



US00D889634S

(12) **United States Design Patent** (10) **Patent No.:** **US D889,634 S**
Tuononen et al. (45) **Date of Patent:** **** Jul. 7, 2020**

(54) **PRESSURE CONTROL UNIT** 5,029,579 A 7/1991 Trammell
5,425,742 A 6/1995 Joy
(71) Applicant: **OTIVIO AS**, Oslo (NO) 5,458,562 A 10/1995 Cooper
(Continued)

(72) Inventors: **Sanna Tuononen**, Oslo (NO); **Petri Rantanen**, Oslo (NO)

FOREIGN PATENT DOCUMENTS

(73) Assignee: **OTIVIO AS**, Oslo (NO)

EM 0026509370001 3/2015
EM 0026509370002 3/2015

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

(Continued)

(21) Appl. No.: **29/659,685**

OTHER PUBLICATIONS

(22) Filed: **Aug. 10, 2018**

FlowOx First Time Assembly Instructional Video. Posted by Otivio AS on YouTube.com. Date published: Apr. 3, 2019. Retrieved from Internet: https://www.youtube.com/watch?v=2VVStprMr28&feature=emb_logo (Year: 2019).*

(51) **LOC (12) Cl.** **24-01**

(52) **U.S. Cl.**
USPC **D24/107; D24/188**

(Continued)

(58) **Field of Classification Search**
USPC D24/107, 108, 111, 169, 185, 186, 188, D24/200, 213
CPC A61M 2205/3344; A61H 2209/00; A61H 1/00; A61H 9/00

Primary Examiner — Lilyana Bekic
(74) *Attorney, Agent, or Firm* — Workman Nydegger

See application file for complete search history.

(57) **CLAIM**

(56) **References Cited**

The ornamental design for a pressure control unit, as shown and described.

