



US00D977647S

(12) **United States Design Patent** (10) **Patent No.:** **US D977,647 S**
Schuessler et al. (45) **Date of Patent:** **** Feb. 7, 2023**

- (54) **TISSUE EXPANSION DEVICE**
- (71) Applicant: **Allergan, Inc.**, Irvine, CA (US)
- (72) Inventors: **David J. Schuessler**, Santa Ana, CA (US); **Alberto J. Flores**, Heredia (CR); **Daniela Rodriguez**, Mercedes (CR); **Luis M. Solano**, San Jose (CR)
- (73) Assignee: **Allergan, Inc.**, Irvine, CA (US)
- (**) Term: **15 Years**
- (21) Appl. No.: **29/732,027**
- (22) Filed: **Apr. 20, 2020**

4,650,487 A	3/1987	Chaglassian
4,662,357 A	5/1987	Pierce et al.
4,685,447 A	8/1987	Iversen et al.
4,738,657 A	4/1988	Hancock et al.
4,773,909 A	9/1988	Chaglassian
4,823,815 A	4/1989	Watson et al.
4,840,615 A	6/1989	Hancock et al.
4,889,744 A	12/1989	Quaid
4,908,029 A	3/1990	Bark et al.
4,960,425 A	10/1990	Yan et al.
4,969,906 A	11/1990	Kronman
5,005,591 A	4/1991	Austad
5,019,101 A	5/1991	Purkait et al.
5,022,942 A	6/1991	Yan et al.
5,026,394 A	6/1991	Baker
5,066,303 A	11/1991	Bark et al.
5,074,878 A	12/1991	Bark et al.
5,084,061 A	1/1992	Gau et al.
5,127,627 A	7/1992	Wiser
5,133,753 A	7/1992	Bark et al.
5,141,508 A	8/1992	Bark et al.
5,171,269 A	12/1992	Bark
5,282,857 A	2/1994	Perry et al.
5,340,352 A	8/1994	Nakanishi et al.
5,425,762 A	6/1995	Muller
5,447,535 A	9/1995	Muller
5,456,716 A	10/1995	Iversen et al.
5,480,430 A	1/1996	Carlisle et al.
5,496,368 A	3/1996	Wiese
5,525,275 A	6/1996	Iversen et al.
5,536,264 A	7/1996	Hsueh et al.
5,549,672 A	8/1996	Maddock et al.
5,571,183 A	11/1996	Kazem
5,589,176 A	12/1996	Seare, Jr.
5,632,774 A	5/1997	Babian
5,658,329 A	8/1997	Purkait
5,674,279 A	10/1997	Wright et al.
5,674,285 A	10/1997	Quaid
5,725,507 A	3/1998	Petrick
5,895,423 A	4/1999	Becker et al.
5,964,803 A	10/1999	Iversen
6,022,376 A	2/2000	Assell et al.
6,074,421 A	6/2000	Murphy
6,146,418 A	11/2000	Berman
6,203,570 B1	3/2001	Baeke
6,214,045 B1	4/2001	Corbitt, Jr. et al.
6,214,331 B1	4/2001	Vanderhoff et al.
6,228,116 B1	5/2001	Ledergerber
6,231,712 B1	5/2001	Torres
6,232,372 B1	5/2001	Brothers et al.
6,287,293 B1	9/2001	Jones et al.
6,371,904 B1	4/2002	Sirimanne et al.
6,588,432 B1	7/2003	Rehder et al.

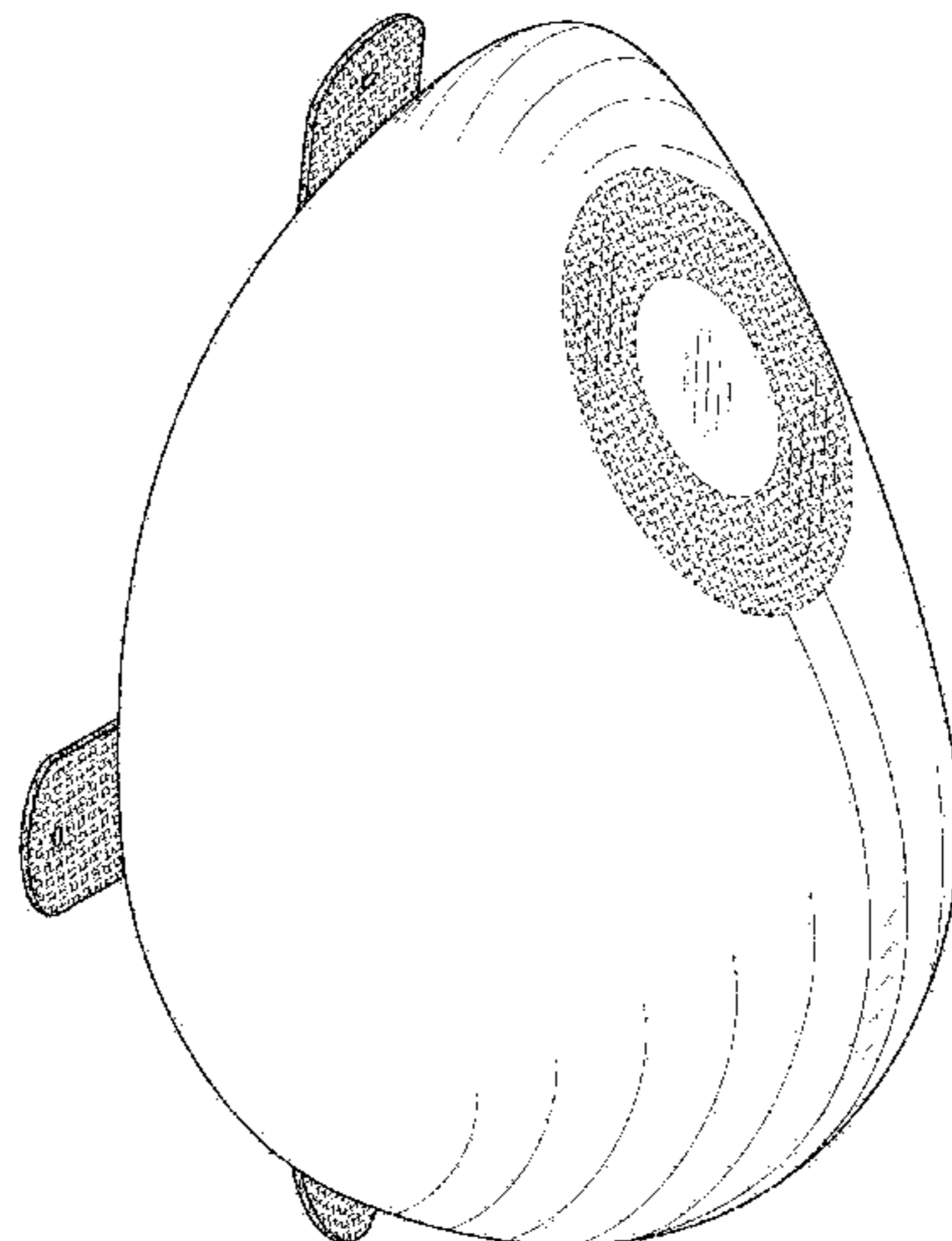
Related U.S. Application Data

- (62) Division of application No. 29/663,346, filed on Sep. 13, 2018, now Pat. No. Des. 896,383.
- (51) **LOC (14) Cl.** **24-03**
- (52) **U.S. Cl.**
USPC **D24/155**
- (58) **Field of Classification Search**
USPC D24/155
CPC A61F 2/12
See application file for complete search history.

References Cited

U.S. PATENT DOCUMENTS

3,204,959 A	9/1965	Nichols
3,301,251 A	1/1967	Jackson
3,301,254 A	1/1967	Schickedanz
3,577,836 A	5/1971	Tamura
3,852,832 A	12/1974	McGhan et al.
3,919,724 A	11/1975	Sanders et al.
4,157,085 A	6/1979	Austad
4,190,040 A	2/1980	Schulte
4,195,639 A	4/1980	Lee
4,200,098 A	4/1980	Ayer et al.
4,332,634 A	6/1982	Aperavich
4,428,364 A	1/1984	Bartolo
4,455,691 A	6/1984	Van Aken Redinger et al.
4,605,412 A	8/1986	LaForest et al.
4,636,213 A	1/1987	Pakiam



US D977,647 S

6,602,452 B2	8/2003	Schuessler	D896,383 S *	9/2020	Schuessler D24/155
6,605,116 B2	8/2003	Falcon et al.	D926,984 S *	8/2021	Schuessler D24/155
6,692,527 B1	2/2004	Bellin et al.	D927,690 S *	8/2021	Limem D24/155
6,692,528 B2	2/2004	Ward et al.	2001/0052141 A1	12/2001	Andersen
6,733,512 B2	5/2004	McGhan	2002/0106953 A1	8/2002	Kim et al.
6,743,254 B2	6/2004	Guest et al.	2003/0093151 A1	5/2003	Zhang
6,755,861 B2	6/2004	Nakao	2003/0134067 A1	7/2003	Garelli
6,913,765 B2	7/2005	Li et al.	2003/0144734 A1	7/2003	Dreschnack et al.
6,955,690 B1	10/2005	Cao	2003/0149481 A1	8/2003	Guest et al.
6,962,739 B1	11/2005	Kim et al.	2003/0171768 A1	9/2003	McGhan
7,018,692 B2	3/2006	Kim et al.	2003/0205846 A1	11/2003	Bellin et al.
7,058,439 B2	6/2006	Eaton et al.	2003/0233150 A1	12/2003	Bourne et al.
7,081,135 B2	7/2006	Smith et al.	2005/0170221 A1	8/2005	Kim et al.
7,238,193 B2	7/2007	Gedebou	2007/0059375 A1	3/2007	Bourne et al.
7,645,475 B2	1/2010	Prewett	2007/0156230 A1	7/2007	Dugan et al.
7,702,378 B2	4/2010	Bolan et al.	2007/0196454 A1	8/2007	Stockman et al.
7,771,462 B1	8/2010	Davidson et al.	2007/0198085 A1	8/2007	Benslimane
7,785,302 B2	8/2010	Sheetz et al.	2008/0027273 A1	1/2008	Gutterman
7,810,223 B2	10/2010	Hemerick	2008/0027534 A1	1/2008	Edwin et al.
7,914,578 B2	3/2011	Vardi	2008/0063716 A1	3/2008	Moro et al.
7,976,859 B2	7/2011	Beisang et al.	2008/0312739 A1	12/2008	Agerup et al.
8,021,418 B2	9/2011	Gerberding et al.	2009/0012372 A1	1/2009	Burnett et al.
8,027,712 B2	9/2011	Sioshansi et al.	2009/0030515 A1	1/2009	Schuessler et al.
8,066,758 B2	11/2011	Bogert et al.	2009/0048684 A1	2/2009	Lesh
8,070,809 B2	12/2011	Schuessler	2009/0118756 A1	5/2009	Valencon et al.
8,202,259 B2	6/2012	Sheetz et al.	2009/0118829 A1	5/2009	Powell et al.
8,320,993 B2	11/2012	Sirimanne et al.	2009/0198332 A1	8/2009	Becker
8,343,205 B2	1/2013	Sugimoto et al.	2009/0198333 A1	8/2009	Becker
8,377,127 B2	2/2013	Schuessler	2009/0202608 A1	8/2009	Alessi et al.
8,382,723 B2	2/2013	Powers et al.	2009/0270904 A1	10/2009	Birk et al.
8,398,710 B2	3/2013	Forsell	2009/0270985 A1	10/2009	Schuessler
8,454,690 B2	6/2013	McClellan	2009/0275974 A1	11/2009	Marchand et al.
8,463,357 B2	6/2013	Piran et al.	2009/0326654 A1	12/2009	Powell
8,506,627 B2	8/2013	Van Epps et al.	2010/0049316 A1	2/2010	Schuessler
8,609,004 B2	12/2013	Schuessler	2010/0070042 A1	3/2010	Bryan et al.
8,636,797 B2	1/2014	Chitre et al.	2010/0168853 A1	7/2010	Job
8,670,633 B2	3/2014	Boyden et al.	2010/0217388 A1	8/2010	Cohen
8,690,943 B2	4/2014	Schuessler	2011/0054407 A1	3/2011	Olroyd
8,784,486 B2	7/2014	Schuessler	2011/0270391 A1	11/2011	Chitre et al.
8,821,574 B2	9/2014	Davodian	2011/0288639 A1	11/2011	Trilokekar et al.
8,852,276 B2	10/2014	Del Vecchio	2011/0306827 A1	12/2011	Chitre
8,875,714 B2	11/2014	Boyden et al.	2012/0061368 A1	3/2012	Frigerio et al.
8,920,486 B2	12/2014	Park	2012/0109080 A1	5/2012	Manesis et al.
8,968,400 B2	3/2015	Schuessler	2012/0123537 A1	5/2012	Manesis et al.
9,138,311 B2	9/2015	Van Epps et al.	2012/0197393 A1	8/2012	Yu
9,241,773 B2	1/2016	Bolan et al.	2012/0303120 A1	11/2012	Schuessler
9,380,998 B2	7/2016	Sirimanne et al.	2013/0052142 A1	2/2013	Harder et al.
9,387,068 B2	7/2016	Schuessler	2013/0131799 A1	5/2013	Schuessler
9,393,106 B2	7/2016	Van Epps et al.	2013/0131801 A1	5/2013	Schuessler
9,399,122 B2	7/2016	Mosharrafa et al.	2013/0171288 A1	7/2013	Harders
9,463,087 B2	10/2016	Hristov et al.	2013/0245758 A1	9/2013	Chitre et al.
9,480,584 B2	11/2016	Park	2013/0304207 A1	11/2013	Schuessler
9,532,888 B2	1/2017	Dugan et al.	2013/0325120 A1	12/2013	McClellan
9,603,698 B2	3/2017	Kerr et al.	2014/0257481 A1	9/2014	Brooks et al.
9,630,366 B2	4/2017	Schuessler	2015/0351900 A1	12/2015	Glicksman
9,636,210 B2	5/2017	Hristov et al.	2016/0000547 A1	1/2016	Aiden et al.
9,669,117 B2	6/2017	Campbell et al.	2016/0074152 A1	3/2016	Chitre
9,682,186 B2	6/2017	Powers et al.	2016/0262835 A1	9/2016	Davila et al.
9,700,404 B2	7/2017	Martin et al.	2017/0014226 A1	1/2017	Fenaroli
9,700,405 B2	7/2017	Davila et al.	2017/0035999 A1	2/2017	Wijay
9,713,524 B2	7/2017	Glicksman	2017/0042707 A1	2/2017	Park
9,724,189 B2	8/2017	Forsell	2017/0189165 A1	7/2017	Hristov et al.
9,750,600 B2	9/2017	Mayo Martin	2017/0265990 A1	9/2017	Martin et al.
9,775,704 B2	10/2017	Bergheim	2017/0319328 A1	11/2017	Davila et al.
D803,401 S	11/2017	Limem	2017/0348089 A1	12/2017	Becker
9,814,566 B1	11/2017	Cree	2018/0036122 A1	2/2018	Bergheim et al.
9,848,972 B2	12/2017	Van Epps	2018/0256276 A1	9/2018	Zamarripa et al.
9,884,150 B2	2/2018	Jho et al.			
9,918,829 B2	3/2018	Van Epps et al.			
D816,220 S	4/2018	Limem			
D816,221 S	4/2018	Limem			
D836,778 S	12/2018	Limem			
10,182,904 B2	1/2019	Gliner et al.			
D856,517 S	8/2019	Spiegel			
D857,895 S	8/2019	Limem			
D870,289 S	12/2019	Limem			
D889,654 S *	7/2020	Limem D24/155			
D889,655 S *	7/2020	Limem D24/155			
D892,329 S *	8/2020	Limem D24/155			

FOREIGN PATENT DOCUMENTS

EP	0029292	5/1981
EP	0324234	7/1989
EP	0412703	2/1991
EP	0422302	4/1991
EP	0478279	4/1992
EP	0710468	5/1996
EP	0784987	7/1997
EP	0872221	2/1999
EP	1469799 B1	5/2014

EP	2531254	B1	5/2015
EP	2928412	B1	3/2017
EP	3348234		7/2018
EP	3125824	B1	10/2018
EP	2996631	B1	12/2019
FR	587637		4/1925
FR	895747		2/1945
GB	2040688		9/1980
GB	2392077		2/2004
WO	WO 92/20519		11/1992
WO	WO 95/01864		1/1995
WO	WO 02/10667		2/2002
WO	WO 2003/017868		3/2003
WO	WO 2003/057462		7/2003
WO	WO 2003/059617		7/2003
WO	WO 2004/021935		3/2004
WO	WO 2005/000165		1/2005
WO	WO 2008/016983		2/2008
WO	WO 2009/061672		5/2009
WO	WO 2011/084465		7/2011
WO	WO 2012/064683		5/2012
WO	WO 2013/045000		4/2013
WO	WO 2013/105083		7/2013
WO	WO 2014/118773		7/2014
WO	WO 2015/153066		10/2015
WO	WO 2015/179061		11/2015
WO	WO 2016/144475		9/2016
WO	WO 2018/097891		5/2018

* cited by examiner

Primary Examiner — Charles D Hanson
(74) *Attorney, Agent, or Firm* — McCarter & English, LLP

(57) **CLAIM**

The ornamental design for a tissue expansion device, as shown and described.

DESCRIPTION

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.

