



US00D839444S

(12) **United States Design Patent** (10) **Patent No.:** **US D839,444 S**
Fukaya et al. (45) **Date of Patent:** **** Jan. 29, 2019**

(54) **CRUCIBLE**

(71) Applicant: **A.L.M.T. Corp.**, Tokyo (JP)

(72) Inventors: **Yoshitake Fukaya**, Toyama (JP);
Masahiro Kato, Toyama (JP); **Makoto Watanabe**, Toyama (JP); **Kiyohide Sasaki**, Tokyo (JP)

(73) Assignee: **A.L.M.T. CORP.**, Tokyo (JP)

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

(21) Appl. No.: **29/543,974**

(22) Filed: **Oct. 29, 2015**

Related U.S. Application Data

(62) Division of application No. 29/468,973, filed on Oct. 4, 2013, now Pat. No. Des. 771,167.

(30) **Foreign Application Priority Data**

Aug. 21, 2013 (JP) 2013-019097
 Aug. 29, 2013 (JP) 2013-019888
 Sep. 4, 2013 (JP) 2013-020426
 Sep. 4, 2013 (JP) 2013-020427
 Sep. 4, 2013 (JP) 2013-020428

(51) **LOC (11) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/220**

(58) **Field of Classification Search**

USPC D24/220, 121; D15/135, 136, 137, 144,
D15/144.1, 144.2; D7/586; 422/422,
422/530, 552; 428/579; 264/86;
222/572; 220/253, 669; 117/223, 13,
117/208; 266/275; 164/131

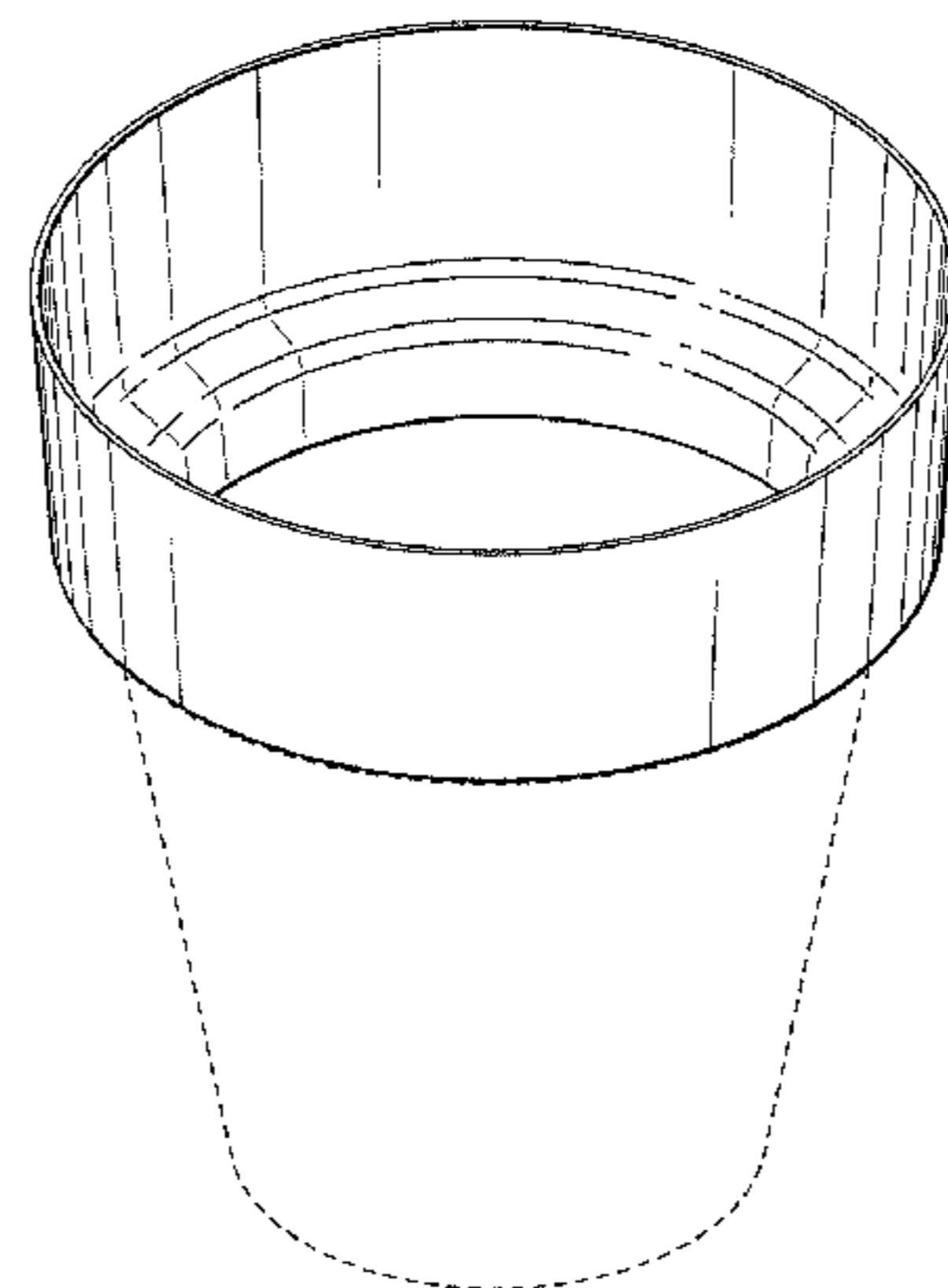
CPC ... C30B 11/002; C30B 15/10; C01F 17/0006;
B28B 1/26; B22D 41/00; B01L 3/04;
F27B 14/10; F27D 1/0006; A61B 90/40

