



US00D863195S

(12) **United States Design Patent** (10) **Patent No.:** **US D863,195 S**  
**Bidigare et al.** (45) **Date of Patent:** **\*\* \*Oct. 15, 2019**

(54) **VEHICLE EXHAUST AFTERTREATMENT  
DEVICE CLEANING TOOL**

<[https://www.ayarushop.com/index.php?main\\_page=product\\_info&products\\_id=165443](https://www.ayarushop.com/index.php?main_page=product_info&products_id=165443) > (Year: 2012).\*

(Continued)

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(US)

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(57) **CLAIM**

The ornamental design for a vehicle exhaust aftertreatment device cleaning tool, as shown and described.

**DESCRIPTION**

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(US)

FIG. 1 is a top perspective view of a first embodiment of a vehicle exhaust aftertreatment device cleaning tool in accordance with the present invention;

(\*) Notice: This patent is subject to a terminal disclaimer.

FIG. 2 is a left side elevational view of the vehicle exhaust aftertreatment device cleaning tool shown in FIG. 1;

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

FIG. 3 is a right side elevational view of the vehicle exhaust aftertreatment device cleaning tool shown in FIG. 1;

(21) Appl. No.: **29/614,482**

FIG. 4 is a front elevational view of the vehicle exhaust aftertreatment device cleaning tool shown in FIG. 1;

(22) Filed: **Aug. 18, 2017**

FIG. 5 is a back elevational view of the vehicle exhaust aftertreatment device cleaning tool shown in FIG. 1;

(51) **LOC (12) Cl.** ..... **12-16**

FIG. 6 is a top view of the vehicle exhaust aftertreatment device cleaning tool shown in FIG. 1;

(52) **U.S. Cl.**  
USPC ..... **D12/400**

FIG. 7 is a bottom view of the vehicle exhaust aftertreatment device cleaning tool shown in FIG. 1; and

(58) **Field of Classification Search**  
USPC ..... D12/400; D24/109  
See application file for complete search history.

FIG. 8 is a bottom perspective view of the vehicle exhaust aftertreatment device cleaning tool shown in FIG. 1.

(56) **References Cited**

FIG. 9 is a top perspective view of a second embodiment of a vehicle exhaust aftertreatment device cleaning tool in accordance with the present invention;

**U.S. PATENT DOCUMENTS**

FIG. 10 is a left side elevational view of the vehicle exhaust aftertreatment device cleaning tool shown in FIG. 9;

D33,398 S \* 10/1900 Herrick ..... 473/387  
1,564,212 A \* 12/1925 Decker ..... A63B 57/10  
473/390

FIG. 11 is a right side elevational view of the vehicle exhaust aftertreatment device cleaning tool shown in FIG. 9;

(Continued)

FIG. 12 is a front elevational view of the vehicle exhaust aftertreatment device cleaning tool shown in FIG. 9;

**OTHER PUBLICATIONS**

Medela Personalfit Breast Shield, Small 21mm, posted to Ayarushop.  
Posted date Mar. 24, 2012 [site visited Jan. 28, 2019]. Available:

FIG. 13 is a back elevational view of the vehicle exhaust aftertreatment device cleaning tool shown in FIG. 9;

FIG. 14 is a top view of the vehicle exhaust aftertreatment device cleaning tool shown in FIG. 9;

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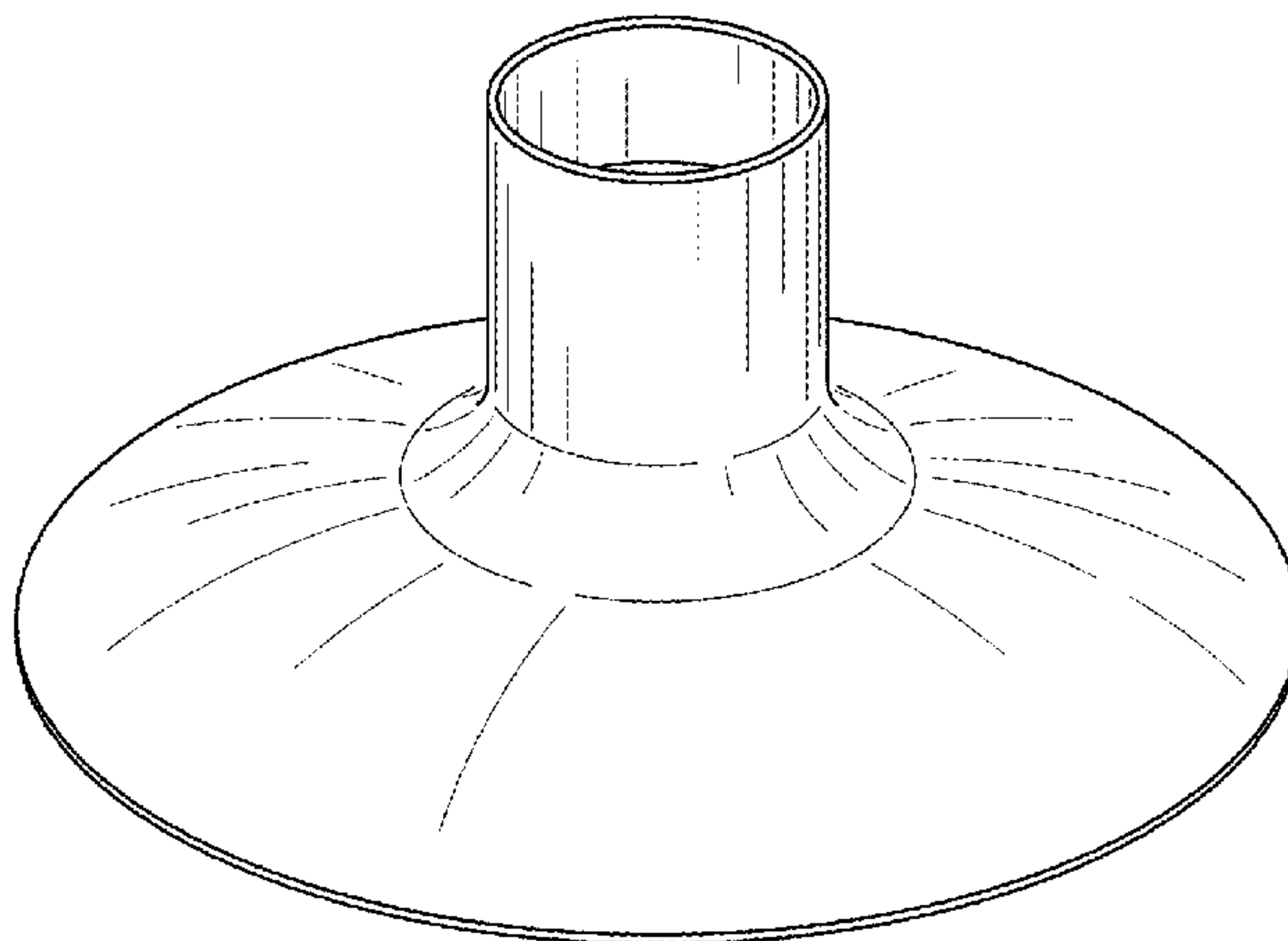


FIG. 15 is a bottom view of the vehicle exhaust aftertreatment device cleaning tool shown in FIG. 9; and, FIG. 16 is a bottom perspective view of the vehicle exhaust aftertreatment device cleaning tool shown in FIG. 9. The dashed broken lines in FIG. 9, FIG. 14, FIG. 15, and FIG. 16 show portions of the vehicle exhaust aftertreatment device cleaning tool that form no part of the claimed design. The shade lines in the figures show contour and not surface ornamentation.