FIG. 1 is a front, top perspective view of another embodiment of a tissue expansion device;
FIG. 2 is a top plan view of the tissue expansion device of FIG. 1;
FIG. 3 is a bottom plan view of the tissue expansion device of FIG. 1;
FIG. 4 is a left side view of the tissue expansion device of FIG. 1, the right side view being in mirror image thereof;
FIG. 5 is a front plan view of the tissue expansion device of FIG. 1;
FIG. 6 is a rear plan view of the tissue expansion device of FIG. 1;
FIG. 7 is a front, top perspective view of yet another embodiment of a tissue expansion device;
FIG. 8 is a top plan view of the tissue expansion device of FIG. 7;
FIG. 9 is a bottom plan view of the tissue expansion device of FIG. 7;
FIG. 10 is a left side view of the tissue expansion device of FIG. 7, the right side view being in mirror image thereof;

FIG. 11 is a front plan view of the tissue expansion device of FIG. 7;
FIG. 12 is a rear plan view of the tissue expansion device of FIG. 7;
FIG. 13 is a front, top perspective view of yet another embodiment of a tissue expansion device;
FIG. 14 is a top plan view of the tissue expansion device of FIG. 13;
FIG. 15 is a bottom plan view of the tissue expansion device of FIG. 13;
FIG. 16 is a left side view of the tissue expansion device of FIG. 13, the right side view being in mirror image thereof;
FIG. 17 is a front plan view of the tissue expansion device of FIG. 13;
FIG. 18 is a rear plan view of the tissue expansion device of FIG. 13;
FIG. 19 is a front, top perspective view of yet another embodiment of a tissue expansion device;
FIG. 20 is a top plan view of the tissue expansion device of FIG. 19;
FIG. 21 is a bottom plan view of the tissue expansion device of FIG. 19;
FIG. 22 is a left side view of the tissue expansion device of FIG. 19, the right side view being in mirror image thereof;
FIG. 23 is a front plan view of the tissue expansion device of FIG. 19;
FIG. 24 is a rear plan view of the tissue expansion device of FIG. 19;
FIG. 25 is a front, top perspective view of yet another embodiment of a tissue expansion device;
FIG. 26 is a top plan view of the tissue expansion device of FIG. 25;
FIG. 27 is a bottom plan view of the tissue expansion device of FIG. 25;
FIG. 28 is a left side view of the tissue expansion device of FIG. 25, the right side view being in mirror image thereof;
FIG. 29 is a front plan view of the tissue expansion device of FIG. 25;
FIG. 30 is a rear plan view of the tissue expansion device of FIG. 25;
FIG. 31 is a front, top perspective view of yet another embodiment of a tissue expansion device;
FIG. 32 is a top plan view of the tissue expansion device of FIG. 31;
FIG. 33 is a bottom plan view of the tissue expansion device of FIG. 31;
FIG. 34 is a left side view of the tissue expansion device of FIG. 31, the right side view being in mirror image thereof;
FIG. 35 is a front plan view of the tissue expansion device of FIG. 31; and,
FIG. 36 is a rear plan view of the tissue expansion device of FIG. 31.
In FIGS. 19-24, the blue color can be represented by Pantone 306C; in FIGS. 25-30, the blue color can be represented by Pantone 072C; and in FIGS. 31-36, the blue color can be represented by Pantone 7457C.
The broken lines shown in the figures are included for the purpose of illustration and form no part of the claimed design.