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,081,535 A * 12/1913 Jeppson C04B 41/009
422/422
D53,484 S * 7/1919 Brile et al. 428/579
1,381,171 A * 6/1921 Darrah B28B 1/26
264/86
1,518,818 A * 12/1924 Rietz F27B 14/10
422/530
2,099,043 A * 11/1937 Wicklein B22D 41/00
222/572
2,195,436 A * 4/1940 Weller B01L 3/04
422/552
D142,792 S * 11/1945 Ripich D15/135
D185,475 S * 6/1959 Weller D24/220
2,961,228 A * 11/1960 Moore B01L 3/04
220/253
D215,448 S * 10/1969 KNowles D15/144.2
3,796,552 A * 3/1974 Robinson C01F 17/0006
117/223
D231,834 S 6/1974 Gulrich
4,354,831 A * 10/1982 Shinkawa F27B 14/10
266/275
4,366,571 A 12/1982 Palmquist
D269,519 S 6/1983 Braun
D280,761 S 9/1985 Silsbury
D420,374 S 2/2000 Zigliotto
D422,609 S 4/2000 Fong et al.
D446,530 S 8/2001 Kuraoka et al.
6,334,898 B1 1/2002 Bommier
D517,577 S 3/2006 Conway et al.
D527,401 S 8/2006 Mizuno et al.
D535,674 S 1/2007 Conway et al.
D536,009 S 1/2007 MacKenzie et al.
D539,611 S * 4/2007 Wasserman D7/586
D582,950 S 12/2008 Yamaguchi et al.
D617,894 S * 6/2010 Wright A61B 90/40
D24/121
D653,270 S 1/2012 Furujo et al.
D654,520 S * 2/2012 Okada D15/144
D654,939 S 2/2012 Furujo et al.
D681,706 S 5/2013 Savill, Jr.
D697,956 S 1/2014 Davis et al.
D712,446 S * 9/2014 Wetzel 15/144.2
D719,200 S 12/2014 Hassan
D735,787 S 8/2015 Hassan et al.
D736,285 S 8/2015 Hassan et al.
D771,167 S * 11/2016 Fukaya D15/144
2002/0083886 A1 * 7/2002 Katoh C30B 11/002
117/13



2008/0253870	A1	10/2008	Ford	JP	D1010853	S	5/1998
2009/0272314	A1	11/2009	Kato et al.	JP	D1065082	S	3/2000
2009/0288592	A1	11/2009	Kato et al.	JP	D1065082/1	S	5/2000
2010/0314400	A1*	12/2010	Kanda	JP	2000-290739	A	10/2000
				JP	2001-48693	A	2/2001
				JP	2001-323302	A	11/2001
2011/0017124	A1	1/2011	Hoshikawa et al.	JP	2002-60296	A	2/2002
2013/0087094	A1*	4/2013	Quinton	JP	2002-170780	A	6/2002
				JP	2003-112998	A	4/2003
				JP	2005-206416	A	8/2005
2013/0288192	A1	10/2013	Uhlenhut	JP	2007-240037	A	9/2007
2014/0083638	A1	3/2014	Waniuk et al.	JP	D1358312	S	5/2009
2014/0150986	A1*	6/2014	Bewlay	JP	D1358644	S	5/2009
				JP	D1358645	S	5/2009
				JP	D1359187	S	5/2009
				JP	D1368861	S	9/2009
				JP	D1368862	S	9/2009
2014/0202377	A1	7/2014	Sugisaki	JP	2010-270345	A	12/2010
2015/0151378	A1	6/2015	Fujii et al.	JP	D1402735	S	12/2010
2015/0153108	A1	6/2015	Zhang et al.	JP	2011-42560	A	3/2011
2015/0184311	A1	7/2015	Turenne et al.	JP	2011-105575	A	6/2011
2015/0225870	A1*	8/2015	Katoh	JP	D1415427	S	6/2011
				JP	D1415594	S	6/2011
				JP	2012-254916	A	12/2012
				JP	2012236733	A	12/2012
				JP	2013-156118	A	8/2013
				JP	2013-230970	A	11/2013
				WO	WO 2013/015301	A1	1/2013