**1 Claim, 12 Drawing Sheets**

(56)

**References Cited**

U.S. PATENT DOCUMENTS

2,178,033 A \* 10/1939 Decker ..... B60H 1/00464  
165/42  
2,589,967 A \* 3/1952 Sawyer ..... A47G 19/2261  
215/372  
2,805,071 A \* 9/1957 Kaplan ..... A63B 57/15  
473/398  
2,908,473 A \* 10/1959 Snyder ..... A47G 23/0241  
215/376  
D248,075 S \* 6/1978 Daenen ..... D7/523  
4,136,869 A \* 1/1979 Tassone ..... A63B 69/0075  
473/417  
4,316,560 A \* 2/1982 Carter ..... B44D 3/128  
220/700  
D263,715 S \* 4/1982 Walter ..... D15/199  
4,901,776 A \* 2/1990 Attinello ..... B67C 11/02  
116/228  
D309,241 S \* 7/1990 Ayyoubi ..... D23/200  
D317,222 S \* 6/1991 Dodge ..... D1/102  
5,168,908 A \* 12/1992 Boyum ..... B67C 11/02  
141/331  
D359,958 S \* 7/1995 Frodelius ..... D14/208  
D396,284 S \* 7/1998 Schaefer ..... D24/122  
5,927,353 A \* 7/1999 Persson ..... B65B 39/00  
141/331  
D426,047 S \* 6/2000 Kurtz ..... D1/105  
D428,771 S \* 8/2000 Novi ..... D7/523  
D432,915 S \* 10/2000 Smith ..... D9/436  
6,131,759 A 10/2000 Young  
D436,166 S \* 1/2001 Berkey ..... D24/122  
6,341,631 B1 1/2002 Hobbs  
6,571,976 B1 \* 6/2003 Sonnabend ..... B65D 25/24  
220/483  
6,723,066 B2 \* 4/2004 Larsson ..... A61M 1/064  
604/74  
D506,991 S \* 7/2005 Chen ..... D14/204  
D564,656 S 3/2008 Matsutori et al.  
D591,730 S \* 5/2009 Pantaleone ..... D14/216  
D606,373 S 12/2009 McCaffery et al.  
D617,894 S \* 6/2010 Wright ..... A61B 90/40  
D24/121

8,196,622 B1 \* 6/2012 Fisher ..... B67C 11/02  
141/330  
8,444,596 B2 \* 5/2013 Paterson ..... A61M 1/0072  
604/74  
D724,055 S \* 3/2015 Tice ..... D14/216  
D738,169 S 9/2015 Weisenbach  
D754,312 S \* 4/2016 Ellis ..... D23/355  
D814,018 S \* 3/2018 Emmenegger ..... D24/109  
D815,272 S \* 4/2018 Emmenegger ..... D24/109  
D822,815 S \* 7/2018 Seo ..... D23/356  
D847,449 S \* 4/2019 Viera ..... D34/2  
2010/0183490 A1 7/2010 Hoke et al.  
2010/0230920 A1 9/2010 Thibault  
2010/0324477 A1 \* 12/2010 Paterson ..... A61M 1/06  
604/74  
2011/0301532 A1 \* 12/2011 Wach ..... A61M 1/06  
604/74  
2012/0071981 A1 3/2012 Farley et al.  
2013/0192711 A1 8/2013 Sessler  
2016/0331879 A1 \* 11/2016 Dann ..... A61M 1/064  
2017/0095600 A1 \* 4/2017 Sherman ..... A61M 39/105

OTHER PUBLICATIONS

Catalytic Exhaust Products Ltd., Diesel Particulate Filters At Great Prices!, brochure downloaded Jul. 24, 2017 from the world wide web at <https://www.catalyticexhaust.com/product/diesel-particulate-filters/maintenance-filters> (3 pages).  
DES Blowout Box (FTM BB002), DPF Cleaning Equipment, brochure downloaded Nov. 22, 2017 from the world wide web at <https://www.dpfpartsdirect.com/collections/cleaning-equipment/products/blowout-box-des-bb002> (2 pages).  
Detroit Diesel Corporation, Detroit Service Information Bulletin, Diesel Oxidation Catalyst Air Cleaning, Feb. 23, 2016 (9 pages).  
FSX Equipment Inc., Diesel Particulate Filter Cleaning Equipment, brochure (3 pages), Jun. 10, 2009.  
Hands on Tools Mechanic & Body Shop Tools & Supplies, OTC 5286 Portable Diesel Particulate Filter DPF, brochure downloaded Nov. 22, 2017 from the world wide web at [https://www.handsontools.com/OTC-5286-Portable-Diesel-Particulate-Filter-DPF-Cleaner\\_p\\_101531.html](https://www.handsontools.com/OTC-5286-Portable-Diesel-Particulate-Filter-DPF-Cleaner_p_101531.html) (3 pages).  
Nett Technologies Inc., Diesel Oxidation Catalysts, Your diesel engine emission control just got easier!, brochure and specification sheets downloaded Jul. 24, 2017 from the world wide web at <https://www.nettinc.com/wp-content/uploads/docs/diesel-oxidation-catalyst-brochure-DOC.pdf> (2 pages).  
OTC Tool Company, OTC Tools and SPX, OTC 5280 Diesel Particulate Filter Cleaner, brochure and specification sheets downloaded Nov. 22, 2017 from the world wide web at [http://s7d9.scene7.com/is/content/GenuinePartsCompany/1437908pdf?SPDF\\$](http://s7d9.scene7.com/is/content/GenuinePartsCompany/1437908pdf?SPDF$), 2010 (4 pages).  
Medela, PersonalFit Breast Shields 21 mm—box of 2, Item #87072, downloaded from the world wide web at <http://www.medelabreastfeedingus.com/products/196/personalfit-breastshields-21mm-small#!Works-With> on Mar. 28, 2019.

