

US00D766433S

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

(10) **Patent No.:** **US D766,433 S**

(45) **Date of Patent:** **** Sep. 13, 2016**

- (54) **ECCENTRIC CROWN**
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- (**) Term: **14 Years**
- (21) Appl. No.: **29/471,665**
- (22) Filed: **Nov. 4, 2013**
- (51) **LOC (10) Cl.** **24-02**
- (52) **U.S. Cl.**
USPC **D24/146**
- (58) **Field of Classification Search**
USPC D24/146, 147, 133, 128, 129, 143; 600/434; 604/93.01, 95.05, 164.1, 905, 604/528, 159, 171, 198, 263, 22; 606/115, 606/159, 170, 177, 179, 180
CPC A61B 17/32002; A61B 18/1492; A61B 2018/00214; A61B 2017/320766; A61B 17/3207; A61B 17/320725; A61B 2017/320741; A61B 17/320758; A61B 2017/320004; A61B 2017/22038; A61B 2017/22039; A61B 2017/22041
See application file for complete search history.

4,990,134 A	2/1991	Auth	
5,026,384 A	6/1991	Farr et al.	
5,030,201 A	7/1991	Palestrant	
5,041,082 A	8/1991	Shiber	
5,078,723 A	1/1992	Dance et al.	
5,087,265 A	2/1992	Summers	
5,100,425 A	3/1992	Fischell et al.	
5,112,299 A *	5/1992	Pascaloff	A61B 17/32002 604/22
5,137,288 A *	8/1992	Starkey	A61M 25/09 279/42
5,158,564 A	10/1992	Schnepp-Pesch et al.	
5,161,534 A *	11/1992	Berthiaume	A61M 25/01 226/127
5,192,291 A	3/1993	Pannek, Jr.	
5,197,956 A *	3/1993	Brizuela	A61M 25/0631 604/171
5,217,474 A	6/1993	Zacca et al.	
5,217,478 A	6/1993	Rexroth	
5,224,945 A	7/1993	Pannek, Jr.	
5,242,460 A	9/1993	Klein et al.	
5,242,461 A	9/1993	Kortenbach et al.	
5,261,877 A	11/1993	Fine et al.	
5,267,955 A	12/1993	Hanson	

(Continued)

