



US00D638534S

(12) **United States Design Patent**
Moga et al.

(10) **Patent No.:** **US D638,534 S**
(45) **Date of Patent:** **** May 24, 2011**

(54) **DRUG DELIVERY DEVICE**

(75) Inventors: **Benjamin J. Moga**, Madison, WI (US);
Kent B. Chase, Sun Prairie, WI (US);
Garrick D. S. Smith, Madison, WI (US)

(73) Assignees: **Ratio, Inc.**, Monona, WI (US); **FluGen, Inc.**, Madison, WI (US)

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

(21) Appl. No.: **29/353,489**

(22) Filed: **Jan. 8, 2010**

(51) **LOC (9) Cl.** **24-02**

(52) **U.S. Cl.** **D24/113**

(58) **Field of Classification Search** D24/112–114,
D24/133, 186, 104, 130, 127, 176, 108, 110,
D24/220, 115, 232; 606/181, 185; 604/232,
604/187, 158, 164.08, 192, 263, 163, 181,
604/184, 198, 227, 168.01, 275, 890.1; D9/414,
D9/424, 417, 426, 435, 415, 425

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D256,727 S	9/1980	Borg et al.	
D306,830 S *	3/1990	DeCoster	D9/435
D314,844 S	2/1991	Baharad	
D318,013 S *	7/1991	Elliot	D9/415
D332,398 S *	1/1993	Lee et al.	D9/415
D350,602 S	9/1994	Hobbs	
D357,115 S *	4/1995	Abrams et al.	D9/415
D366,828 S *	2/1996	Bachand et al.	D9/425
5,527,288 A	6/1996	Gross et al.	
D375,553 S	11/1996	Creed et al.	
D381,415 S	7/1997	Iddon et al.	
D383,386 S *	9/1997	Loubach	D9/415
D405,014 S	2/1999	Nask et al.	
D411,449 S *	6/1999	Voden	D9/415
D428,331 S *	7/2000	MacTavish	D9/415

D457,646 S *	5/2002	Hool et al.	D24/232
D462,900 S *	9/2002	Yamada et al.	D9/707
6,611,707 B1	8/2003	Prausnitz et al.	
6,623,457 B1	9/2003	Rosenberg	
D488,558 S	4/2004	Hall	
D493,105 S	7/2004	Childs et al.	
6,881,203 B2	4/2005	Delmore et al.	
6,908,453 B2	6/2005	Fleming et al.	
7,097,631 B2	8/2006	Trautman et al.	
D552,500 S	10/2007	Forslund	
D552,739 S	10/2007	Green	
D558,330 S *	12/2007	Chang	D24/110
D571,656 S *	6/2008	Maslowski	D9/425
D589,340 S	3/2009	Busse et al.	
D602,586 S	10/2009	Foley et al.	

(Continued)

OTHER PUBLICATIONS

Roxhed, Niclas, A Fully Integrated Microneedle-based Transdermal Drug Delivery System, Royal Institute of Technology, Stockholm, Sweden, 2007, 92 pgs.

(Continued)