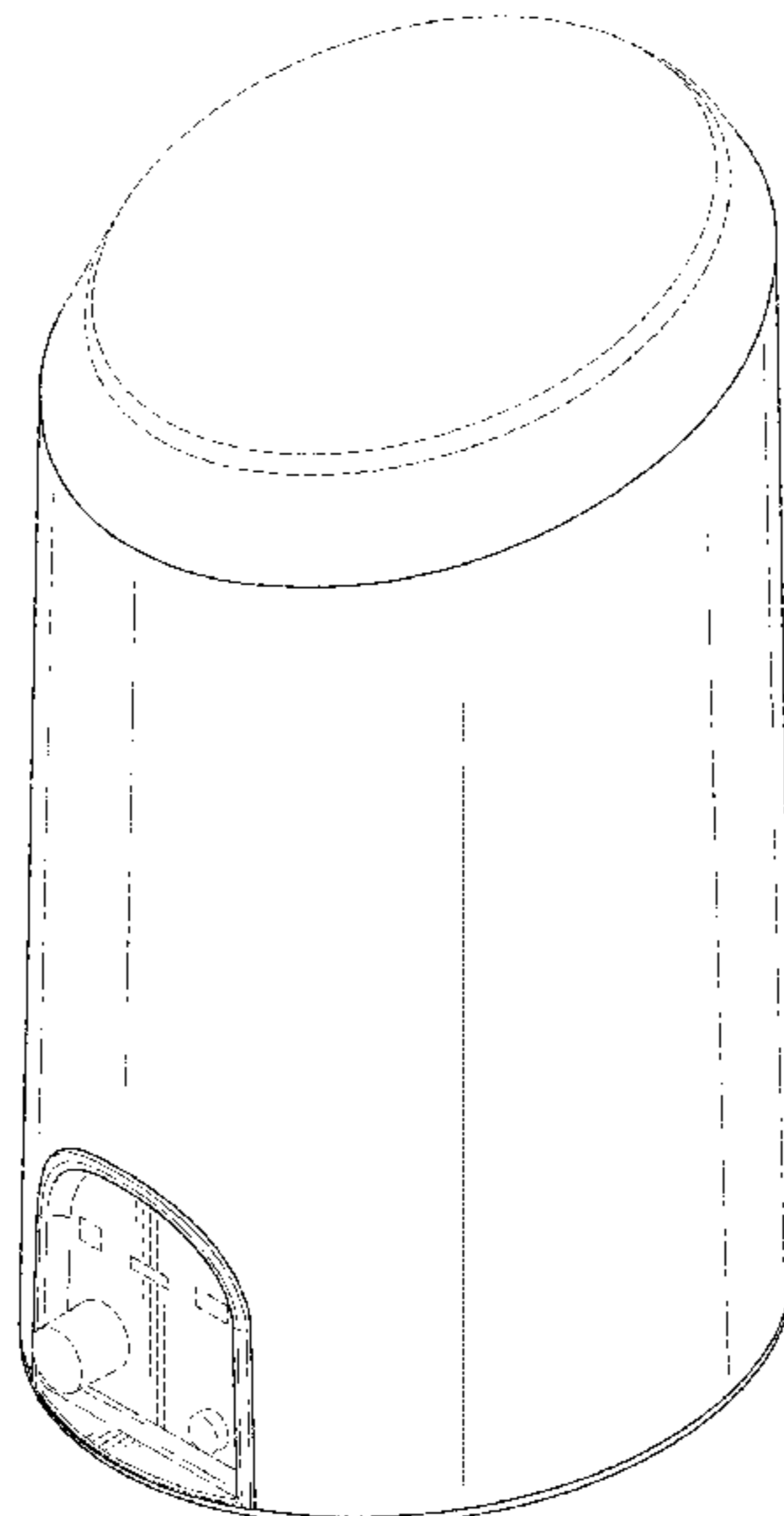
U.S. PATENT DOCUMENTS

1,110,494 A	9/1914	Kellogg
1,399,095 A	12/1921	Webb
2,113,253 A	4/1938	Gray
2,168,611 A	8/1939	Thompson
3,094,983 A	6/1963	MacLeod
3,292,613 A	12/1966	MacLeod
3,403,673 A	10/1968	MacLeod
3,465,748 A	9/1969	Kravchenko
3,654,919 A	4/1972	Birtwell
3,757,806 A	9/1973	Bhaskar et al.
3,859,989 A	1/1975	Spielberg
3,878,839 A	4/1975	Norton et al.
3,896,794 A	7/1975	McGrath
3,977,396 A	8/1976	Cartier
4,054,129 A	10/1977	Byars et al.
4,149,529 A	4/1979	Copeland et al.
5,000,164 A	3/1991	Cooper

DESCRIPTION

FIG. 1 is a front perspective view of a pressure control unit showing our new design;
FIG. 2 is a front elevational view thereof;
FIG. 3 is a rear elevational view thereof;
FIG. 4 is a right side elevational view thereof;
FIG. 5 is a left side elevational view thereof;
FIG. 6 is a top plan view thereof; and,
FIG. 7 is a bottom plan view thereof.
The broken lines in the drawings depict portions of the pressure control unit that form no part of the claimed design.

1 Claim, 6 Drawing Sheets



(56)

References Cited

OTHER PUBLICATIONS

U.S. PATENT DOCUMENTS

5,697,920	A	12/1997	Gibbons	
6,027,464	A	2/2000	Dahlquist	
6,149,674	A	11/2000	Borders	
6,277,052	B1	8/2001	Howard	
D452,570	S *	12/2001	Since	D24/200
6,423,017	B2	7/2002	Brotz	
6,565,593	B2	5/2003	Diana	
7,354,410	B2 *	4/2008	Perry	A61H 9/0078 601/151
7,833,179	B2	11/2010	Filtvedt et al.	
7,833,180	B2	11/2010	Filtvedt et al.	
7,896,825	B2	3/2011	Atkinson et al.	
D644,250	S *	8/2011	Barber	D15/7
8,021,314	B2	9/2011	Filtvedt et al.	
8,100,887	B2	1/2012	Weston et al.	
8,361,001	B2	1/2013	Filtvedt et al.	
8,657,864	B2	2/2014	Rein et al.	
8,821,422	B2	9/2014	Filtvedt et al.	
D790,070	S *	6/2017	Acosta	D24/188
D791,955	S *	7/2017	Gilbert	D24/109
D816,854	S *	5/2018	Acosta	D24/189
D857,215	S *	8/2019	Lin	D24/200
2003/0097163	A1	5/2003	Kane et al.	
2003/0125649	A1	7/2003	McIntosh et al.	
2005/0027218	A1	2/2005	Filtvedt et al.	
2005/0137446	A1	6/2005	Rastegar et al.	
2009/0143719	A1	6/2009	Loori et al.	
2009/0312675	A1	12/2009	Sampson et al.	
2010/0152633	A1	6/2010	Rein et al.	
2011/0000484	A1	1/2011	Melsheimer	
2011/0130712	A1	6/2011	Topaz	
2011/0288458	A1	11/2011	Jones et al.	
2012/0209153	A1 *	8/2012	Farrow	A61H 9/0092 601/18
2012/0238924	A1	9/2012	Avni	
2013/0331747	A1 *	12/2013	Helgeson	A61H 9/0078 601/48
2014/0128781	A1	5/2014	Rein et al.	
2014/0276288	A1	9/2014	Randolph et al.	
2015/0065931	A1	3/2015	Alnabulsi et al.	
2015/0374571	A1 *	12/2015	Denson	A61H 1/008 601/150

FOREIGN PATENT DOCUMENTS

EM	0026509370003	3/2015
EM	0026509370004	3/2015
EM	0026509370005	3/2015
FR	1562252 A	4/1969
WO	9840039 A1	9/1998
WO	0180790 A1	11/2001
WO	03045289 A1	6/2003
WO	2004058131 A2	7/2004

Allen et al., "Intermittent Pressure and Suction in the Treatment of Chronic Occlusive Arterial Disease," *The Journal of the American Medical Association*, vol. 105, No. 25, Dec. 21, 1935, pp. 2029-2034.

De Takats, "Obliterative Vascular Disease: Preliminary Report on Treatment by Alternating Negative and Positive Pressure," *Journal of the American Medical Association*, vol. 103, No. 25, Dec. 22, 1934, pp. 1920-1924.