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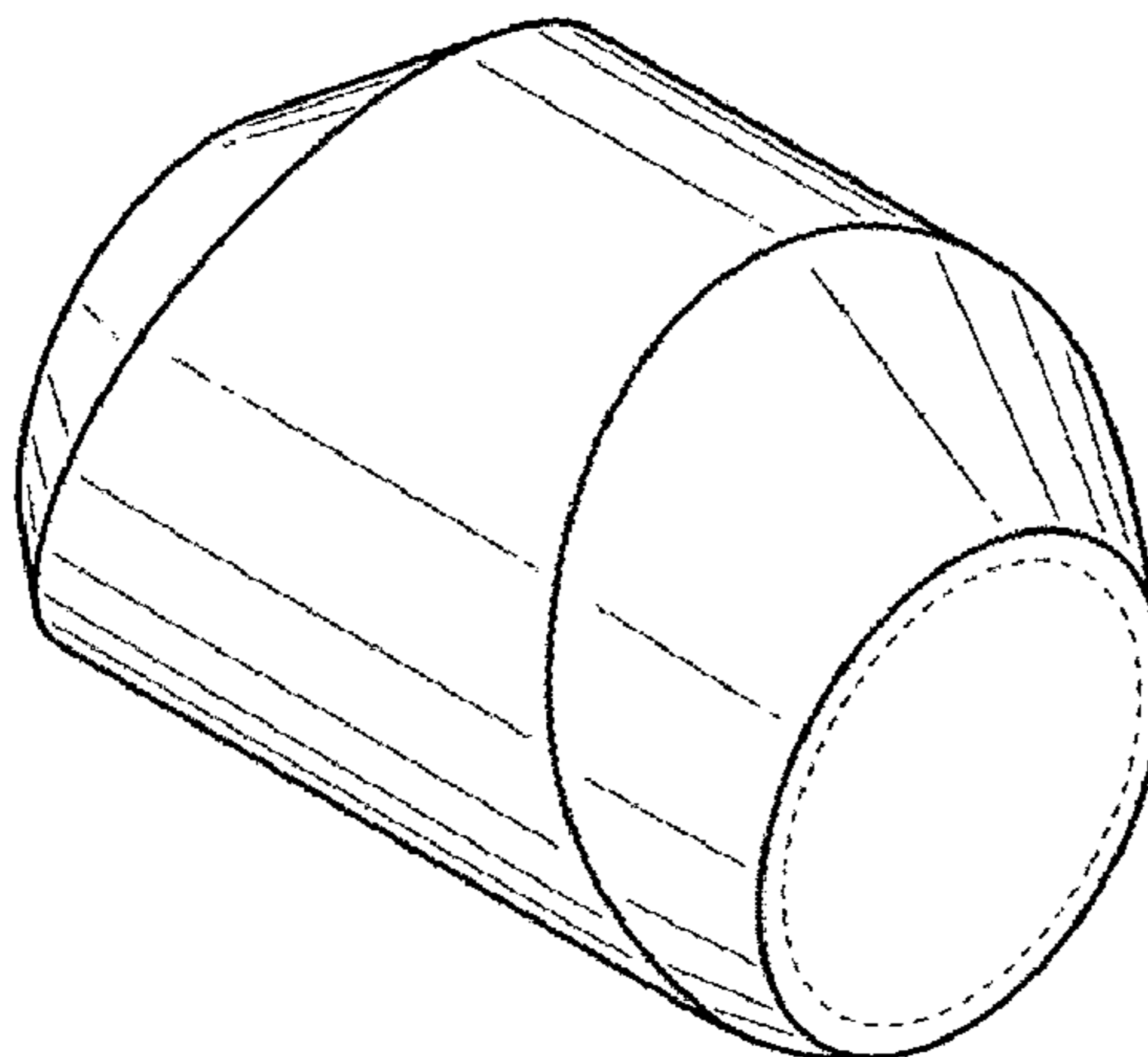
(57) **CLAIM**
The ornamental design for an eccentric crown, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of an eccentric crown; FIG. 2 is a left side view thereof, the right side view being a mirror image thereof; FIG. 3 is a top view thereof; FIG. 4 is a bottom view thereof; FIG. 5 is a front view thereof, the rear view being a mirror image thereof; and, FIG. 6 is a perspective view of a crown. The broken line showing represents portions of the article not claimed and forms no part of the claimed design.

1 Claim, 3 Drawing Sheets

- (56) **References Cited**
U.S. PATENT DOCUMENTS
- 4,445,509 A 5/1984 Auth
- 4,646,736 A 3/1987 Auth
- 4,726,369 A * 2/1988 Mar A61M 25/09041
600/434
- 4,728,319 A 3/1988 Masch
- 4,795,438 A 1/1989 Kensey et al.
- 4,829,999 A * 5/1989 Auth A61M 25/013
24/115 R



(56)