Primary Examiner — T. Chase Nelson

Assistant Examiner — David G Muller

(74) *Attorney, Agent, or Firm* — Foley & Lardner LLP

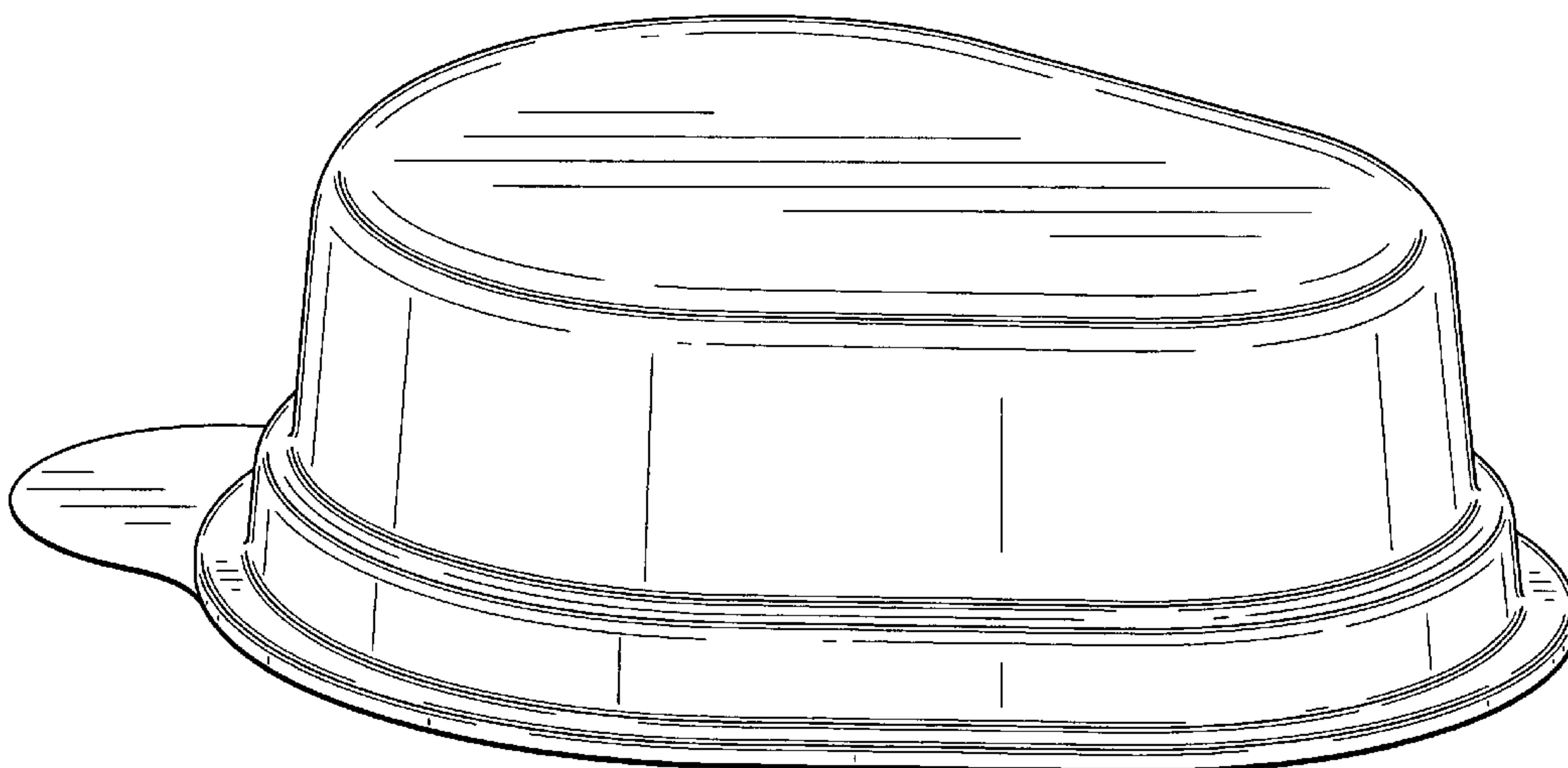
(57) **CLAIM**

We claim the ornamental design for a drug delivery device, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of the claimed design;
FIG. 2 is a front elevation view thereof;
FIG. 3 is a rear elevation view thereof;
FIG. 4 is a left side elevation view thereof;
FIG. 5 is a right side elevation view thereof;
FIG. 6 is a top plan view thereof; and,
FIG. 7 is a bottom plan view thereof.

1 Claim, 5 Drawing Sheets



U.S. PATENT DOCUMENTS

D604,832 S 11/2009 Smutney et al.
7,678,079 B2 3/2010 Shermer et al.
D619,009 S * 7/2010 Heath et al. D9/530
D619,245 S 7/2010 Moga et al.
2002/0099356 A1 7/2002 Unger et al.
2003/0135159 A1 7/2003 Daily et al.
2005/0038379 A1 2/2005 Beebe et al.
2005/0228340 A1 10/2005 Cleary et al.
2006/0161111 A1 7/2006 Potter et al.
2007/0161964 A1 7/2007 Yuzhakov
2007/0191761 A1 8/2007 Boone et al.
2007/0191780 A1 8/2007 Modi
2008/0015522 A1 1/2008 Yeshurun et al.