\* cited by examiner



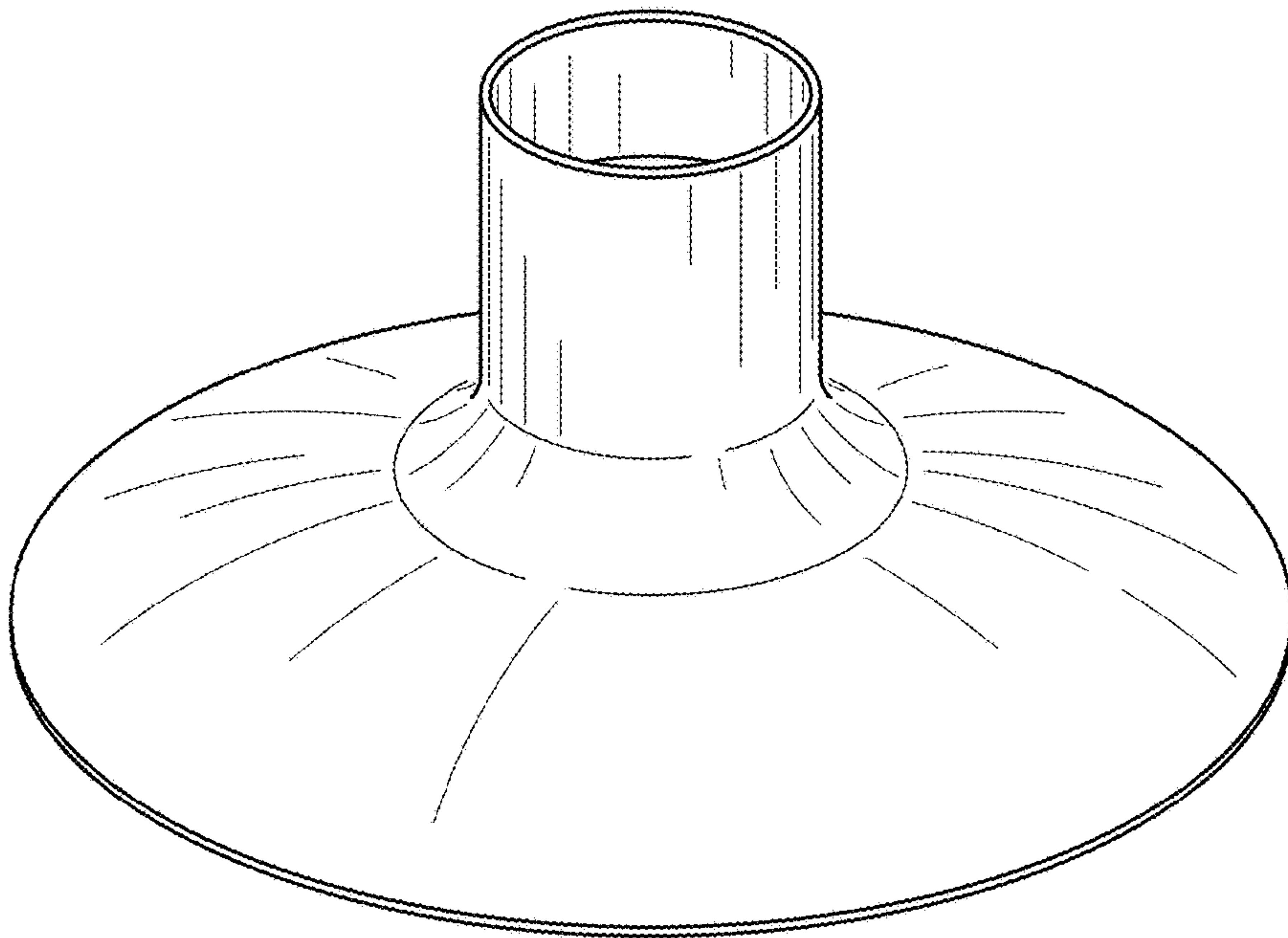


FIG. 1

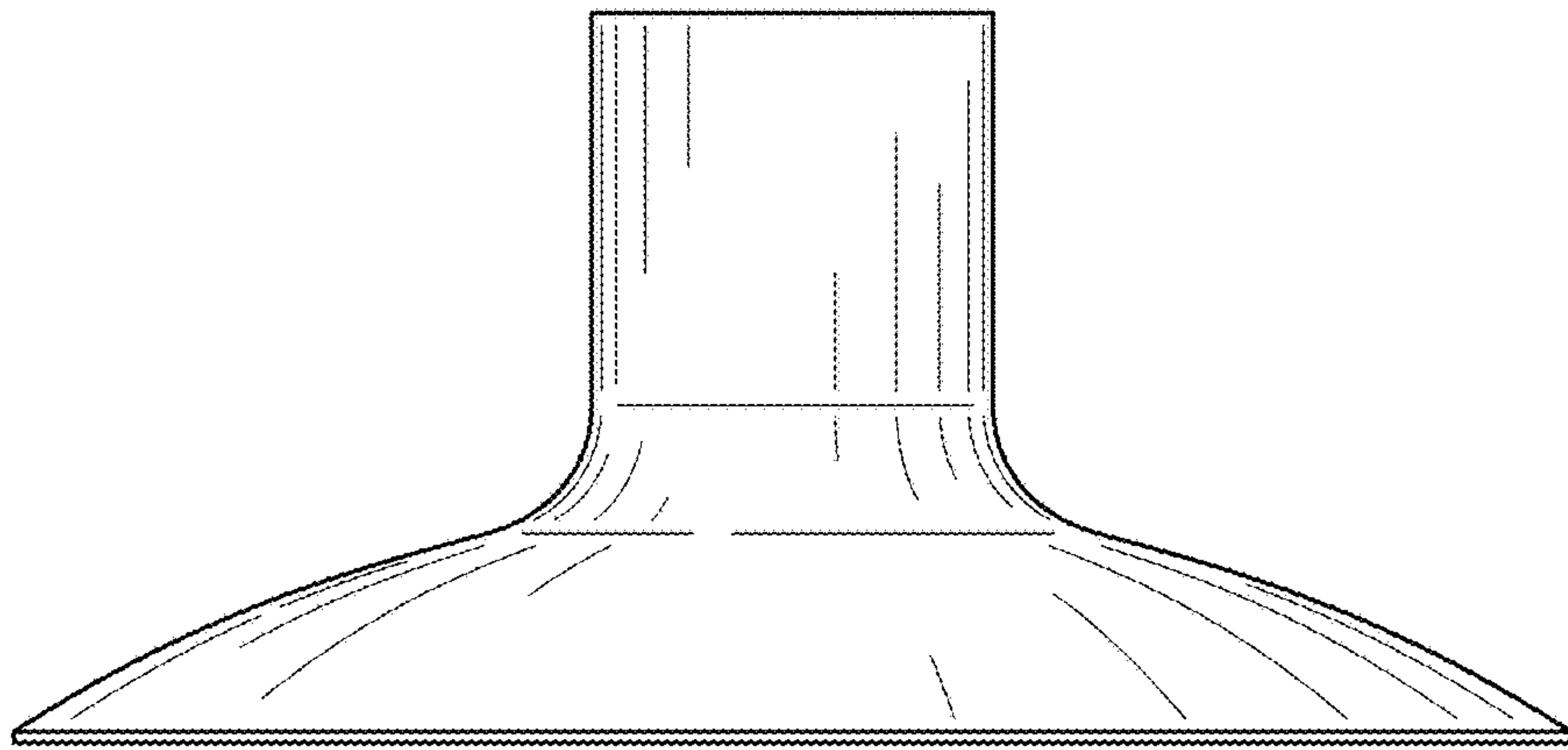


FIG. 2