References Cited

U.S. PATENT DOCUMENTS

5,308,354 A	5/1994	Zacca et al.	7,831,297 B2 *	11/2010	Opie	A61B 17/00008 600/434
5,312,427 A	5/1994	Shturman	D632,791 S *	2/2011	Murner	D24/129
5,314,438 A	5/1994	Shturman	D633,206 S *	2/2011	Murner	D24/129
5,358,485 A	10/1994	Vance et al.	8,043,314 B2	10/2011	Noriega et al.	
5,358,509 A	10/1994	Fine et al.	8,092,395 B2	1/2012	Lupton et al.	
5,360,432 A	11/1994	Shturman	D658,291 S *	4/2012	Jenkins	D24/140
5,370,651 A	12/1994	Summers	8,177,801 B2	5/2012	Kallok et al.	
5,372,602 A	12/1994	Burke	D667,954 S *	9/2012	Mastri	D24/146
5,376,100 A	12/1994	Lefebvre	8,337,516 B2	12/2012	Escudero et al.	
5,395,311 A	3/1995	Andrews	8,348,965 B2	1/2013	Prudnikov et al.	
5,423,331 A *	6/1995	Wysham	8,353,923 B2	1/2013	Shturman	
		A61B 17/22 600/585	8,388,635 B2	3/2013	Kumoyama et al.	
5,423,740 A	6/1995	Sullivan et al.	8,398,634 B2	3/2013	Manzo et al.	
5,423,846 A	6/1995	Fischell	8,439,937 B2	5/2013	Montague et al.	
5,490,859 A	2/1996	Mische et al.	8,551,128 B2	10/2013	Hanson et al.	
5,501,694 A	3/1996	Ressemann et al.	8,597,313 B2	12/2013	Thatcher et al.	
5,540,707 A	7/1996	Ressemann et al.	8,628,550 B2	1/2014	Narveson	
5,571,136 A *	11/1996	Weaver	8,628,551 B2	1/2014	Hanson et al.	
		A61B 10/04 606/174	8,663,264 B2 *	3/2014	Cesarini	A61B 17/32002 600/566
5,584,843 A	12/1996	Wulfman et al.	8,702,735 B2	4/2014	Rivers	
5,632,755 A	5/1997	Nordgren et al.	8,777,873 B2	7/2014	Elsesser et al.	
5,643,296 A	7/1997	Hundertmark et al.	8,793,842 B2 *	8/2014	Donovan	F16G 11/14 24/115 N
5,643,297 A	7/1997	Nordgren et al.	8,795,303 B2 *	8/2014	McBroom	A61B 17/320758 606/159
5,643,298 A	7/1997	Nordgren et al.	9,055,966 B2 *	6/2015	Cambronne	A61B 17/32002
5,746,758 A *	5/1998	Nordgren	D746,456 S *	12/2015	Harrison	D24/146
		A61B 17/32075 606/159	9,254,169 B2 *	2/2016	Long	A61B 18/12
5,792,157 A	8/1998	Mische et al.	9,320,872 B2 *	4/2016	Urmey	A61M 25/013
5,836,868 A	11/1998	Ressemann et al.	2001/0018596 A1	8/2001	Selmon et al.	
5,888,200 A	3/1999	Walen	2002/0077638 A1 *	6/2002	Kadavy	A61B 17/320725 606/159
5,916,227 A	6/1999	Keith et al.	2003/0139689 A1	7/2003	Shturman et al.	
5,928,241 A	7/1999	Menut et al.	2003/0199889 A1	10/2003	Kanz et al.	
5,938,670 A	8/1999	Keith et al.	2004/0006358 A1	1/2004	Wulfman et al.	
5,968,064 A	10/1999	Selmon et al.	2004/0097995 A1	5/2004	Nash et al.	
6,015,420 A	1/2000	Wulfman et al.	2004/0220519 A1 *	11/2004	Wulfman	A61B 5/061 604/93.01
6,080,171 A	6/2000	Keith et al.	2005/0149083 A1	7/2005	Prudnikov et al.	