Herrmann et al., "The Conservative Treatment of Arteriosclerotic Peripheral Vascular Diseases: Passive Vascular Exercises (Pavaex Therapy)," *Annals of Surgery*, vol. 100, No. 4, Oct. 1934, pp. 750-760.

Herrmann et al., "Passive Vascular Exercises: Treatment of Peripheral Obliterative Arterial Diseases by Rhythmic Alternation of Environmental Pressure," *Archives of Surgery*, vol. 29, No. 5, Nov. 1934, pp. 697-704.

Landis et al., "The Effects of Alternate Suction and Pressure on Blood Flow to the Lower Extremities," *The Journal of Clinical Investigation*, vol. 12, No. 5, Sep. 1933, pp. 925-961.

Landis et al., "Treatment of Peripheral Vascular Disease by Means of Suction and Pressure," *Annals of Internal Medicine*, vol. 9, No. 3, Sep. 1, 1935, pp. 264-273.

Meyer et al., "Bier's Hyperemic Treatment," *California State Journal of Medicine*, vol. 8, No. 4, Apr. 1910, pp. 142-143.

Reid, "Diagnosis and Treatment of Peripheral Vascular Diseases," *The American Journal of Surgery*, vol. 24, No. 1, Apr. 1934, pp. 11-35.

Theis et al., "Peripheral Circulatory Diseases Effect of Alternating Positive and Negative Pressure Treatments on Venous Blood and the Skin Temperatures: Preliminary Report," *The Journal of the American Medical Association*, vol. 107, No. 14, Oct. 3, 1936, pp. 1097-1104.

Goodney et al., "National Trends in Lower Extremity Bypass Surgery, Endovascular Interventions, and Major Amputations", *Journal of Vascular Surgery* vol. 50 No. 1, Jul. 2009, pp. 54-60.

Hiramori et al., "Impact of Runoff Grade After Endovascular Therapy for Femoropopliteal Lesions", *Journal of Vascular Surgery*, vol. 59, No. 3, Mar. 2014, pp. 720-727.

Norgren et al., "Inter-Society Consensus for the Management of Peripheral Arterial Disease (TASC II)", *Journal of Vascular Surgery*, vol. 45, No. 1, Supplement S, Jan. 2007, p. S5A-S67A.

Rowe et al., "Patterns of Treatment for Peripheral Arterial Disease in the United States: 1996-2005", *Journal of Vascular Surgery* vol. 49, No. 4, Apr. 2009, pp. 910-917.

Siracuse et al., "Results for Primary Bypass Versus Primary Angioplasty/Stent for Intermittent Claudication Due to Superficial Femoral Artery Occlusive Disease", *Journal of Vascular Surgery*, vol. 55, No. 4, Apr. 2012, pp. 1001-1007.

"Nanova Therapy System," Acelity, retrieved from <https://www.acelity.com/products/nanova-therapy-system-uk> on Aug. 27, 2018, 11 Pages.

