2/1984	Hilton	6,973,929	B2	12/2005	Gunaratnam	
4,549,542	A	10/1985	Chien	6,990,980	B2	1/2006	Richey	
4,588,425	A	5/1986	Usry et al.	7,019,652	B2	3/2006	Richardson	
4,590,951	A	5/1986	O'Connor	7,069,932	B2	7/2006	Eaton et al.	
4,644,947	A	2/1987	Whitwam et al.	7,089,941	B2	8/2006	Bordewick et al.	
4,765,316	A	8/1988	Marshall	7,096,864	B1	8/2006	Mayer et al.	
4,782,832	A	11/1988	Trimble et al.	7,118,608	B2	10/2006	Lovell	
4,802,485	A	2/1989	Bowers et al.	7,156,090	B2	1/2007	Nomori	
4,829,998	A	5/1989	Jackson	7,178,525	B2	2/2007	Matula et al.	
4,836,219	A	6/1989	Hobson et al.	7,195,014	B2	3/2007	Hoffman	
4,944,310	A	7/1990	Sullivan	7,200,873	B2	4/2007	Klotz et al.	
5,035,239	A	7/1991	Edwards	7,204,250	B1	4/2007	Burton	
5,046,492	A	9/1991	Stackhouse et al.	7,255,103	B2	8/2007	Bassin	
5,054,480	A	10/1991	Bare et al.	7,297,119	B2	11/2007	Westbrook et al.	
5,054,484	A	10/1991	Hebeler	7,357,136	B2	4/2008	Ho et al.	
5,104,430	A	4/1992	Her-Mou	D570,473	S *	6/2008	Hamaguchi	D24/110
5,113,853	A	5/1992	Dickey	7,382,247	B2	6/2008	Welch et al.	
5,154,168	A	10/1992	Schlobohm	7,406,966	B2	8/2008	Wondka	
5,303,701	A	4/1994	Heins et al.	7,406,996	B2	8/2008	Schuh	
5,318,020	A	6/1994	Schegerin	7,471,290	B2	12/2008	Wang et al.	
5,349,946	A	9/1994	Mccomb	7,478,635	B2 *	1/2009	Wixey	A61M 16/16 128/203.17
5,353,788	A	10/1994	Miles	7,487,778	B2	2/2009	Freitag	
5,372,130	A	12/1994	Stern et al.	7,516,743	B2	4/2009	Hoffman	
5,394,870	A	3/1995	Johansson	7,575,005	B2	8/2009	Mumford et al.	
5,461,934	A	10/1995	Budd	7,588,033	B2	9/2009	Wondka	
5,485,851	A	1/1996	Erickson	7,664,546	B2	2/2010	Hartley et al.	
5,517,986	A	5/1996	Starr et al.	7,681,575	B2	3/2010	Wixey et al.	
5,533,500	A	7/1996	Her Mou	7,766,841	B2	8/2010	Yamamoto et al.	
RE35,339	E	10/1996	Rapoport	7,887,492	B1	2/2011	Rulkov et al.	
5,564,124	A	10/1996	Elsherif et al.	7,913,692	B2	3/2011	Kwok	
5,577,496	A	11/1996	Blackwood et al.	7,934,500	B2	5/2011	Madaus et al.	
5,649,533	A	7/1997	Oren	7,942,824	B1	5/2011	Kayyali et al.	
5,657,752	A	8/1997	Landis et al.	7,975,687	B2	7/2011	Gründler et al.	
5,769,071	A	6/1998	Turnbull	D643,929	S	8/2011	DelloStritto et al.	
5,928,189	A	7/1999	Phillips et al.	8,020,557	B2	9/2011	Bordewick et al.	
5,937,855	A	8/1999	Zdrojkowski et al.	8,061,354	B2	11/2011	Schneider et al.	
5,950,621	A	9/1999	Klockseth et al.	D659,235	S *	5/2012	Bertinetti	D24/110
5,954,050	A	9/1999	Christopher	8,172,766	B1	5/2012	Kayyali et al.	
5,961,447	A	10/1999	Raviv et al.	8,316,848	B2	11/2012	Kwok et al.	
D421,298	S *	2/2000	Kenyon	8,327,846	B2	12/2012	Bowditch et al.	
6,050,262	A	4/2000	Jay	8,336,546	B2	12/2012	Bowditch et al.	
6,122,773	A	9/2000	Katz	8,353,290	B2	1/2013	Adams	
6,135,106	A	10/2000	Dirks et al.	D683,444	S *	5/2013	Inoue	D24/110
6,179,586	B1	1/2001	Herb et al.	D683,445	S *	5/2013	Inoue	D24/110
6,213,119	B1	4/2001	Brydon et al.	8,453,640	B2	6/2013	Martin et al.	
6,349,724	B1	2/2002	Burton et al.	8,475,370	B2	7/2013	McCombie et al.	
6,367,474	B1	4/2002	Berthon Jones et al.	8,517,017	B2	8/2013	Bowditch et al.	
6,371,112	B1	4/2002	Bibi	D696,393	S *	12/2013	Lu	D24/110
6,393,617	B1	5/2002	Paris et al.	D696,394	S *	12/2013	Lu	D24/110
6,397,845	B1	6/2002	Burton	8,688,187	B2	4/2014	DelloStritto et al.	
6,431,171	B1	8/2002	Burton	8,720,439	B1	5/2014	Kolkowski et al.	
6,435,180	B1	8/2002	Hewson et al.	D710,989	S *	8/2014	Bertinetti	D24/110
6,435,184	B1	8/2002	Ho	8,903,467	B2	12/2014	Sweitzer et al.	
6,513,526	B2	2/2003	Kwok et al.	8,919,344	B2	12/2014	Bowditch et al.	
6,532,960	B1	3/2003	Yurko	8,925,546	B2	1/2015	Bowditch et al.	
6,561,190	B1	5/2003	Kwok	D732,158	S *	6/2015	Salmon	D24/110
6,561,191	B1	5/2003	Kwok	D734,446	S *	7/2015	Salmon	D24/108
6,615,831	B1	9/2003	Tuitt et al.	D740,929	S *	10/2015	Pipe	D24/108
6,622,311	B2	9/2003	Diaz et al.	D740,930	S *	10/2015	Pipe	D24/108
6,622,726	B1	9/2003	Du	2002/0078958	A1	6/2002	Stenzler	
6,634,864	B1	10/2003	Young et al.	2002/0104541	A1	8/2002	Bibi et al.	
6,694,978	B1	2/2004	Bennarsten	2003/0062045	A1	4/2003	Woodring et al.	
6,705,314	B1	3/2004	O'Dea	2003/0079749	A1	5/2003	Strickland et al.	
6,709,405	B2	3/2004	Jonson	2004/0079373	A1	4/2004	Mukaiyama et al.	
6,752,146	B1	6/2004	Altshuler et al.	2004/0163648	A1	8/2004	Burton	
6,772,760	B2	8/2004	Frater et al.	2004/0186681	A1	9/2004	Harle	
6,772,762	B2	8/2004	Piesinger	2004/0226562	A1	11/2004	Bordewick	
6,793,629	B2	9/2004	Rapoport et al.	2005/0005937	A1	1/2005	Farrugia et al.	
6,854,465	B2	2/2005	Bordewick et al.	2005/0034724	A1	2/2005	O'Dea	
6,881,192	B1	4/2005	Park	2005/0068639	A1	3/2005	Pierrat et al.	
6,889,691	B2	5/2005	Eklund et al.	2005/0131288	A1	6/2005	Turner et al.	
6,895,959	B2	5/2005	Lukas	2005/0133039	A1	6/2005	Wood	
				2005/0188991	A1	9/2005	Sun et al.	
				2006/0037613	A1	2/2006	Kwok et al.	
				2006/0081250	A1	4/2006	Bordewick et al.	