2008/0088066 A1 4/2008 Ferguson et al.
2008/0091226 A1 4/2008 Yeshurun et al.
2008/0114298 A1 5/2008 Cantor et al.
2009/0012494 A1 1/2009 Yeshurun et al.
2009/0043279 A1 2/2009 Kaspar et al.
2010/0030156 A1 2/2010 Beebe et al.
2010/0030198 A1 2/2010 Beebe et al.

OTHER PUBLICATIONS

Notice of Allowance for U.S. Appl. No. 29/353,490, now Patent No.
D619,245, dated Apr. 6, 2010, 8 pages.

* cited by examiner

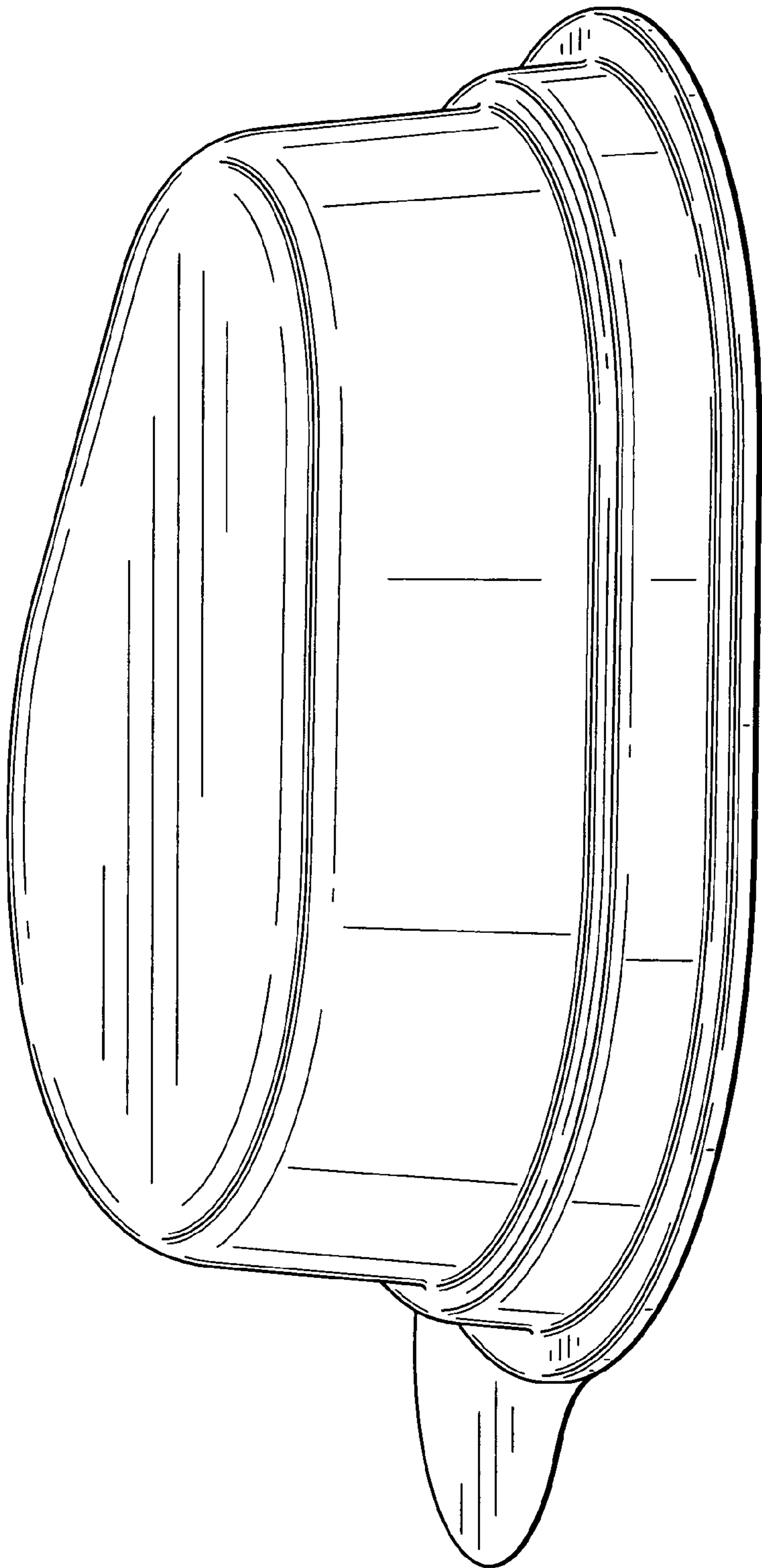


FIG. 1

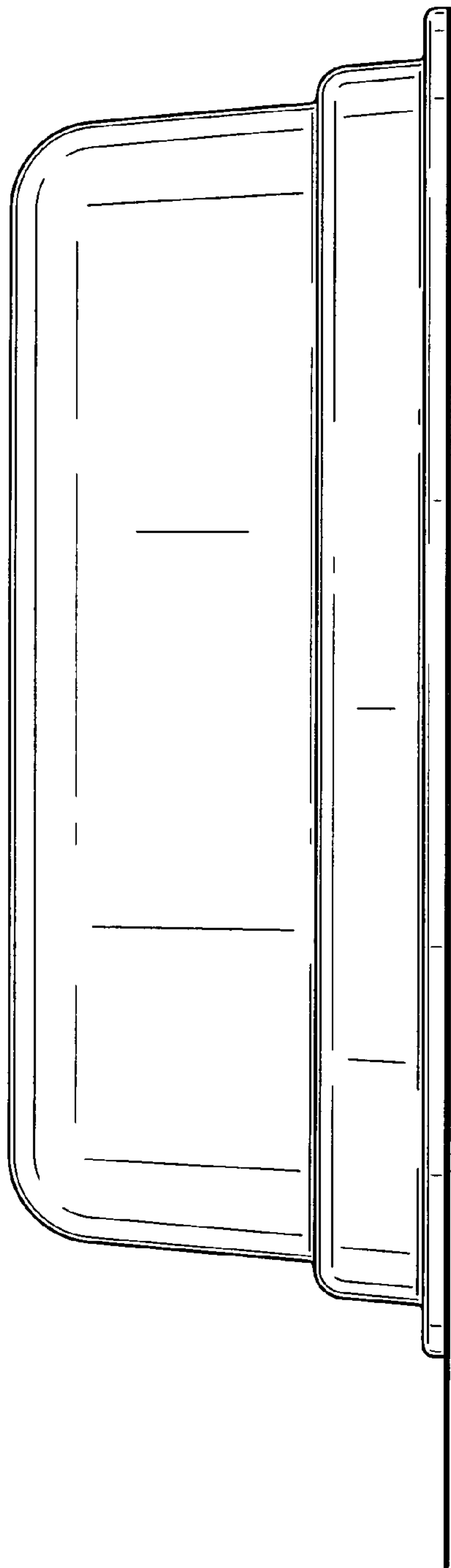


FIG. 2