* cited by examiner

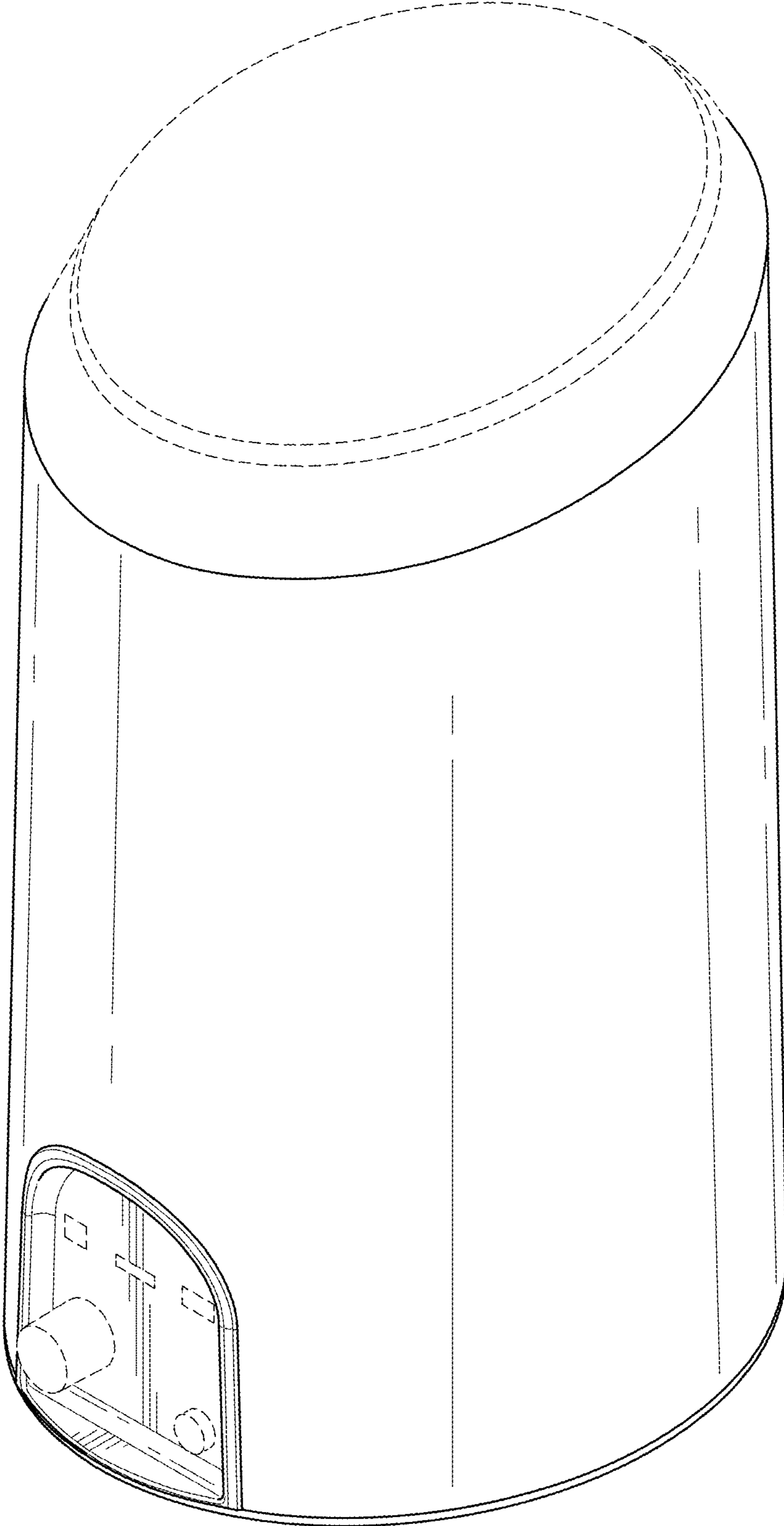


FIG. 1