**1 Claim, 30 Drawing Sheets
(15 of 30 Drawing Sheet(s) Filed in Color)**

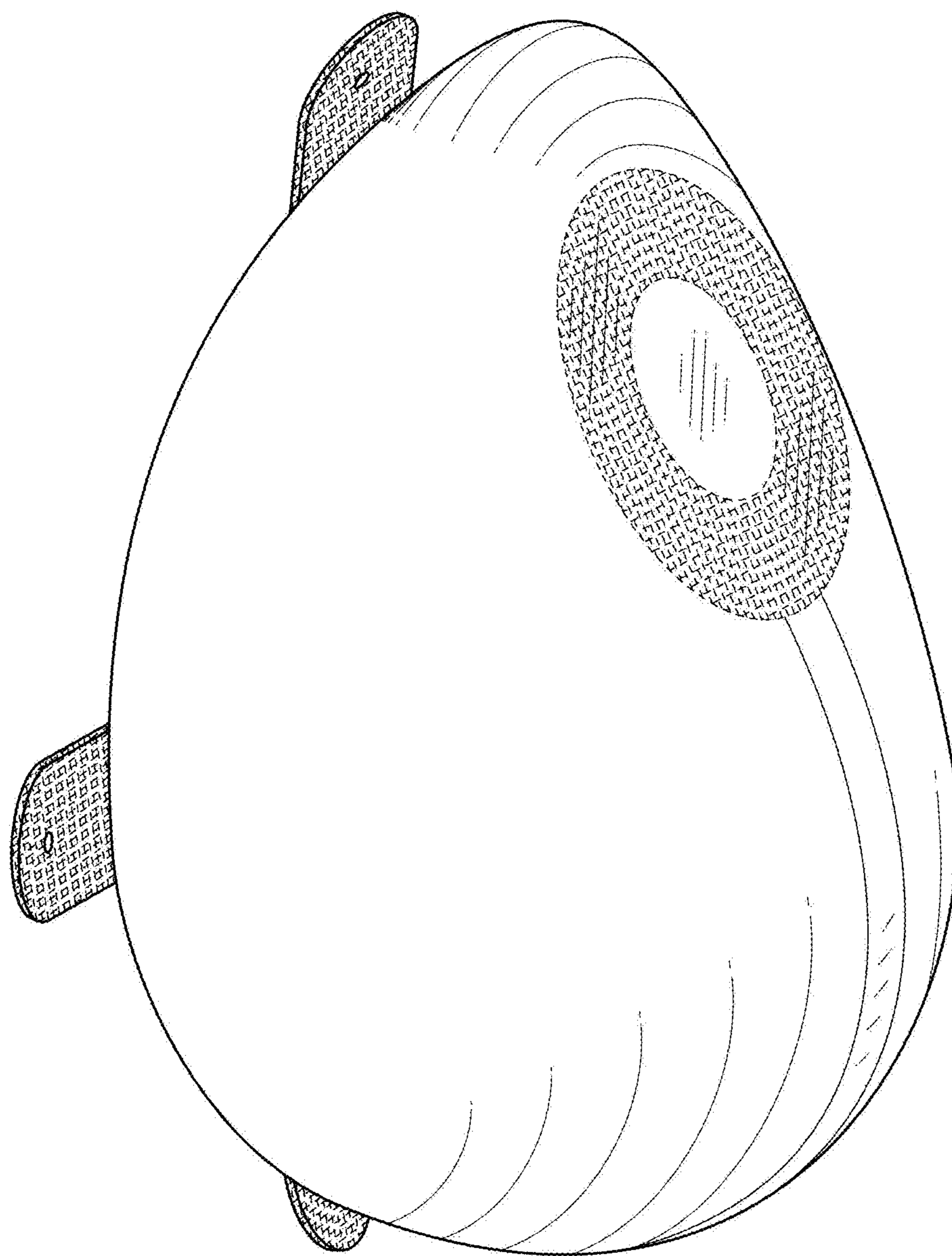


FIG. 1

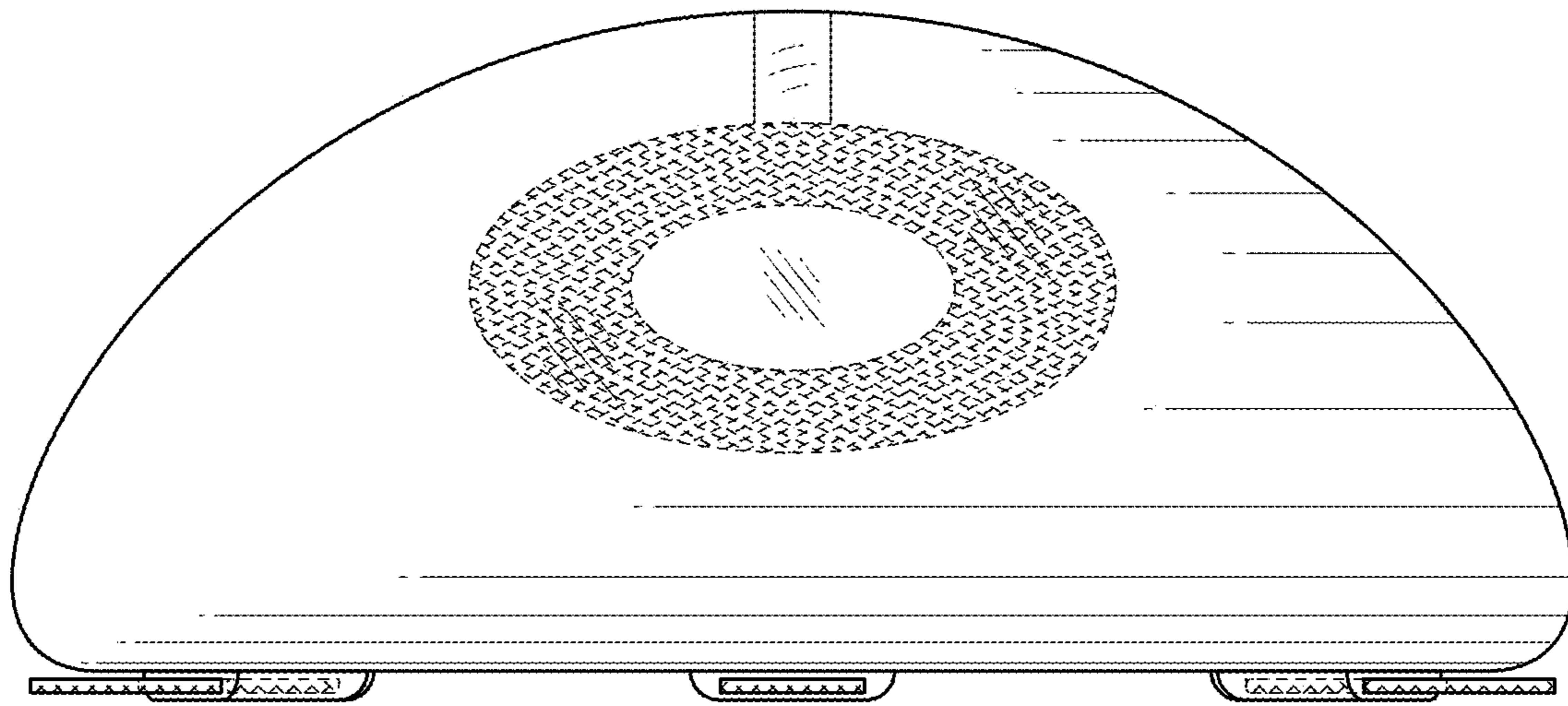


FIG. 2

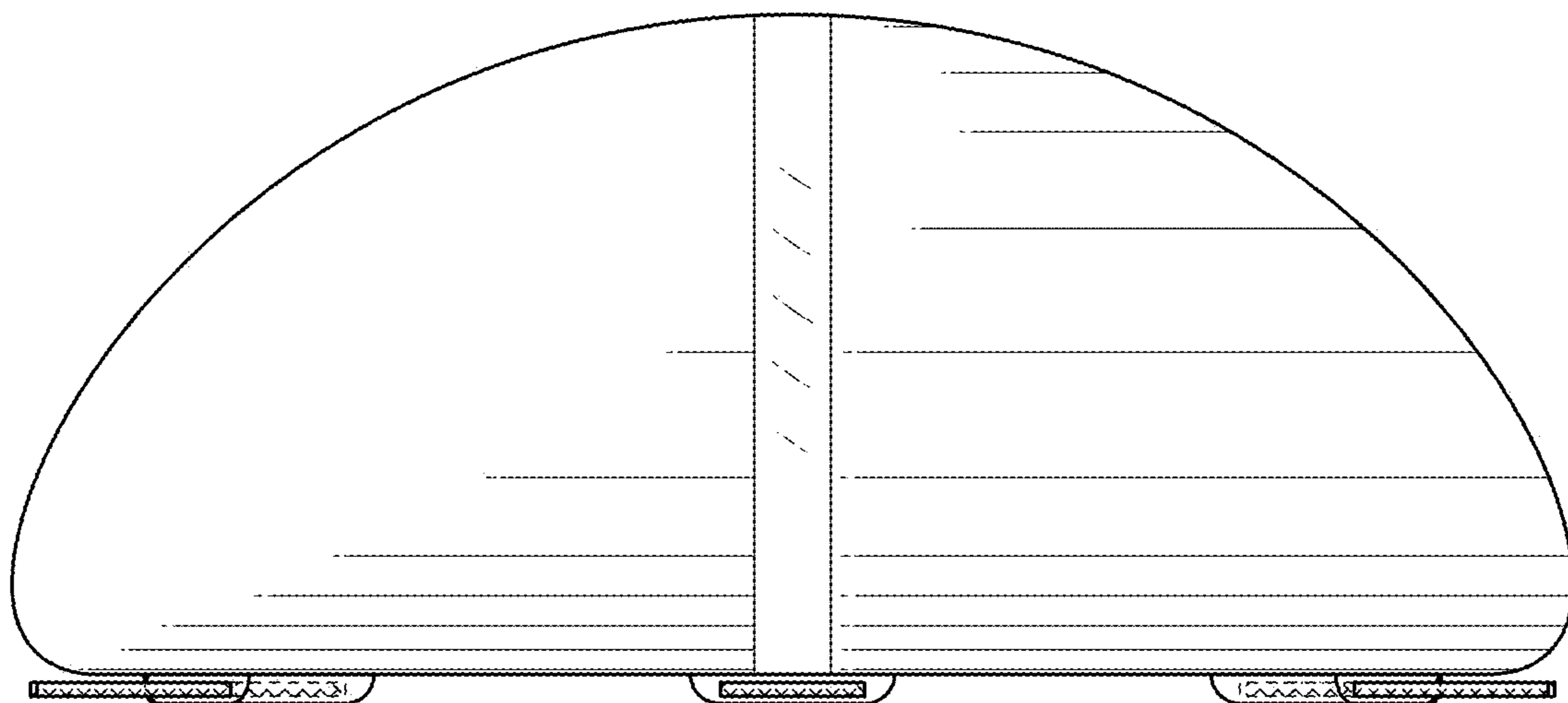


FIG. 3

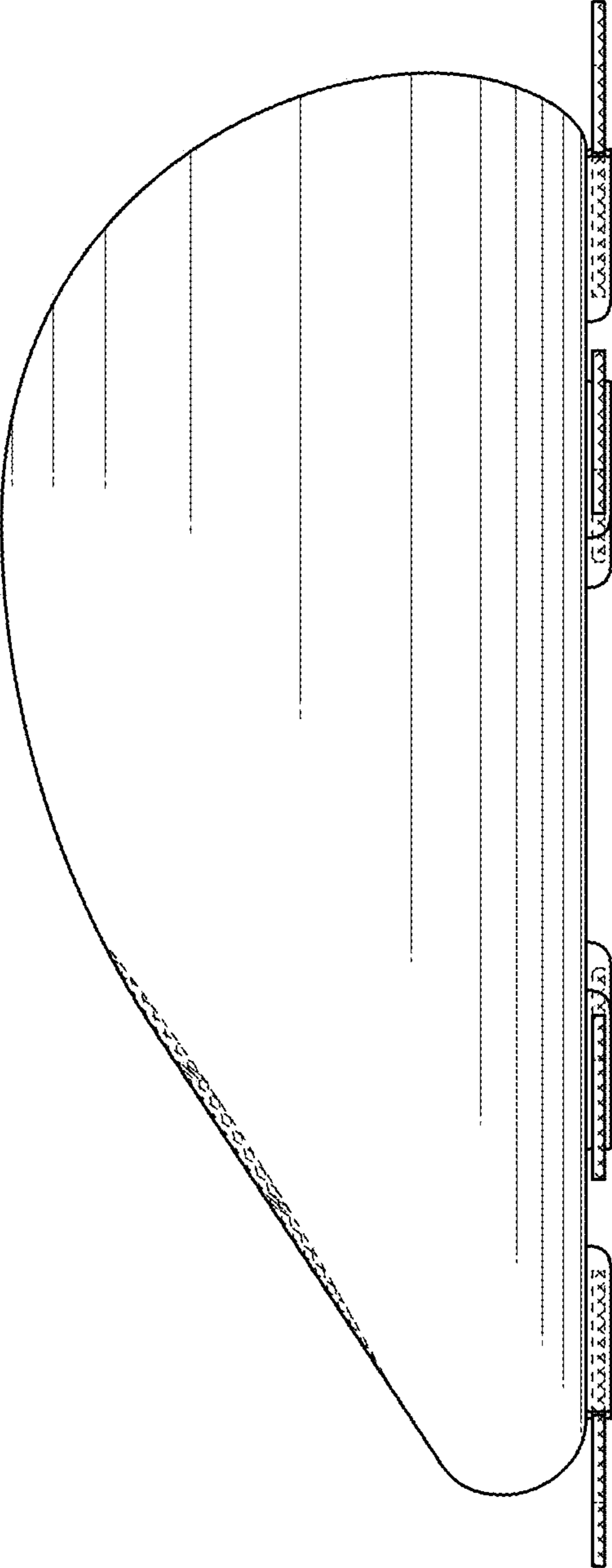


FIG. 4

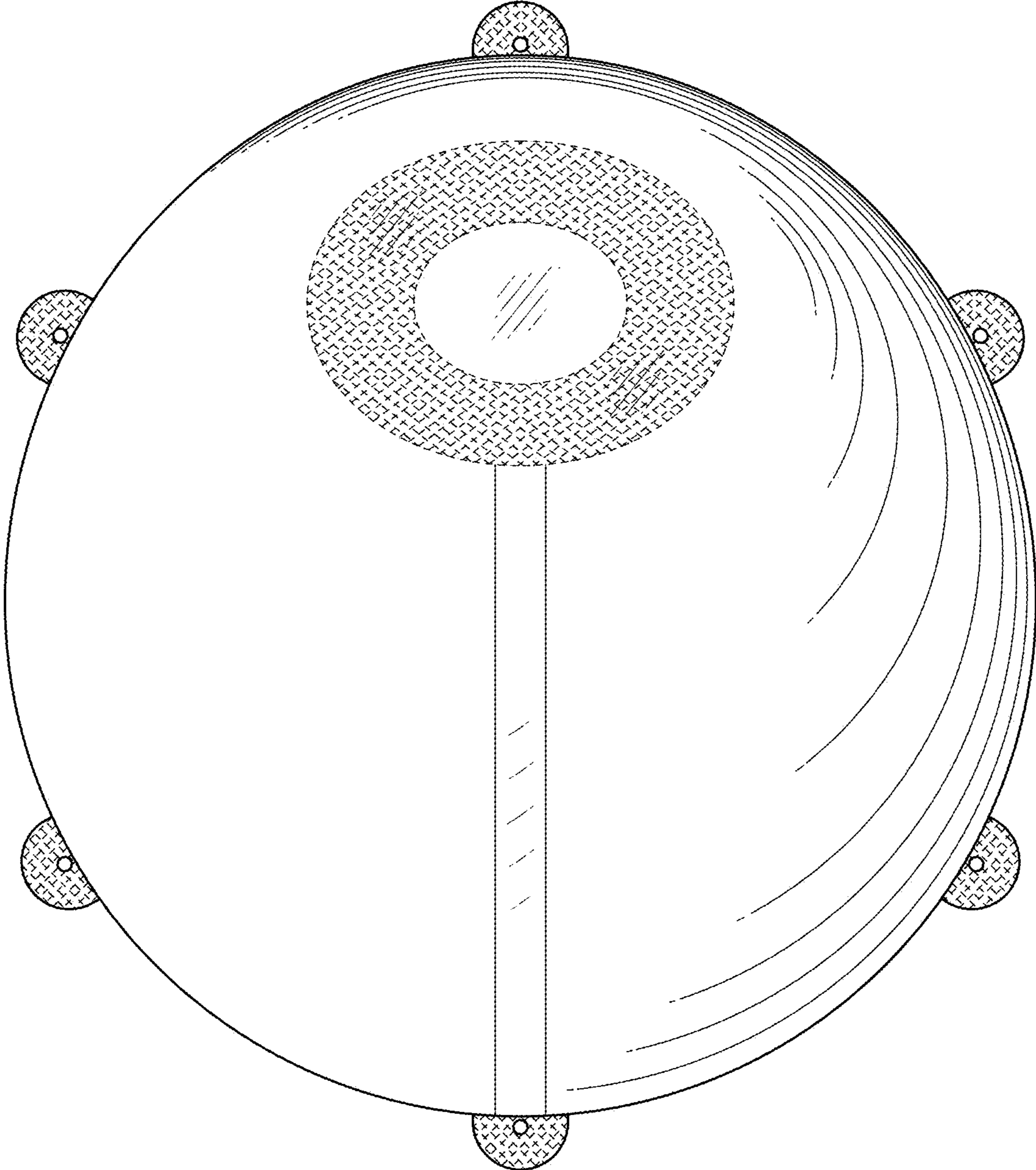