(56)

References Cited

U.S. PATENT DOCUMENTS

2006/0096596 A1 5/2006 Occhialini et al.
 2006/0150973 A1 7/2006 Chalvignac
 2006/0150978 A1 7/2006 Doshi et al.
 2006/0180149 A1 8/2006 Matarasso
 2006/0231097 A1 10/2006 Dougherty et al.
 2007/0000493 A1 1/2007 Cox
 2007/0113854 A1 5/2007 Mcauliffe
 2007/0163592 A1 7/2007 Reinstadtler et al.
 2007/0169781 A1* 7/2007 Tang A61M 16/00
 128/206.21
 2007/0208269 A1 9/2007 Mumford et al.
 2007/0221220 A1* 9/2007 Bright A61M 16/0057
 128/204.18
 2007/0240716 A1 10/2007 Marx
 2007/0247009 A1 10/2007 Hoffman et al.
 2007/0251527 A1 11/2007 Sleeper
 2007/0277825 A1 12/2007 Bordewick et al.
 2008/0006275 A1 1/2008 Nickelson et al.
 2008/0053451 A1 3/2008 Bordewick et al.
 2008/0091090 A1 4/2008 Guillory et al.
 2008/0127976 A1 6/2008 Acker et al.
 2008/0178879 A1 7/2008 Roberts et al.
 2008/0185002 A1 8/2008 Berthon-Jones et al.
 2008/0202527 A1 8/2008 Hutchinson et al.
 2008/0216831 A1 9/2008 McGinnis et al.
 2008/0251079 A1 10/2008 Richey
 2008/0304986 A1 12/2008 Kenyon et al.
 2009/0044810 A1 2/2009 Kwok et al.
 2009/0065005 A1 3/2009 Ades
 2009/0078255 A1 3/2009 Bowman et al.
 2009/0078258 A1 3/2009 Bowman et al.
 2009/0078259 A1 3/2009 Kooij et al.
 2009/0194101 A1 8/2009 Kenyon et al.
 2010/0024811 A1 2/2010 Henry et al.
 2010/0180895 A1 7/2010 Kwok et al.
 2010/0191076 A1 7/2010 Lewicke et al.
 2010/0229867 A1* 9/2010 Bertinetti A61M 16/0051
 128/205.25
 2010/0240982 A1 9/2010 Westbrook et al.
 2010/0312513 A1 12/2010 Mayor et al.
 2010/0319687 A1* 12/2010 Esaki A61M 11/06
 128/200.23
 2011/0056489 A1 3/2011 Slaker et al.
 2011/0100366 A1 5/2011 Chou
 2011/0105915 A1 5/2011 Bauer et al.
 2011/0192400 A9 8/2011 Burton et al.
 2011/0295083 A1 12/2011 Doelling et al.
 2012/0146251 A1 6/2012 Heine et al.
 2012/0152239 A1 6/2012 Shikani et al.
 2012/0152255 A1 6/2012 Barlow et al.
 2012/0266873 A1 10/2012 Lalonde
 2012/0298099 A1 11/2012 Lalonde
 2012/0304985 A1 12/2012 Lalonde
 2013/0060098 A1 3/2013 Thomsen et al.
 2013/0104883 A1 5/2013 Lalonde
 2013/0146054 A1 6/2013 Ho
 2013/0239966 A1 9/2013 Klasek et al.
 2013/0298908 A1 11/2013 Tang et al.
 2013/0306074 A1 11/2013 Bowditch et al.