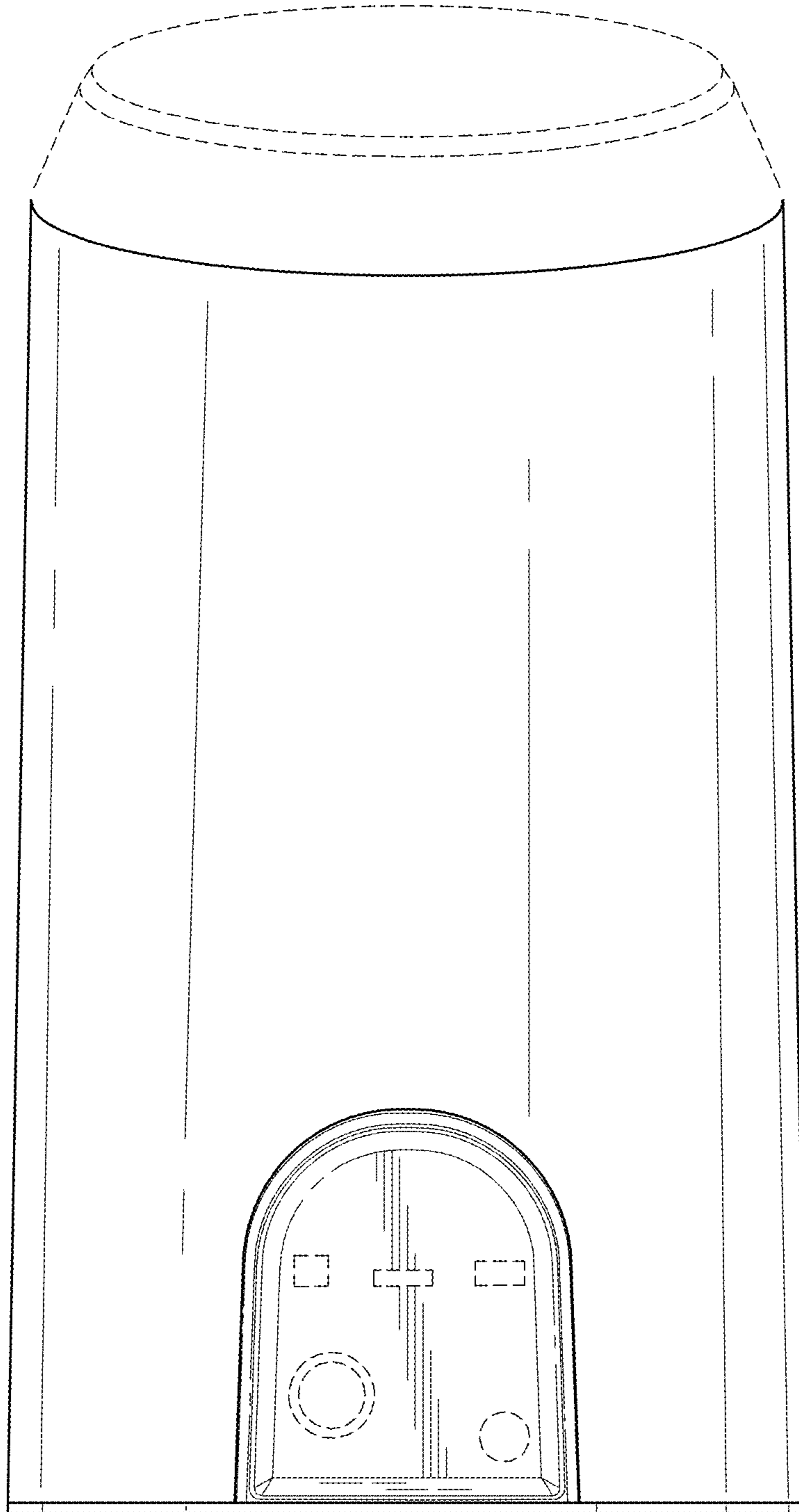


FIG. 2

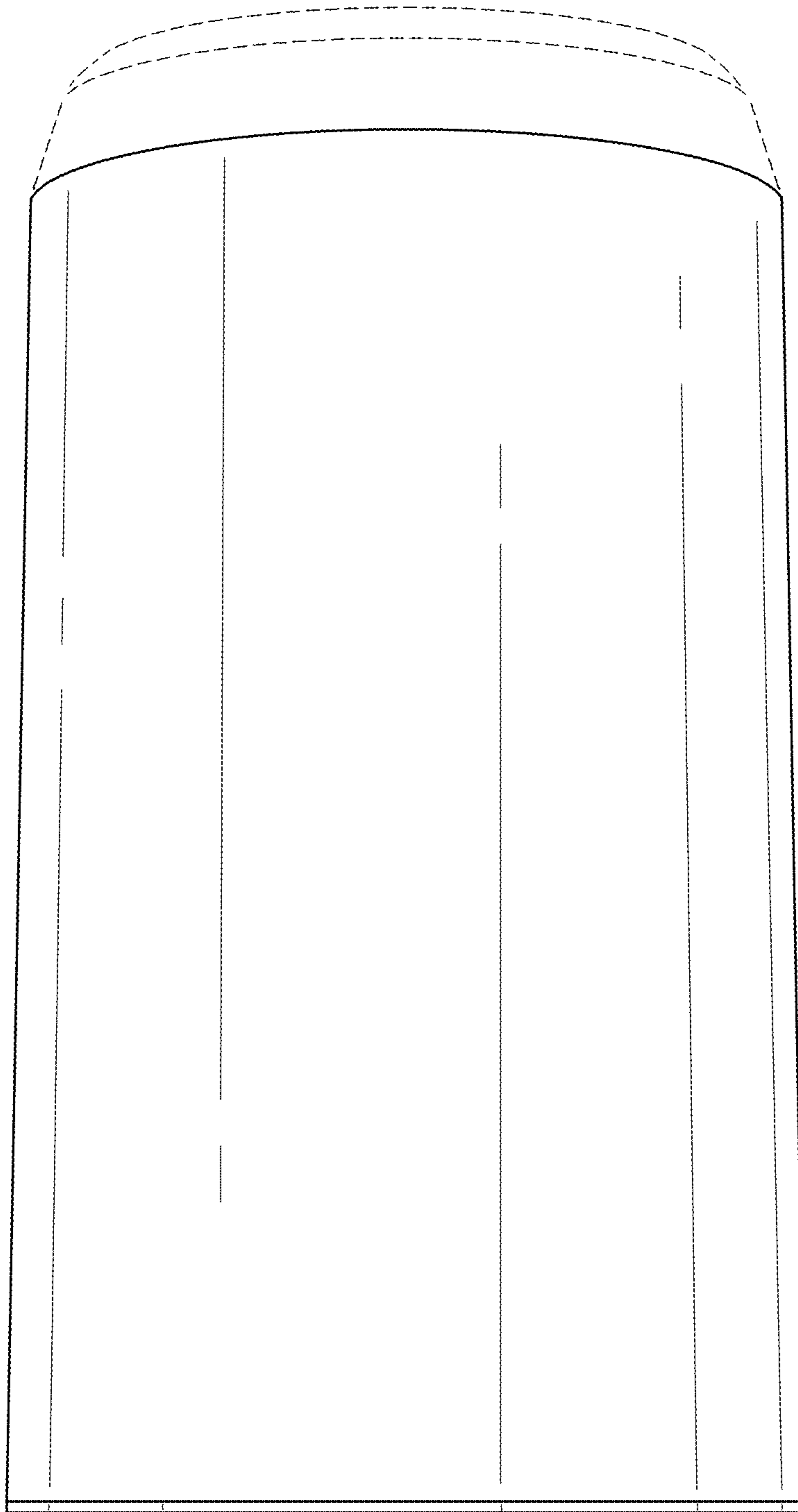