FOREIGN PATENT DOCUMENTS

CN	102304751	A	1/2012
CN	102719898	A	10/2012
CN	202530198	U	11/2012
CN	202530199	U	11/2012
CN	202993825	U	6/2013
CN	203034137	U	7/2013
CN	203049098	U	7/2013
JP	D280905	S	2/1968
JP	D360817	S	12/1972
JP	D468561	S	9/1977
JP	D469183	S	9/1977
JP	D504817	S	3/1979
JP	D504818	S	3/1979
JP	D508660	S	4/1979
JP	D508660/1	S	10/1979
JP	D508660/2	S	10/1979
JP	D508660/3	S	10/1979
JP	D508660/7	S	10/1979
JP	59-103767	U	7/1984
JP	D641179	S	9/1984
JP	D669053	S	12/1985
JP	61-11588	A	1/1986
JP	61-123433	A	6/1986
JP	D690970	S	11/1986
JP	62-28880	U	2/1987
JP	D744971	S	10/1988
JP	64-42388	A	2/1989
JP	D756137	S	2/1989
JP	D756137/1	S	3/1989
JP	D756137/2	S	3/1989
JP	D756137/3	S	3/1989
JP	D756137/4	S	3/1989
JP	5-12488	A	1/1993
JP	D868856	S	5/1993
JP	D868857	S	5/1993
JP	D801276	S	8/1993
JP	D877961	S	9/1993
JP	D880209	S	10/1993
JP	D905180	S	8/1994
JP	D905181	S	8/1994
JP	6-247719	A	9/1994
JP	6-273060	A	9/1994
JP	7-242978	A	9/1995
JP	D944952	S	1/1996
JP	D880209/1	S	4/1996
JP	D993758	S	10/1997

OTHER PUBLICATIONS

Office Action dated Nov. 1, 2016 in related Japanese Application JP 2016-054056.

Office Action dated Nov. 1, 2016 in related Japanese Application JP 2016-054057.

* cited by examiner

Primary Examiner — Rhea Shields
(74) Attorney, Agent, or Firm — Birch, Stewart, Kolasch & Birch, LLP

(57) CLAIM

The ornamental design for a crucible, as shown and described.

DESCRIPTION

FIG. 1 is a front view of a crucible showing our design; FIG. 2 is a rear view thereof; FIG. 3 is a top plan view thereof; FIG. 4 is a bottom plan view thereof; FIG. 5 is a right side view thereof; FIG. 6 is a left side view thereof; FIG. 7 is a cross-sectional view taken along line 7-7 of FIG. 3 thereof; and, FIG. 8 is a perspective view thereof. In the drawings the broken lines are for the purpose of illustrating environment only and form no part of the claimed design.