2013/0333701 A1* 12/2013 Herron A61M 16/0875
 128/203.27
 2014/0000600 A1 1/2014 Dimatteo et al.
 2014/0007881 A1 1/2014 Rummery et al.
 2014/0102456 A1 4/2014 Ovizinsky et al.
 2014/0127996 A1 5/2014 Park et al.
 2014/0144445 A1 5/2014 Bowditch et al.
 2015/0040908 A1 2/2015 Goff et al.
 2015/0096565 A1 4/2015 Bowditch et al.
 2015/0197378 A1* 7/2015 Miller B65D 43/166
 220/810
 2016/0015916 A1 1/2016 Goff et al.

FOREIGN PATENT DOCUMENTS

WO WO91/19527 A1 12/1991
 WO WO99/13931 A1 3/1999
 WO WO99/21602 A1 5/1999
 WO WO02/085417 A2 10/2002
 WO WO2007/149446 A2 12/2007
 WO WO2008/028247 A1 3/2008
 WO WO2010/107913 A2 9/2010
 WO WO2011/127385 A1 10/2011

OTHER PUBLICATIONS

Cartwright; Effect of sleep position on sleep apnea severity; SLEEP; 7(2); pp. 110-114; 1984 (year of pub. sufficiently earlier than effective US filing date and any foreign priority date).
 Colrain et al.; The use of a nasal resistance valve to treat sleep disordered breathing (Abstract No. 0518); SLEEP 2008 22nd Ann. Mtg. Assoc. Prof. Sleep Soc., LLC; Baltimore, MD; vol. 31, Abstract Suppl.; p. A172; Jun. 7-12, 2008.
 Gunaratnam et al.; U.S. Appl. No. 60/494,119 entitled "Nasal Assembly," filed Aug. 12, 2003 (119 pgs.).
 Høfsoy et al.; Monitoring and therapy of sleep related breathing disorders; IEEE; 6th Ann. Workshop on Wearable Micro and Nano Technologies for Personalized Health (pHealth); pp. 41-44; Jun. 24-26, 2009.
 Kwok, Philip R.; U.S. Appl. No. 60/505,718 entitled "Ventilator mask and system," filed Sep. 25, 2003 (37 pgs.).
 Massie et al.; Acceptance and adherence of a novel device in the treatment of mild to moderate obstructive sleep apnea (Abstract No. 0644); SLEEP 2008 22nd Ann. Mtg. Assoc. Prof. Sleep Soc., LLC; Baltimore, MD; vol. 31, Abstract Suppl.; p. A211; Jun. 7-12, 2008.
 Oksenberg et al.; Association of body position with severity of apneic events in patients with severe non-positional obstructive sleep apnea; CHEST; 118(4); pp. 1018-1024; Oct. 2000.
 Penzel et al.; Effect of sleep position and sleep stage on the collapsibility of the upper airways in patients with sleep apnea; SLEEP; 24(1); pp. 90-95; Feb. 2001.
 Pevernagie et al.; Relations between sleep stage, posture and effective nasal CPAP levels in OSA; SLEEP; 15 (2); pp. 162-167; 1992 (year of pub. sufficiently earlier than effective US filing date and any foreign priority date).
 Rosenthal et al.; A novel expiratory pressure device to treat mild-moderate OSA (Abstract No. 0634); SLEEP 2008 22nd Ann. Mtg. Assoc. Prof. Sleep Soc., LLC; Baltimore, MD; vol. 31, Abstract Suppl.; p. A208; Jun. 7-12, 2008.