FIG. 3

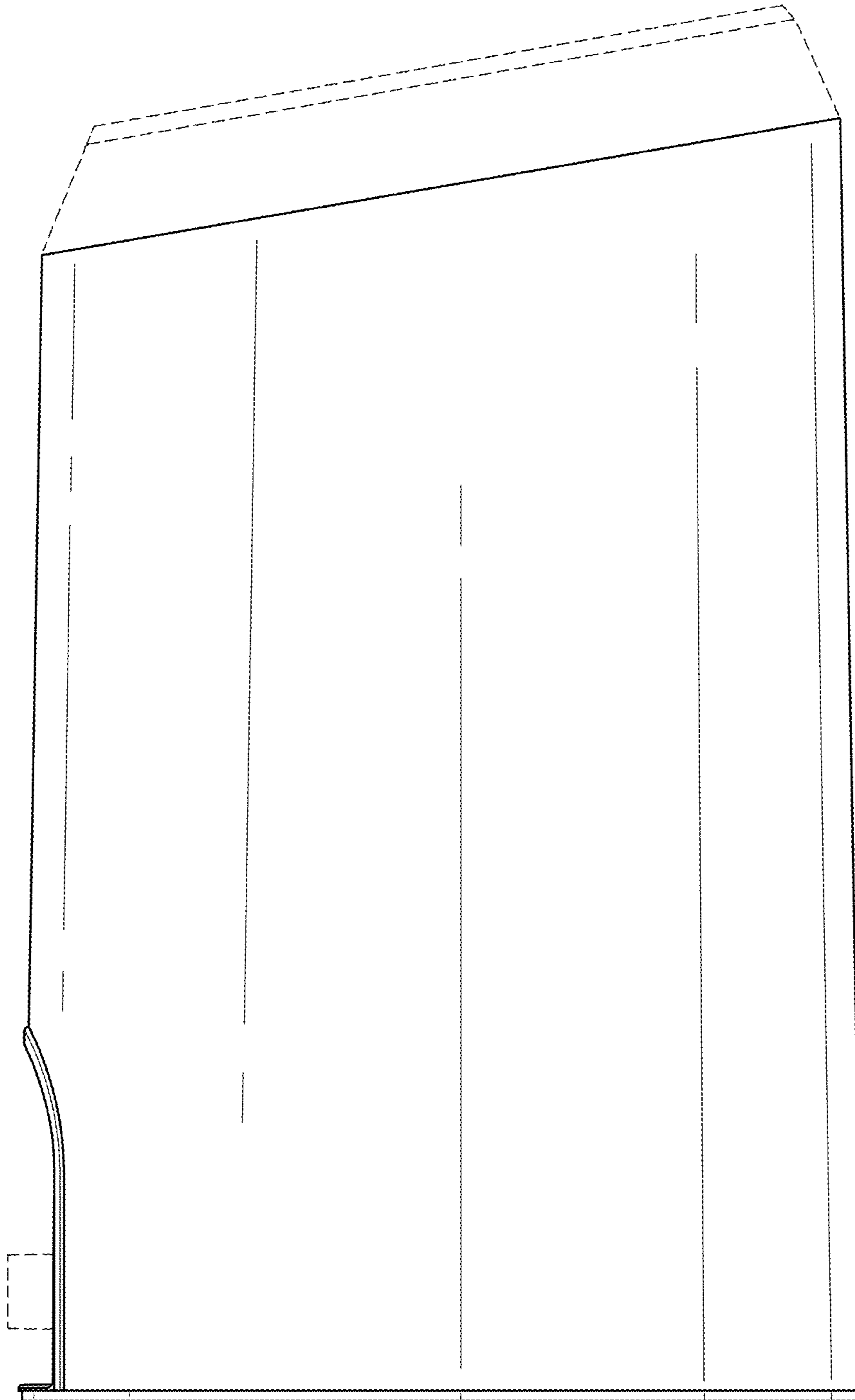


FIG. 4