RE36,764 E	7/2000	Zacca et al.	2005/0149084 A1	7/2005	Kanz et al.	
6,096,054 A	8/2000	Wyzgala et al.	2006/0142793 A9	6/2006	Prudnikov et al.	
6,129,734 A	10/2000	Shturman et al.	2007/0239140 A1	10/2007	Chechelski et al.	
6,146,395 A	11/2000	Kanz et al.	2008/0004644 A1	1/2008	To et al.	
6,152,938 A	11/2000	Curry	2008/0004645 A1	1/2008	To et al.	
6,193,735 B1	2/2001	Stevens	2008/0004646 A1	1/2008	To et al.	
6,217,595 B1	4/2001	Shturman et al.	2008/0004647 A1	1/2008	To et al.	
6,270,509 B1	8/2001	Barry et al.	2008/0033423 A1	2/2008	Peacock, III	
6,280,332 B1	8/2001	Knutson	2008/0054986 A1	3/2008	Berkebile	
6,428,551 B1	8/2002	Hall et al.	2008/0097500 A1	4/2008	Nash et al.	
6,436,111 B1	8/2002	Kadavy et al.	2008/0185419 A1	8/2008	Smith et al.	
6,451,037 B1	9/2002	Chandrasekaran et al.	2008/0221601 A1	9/2008	Huynh et al.	
6,467,121 B1	10/2002	Franzino et al.	2008/0228208 A1	9/2008	Wulfman et al.	
6,482,216 B1	11/2002	Hiblar et al.	2008/0306498 A1 *	12/2008	Thatcher	A61B 17/320758 606/159
6,494,890 B1	12/2002	Shturman et al.	2009/0069829 A1	3/2009	Shturman	
6,503,261 B1	1/2003	Bruneau et al.	2009/0099581 A1	4/2009	Kim et al.	
6,565,588 B1	5/2003	Clement et al.	2009/0105736 A1	4/2009	Prudnikov et al.	
6,579,299 B2	6/2003	McGuckin, Jr. et al.	2009/0149877 A1	6/2009	Hanson et al.	
6,596,005 B1	7/2003	Kanz et al.	2009/0306690 A1	12/2009	Rivers et al.	
6,616,676 B2	9/2003	Bashiri et al.	2010/0125276 A1	5/2010	Palermo	
6,685,696 B2	2/2004	Fleischhacker et al.	2011/0087254 A1	4/2011	Welty	
6,685,718 B1	2/2004	Wyzgala et al.	2011/0112562 A1	5/2011	Torrance	
6,793,634 B2	9/2004	White et al.	2011/0202084 A1	8/2011	Hoem et al.	
6,818,001 B2	11/2004	Wulfman et al.	2011/0213391 A1	9/2011	Rivers et al.	
6,818,005 B2	11/2004	Kupferschmid et al.	2012/0197276 A1	8/2012	Lupton et al.	
6,958,071 B2	10/2005	Carusillo et al.	2012/0259354 A1	10/2012	Kellett	
7,037,271 B2	5/2006	Crowley	2013/0018398 A1	1/2013	Rivers et al.	
7,169,118 B2	1/2007	Reynolds et al.	2013/0018399 A1	1/2013	Rivers et al.	
7,252,674 B2	8/2007	Wyzgala et al.	2013/0023913 A1	1/2013	Rivers et al.	
7,344,546 B2	3/2008	Wulfman et al.	2014/0296888 A1 *	10/2014	Schur	A61B 17/320725 606/159
7,507,245 B2	3/2009	Shturman et al.	2016/0183966 A1 *	6/2016	McGuckin, Jr.	A61B 17/320758 606/159
7,584,022 B2	9/2009	Shturman et al.				
D607,102 S	12/2009	Robinson				
D610,258 S	2/2010	Robinson				
7,674,272 B2	3/2010	Torrance et al.				
7,713,231 B2	5/2010	Wulfman et al.				
7,803,169 B2	9/2010	Shamay				