* cited by examiner

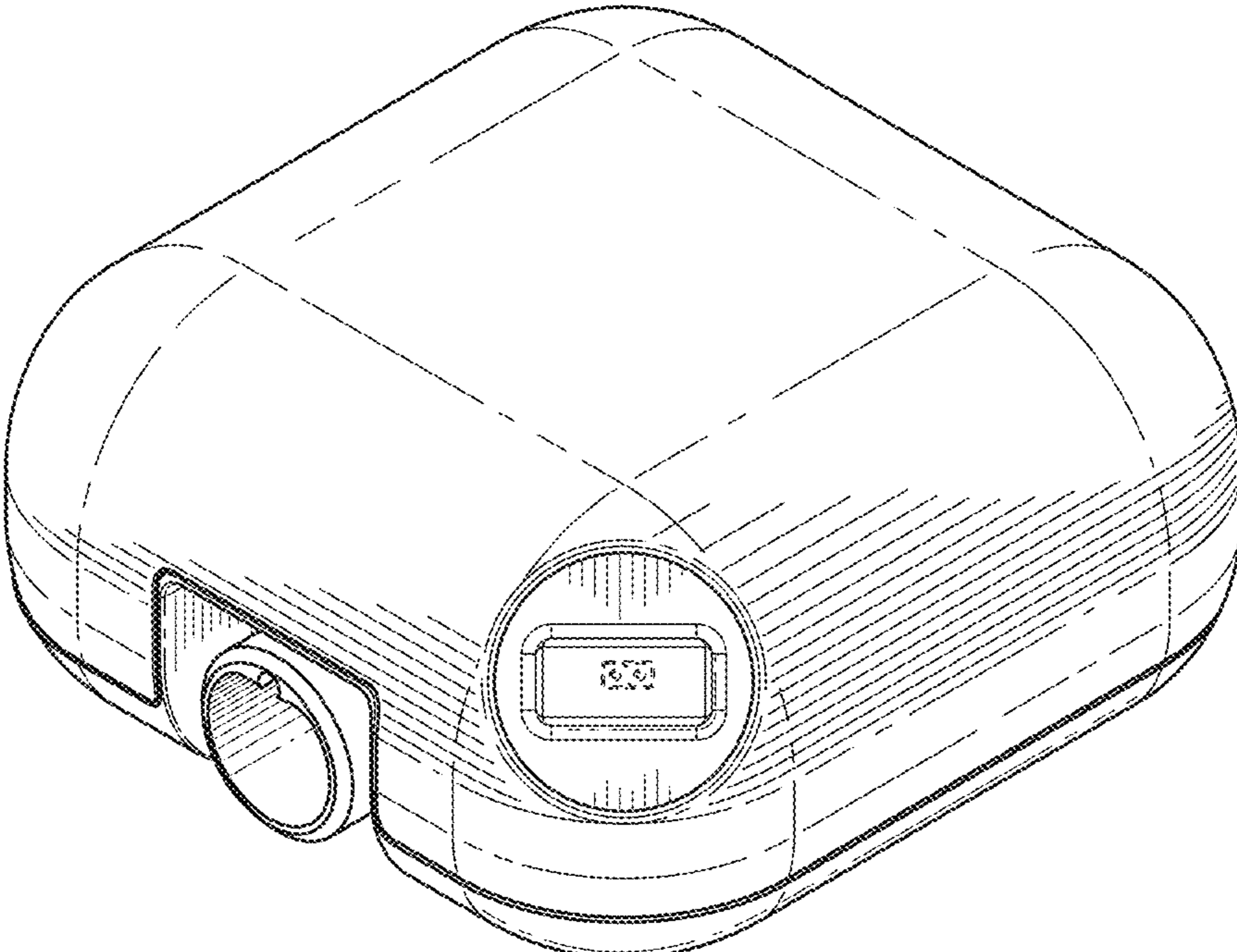


FIG. 1