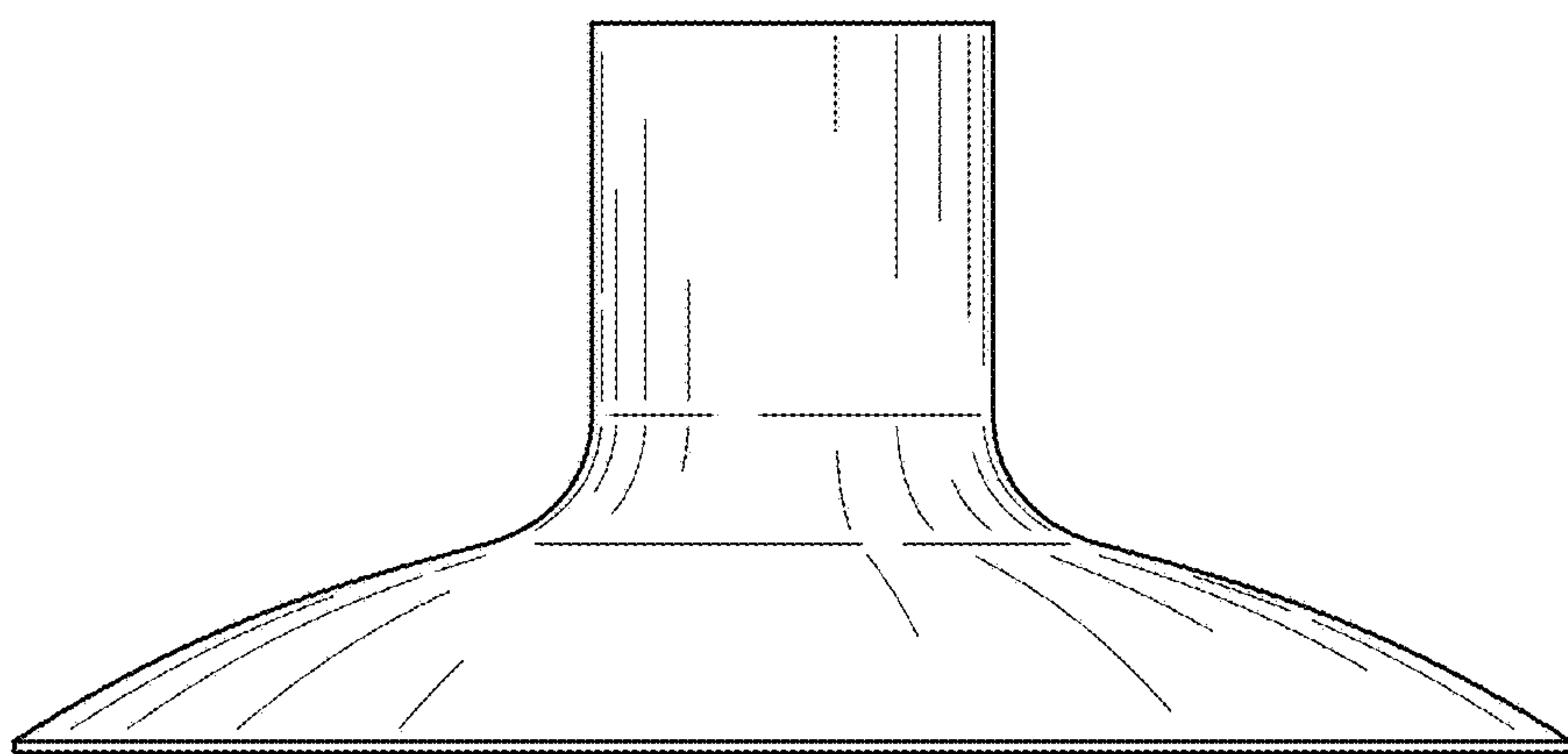


FIG. 3

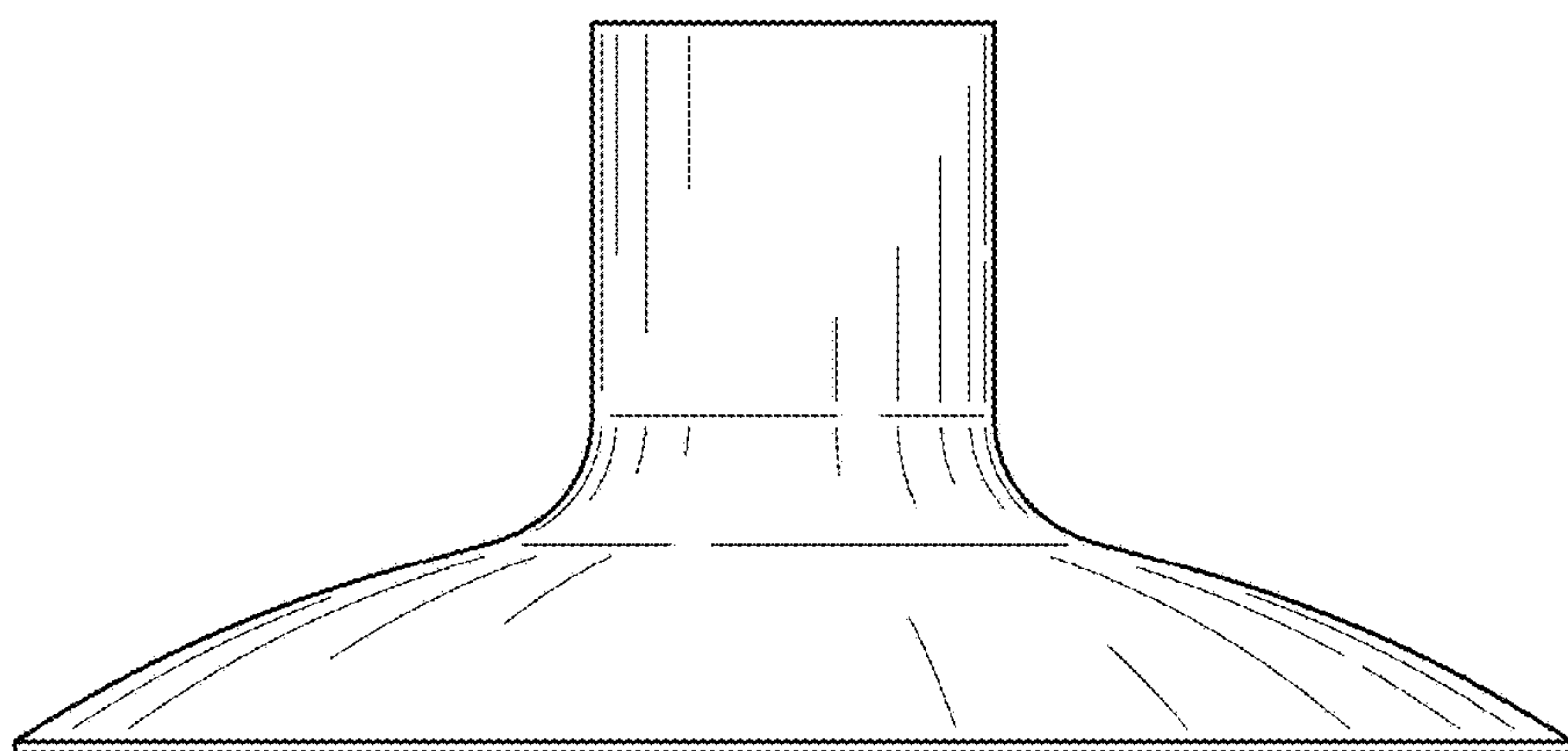


FIG. 4