* cited by examiner

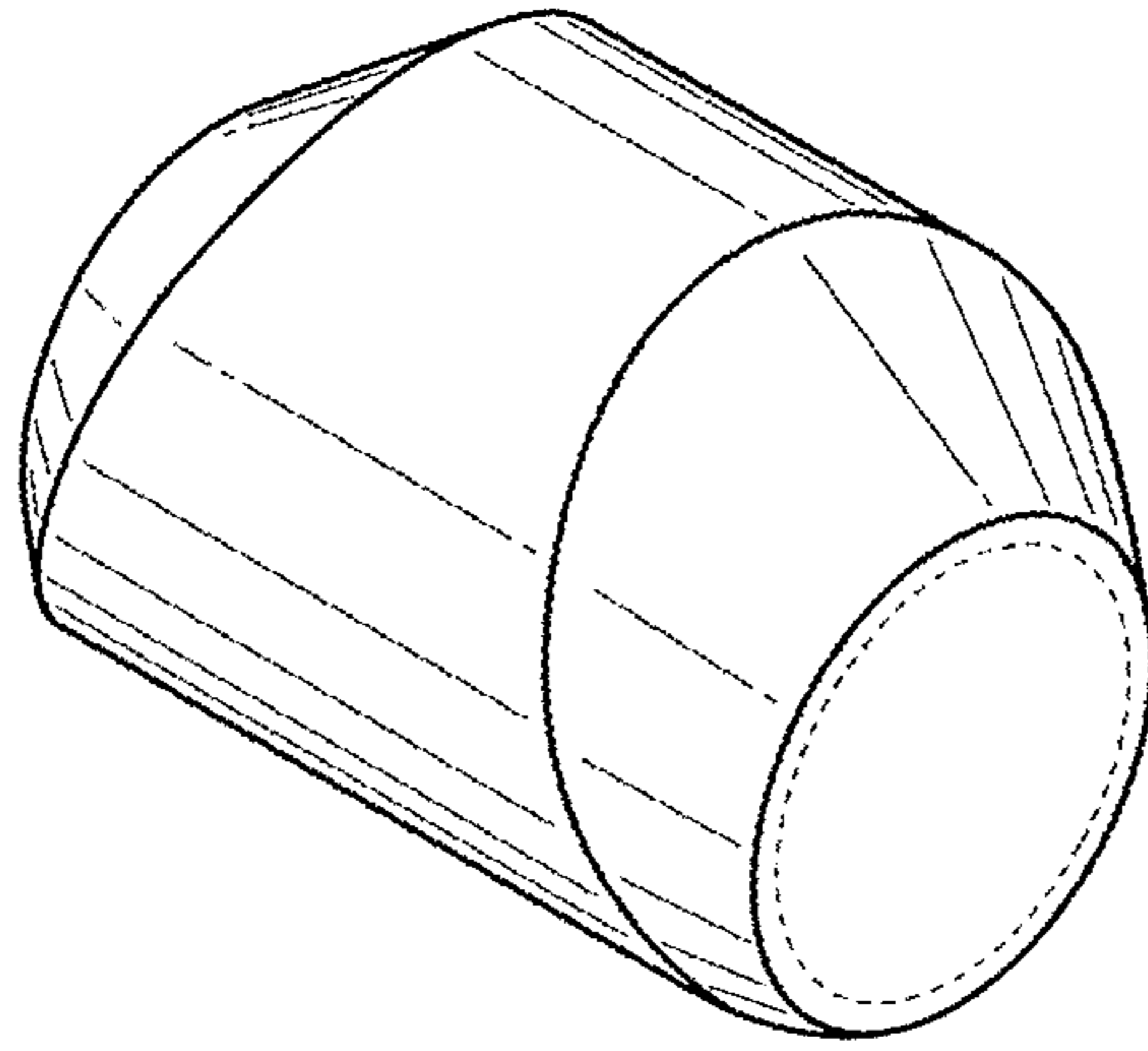


Fig. 1