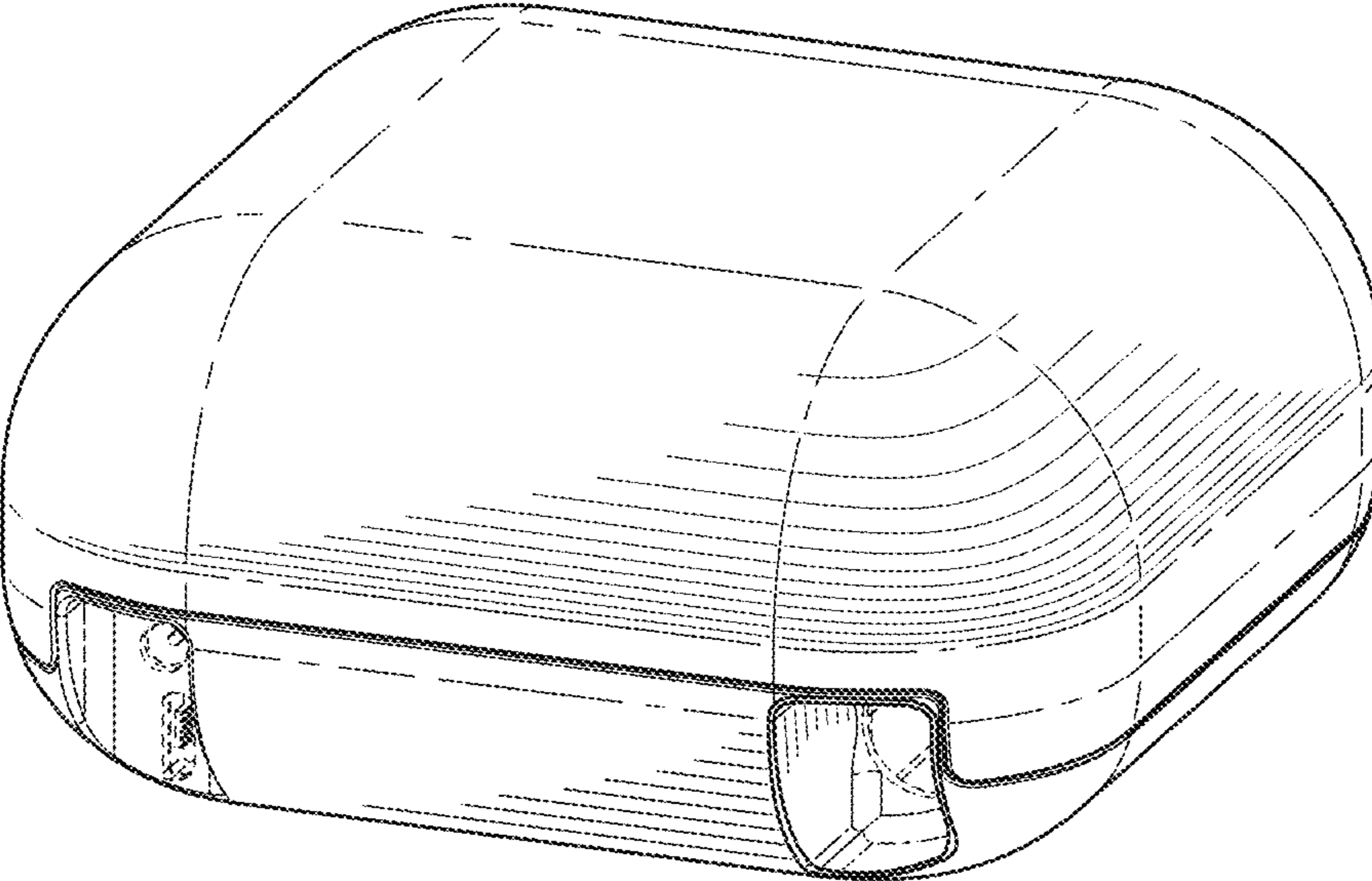


FIG. 2

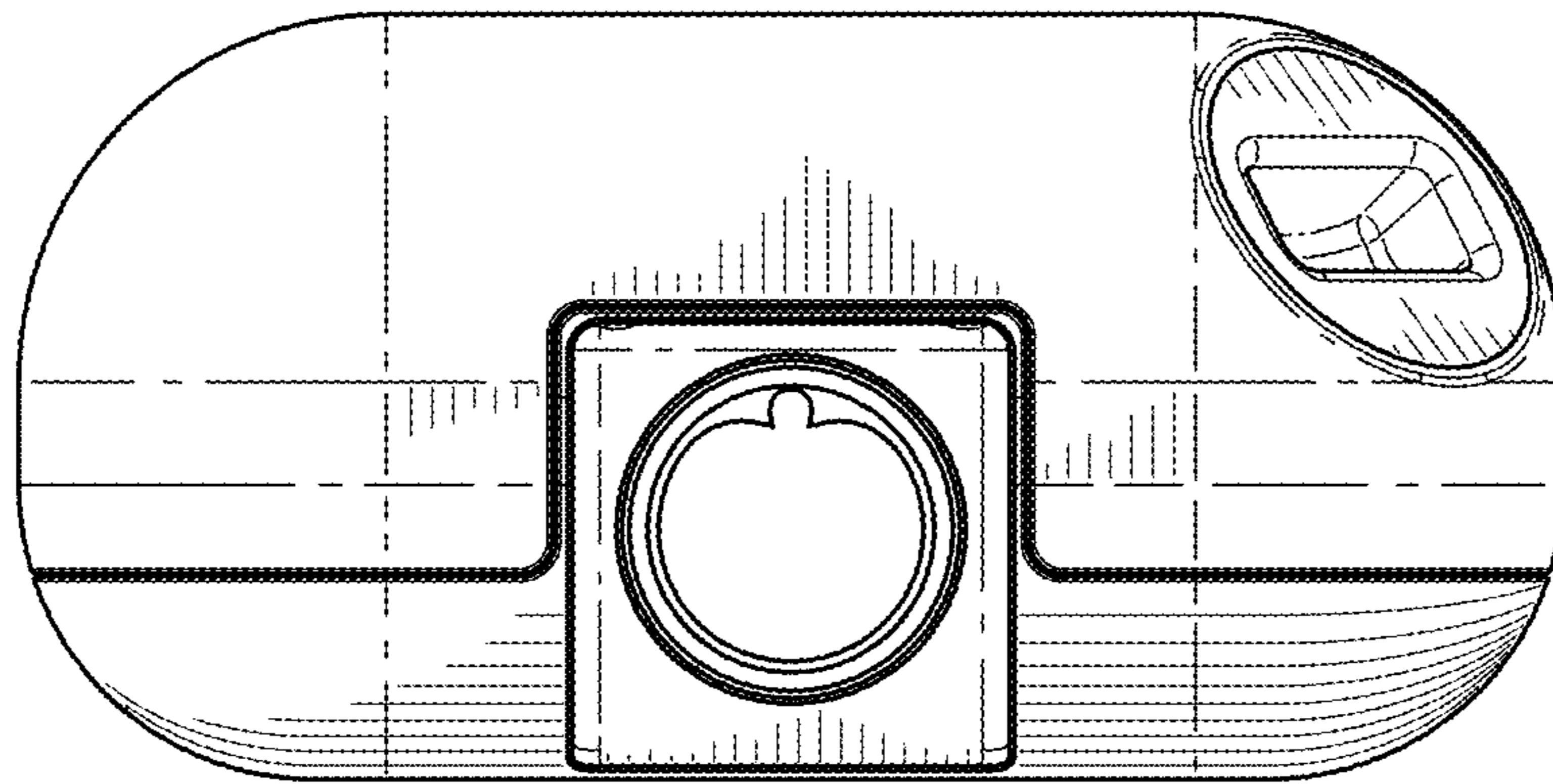


FIG. 3