FIG. 5

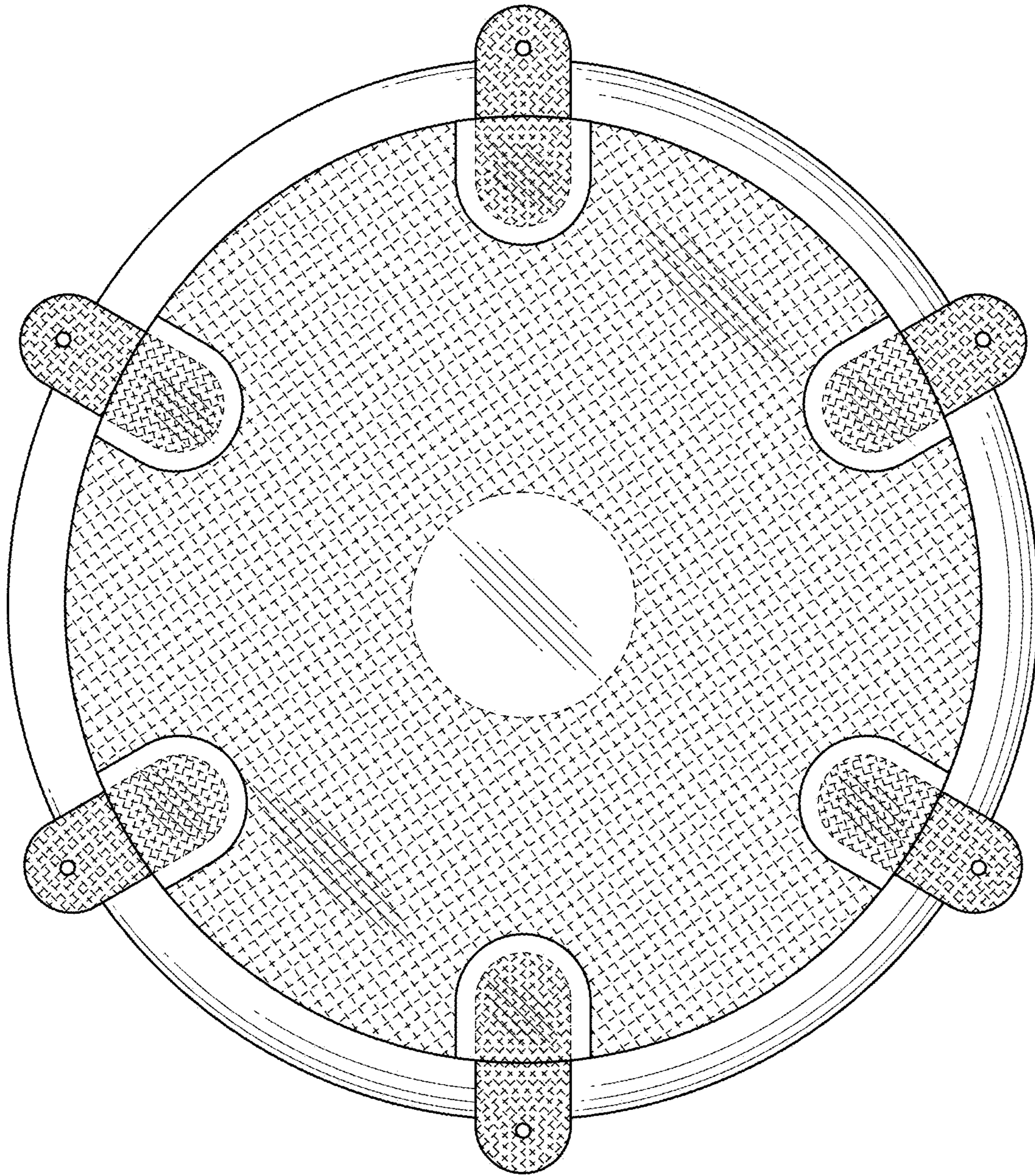


FIG. 6

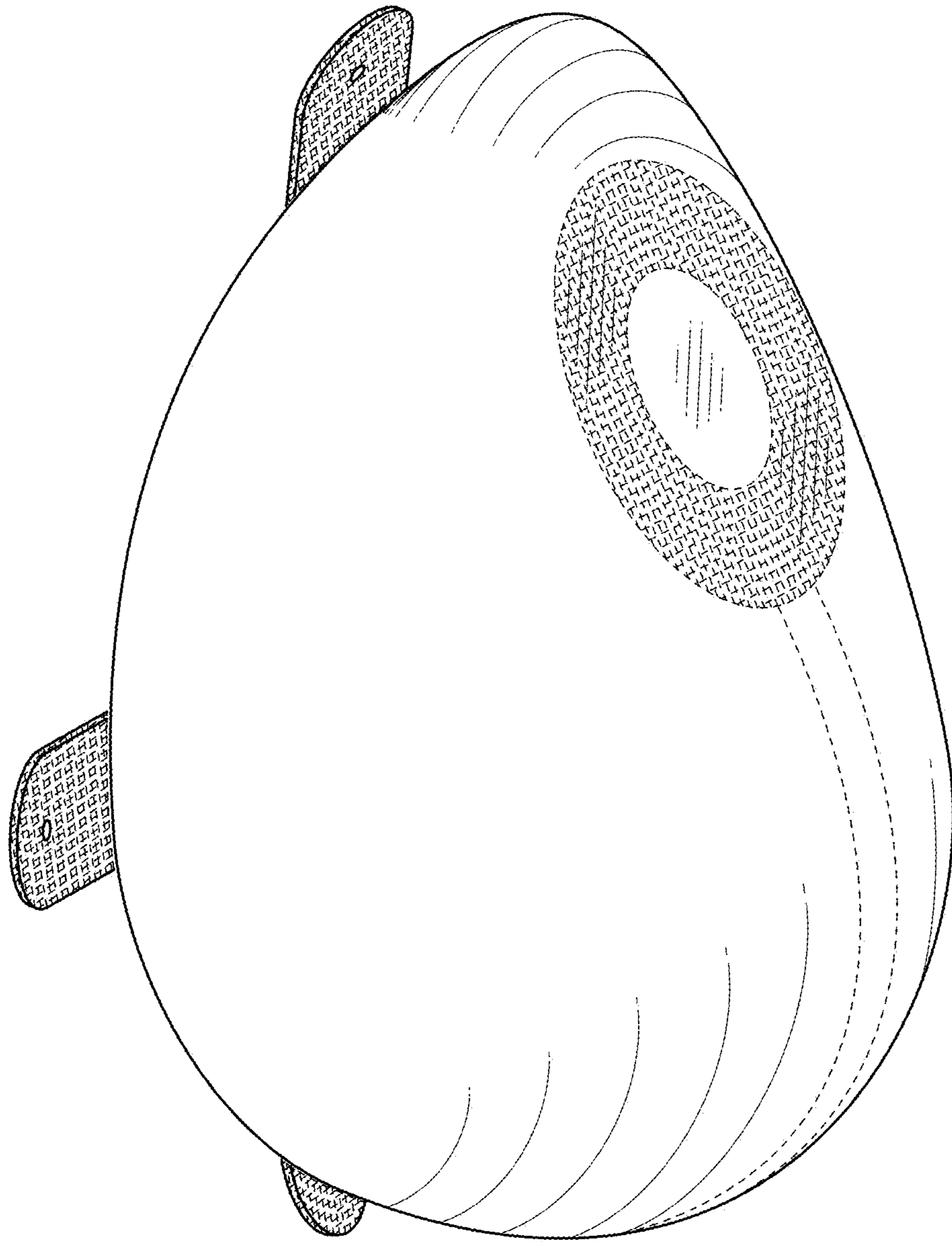


FIG. 7

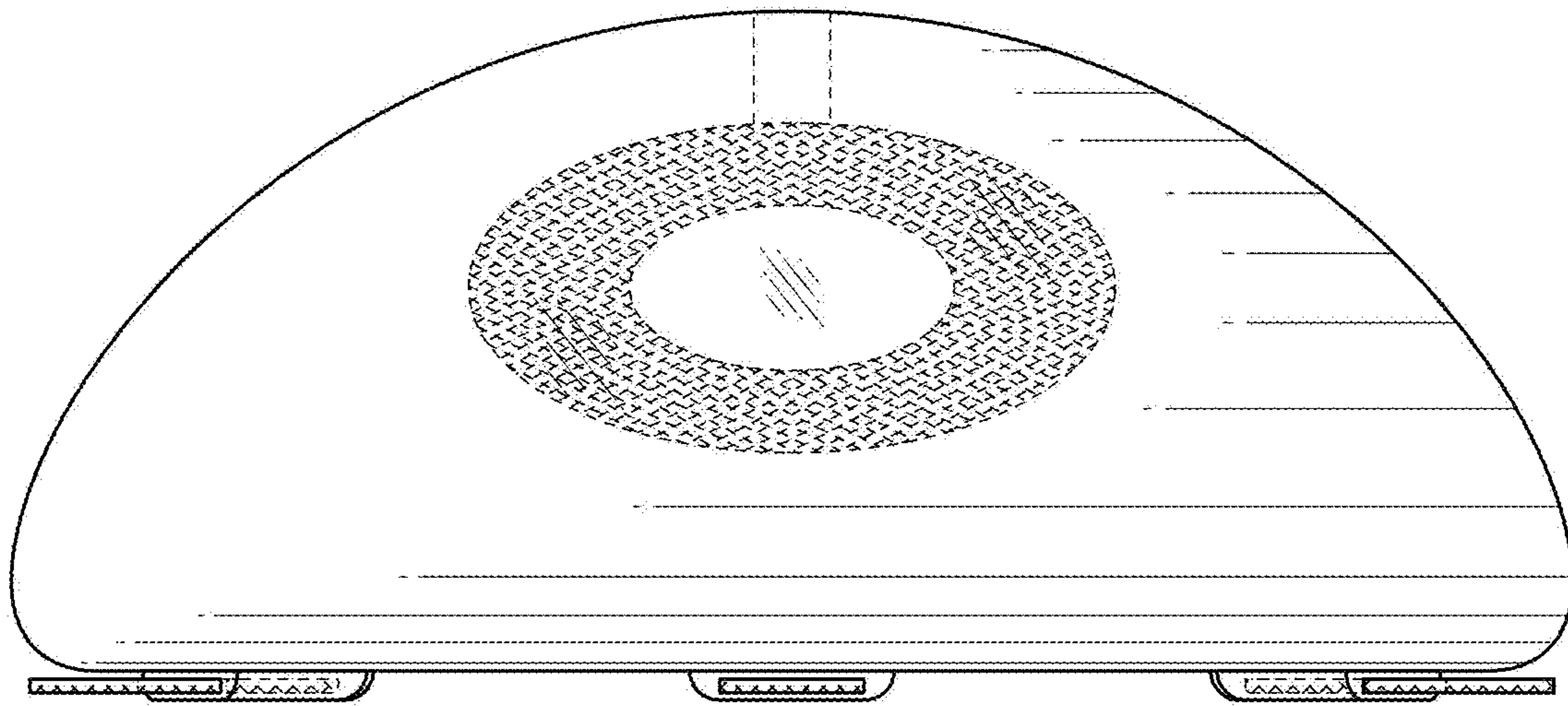


FIG. 8

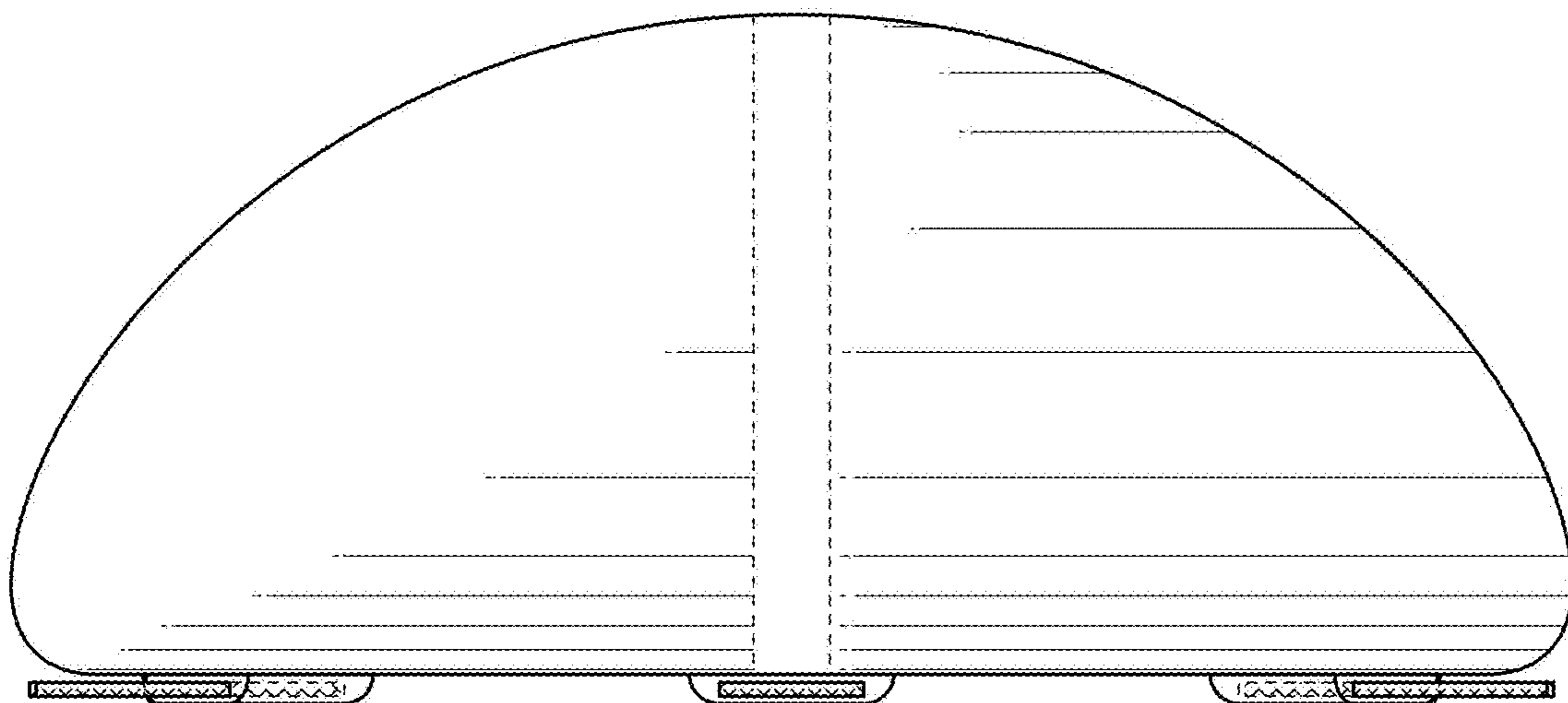


FIG. 9



FIG. 10

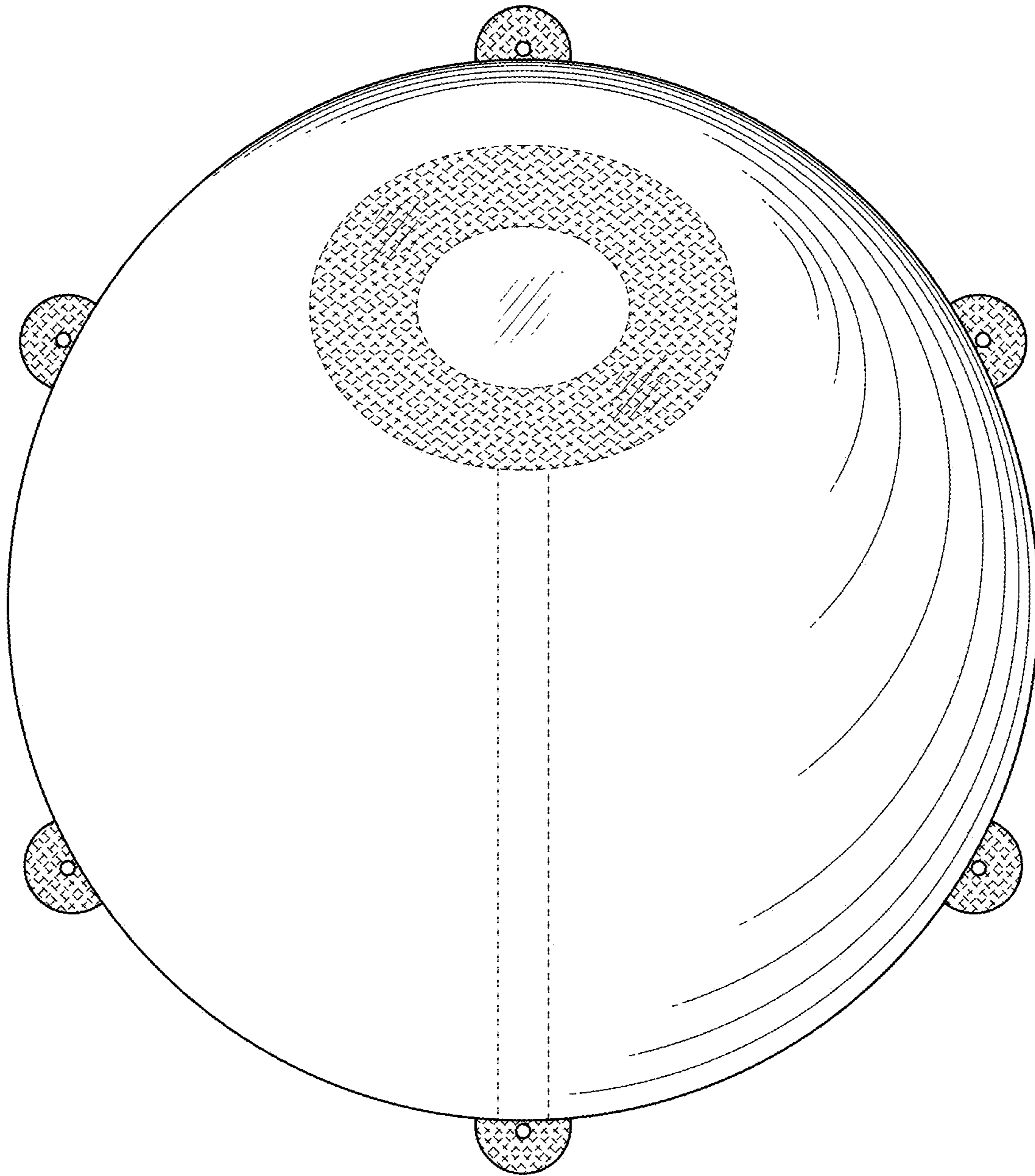


FIG. 11

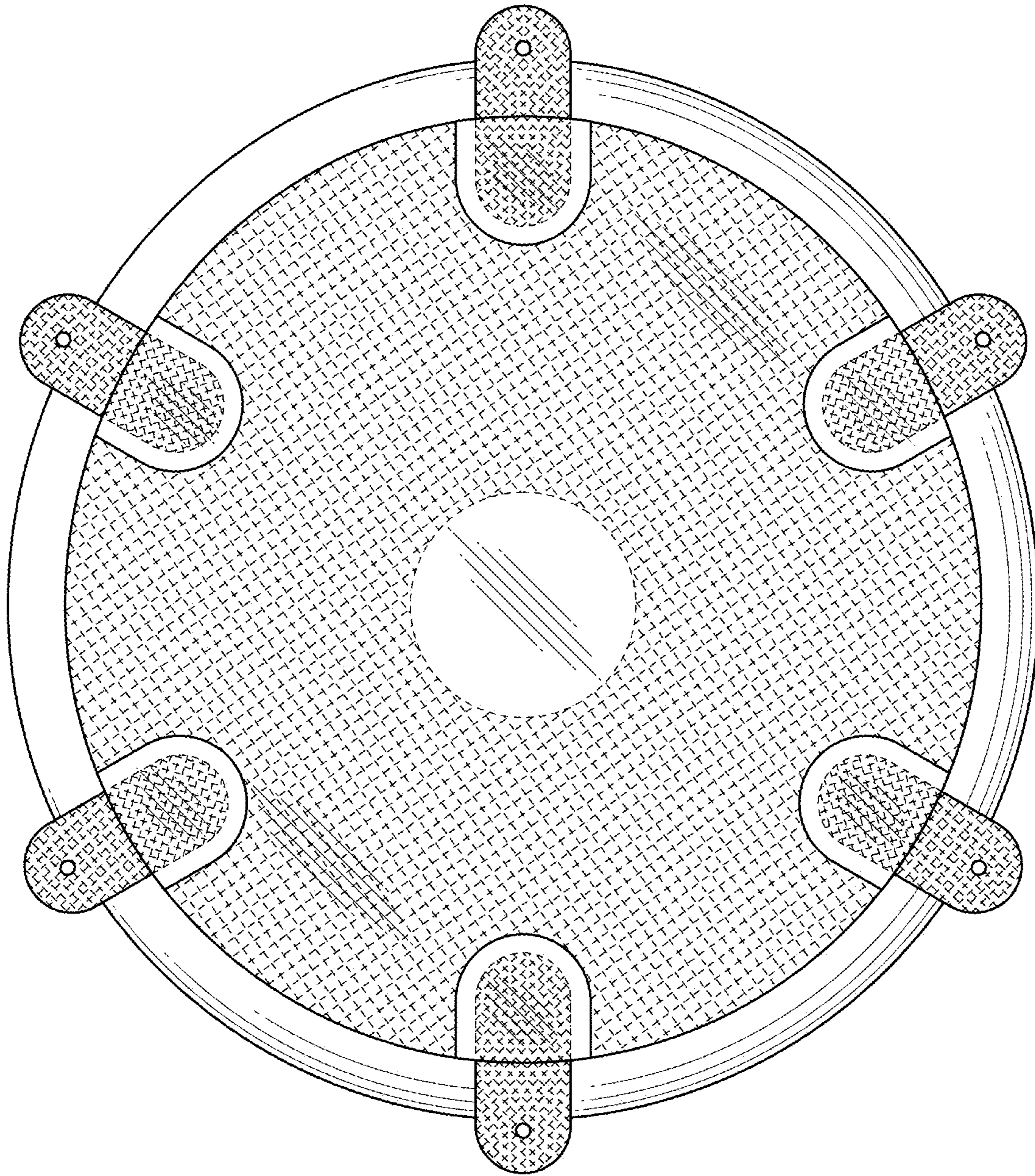