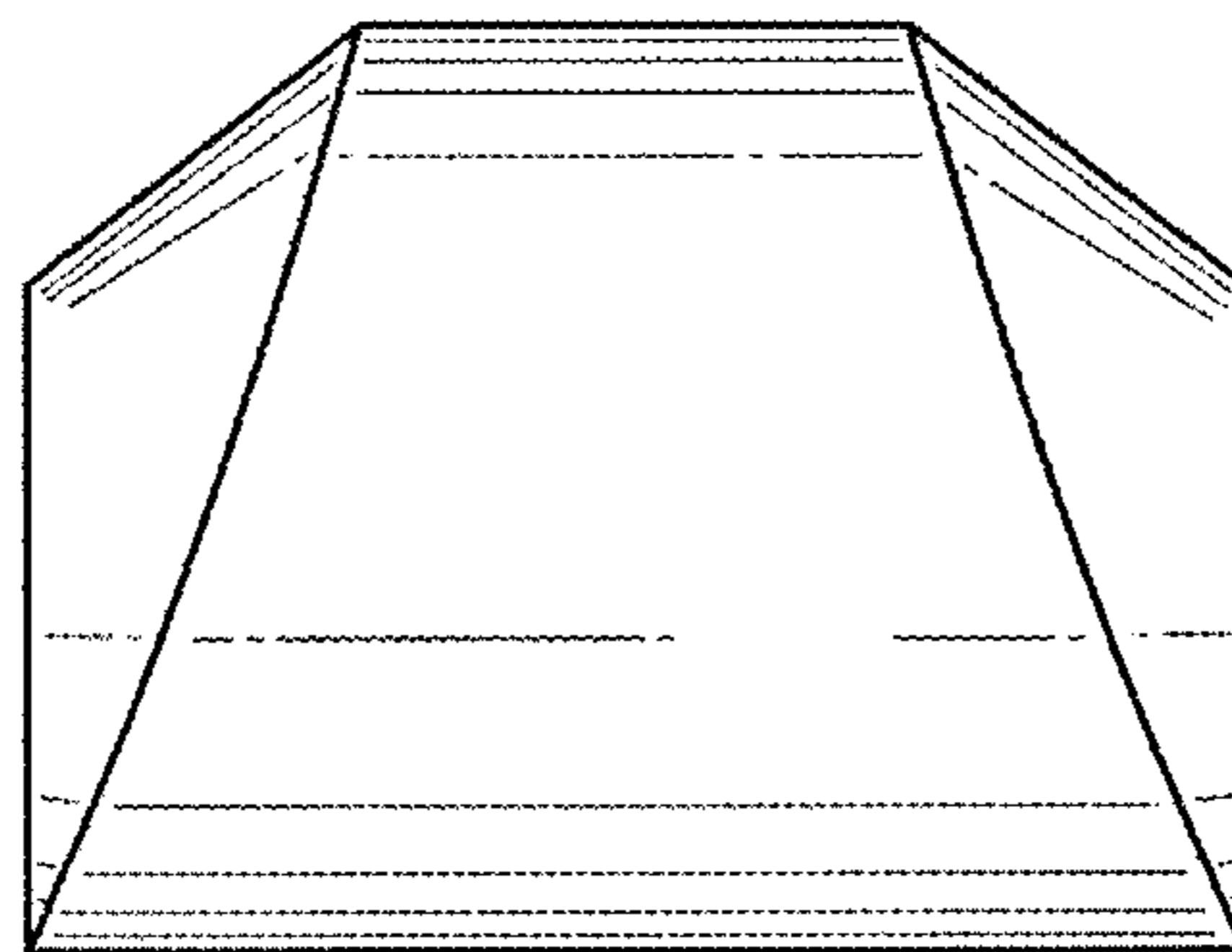


Fig. 2

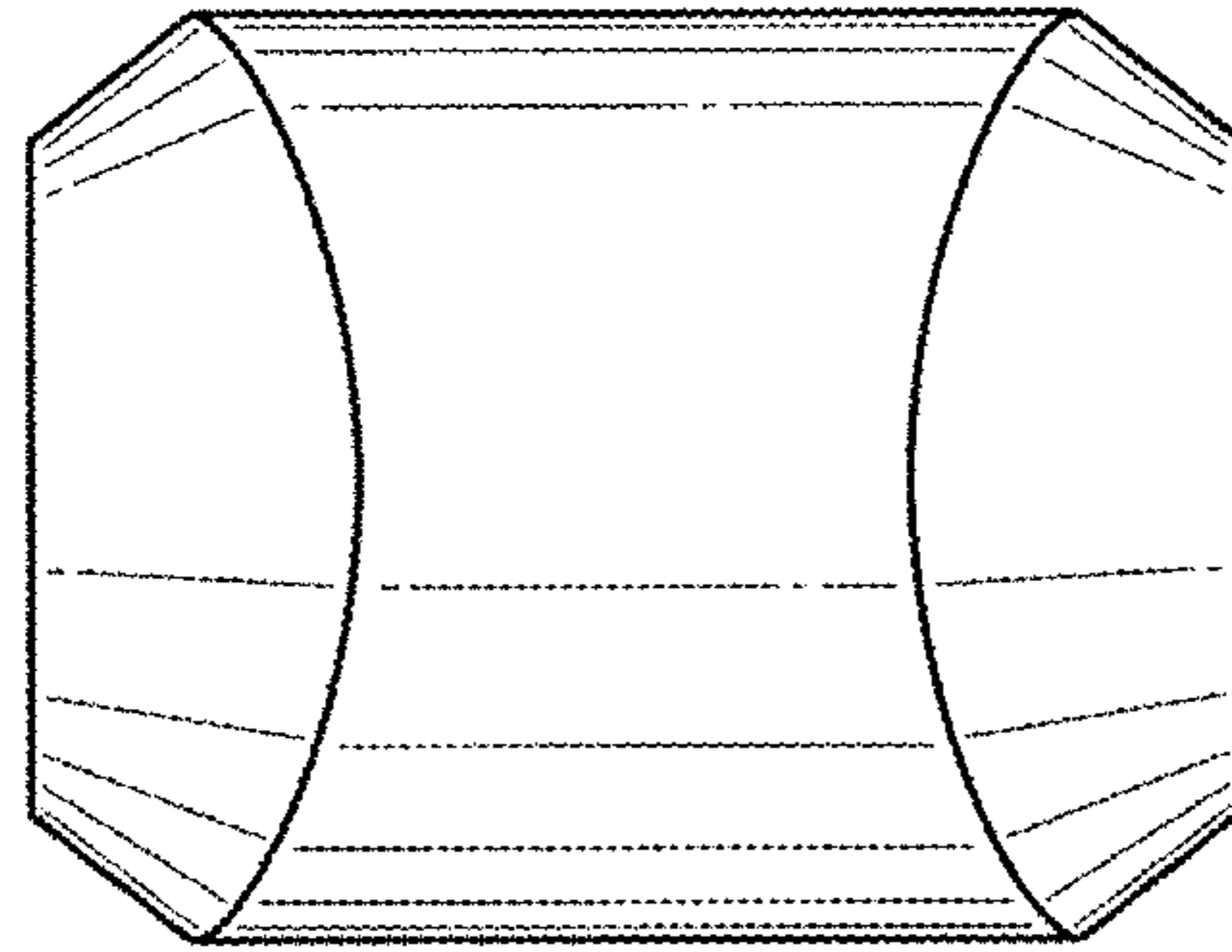