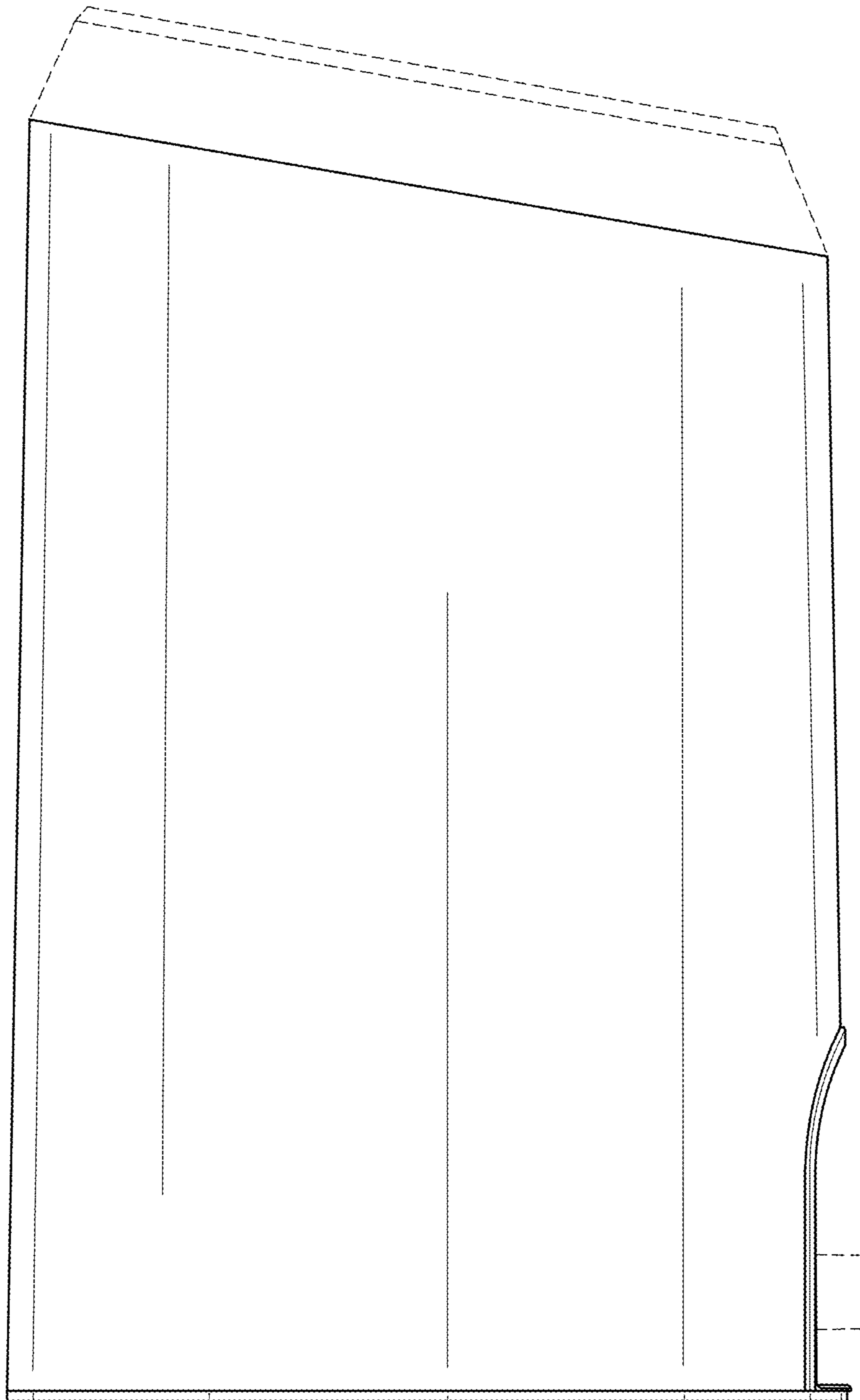


FIG. 5

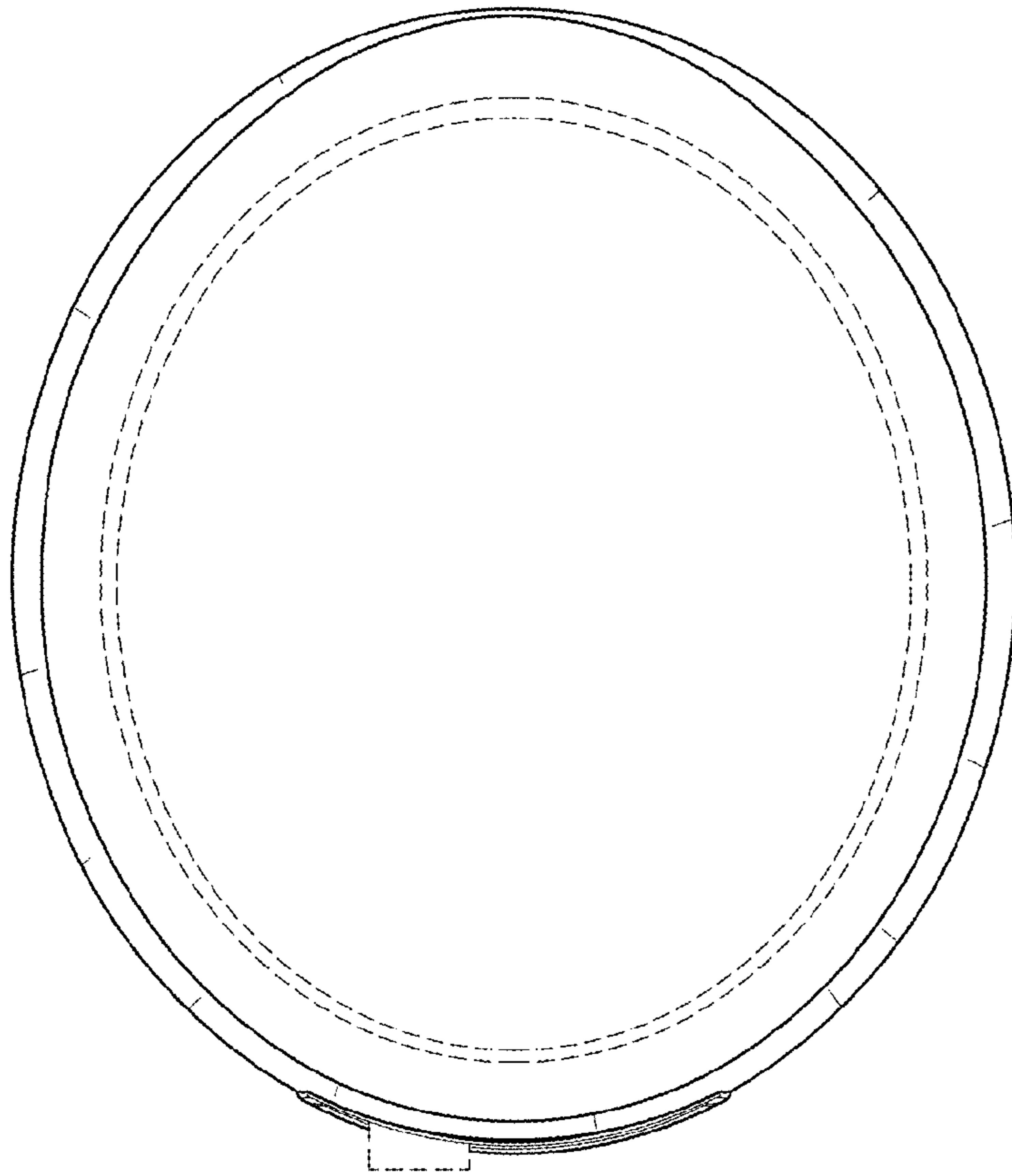