1 Claim, 4 Drawing Sheets

FIG.1

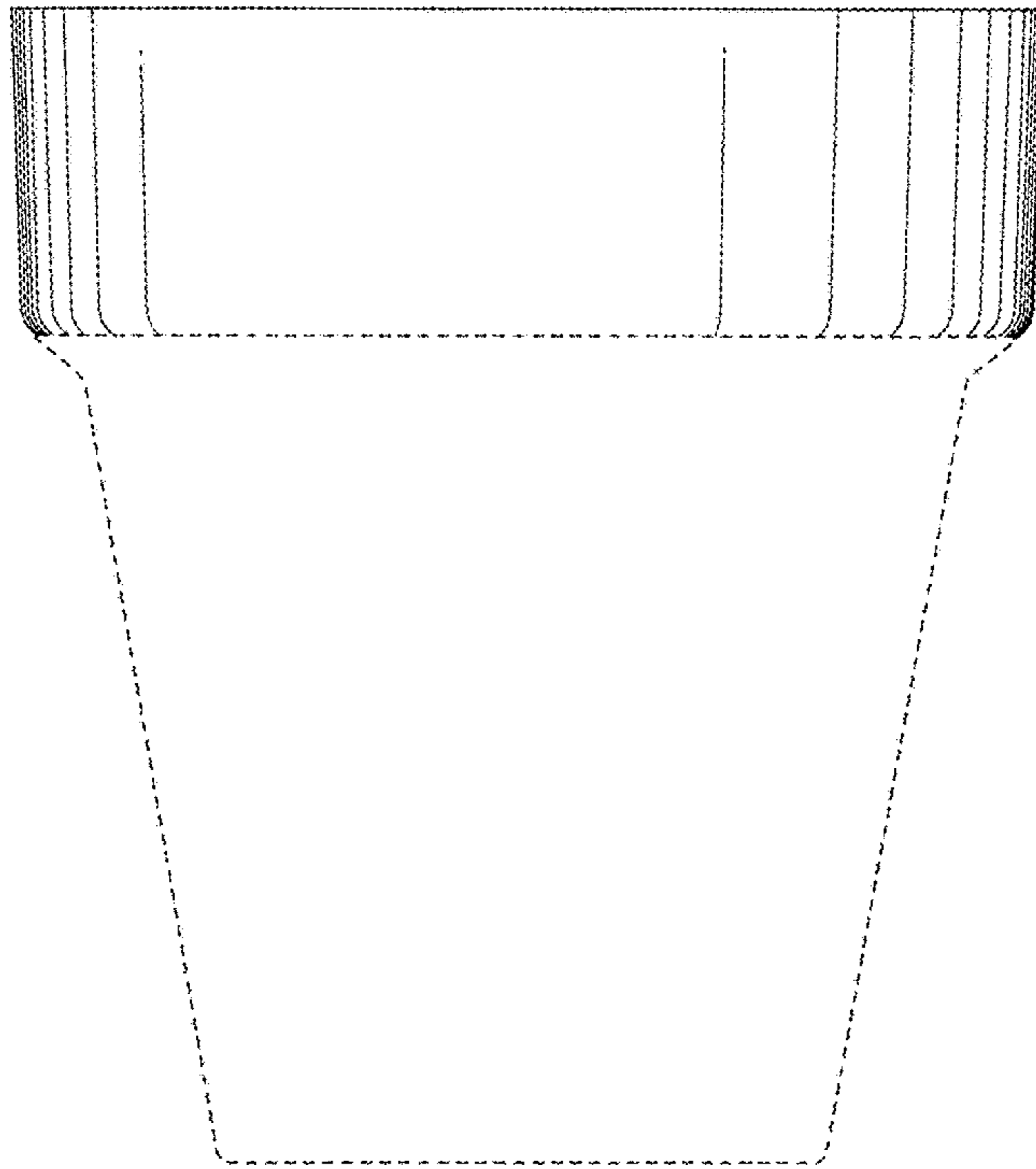