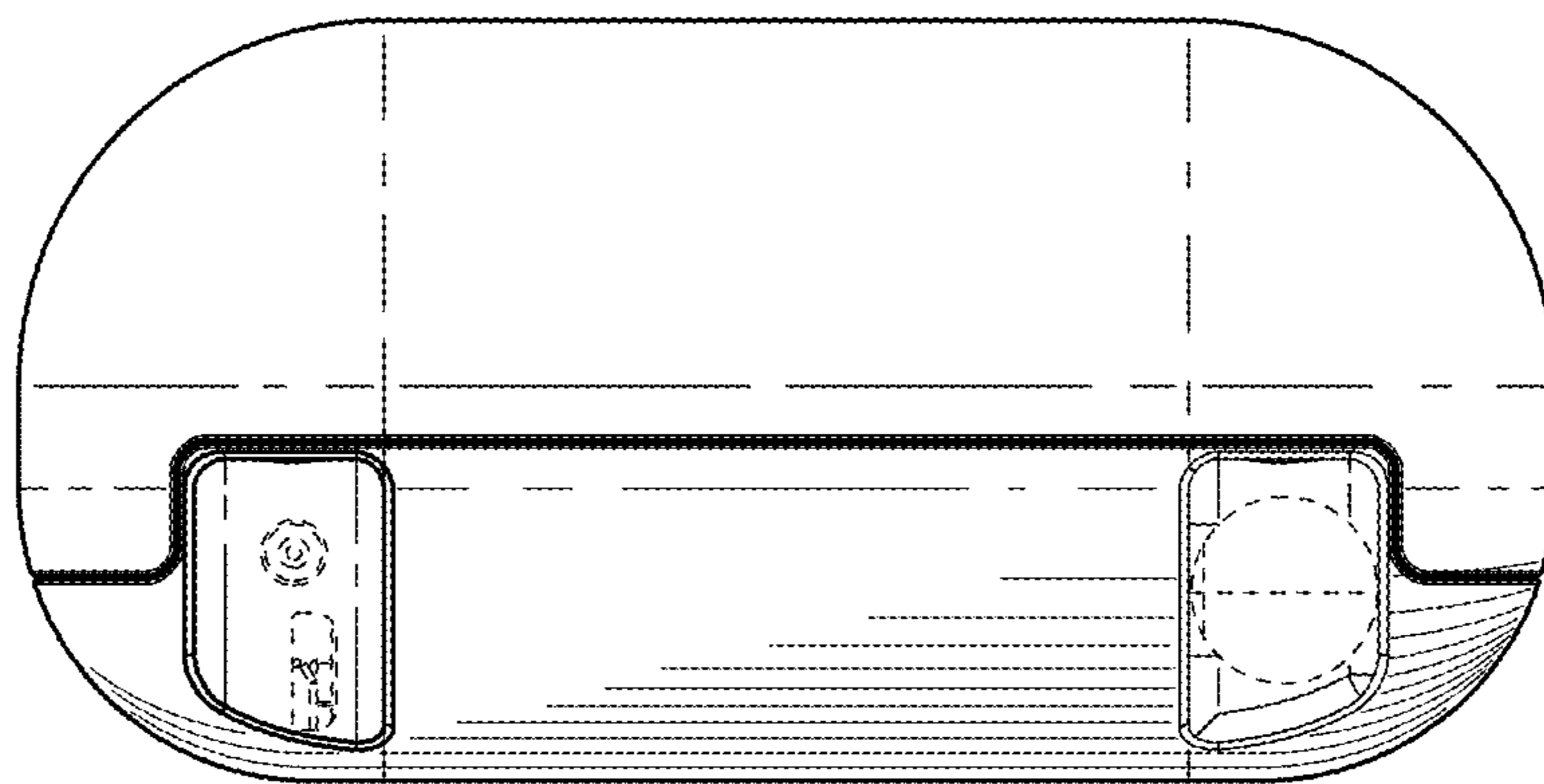


FIG. 4

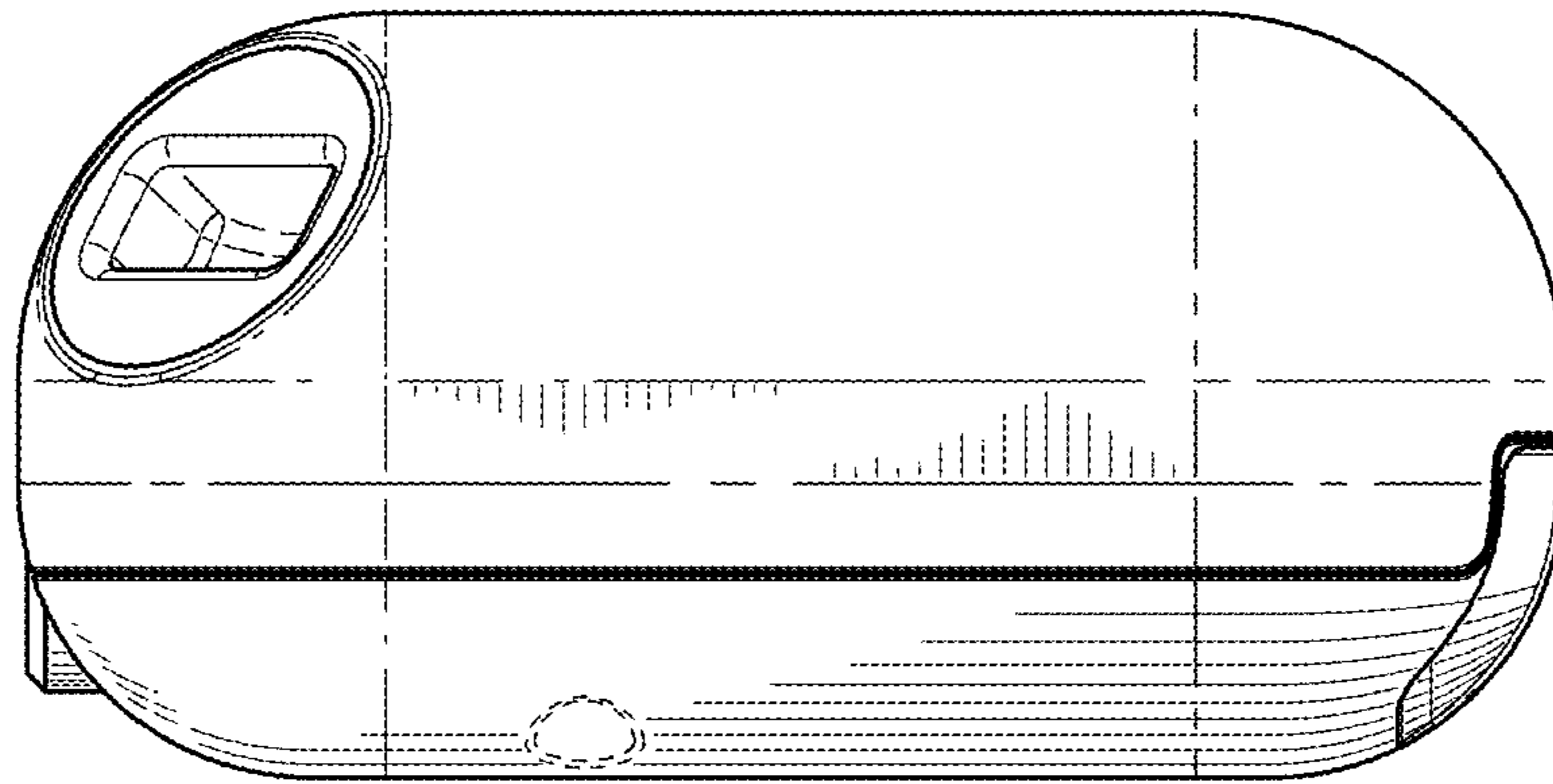