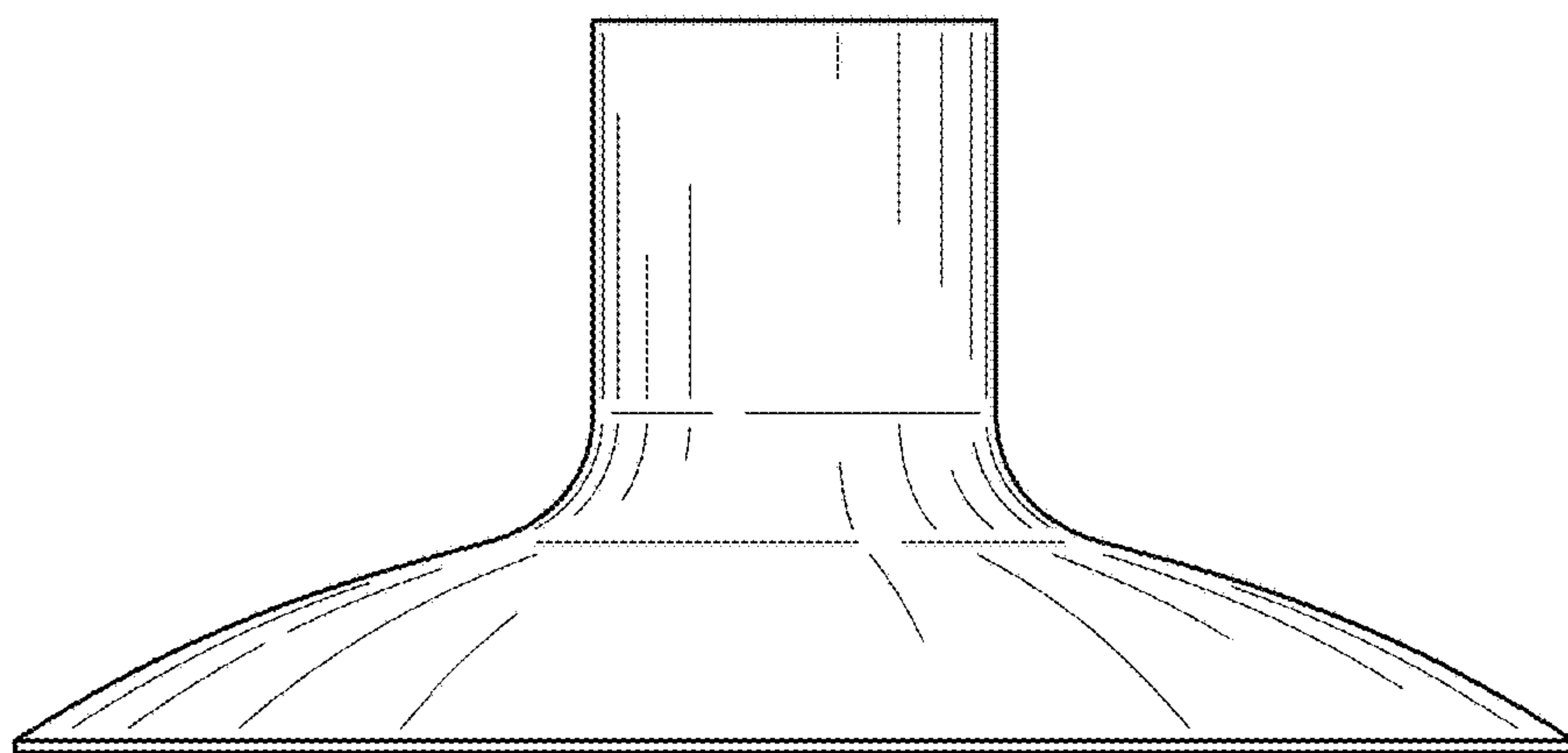


FIG. 5

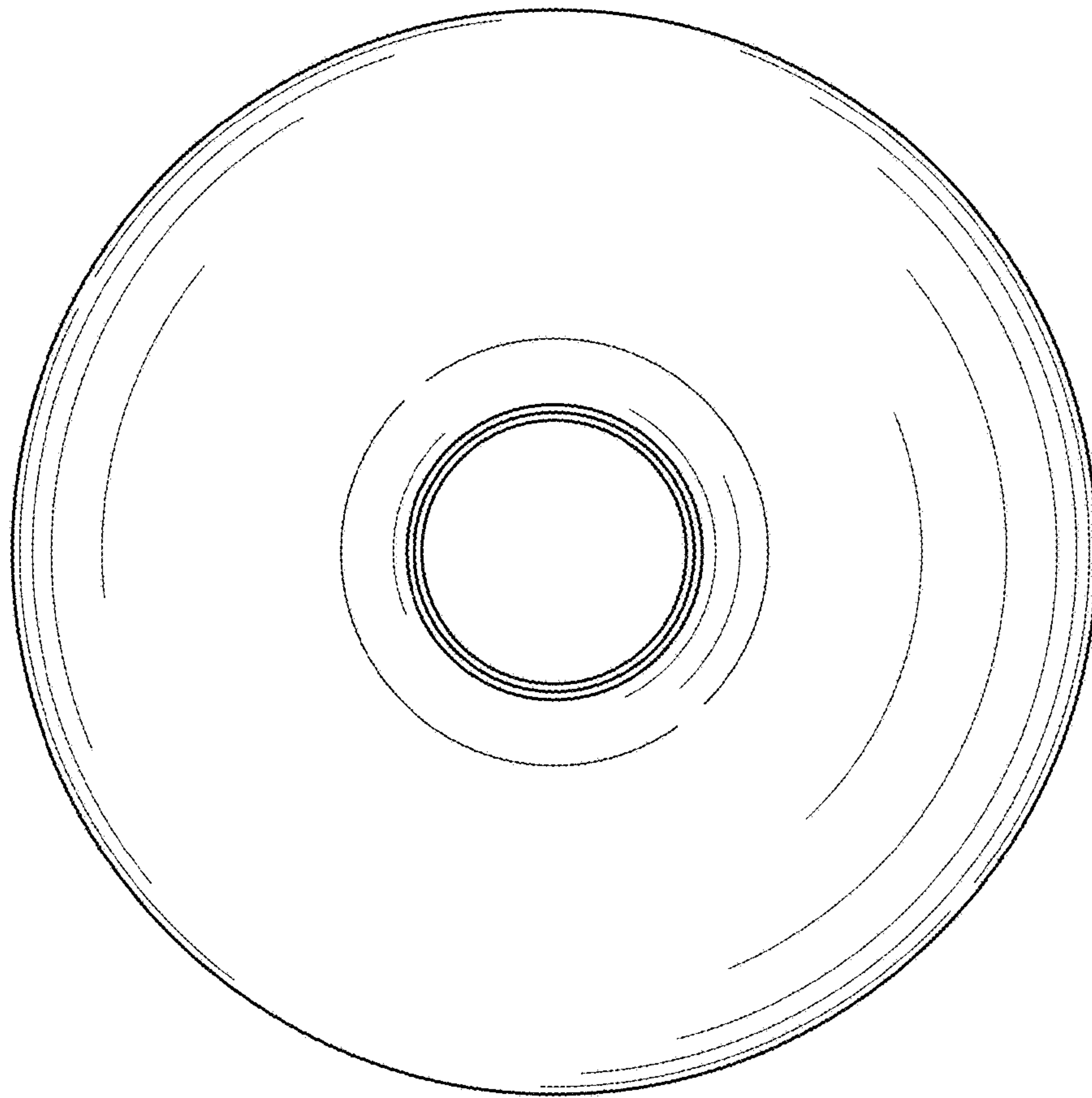


FIG. 6

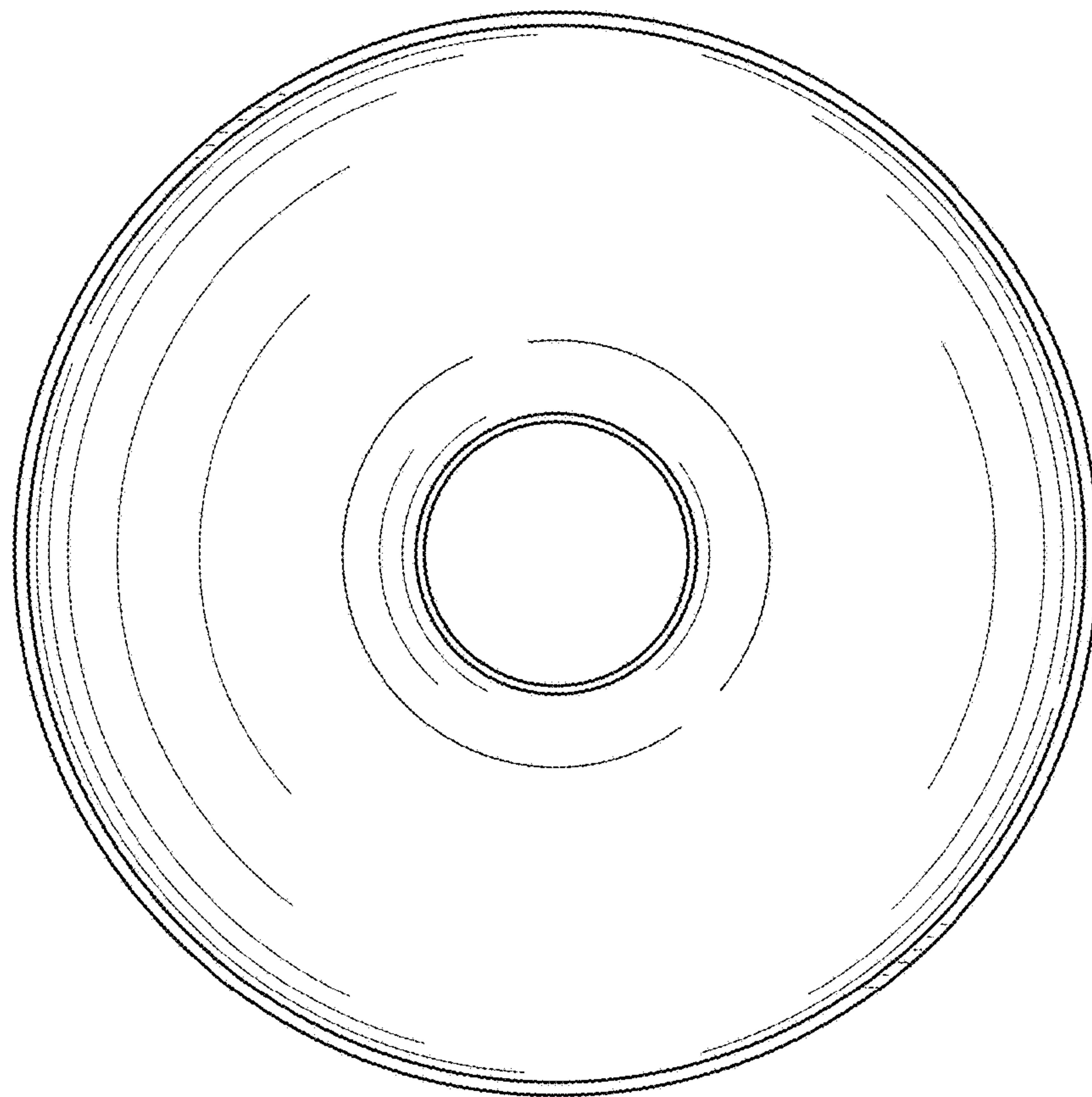