FIG.2

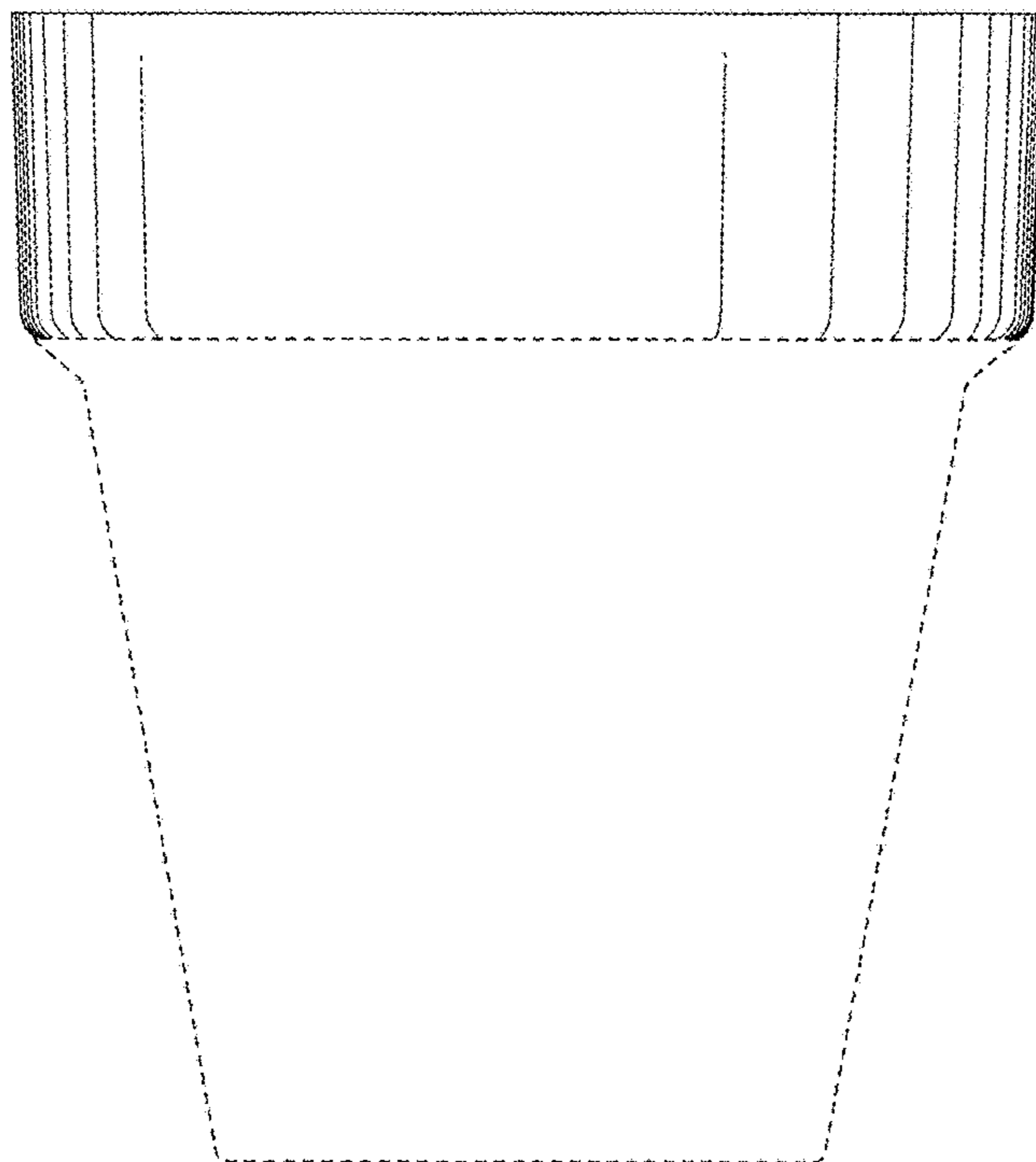


FIG.3