FIG. 5

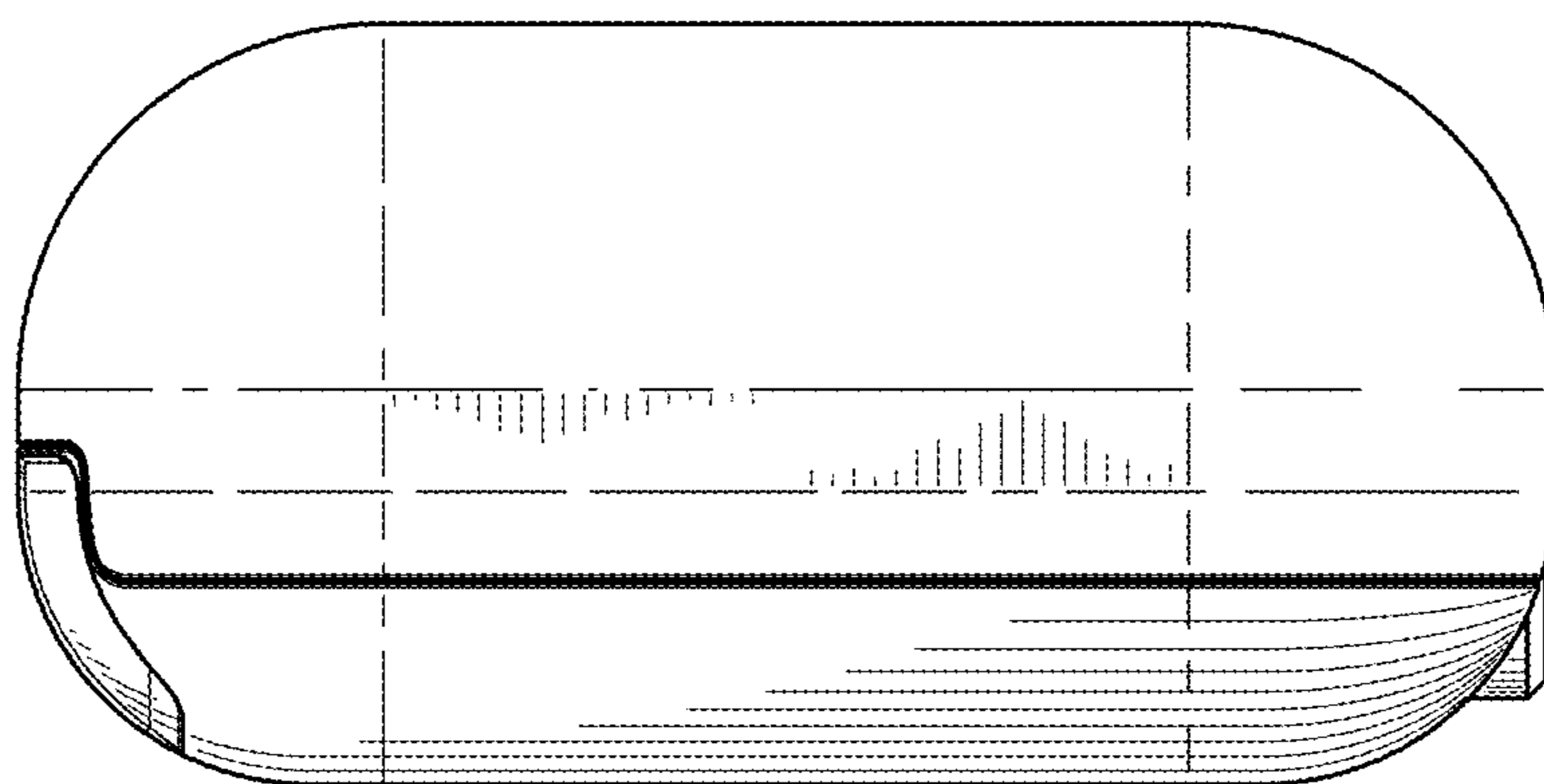


FIG. 6