FIG. 12

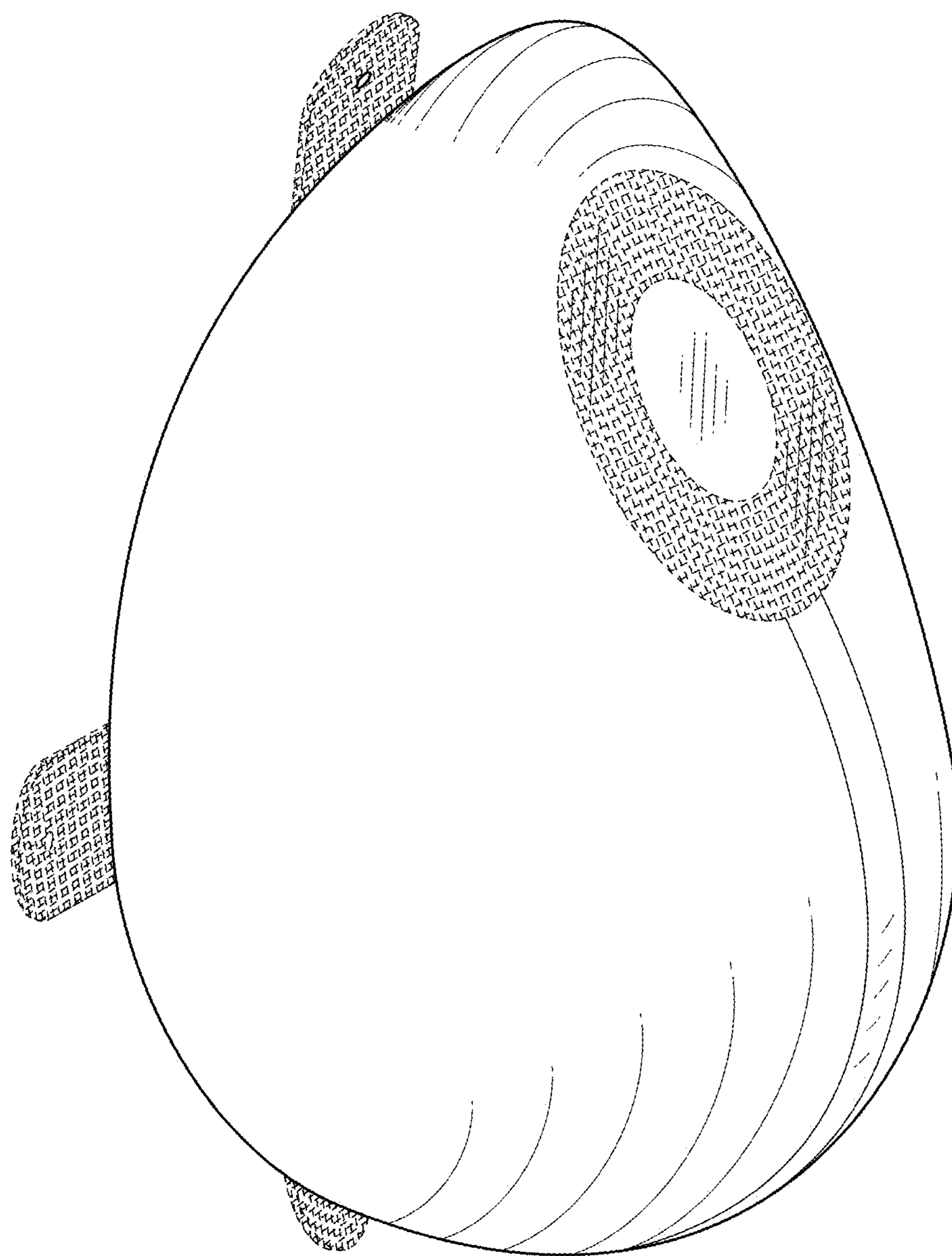


FIG. 13

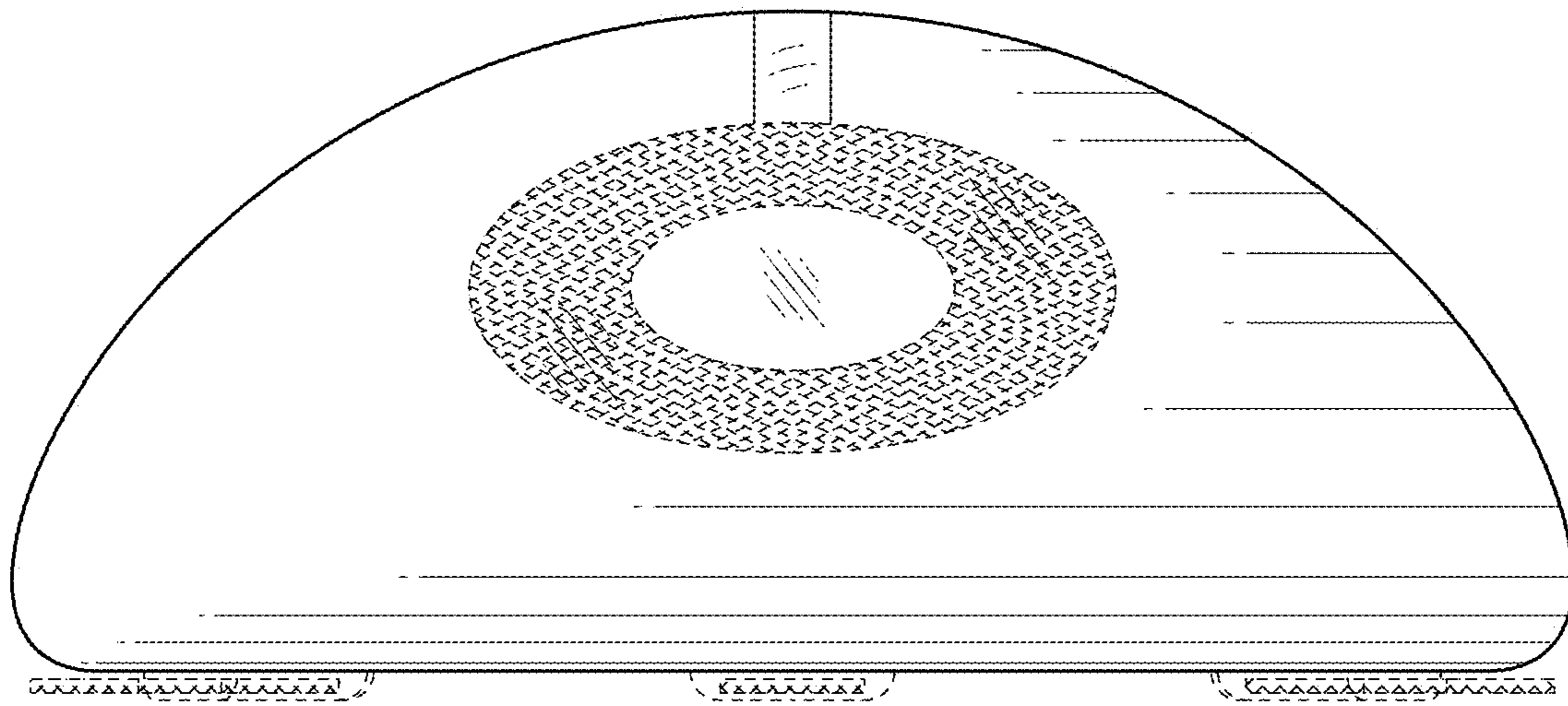


FIG. 14

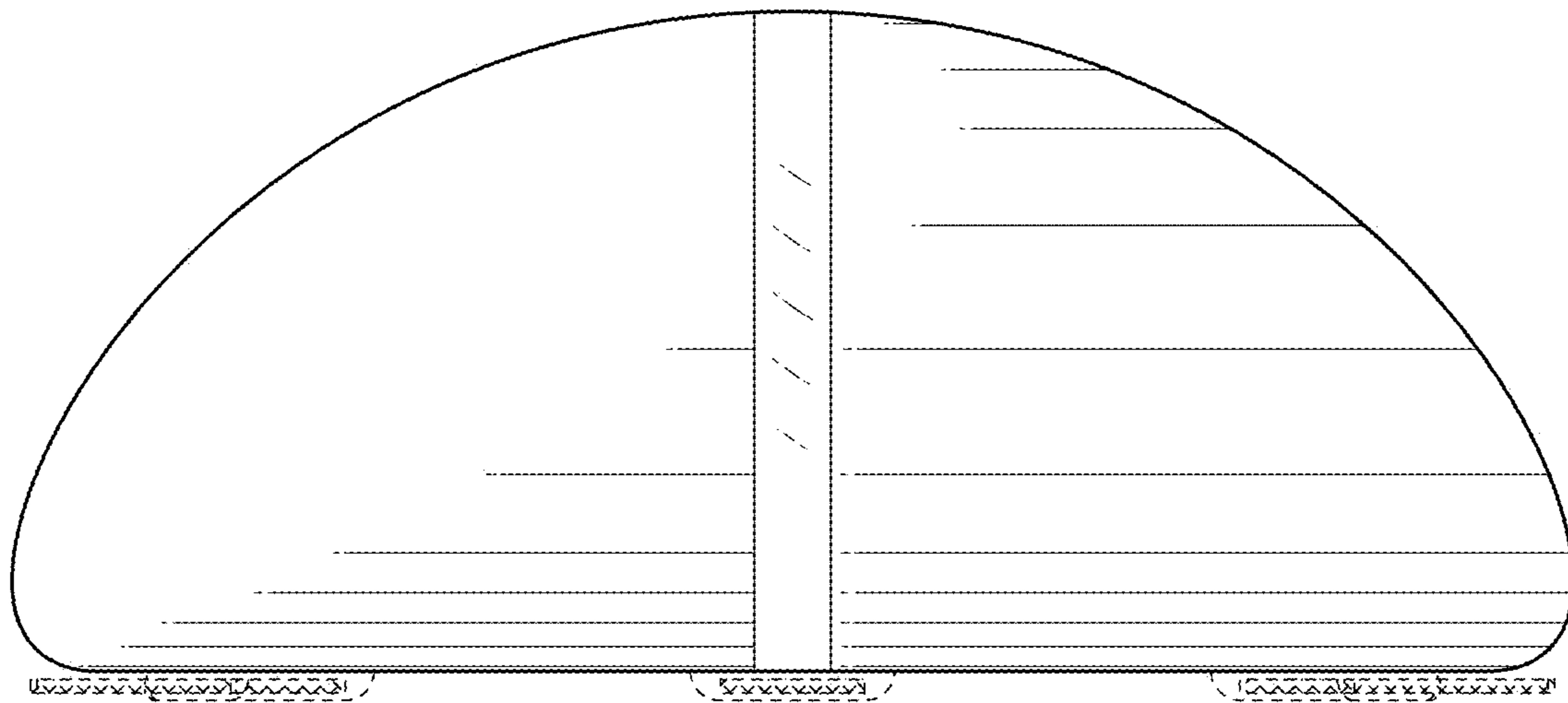


FIG. 15

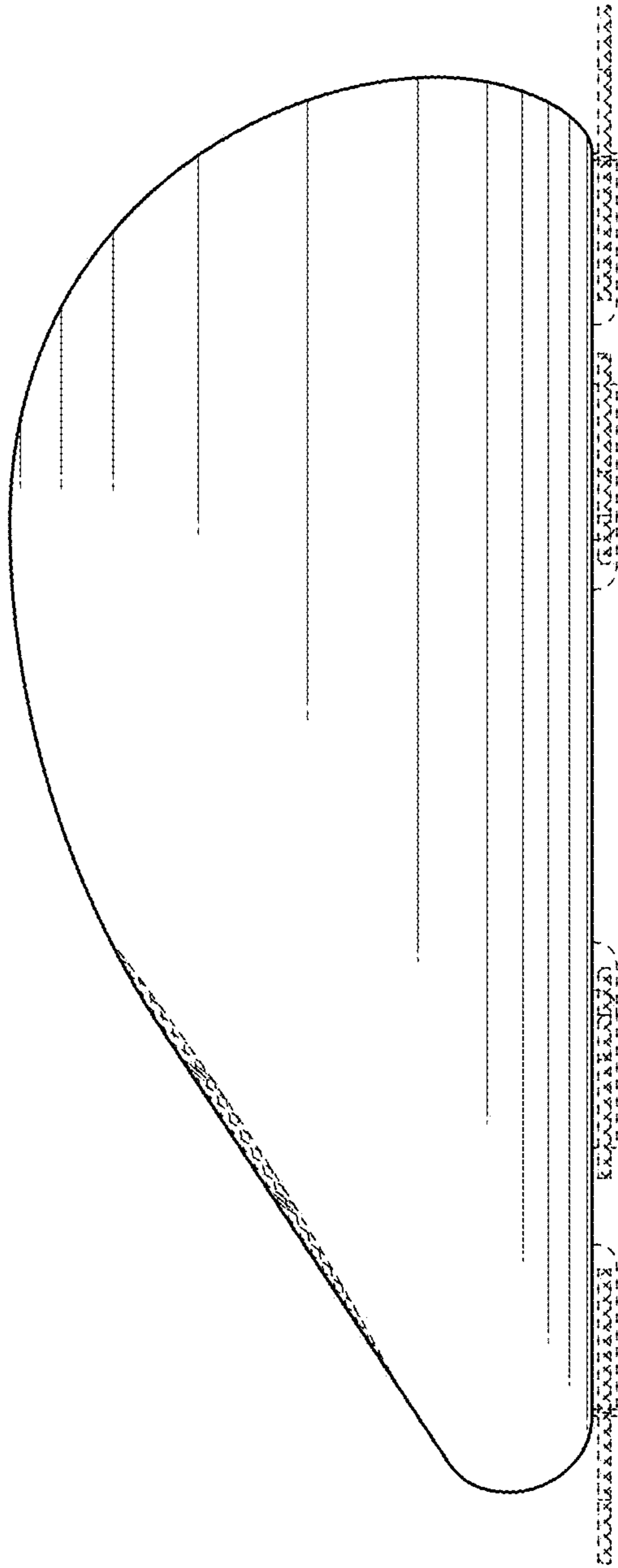


FIG. 16

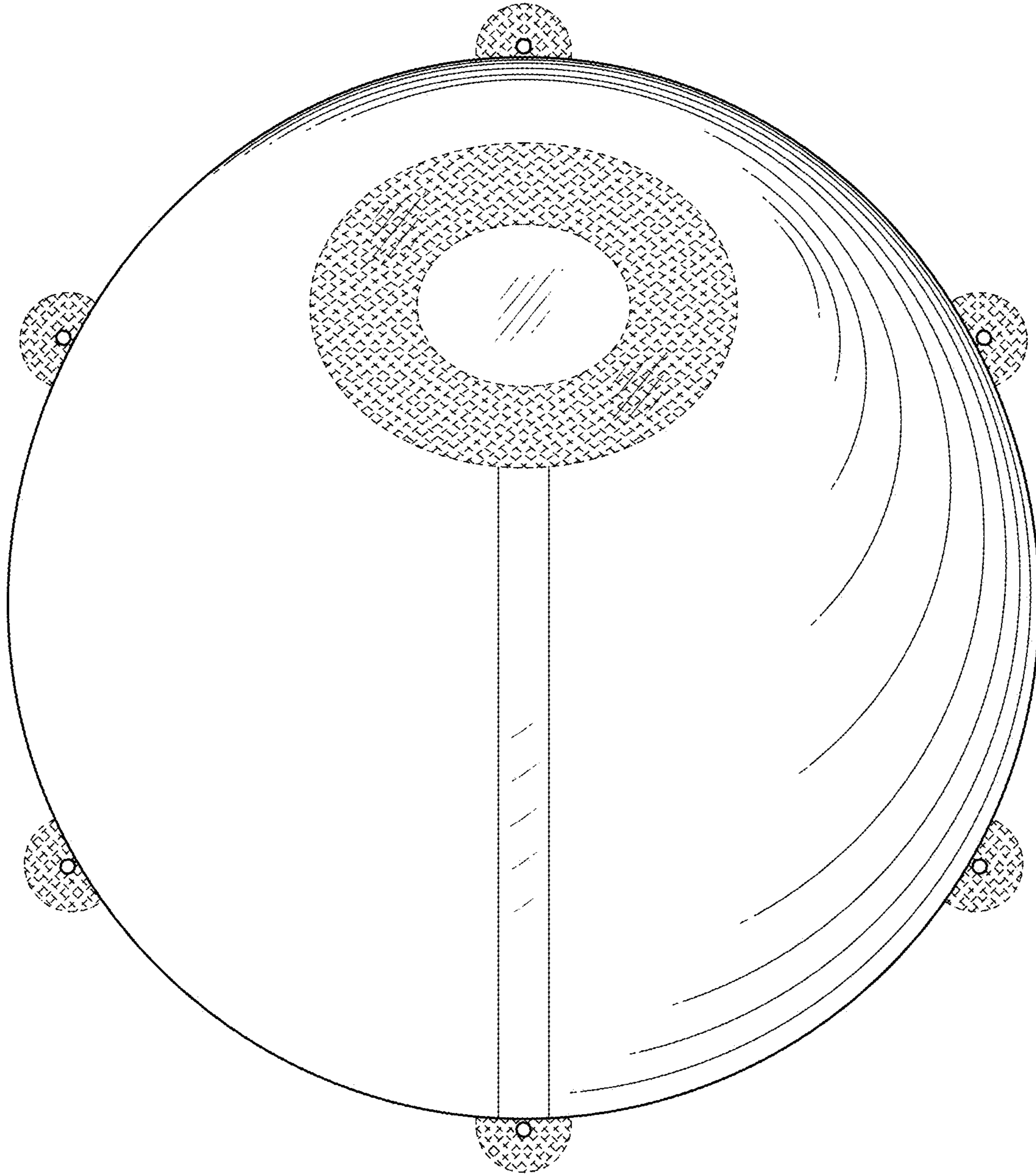


FIG. 17

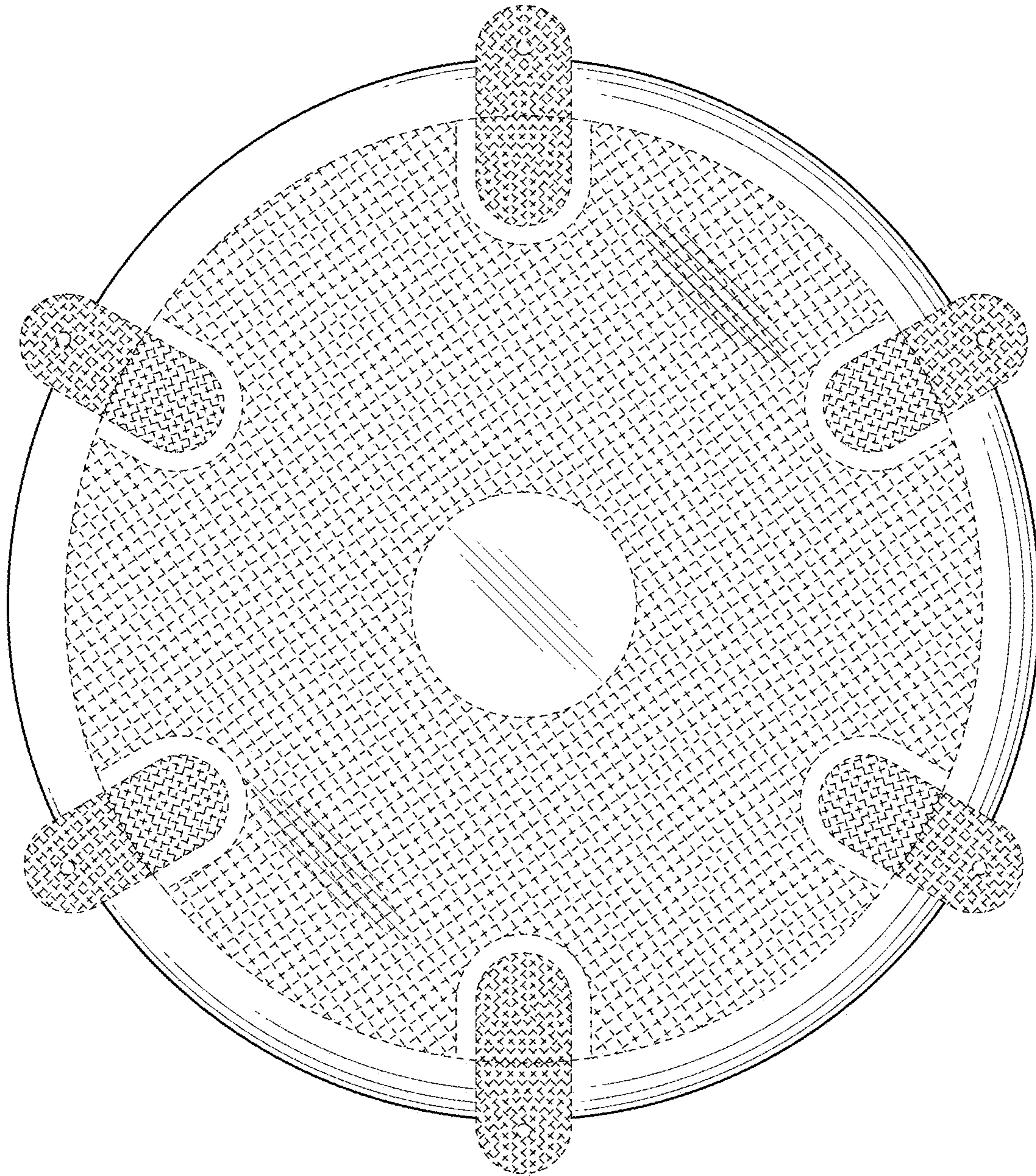