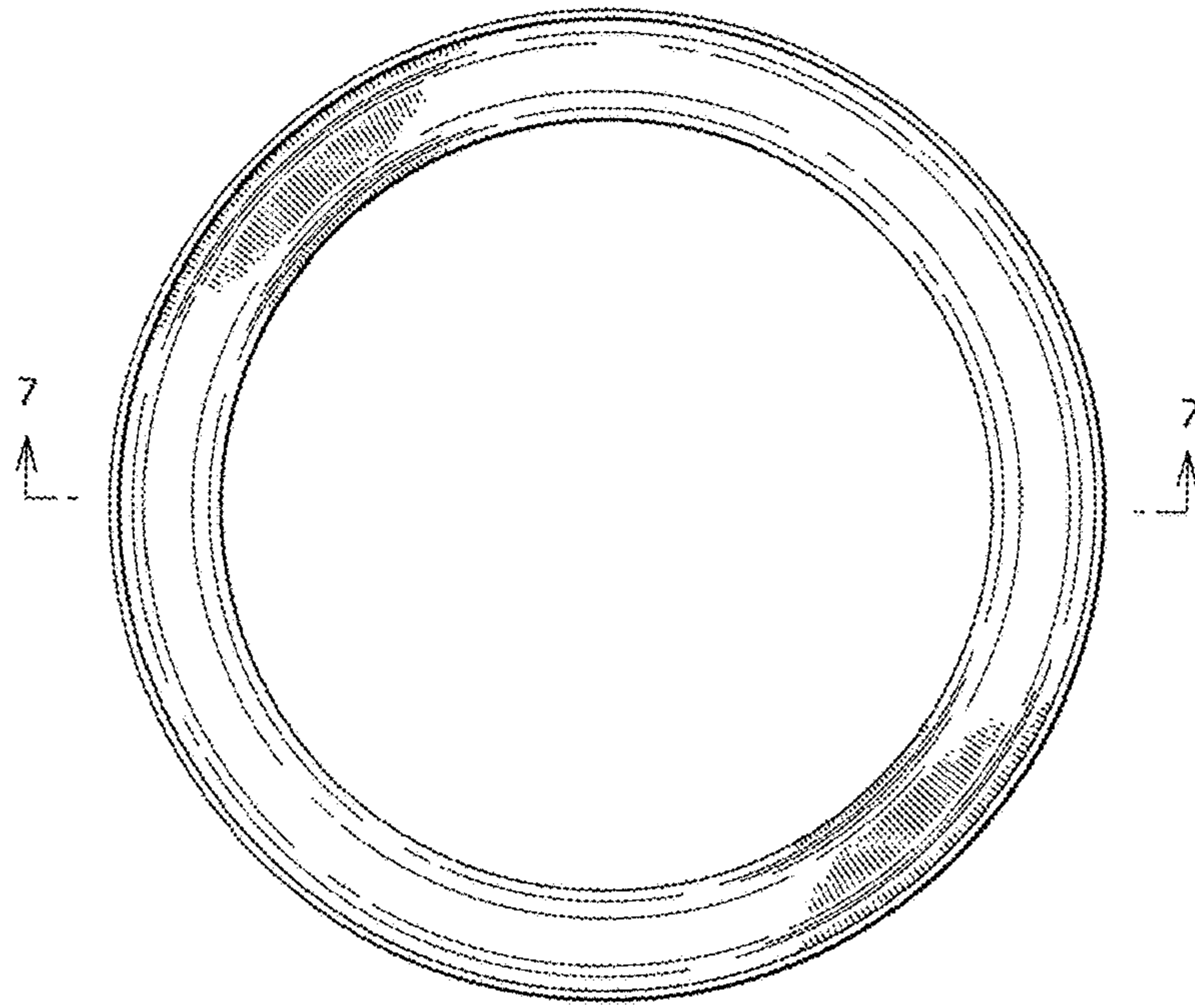


FIG.4

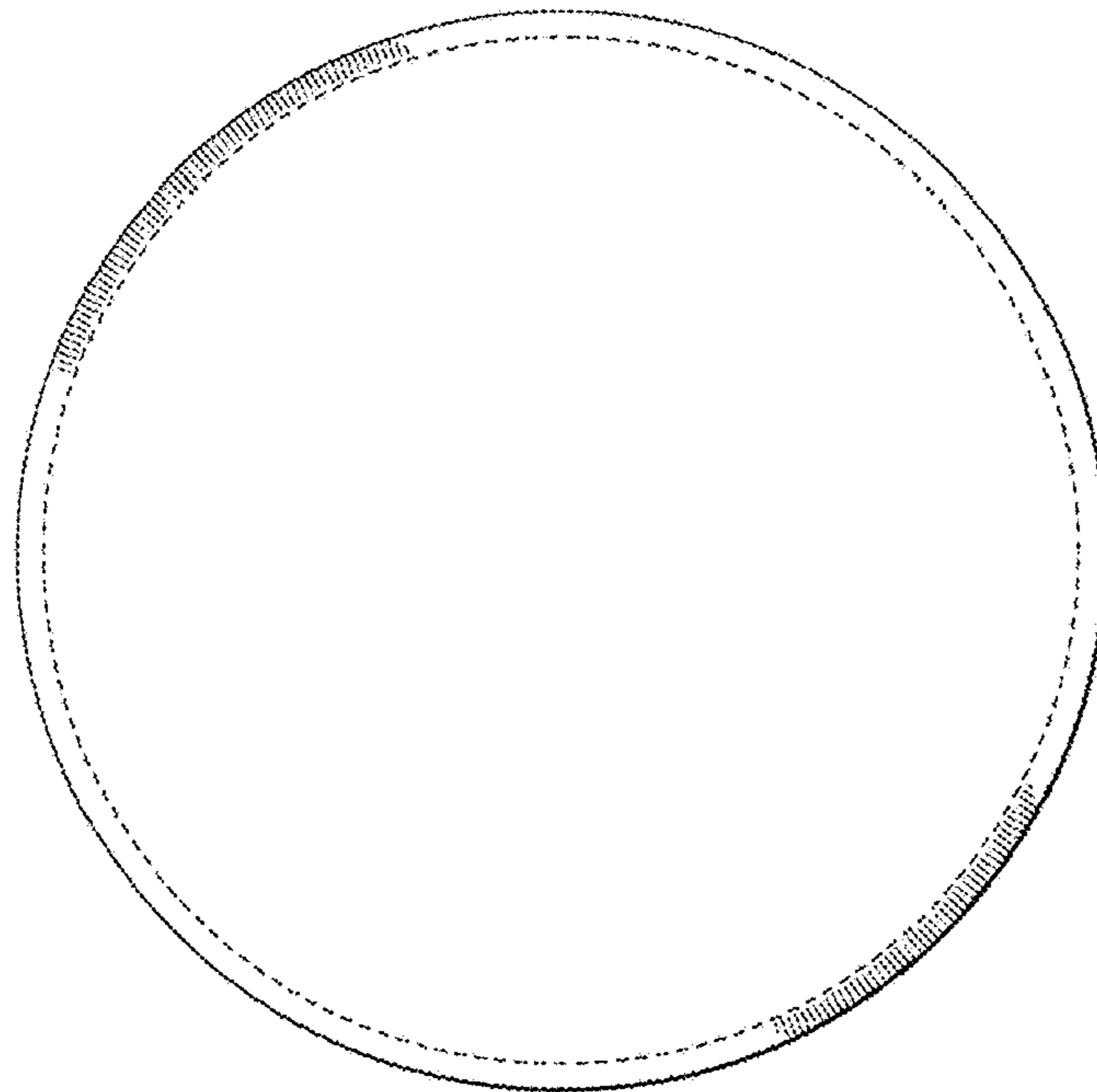