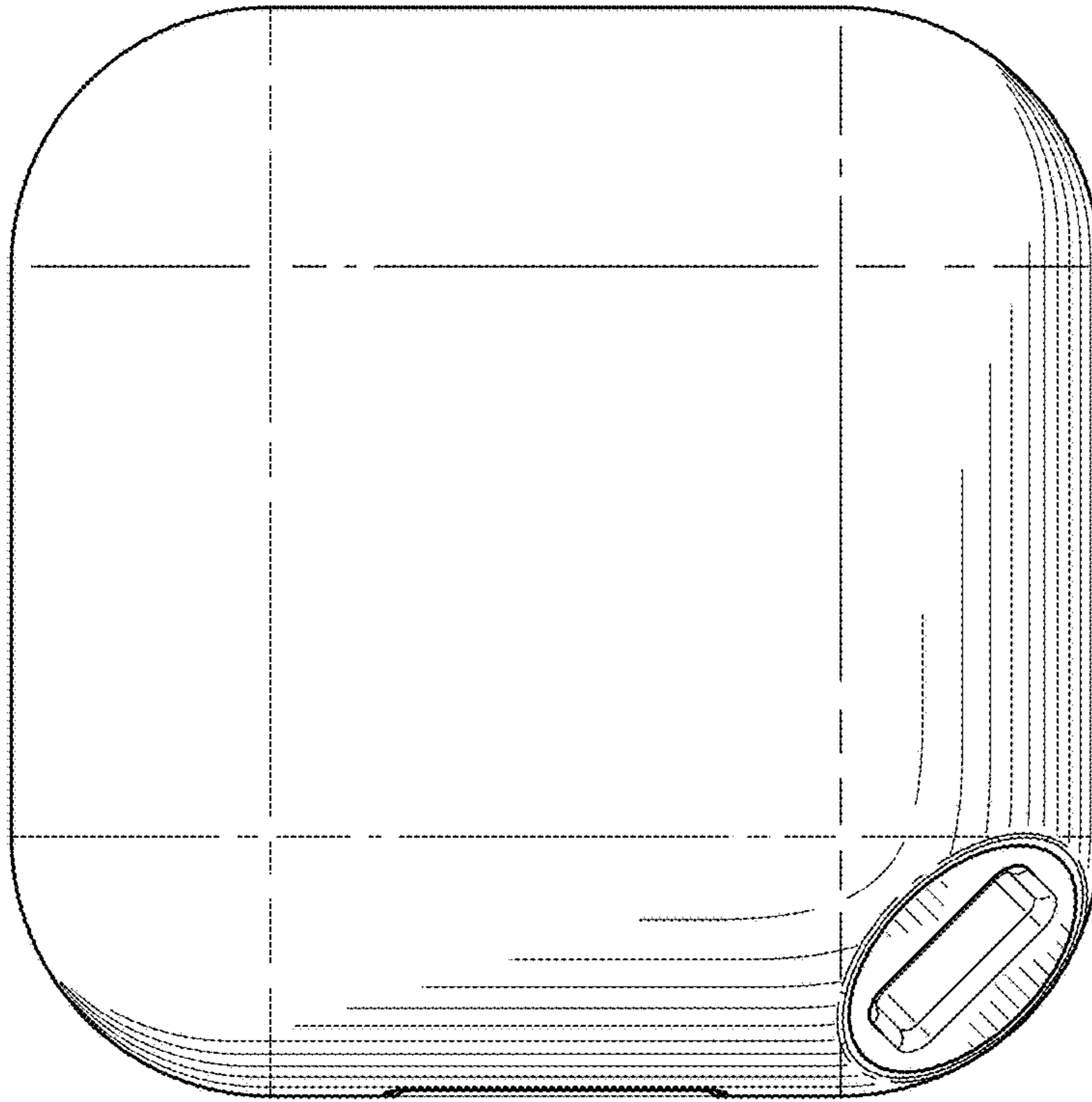


FIG. 7

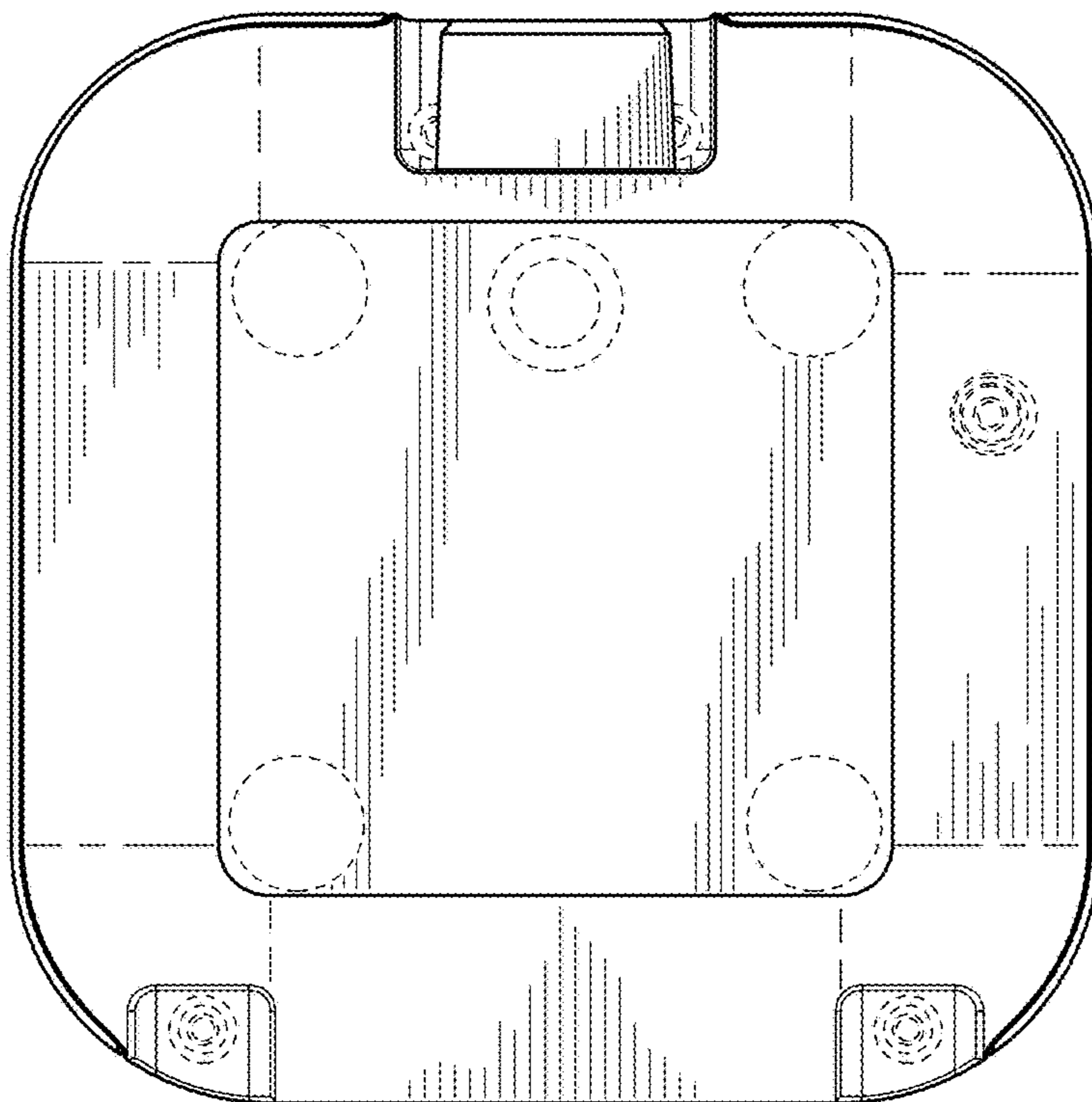


FIG. 8