FIG. 18

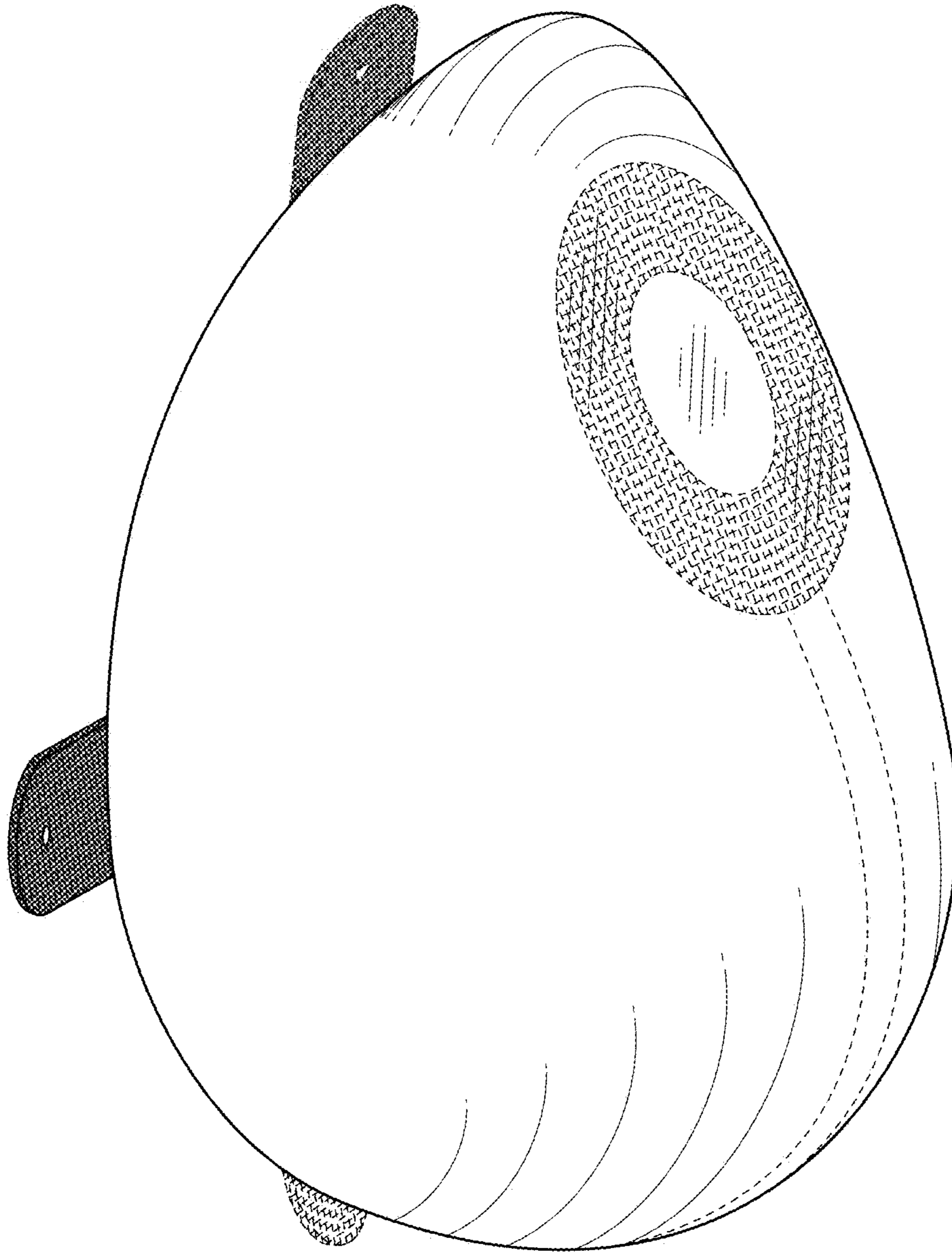


FIG. 19

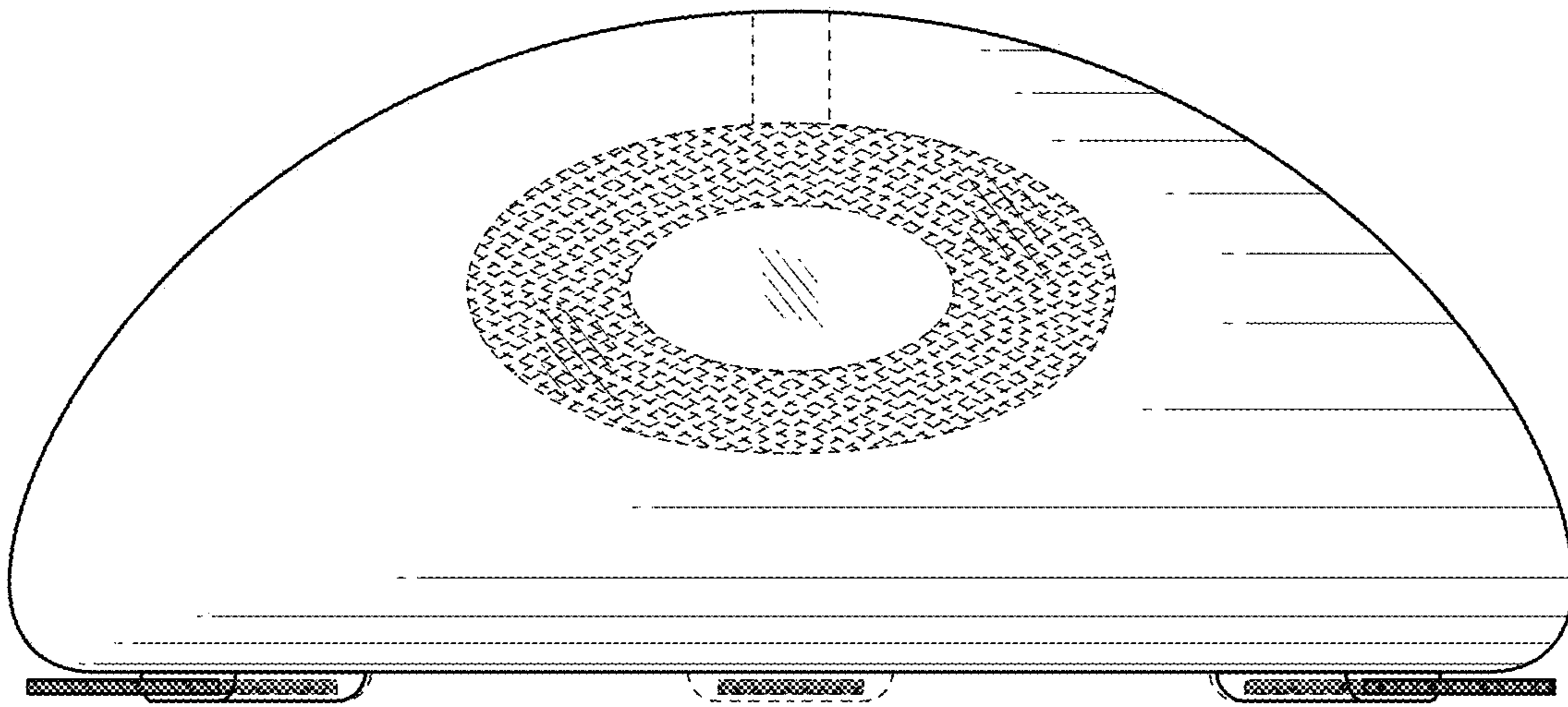


FIG. 20

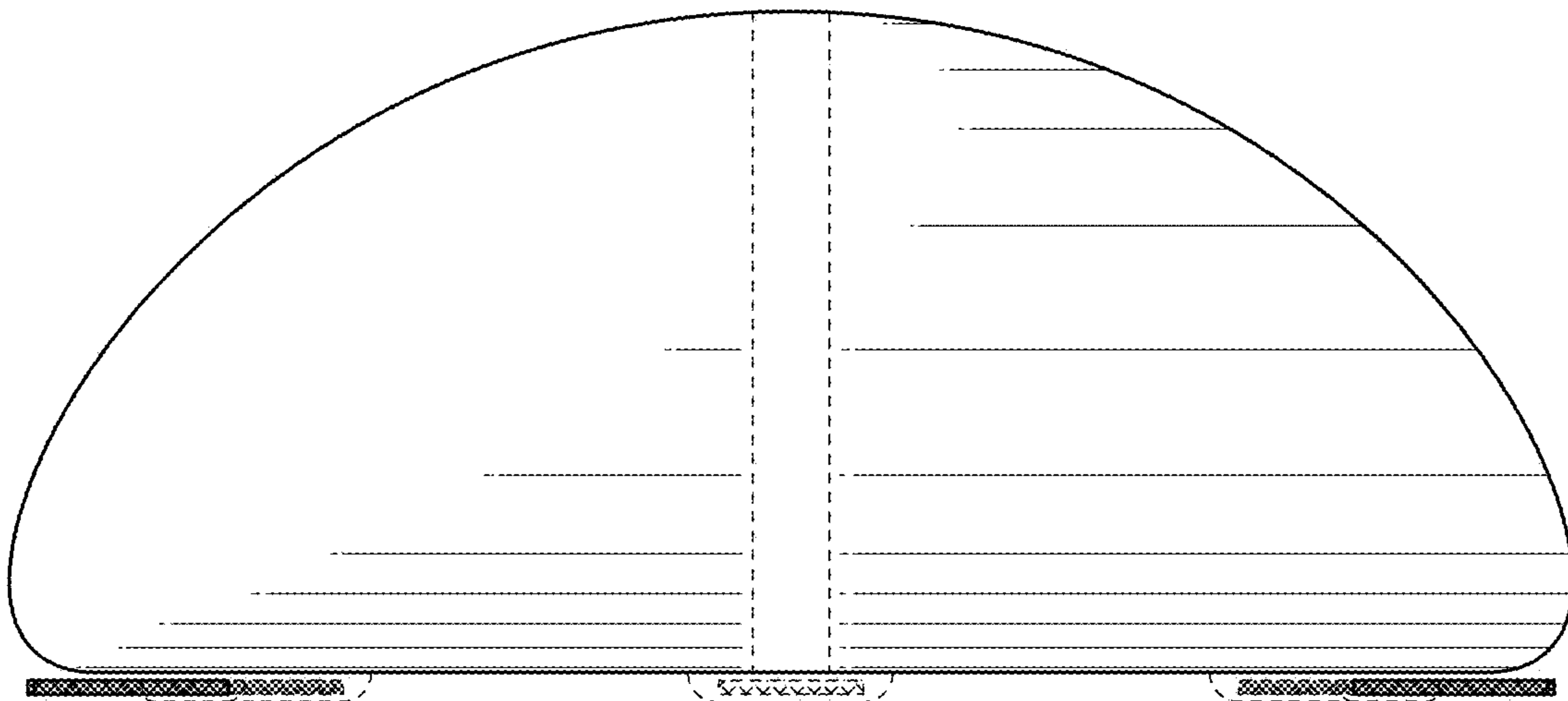


FIG. 21

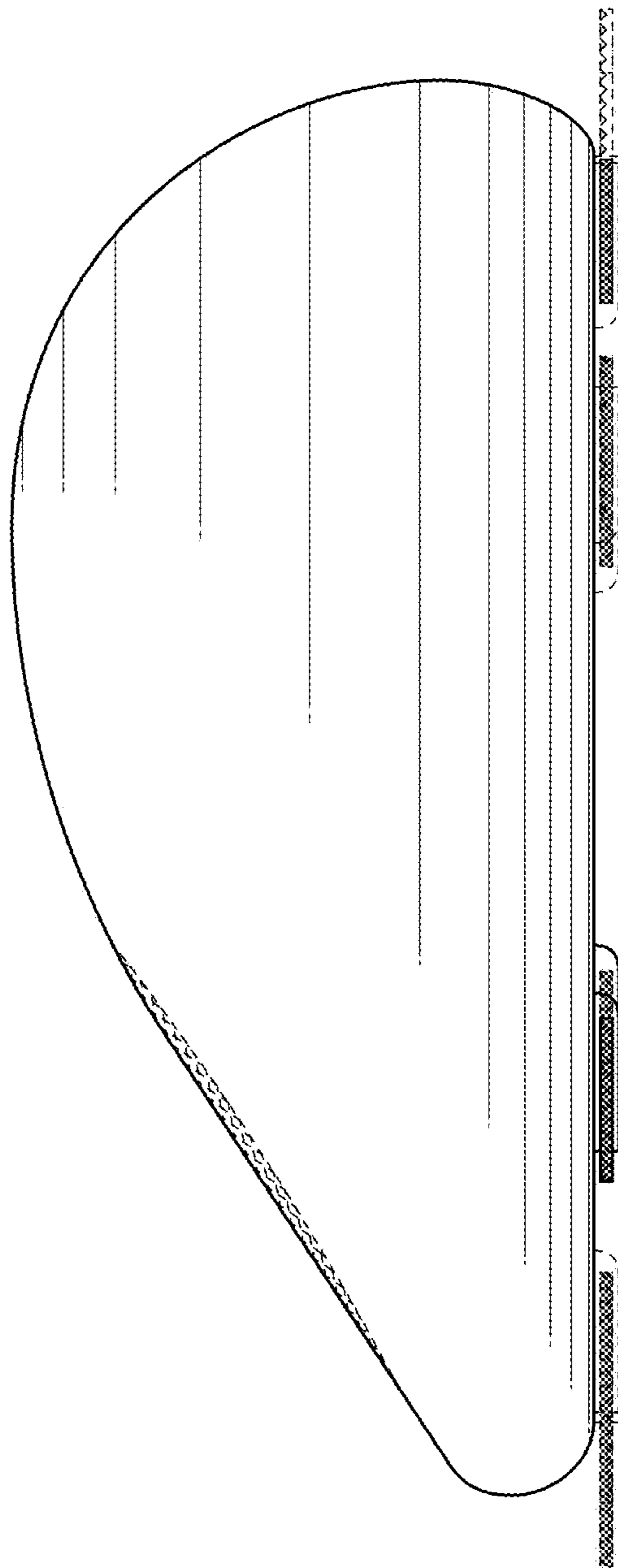


FIG. 22

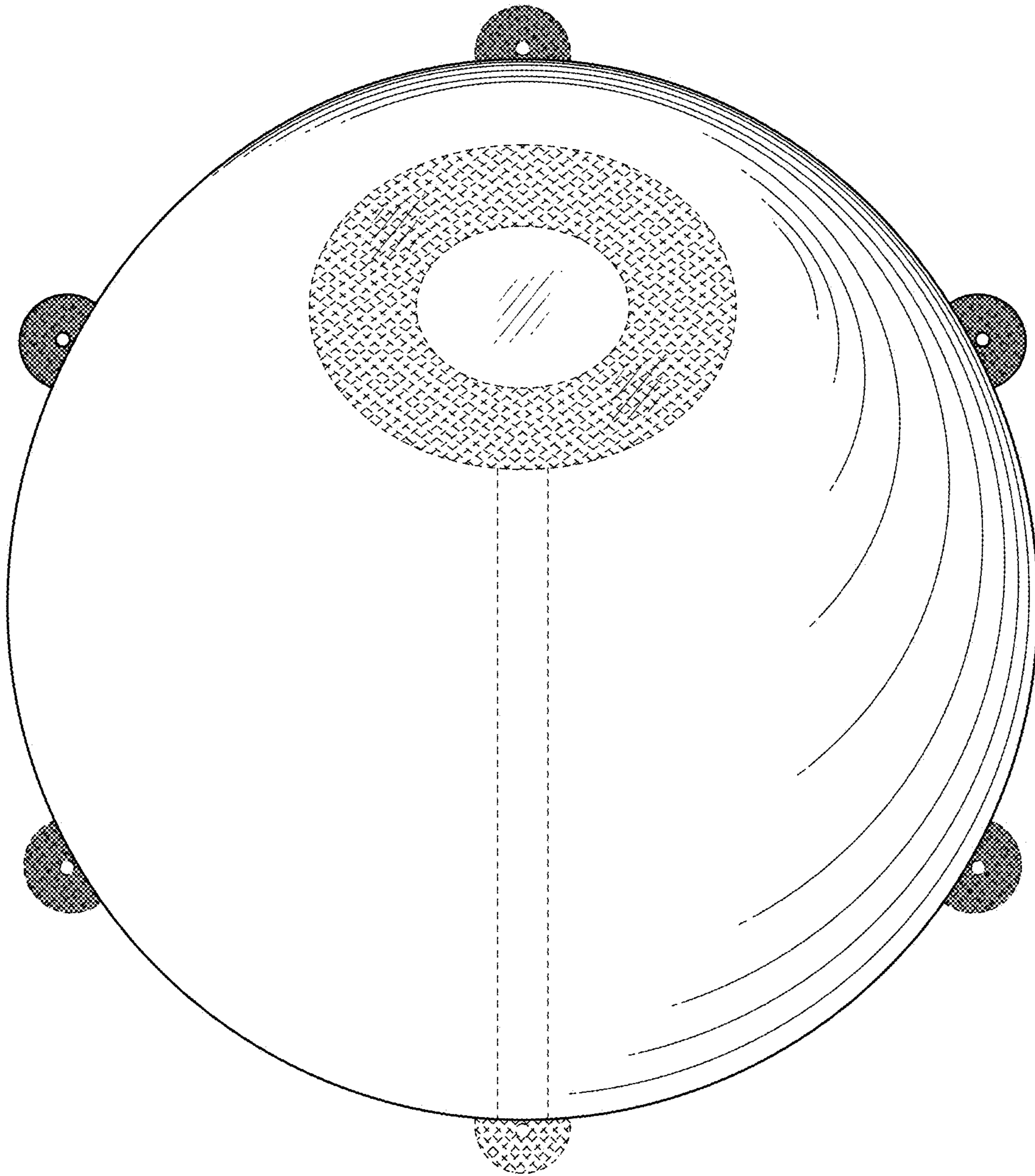


FIG. 23

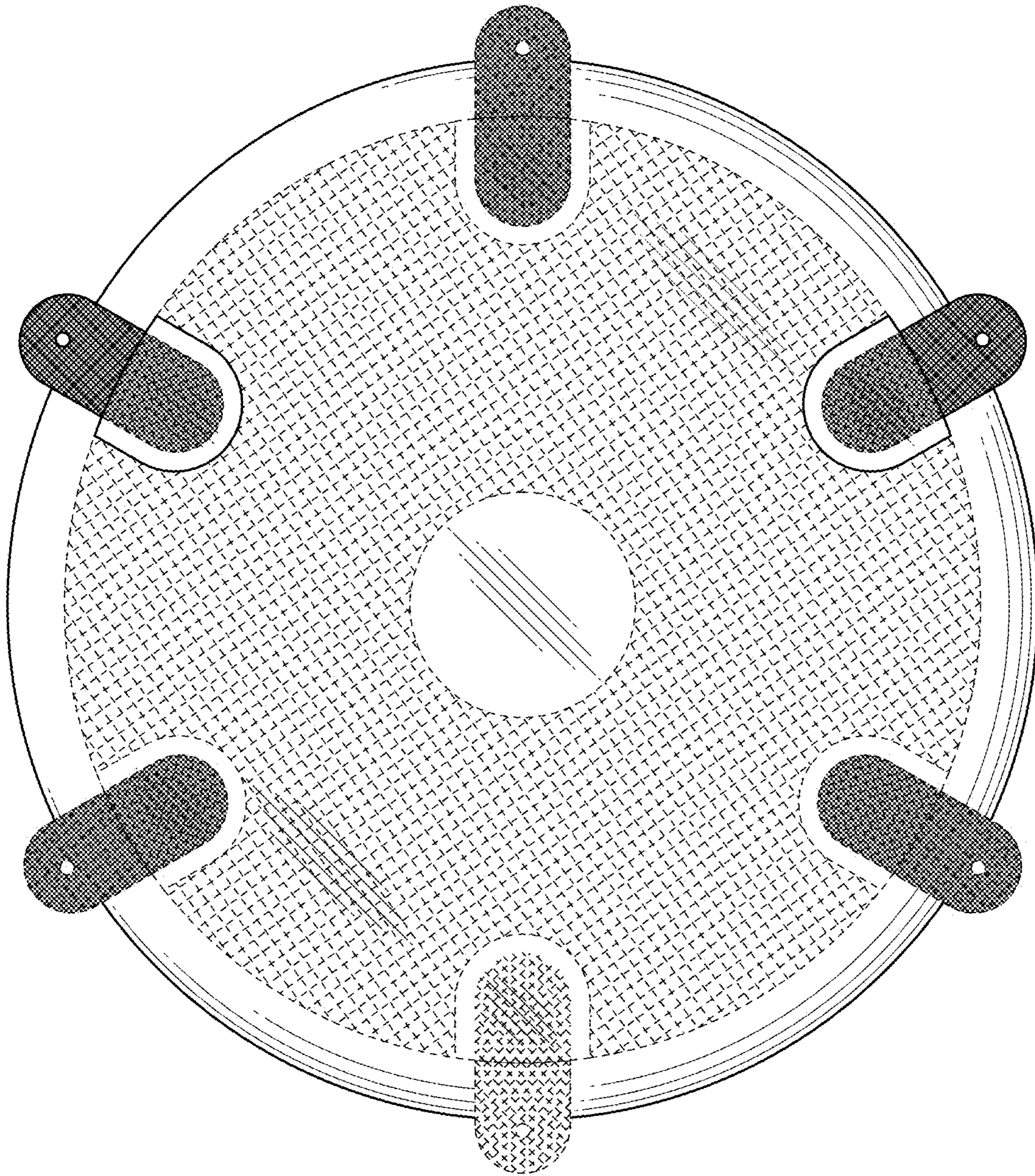