FIG.5

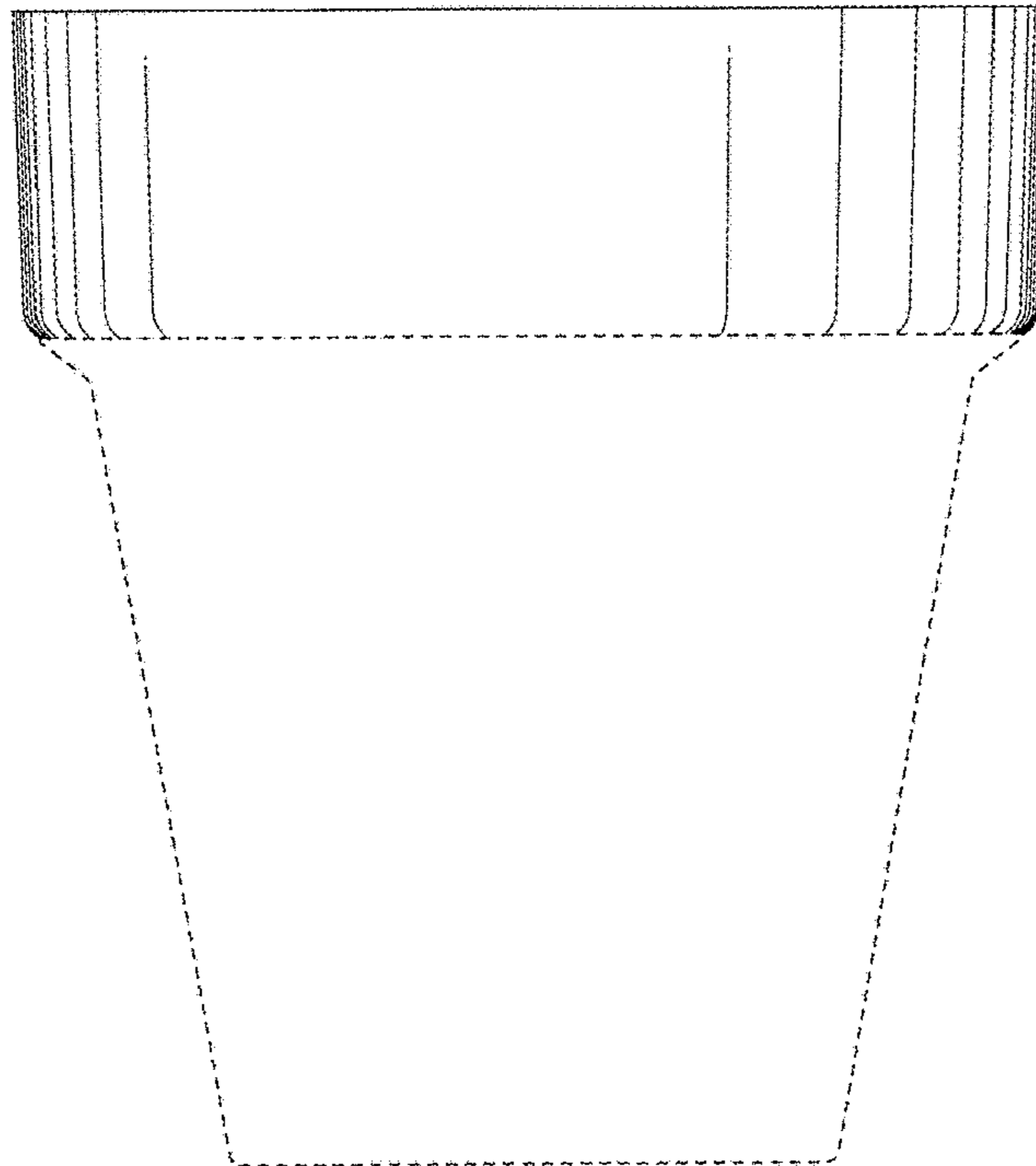


FIG.6

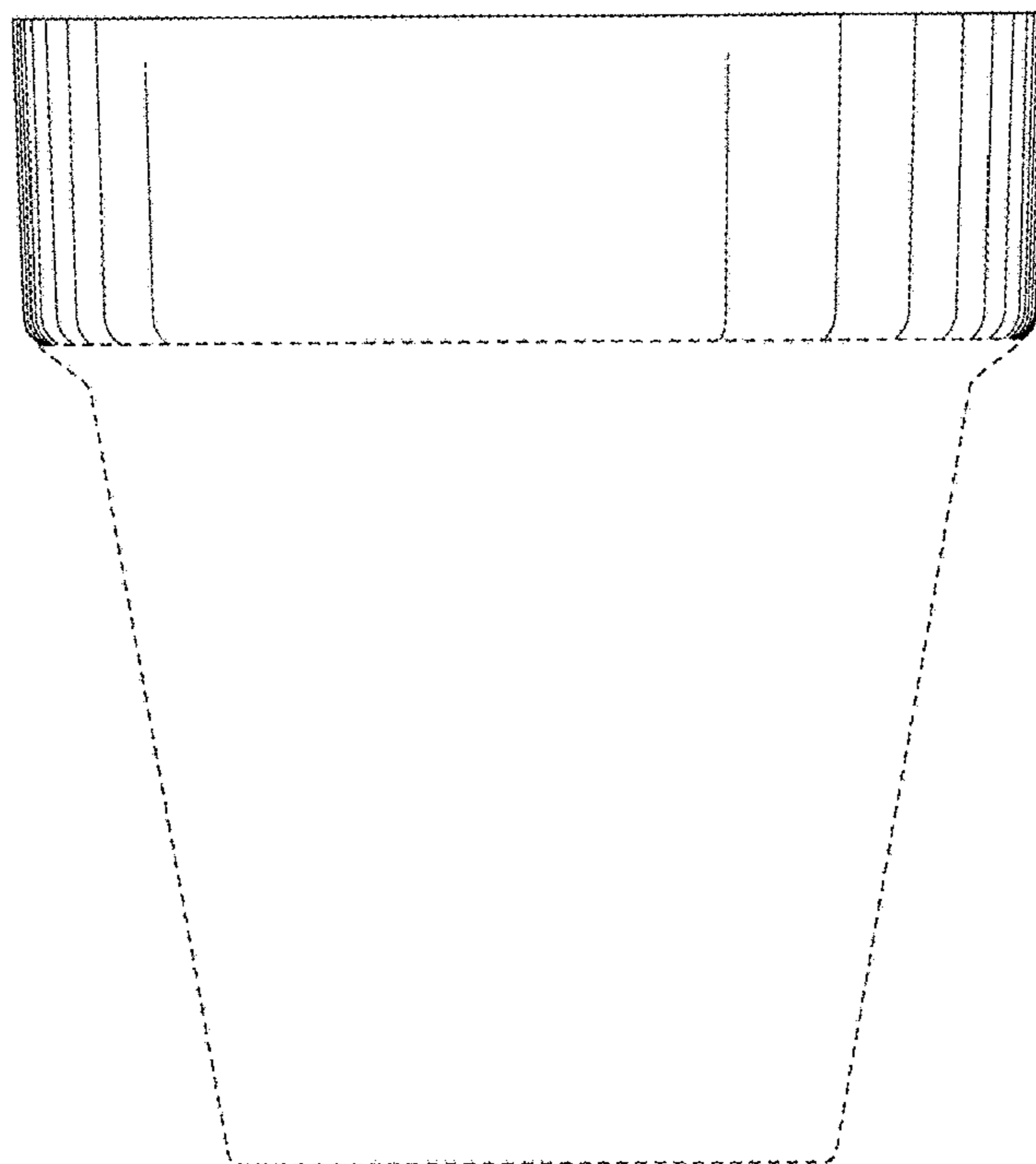