FIG. 6

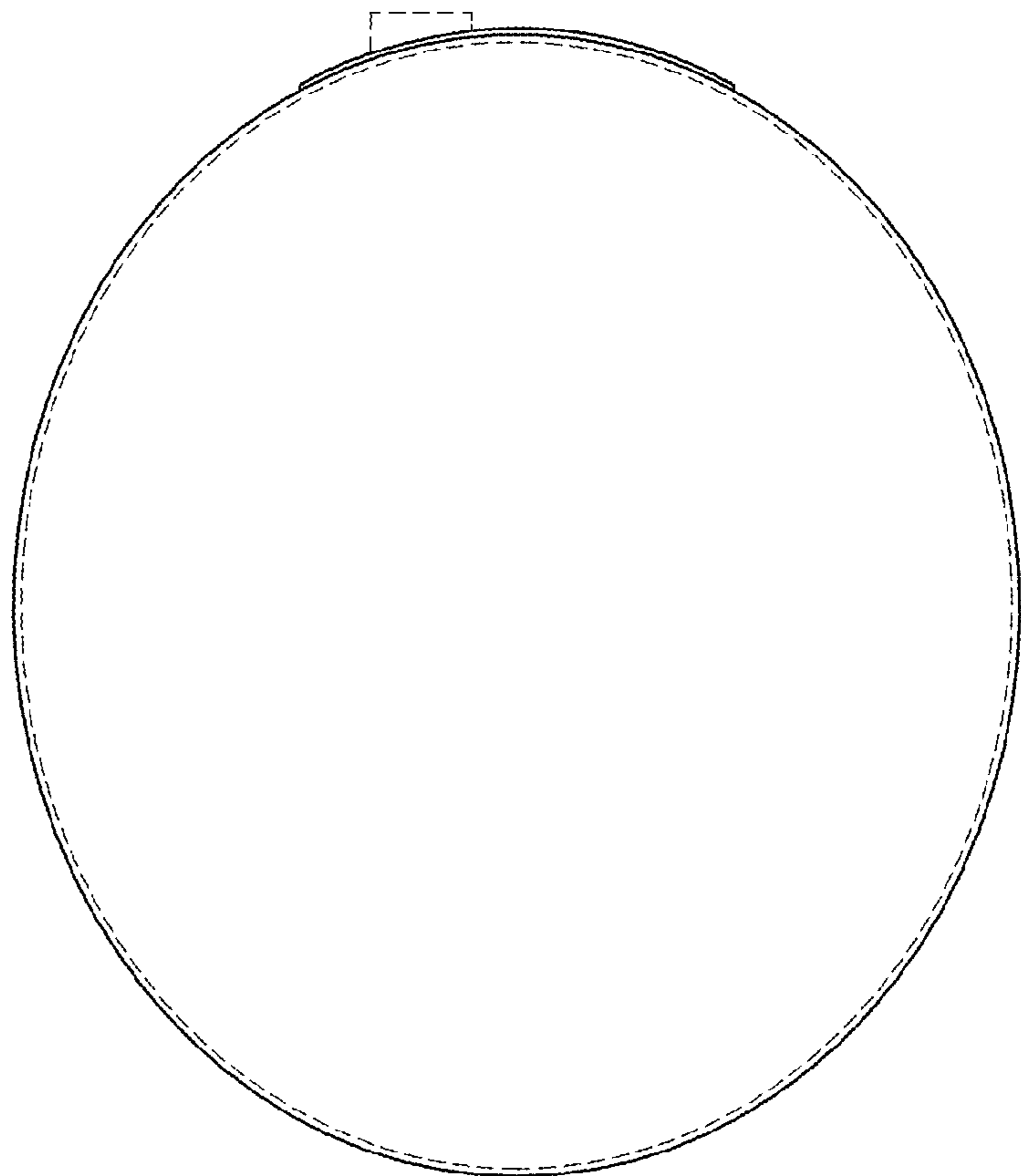


FIG. 7