FIG. 7

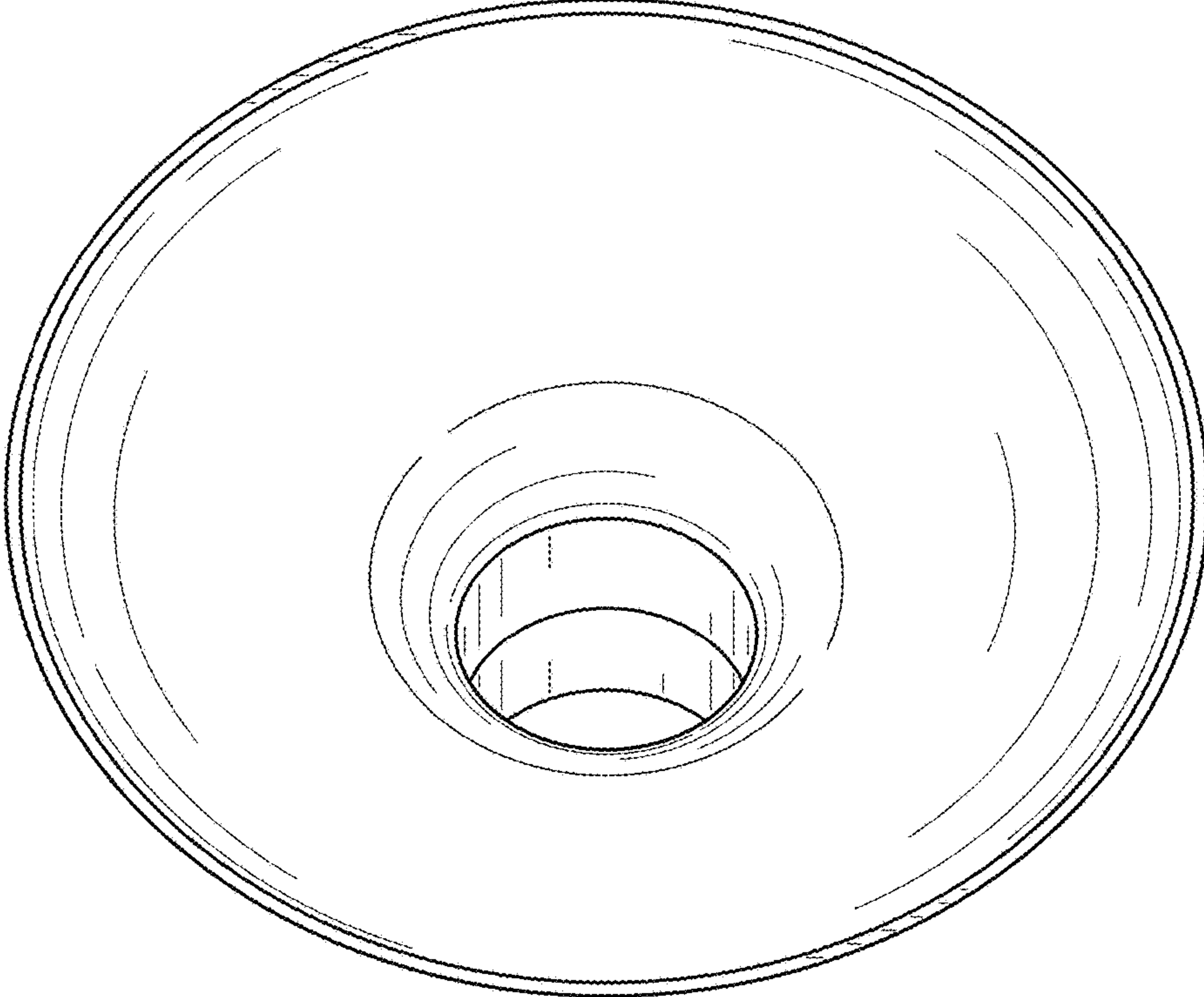


FIG. 8





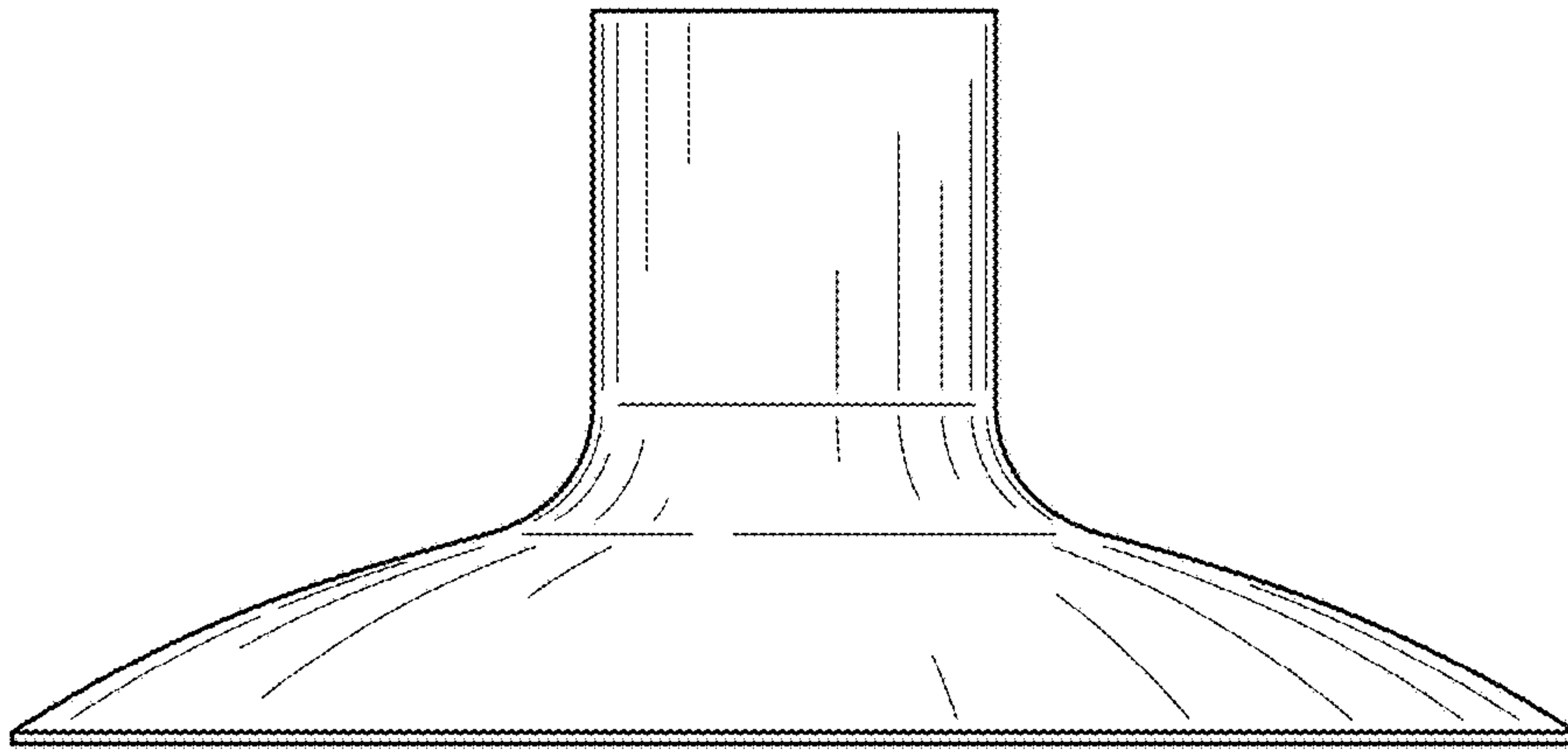


FIG. 10