FIG. 24

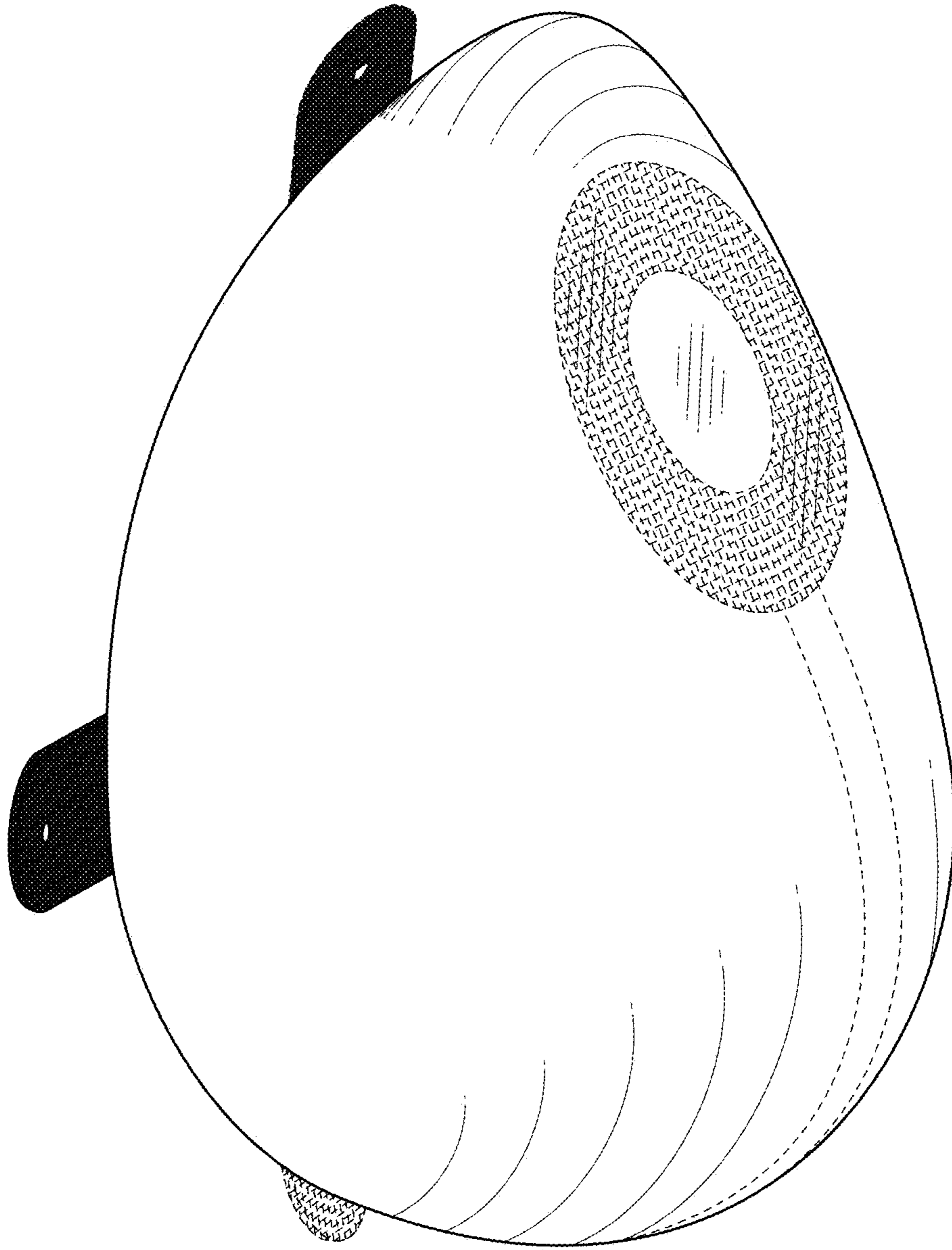


FIG. 25

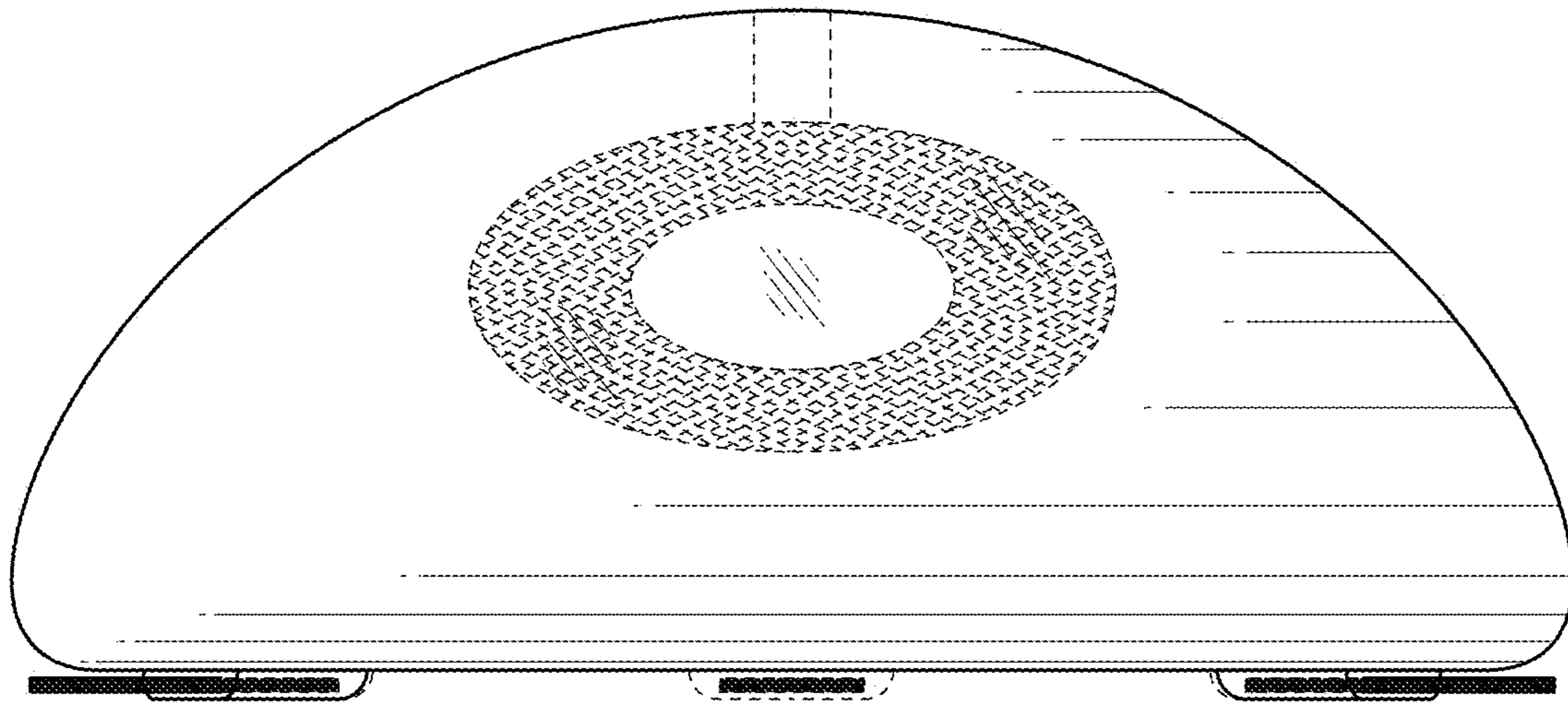


FIG. 26

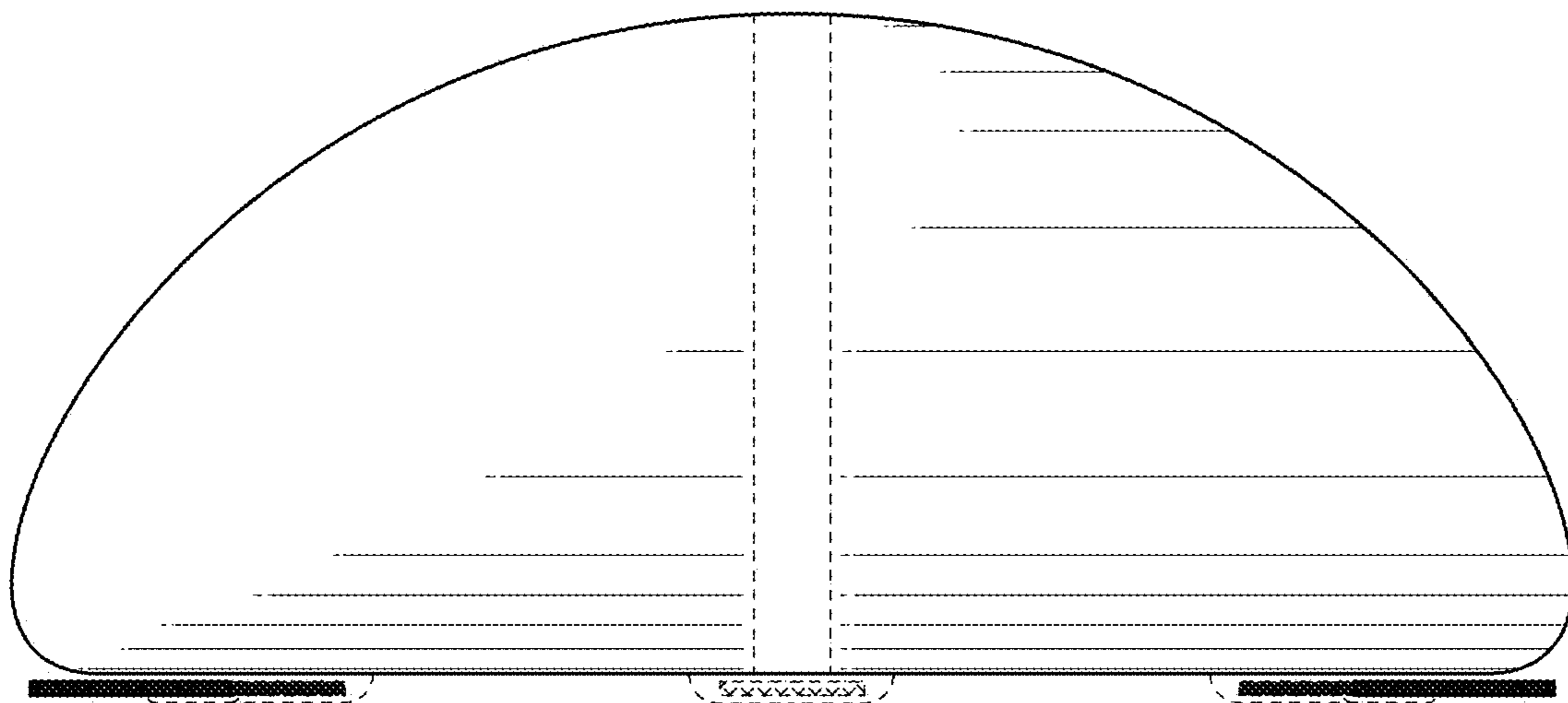


FIG. 27

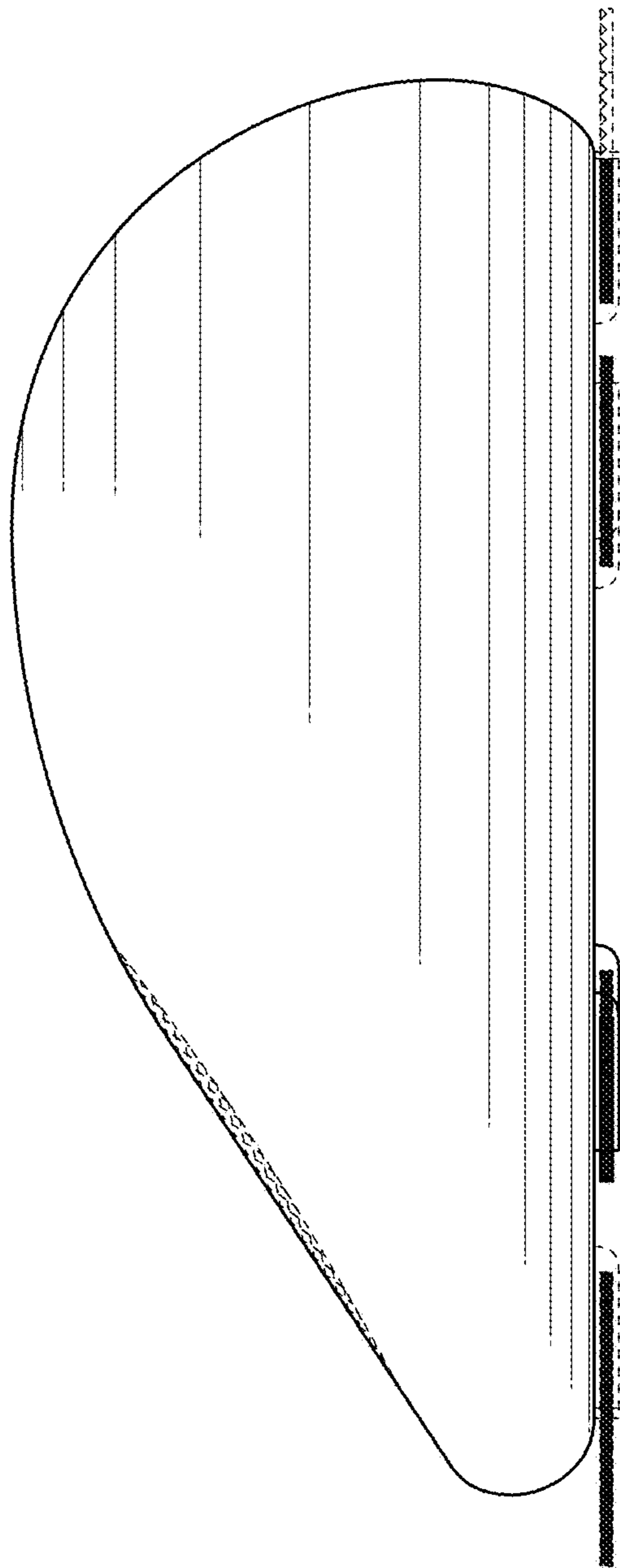


FIG. 28

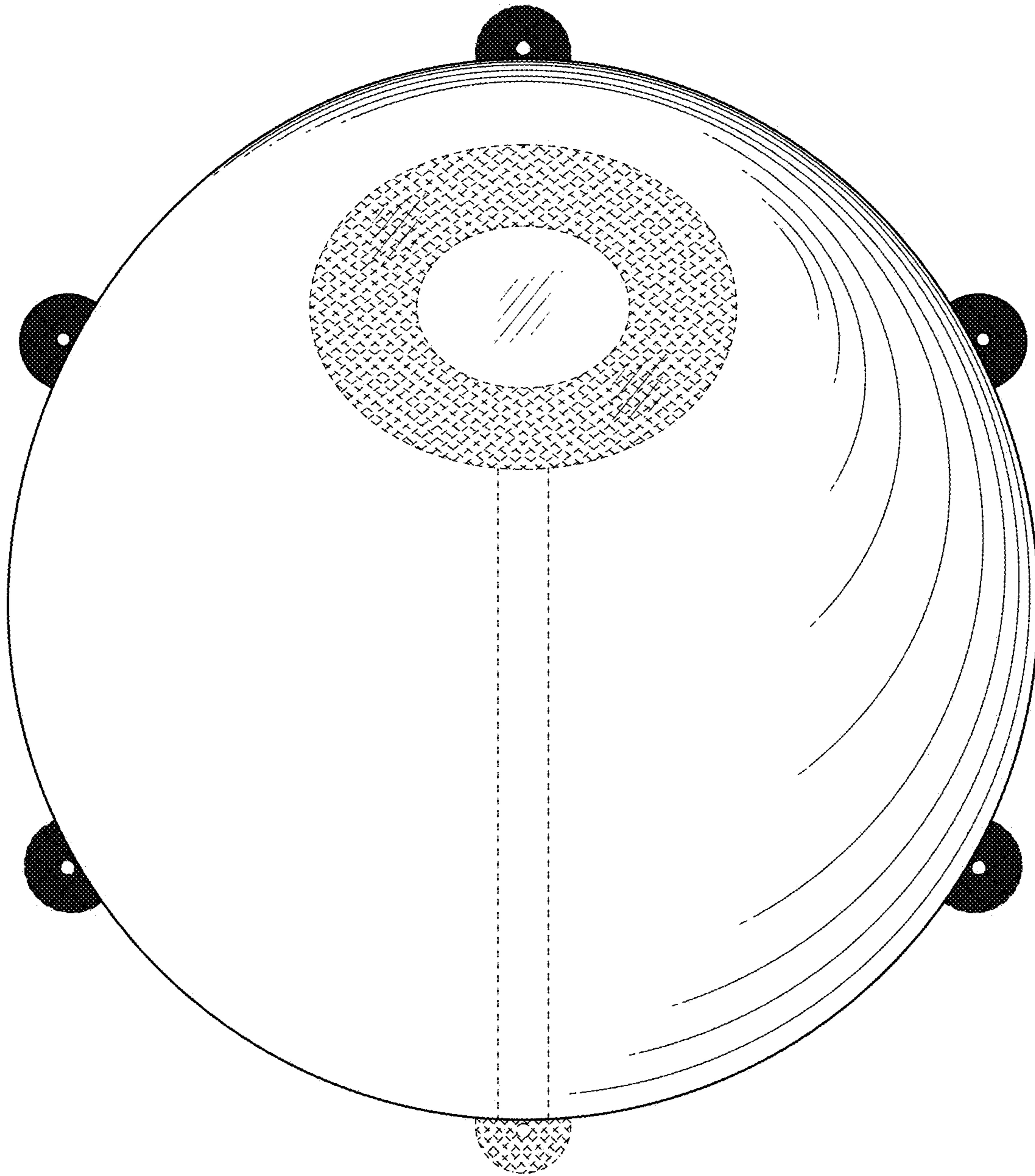


FIG. 29

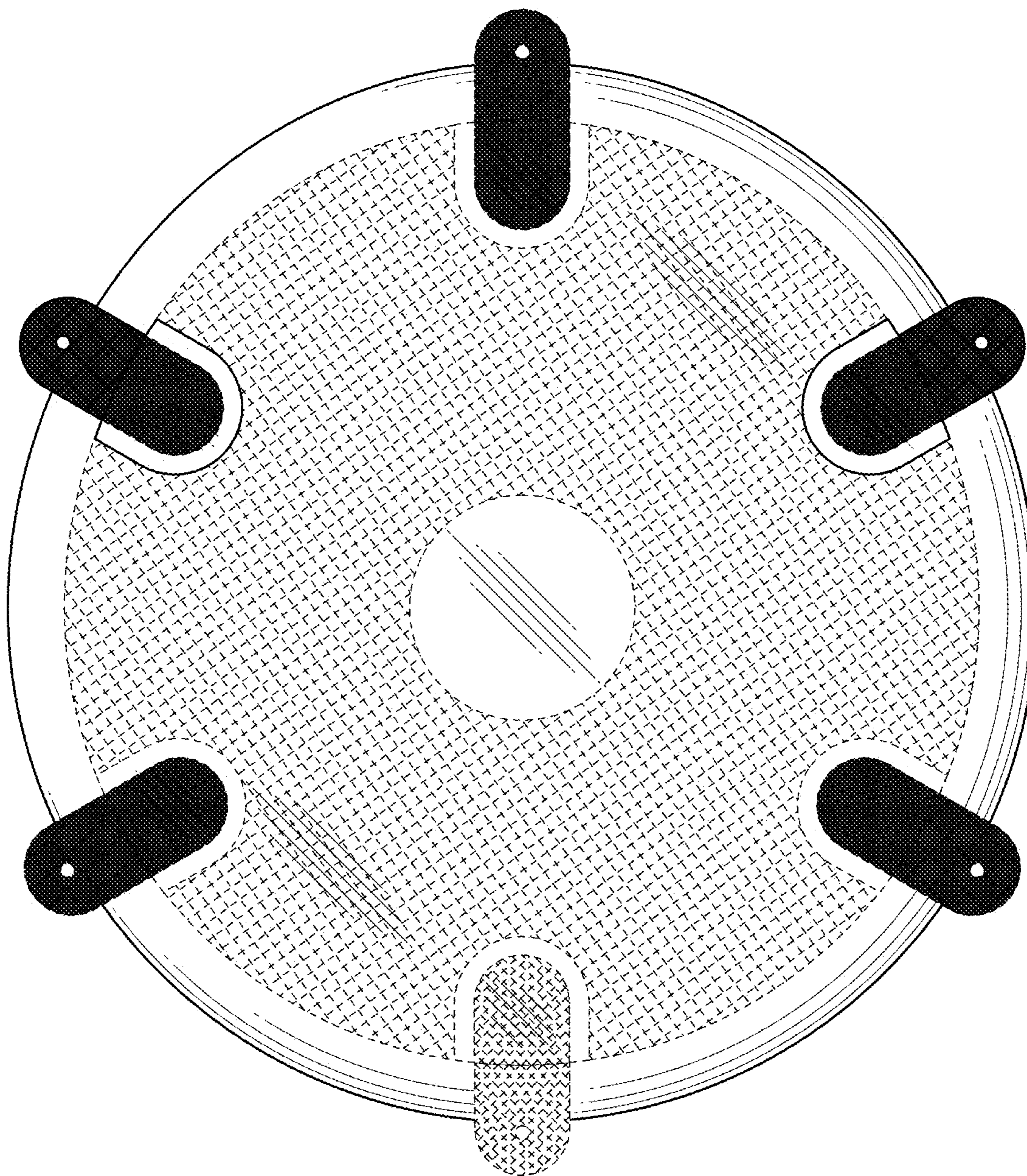