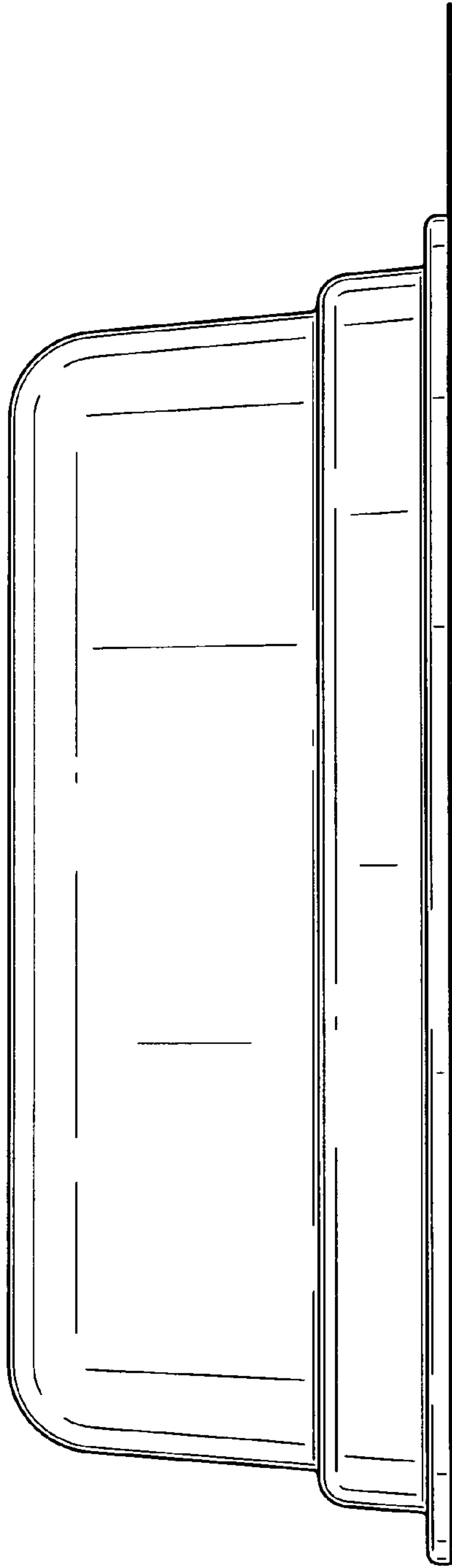


FIG. 3

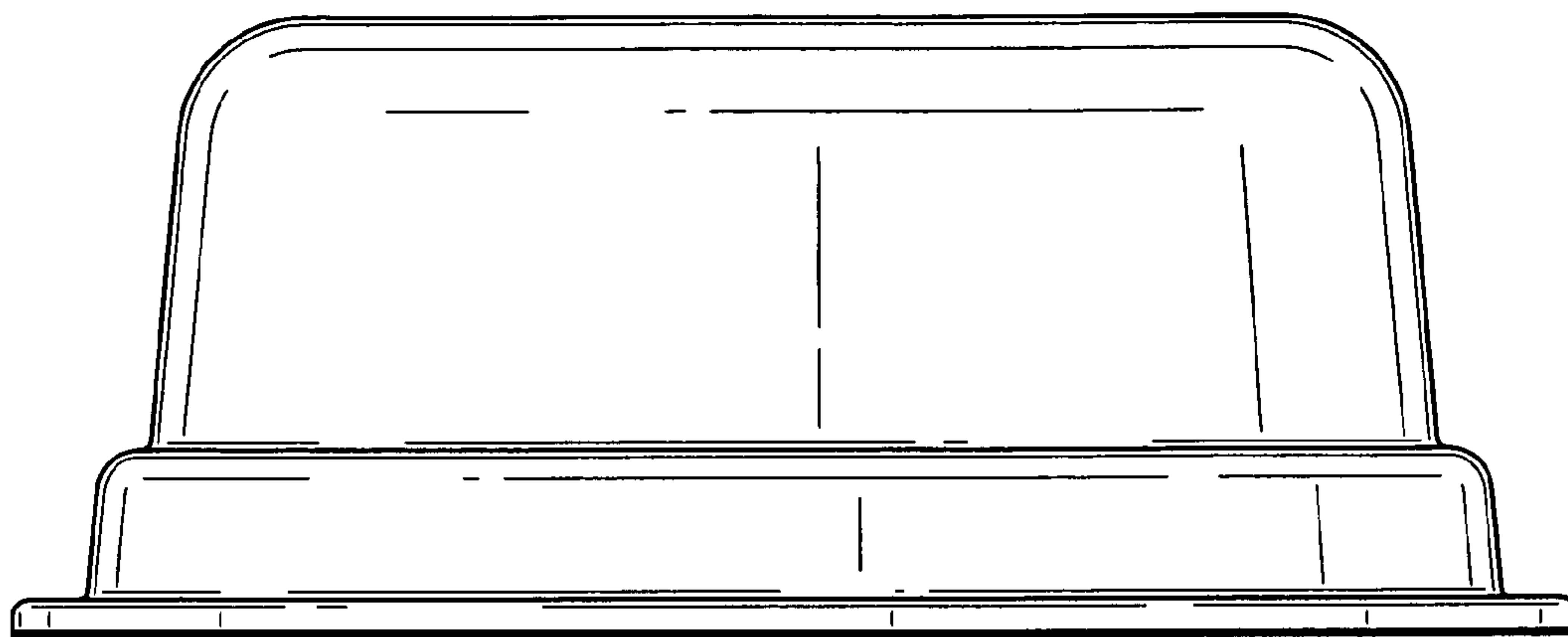


FIG. 4

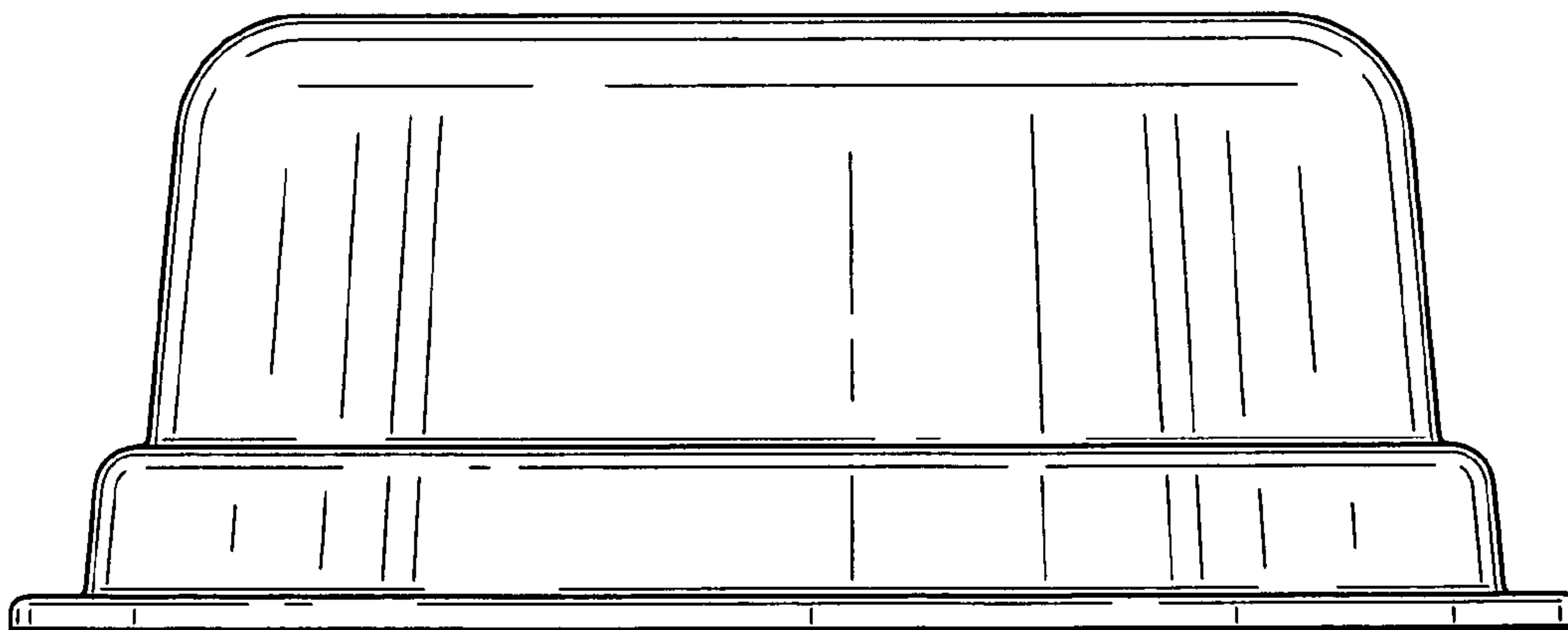