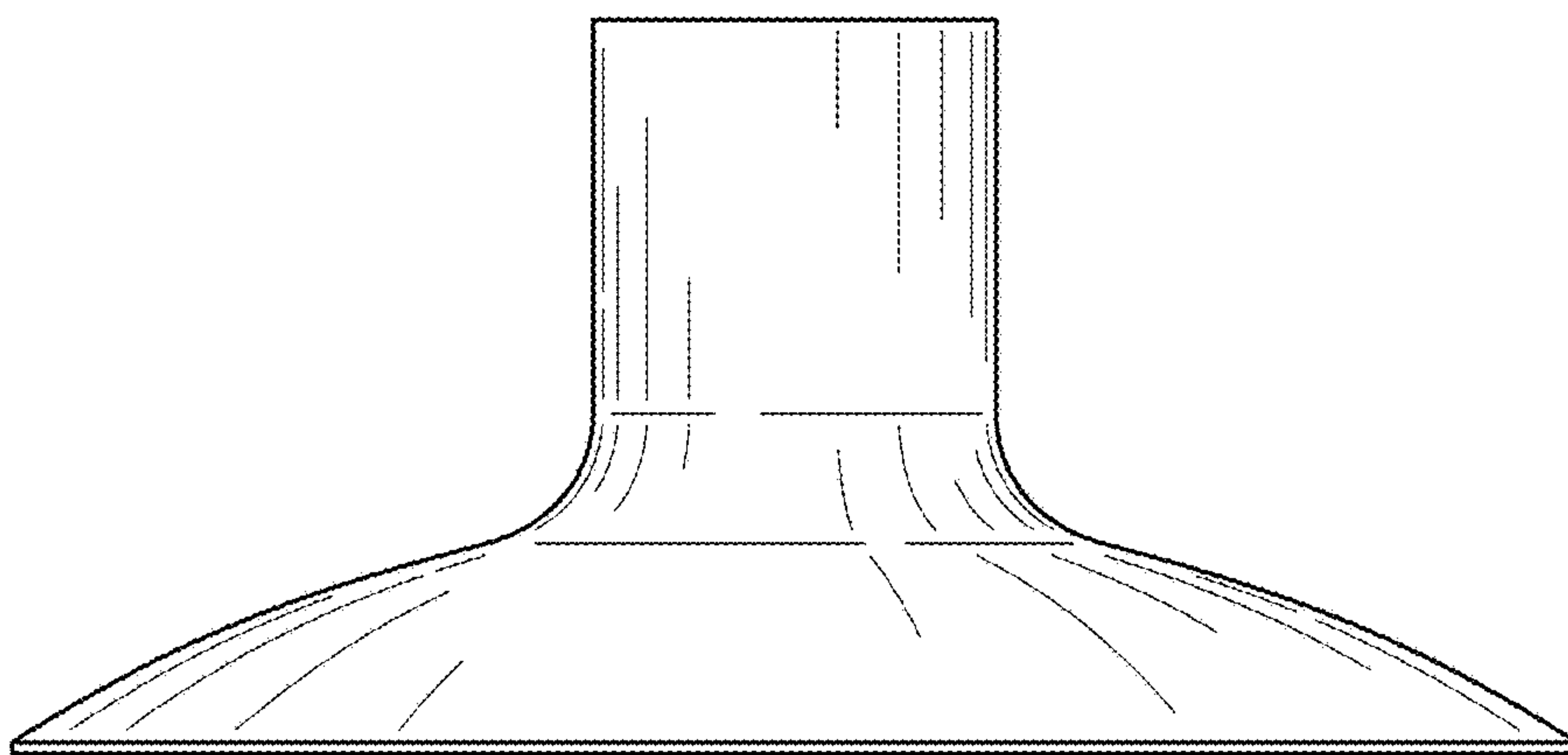
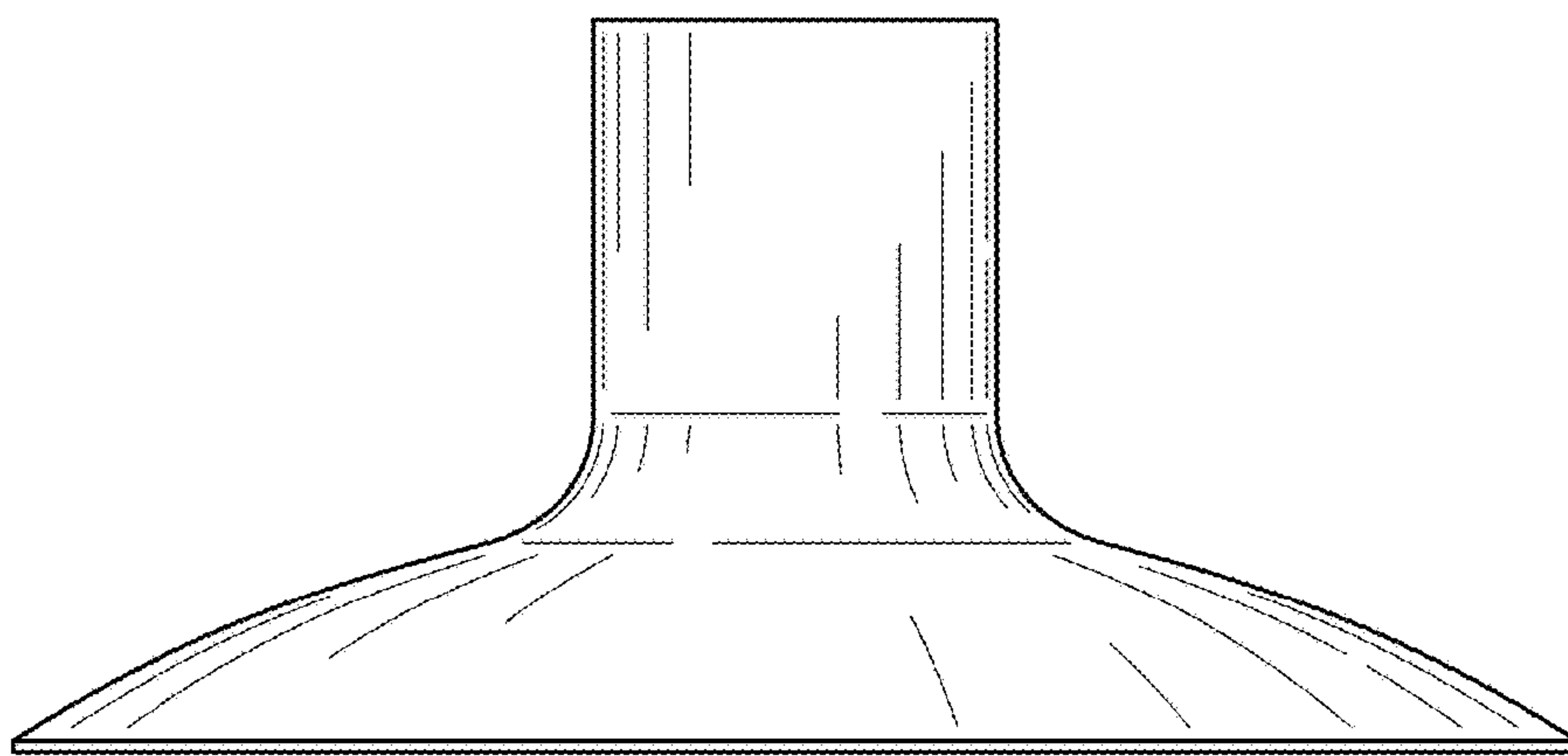
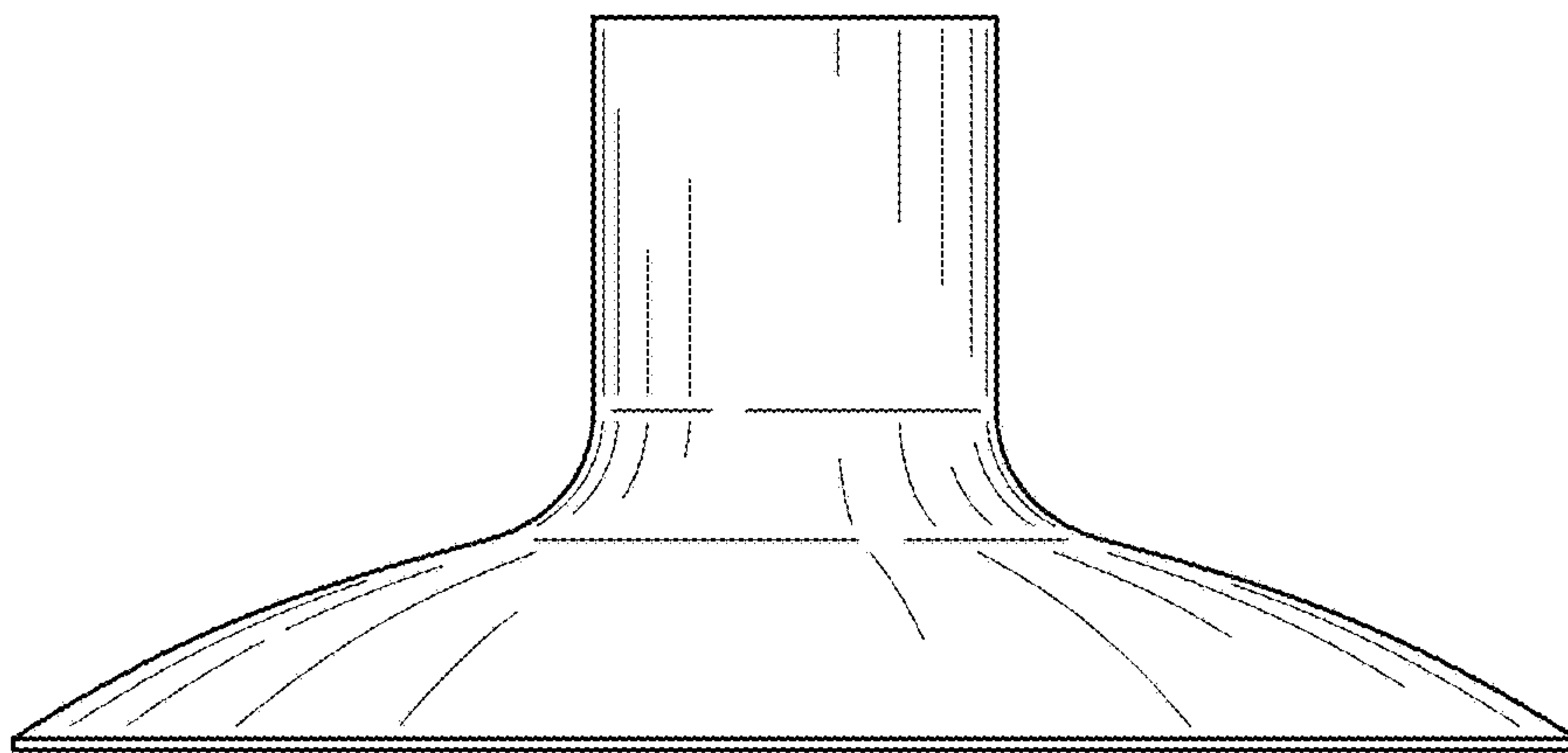