FIG. 30

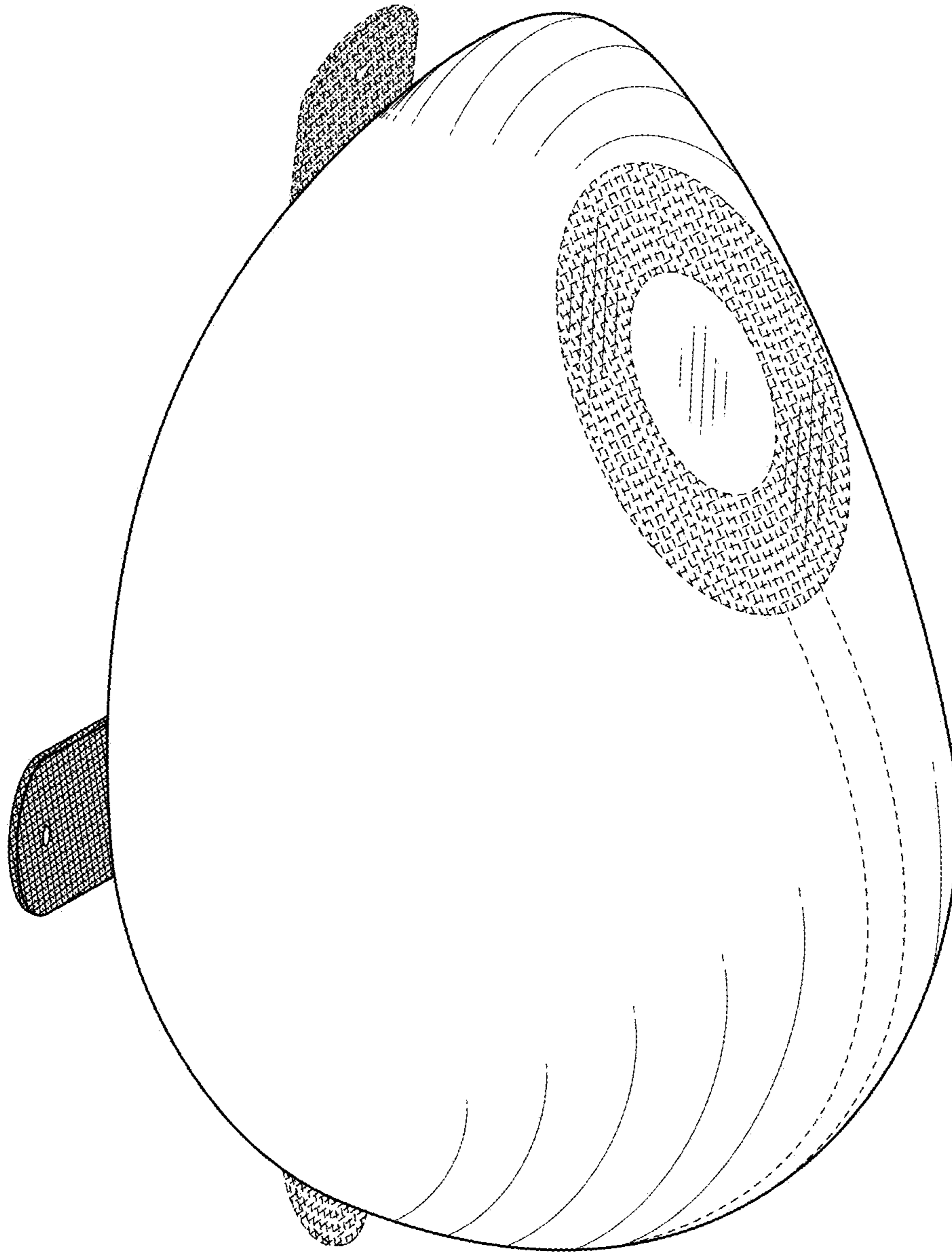


FIG. 31

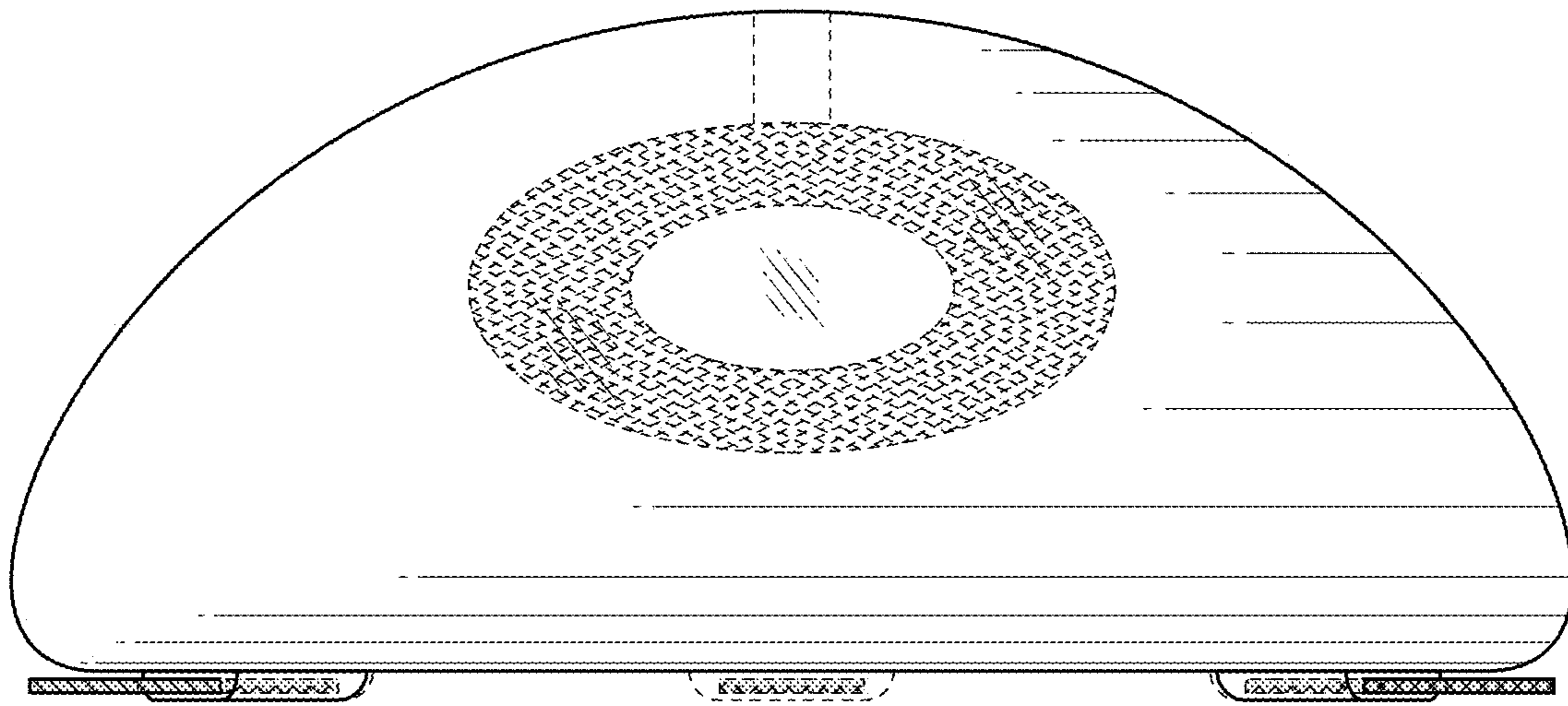


FIG. 32

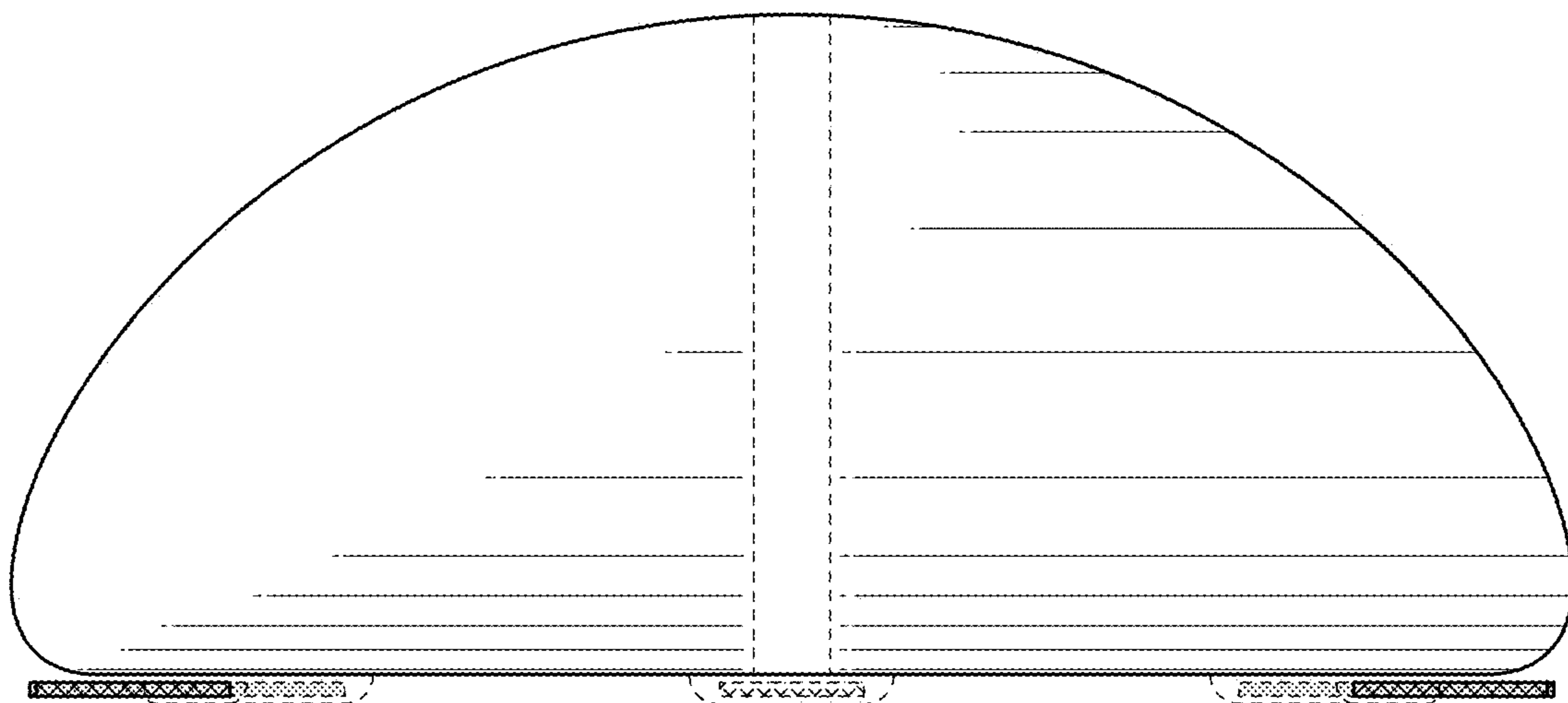


FIG. 33

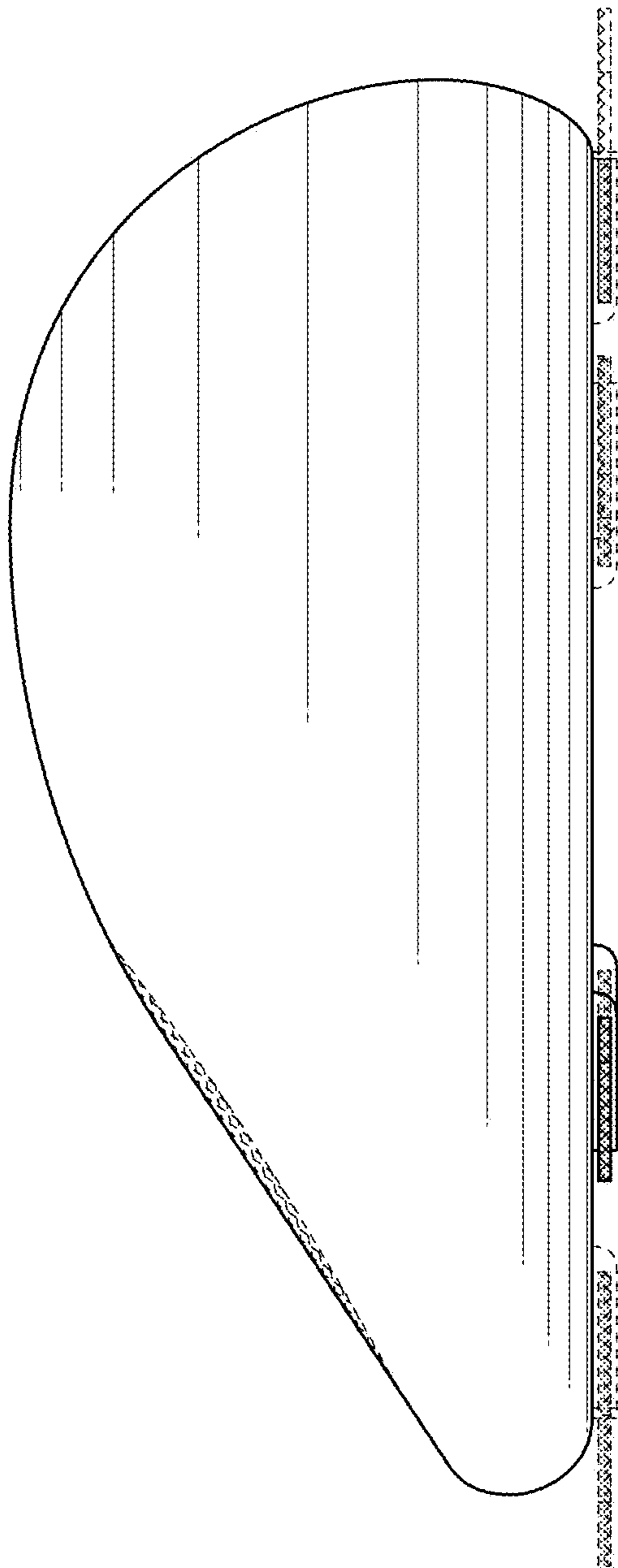


FIG. 34

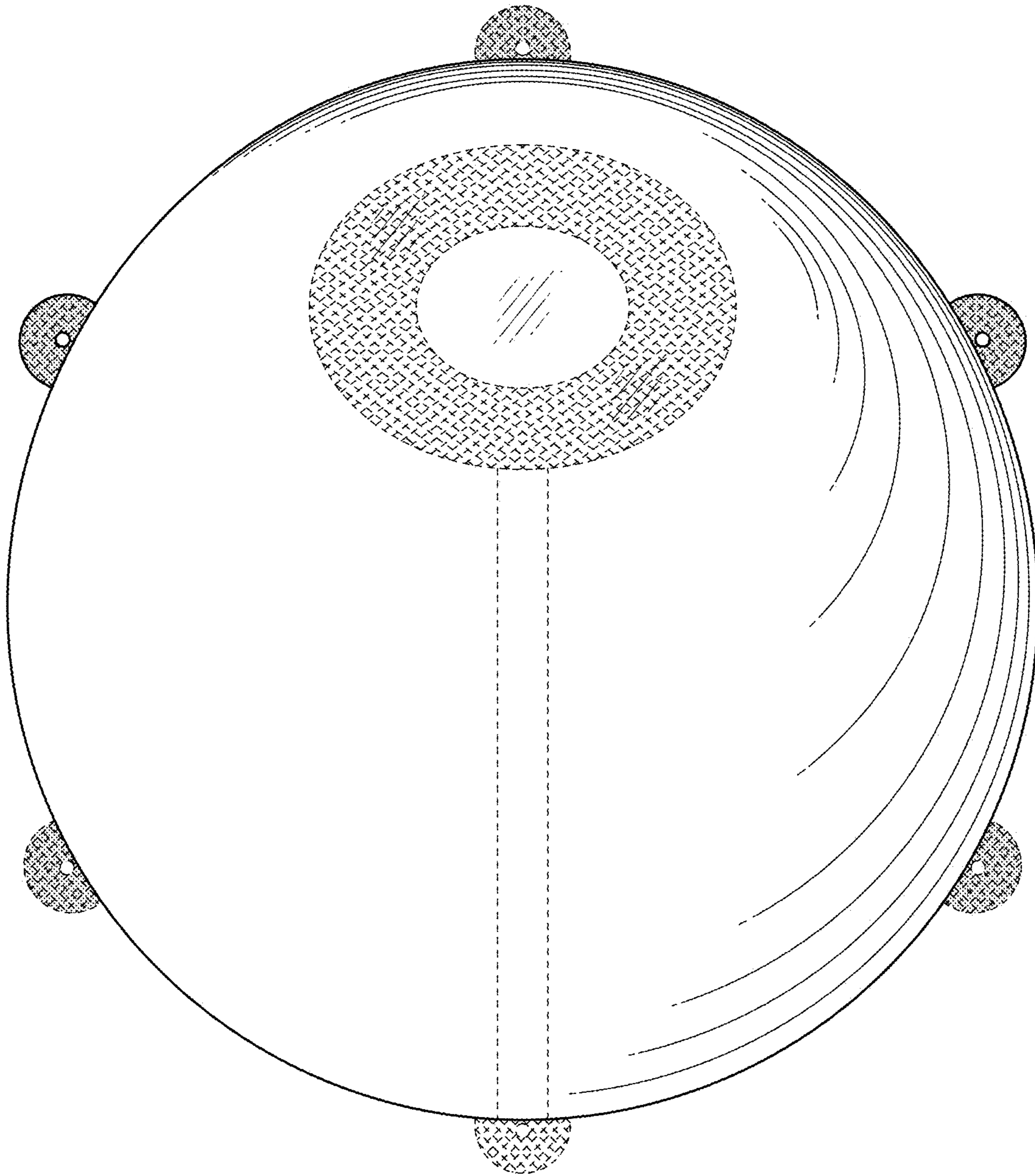


FIG. 35

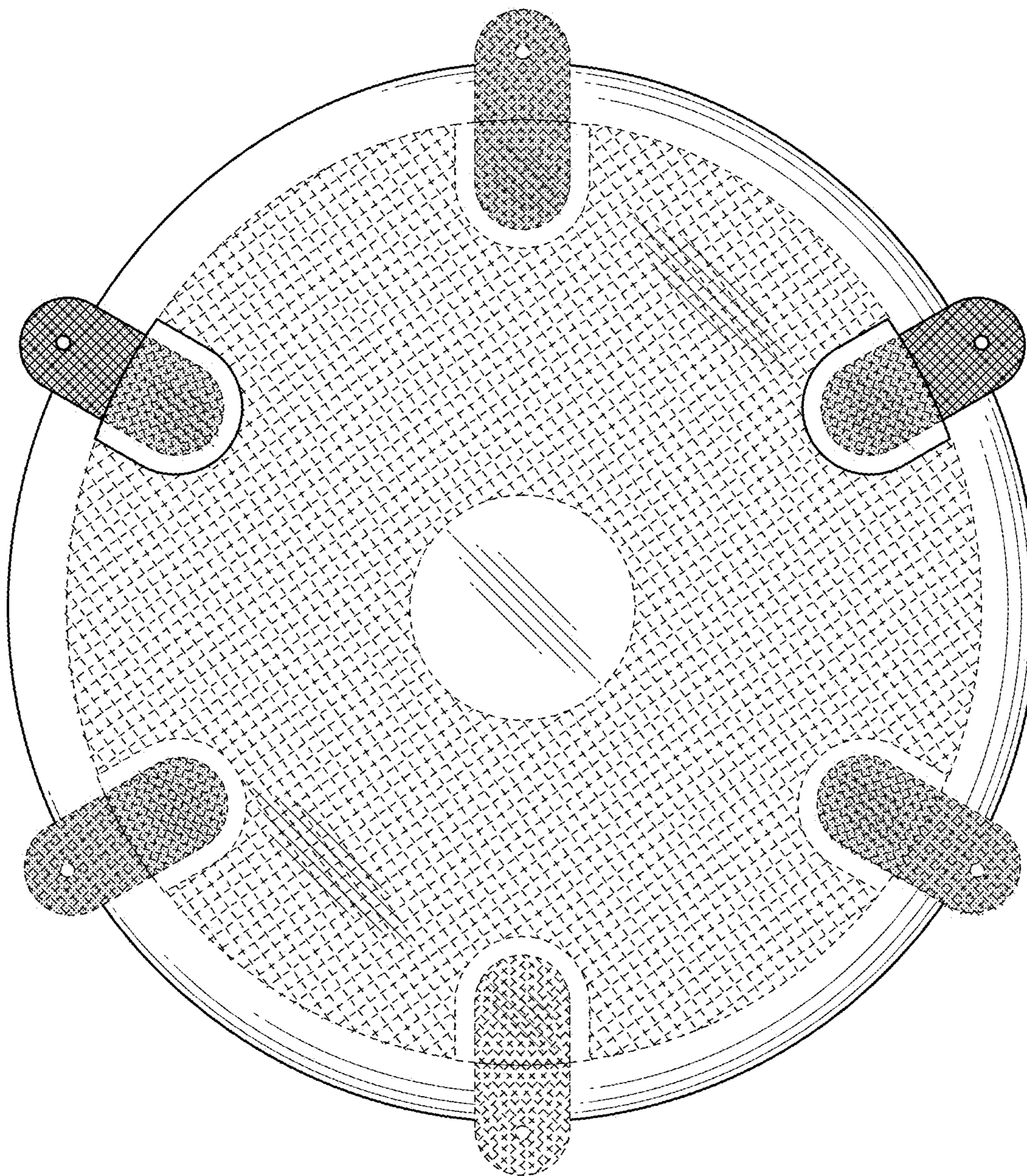


FIG. 36