FIG.7

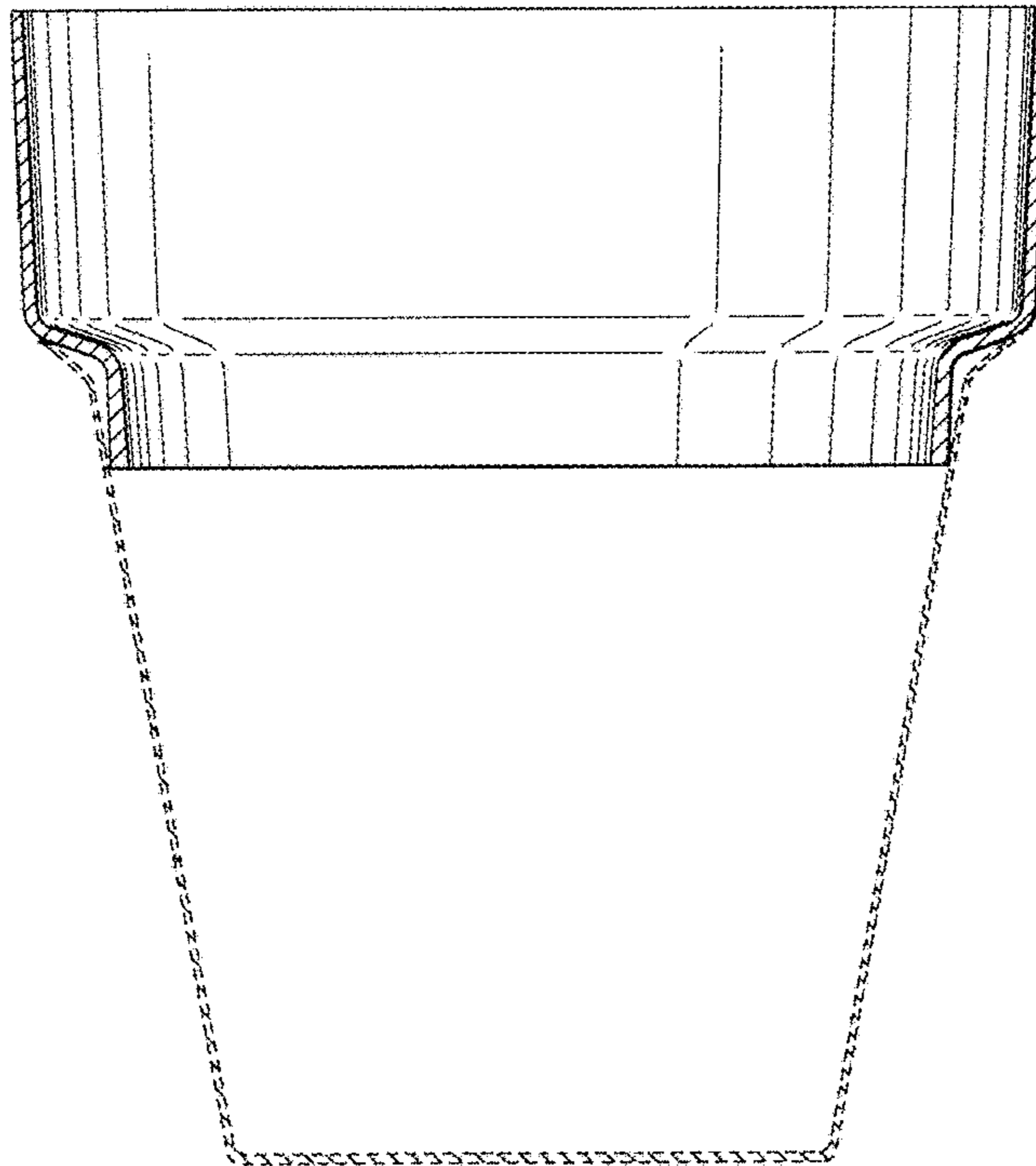


FIG.8