FIG. 11



**FIG. 12**



**FIG. 13**

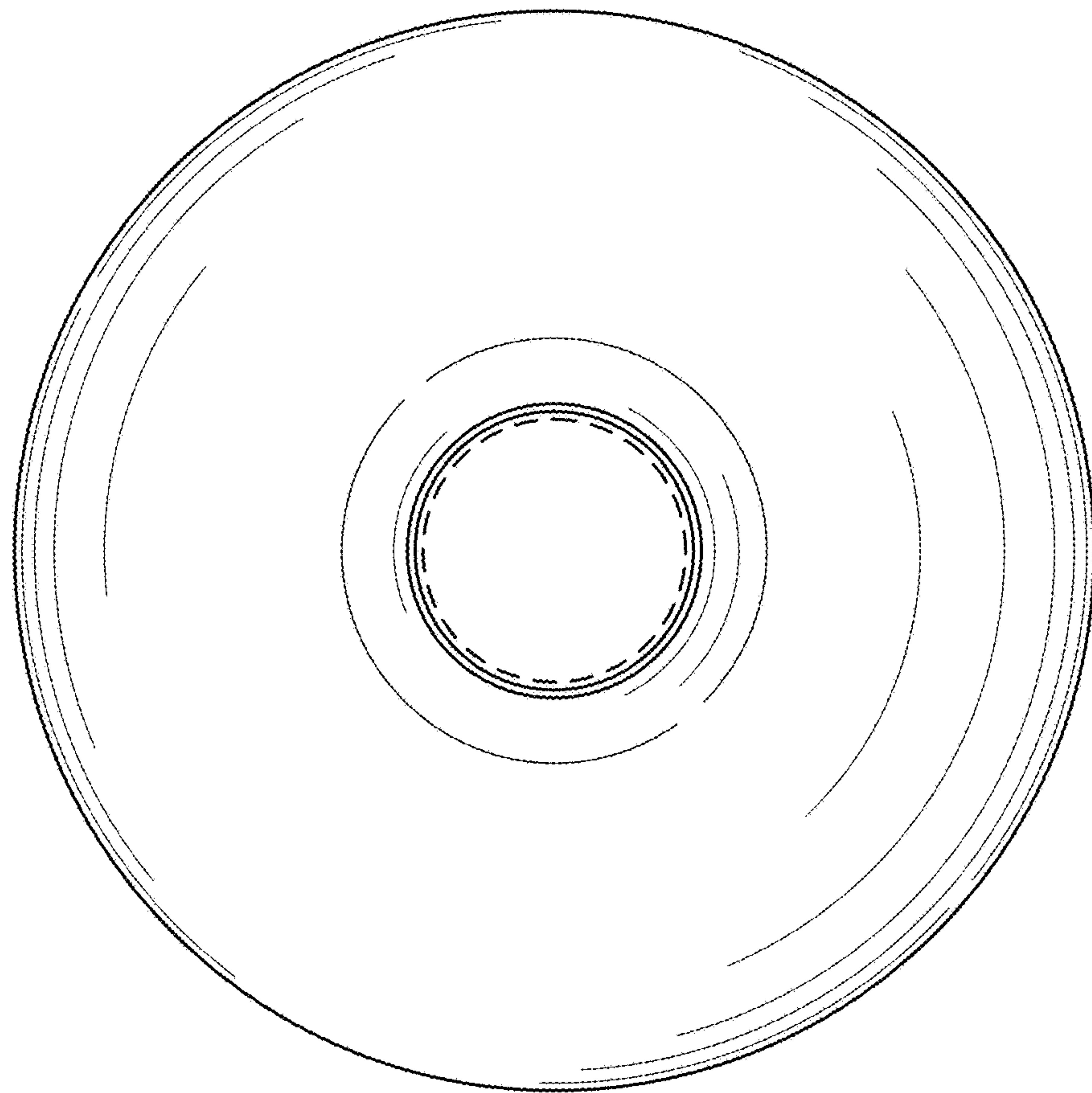


FIG. 14



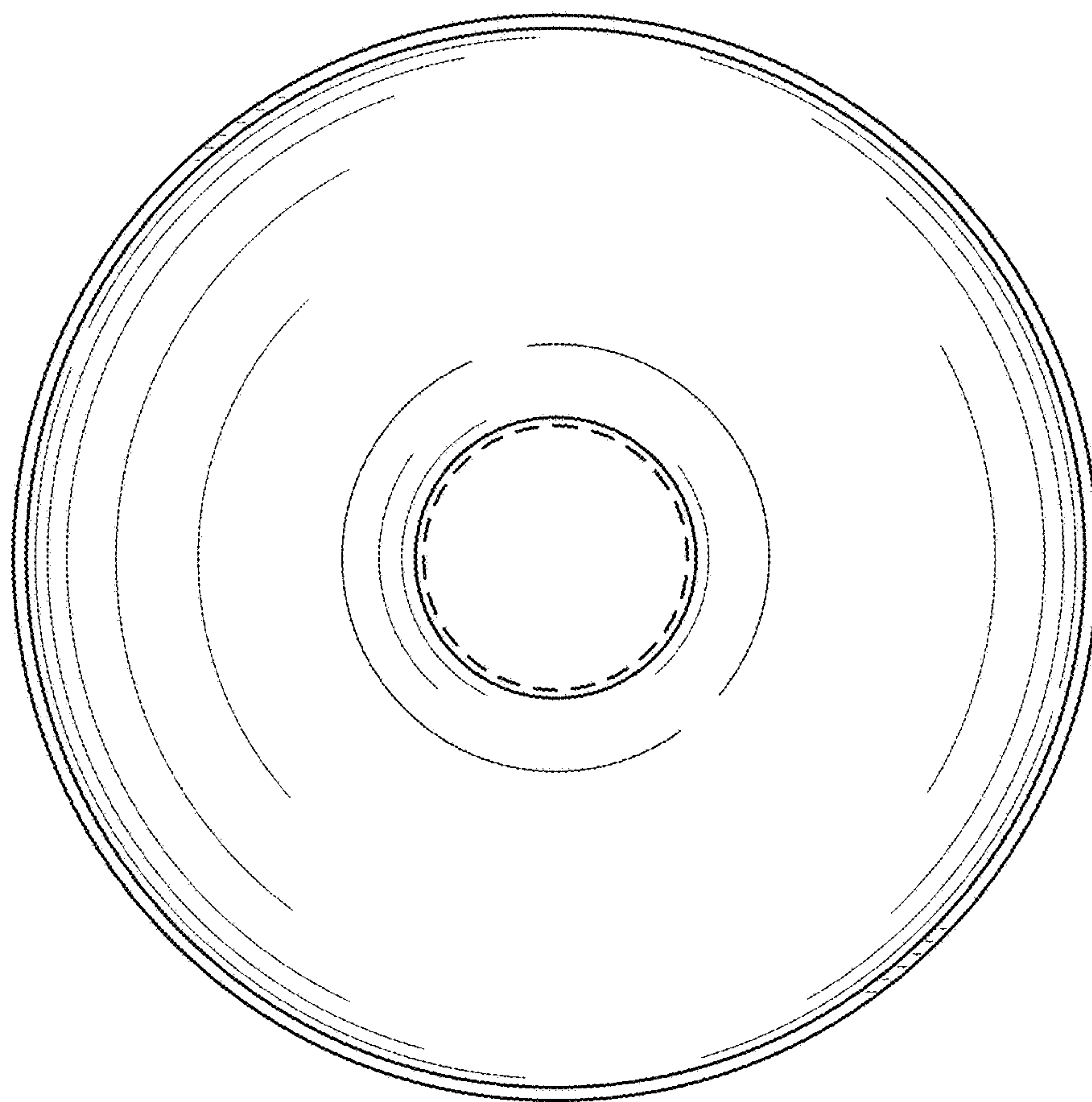


FIG. 15

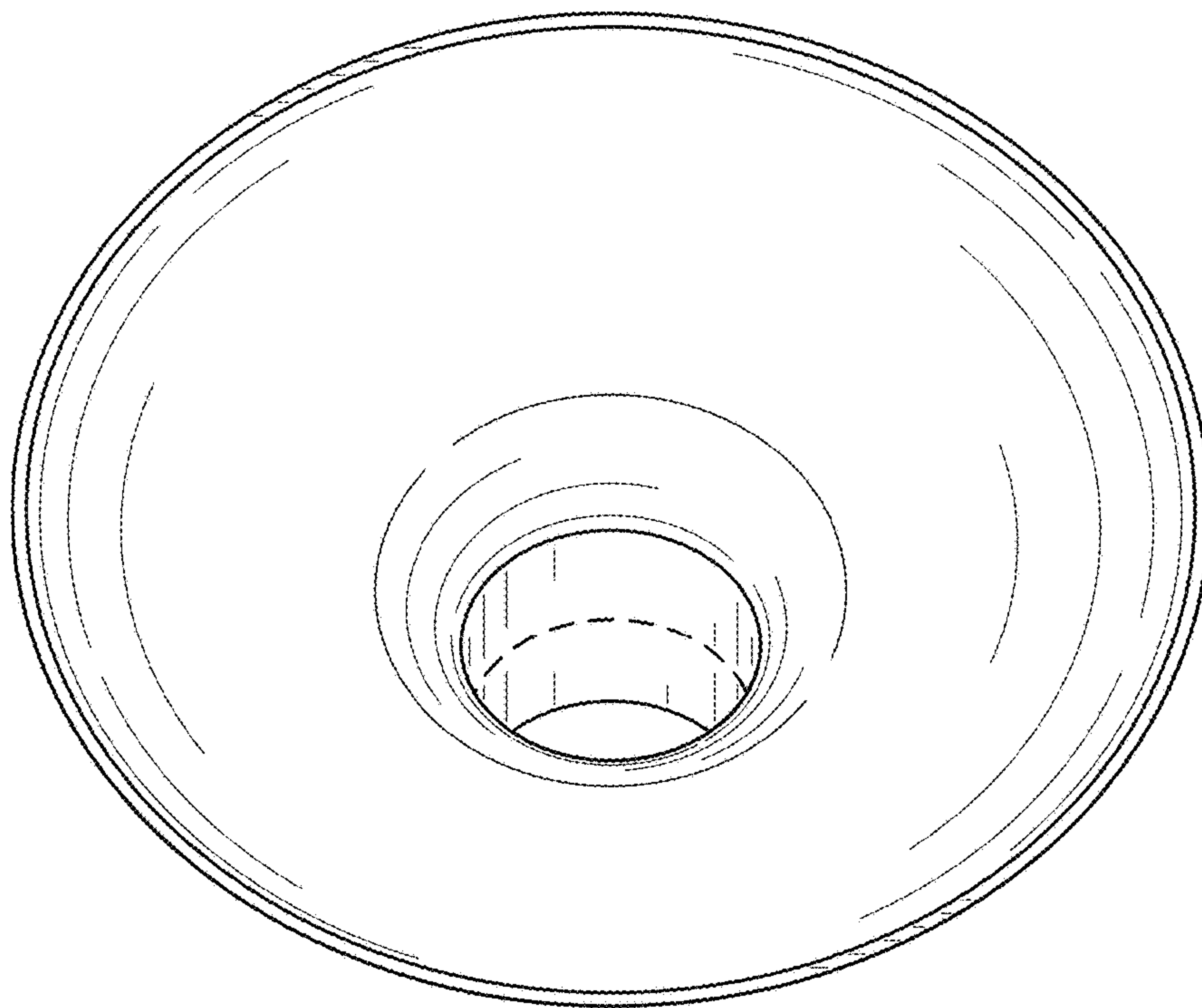


FIG. 16