FIG. 5

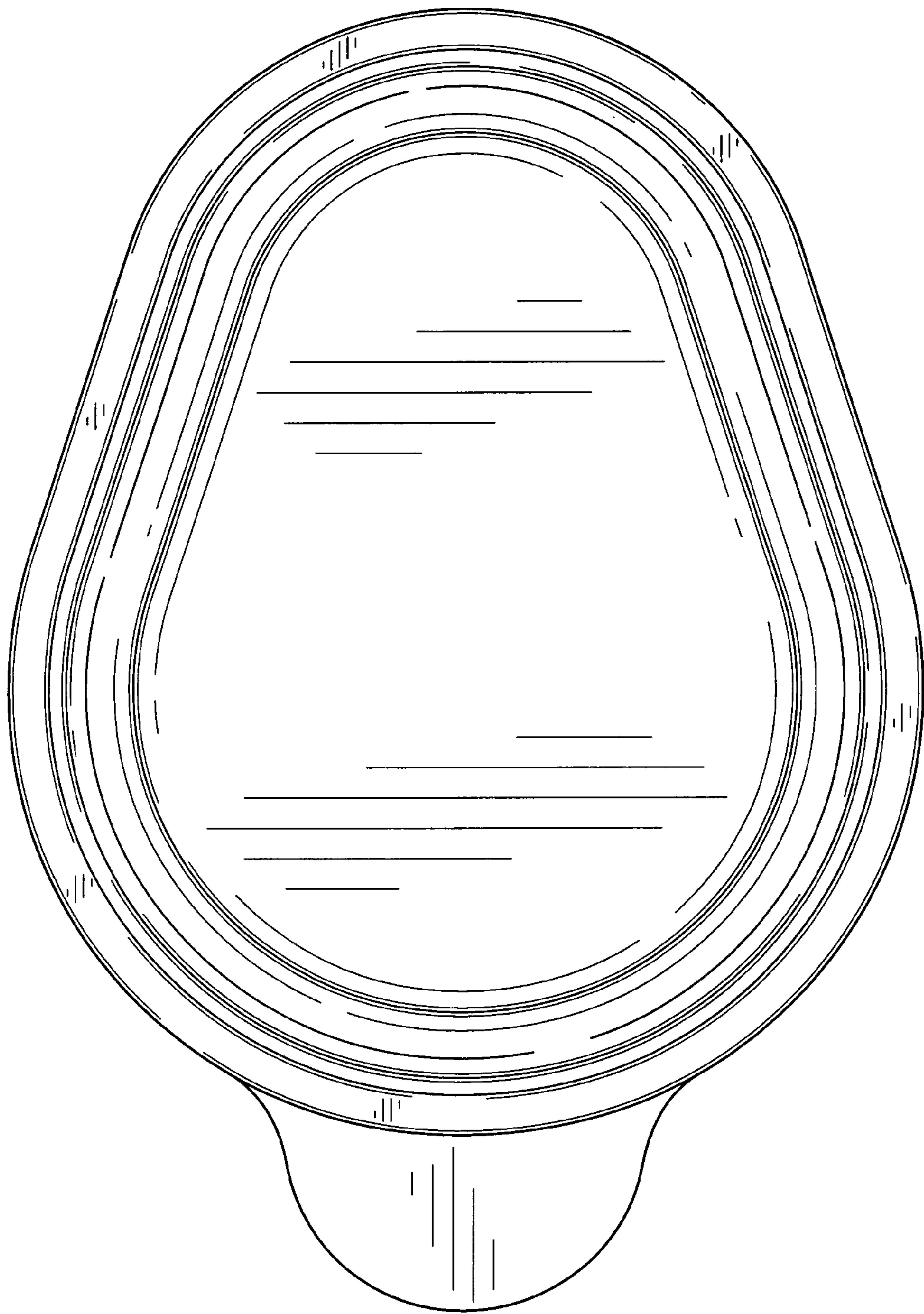


FIG. 6

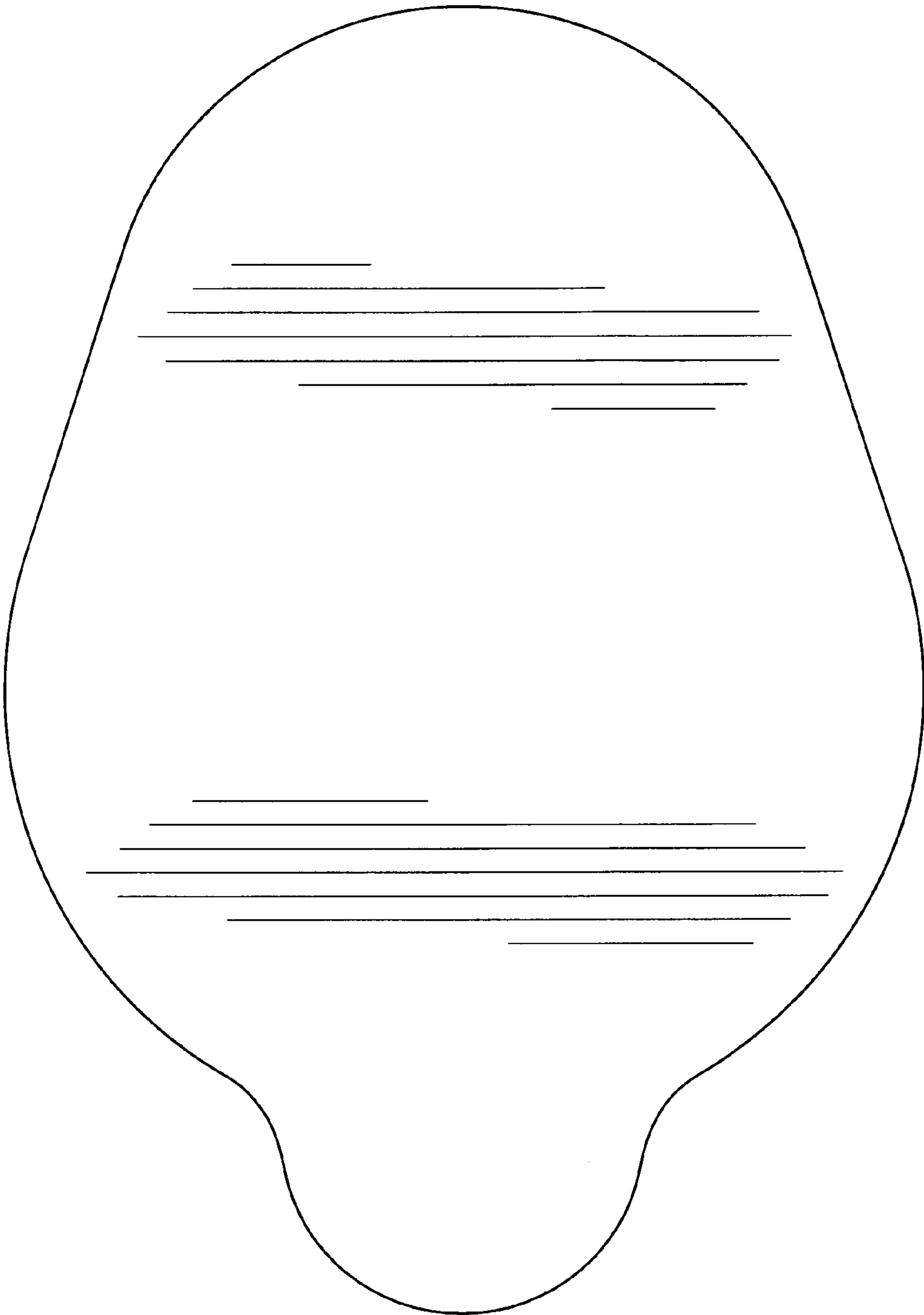


FIG. 7