Fig. 3

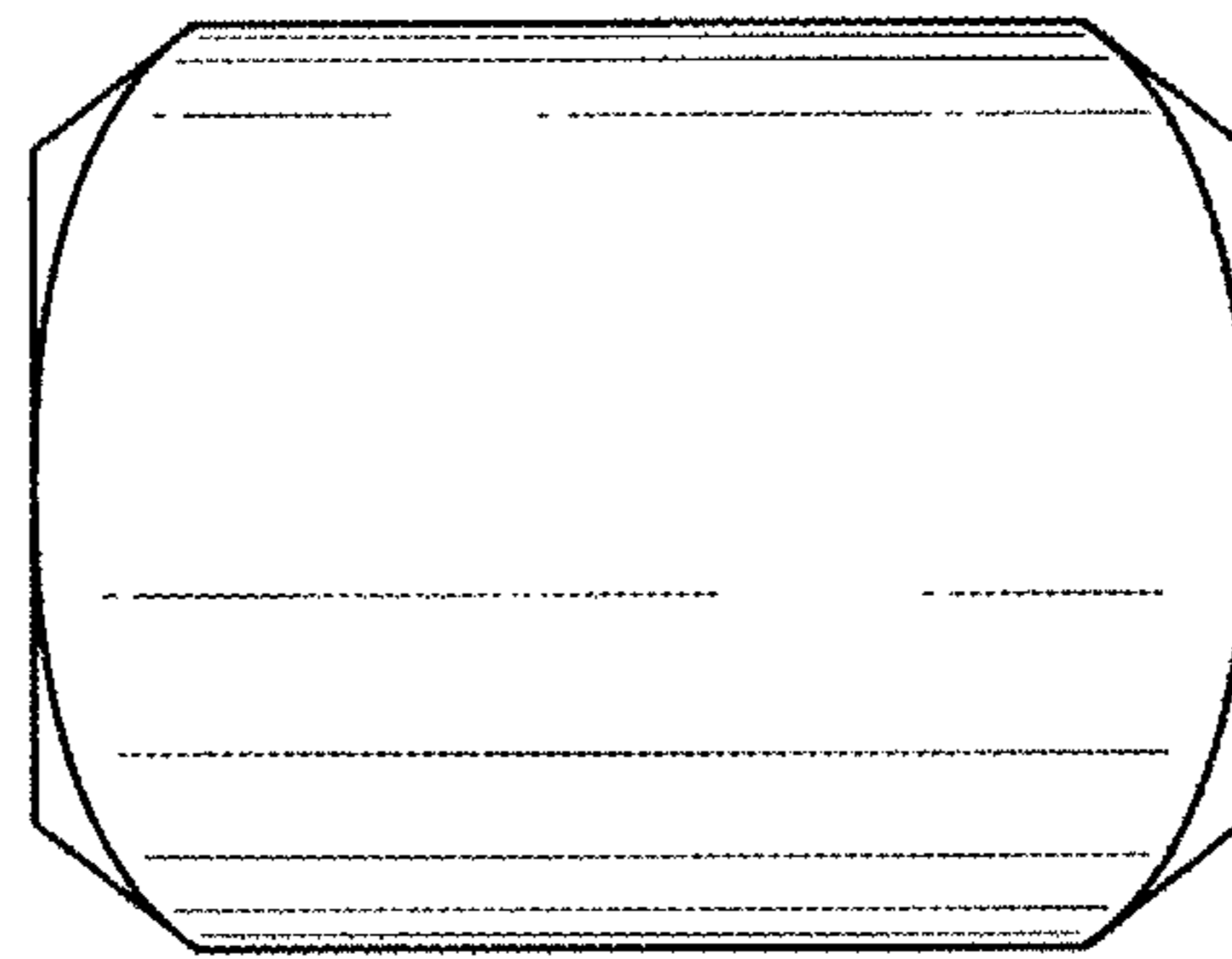


Fig. 4

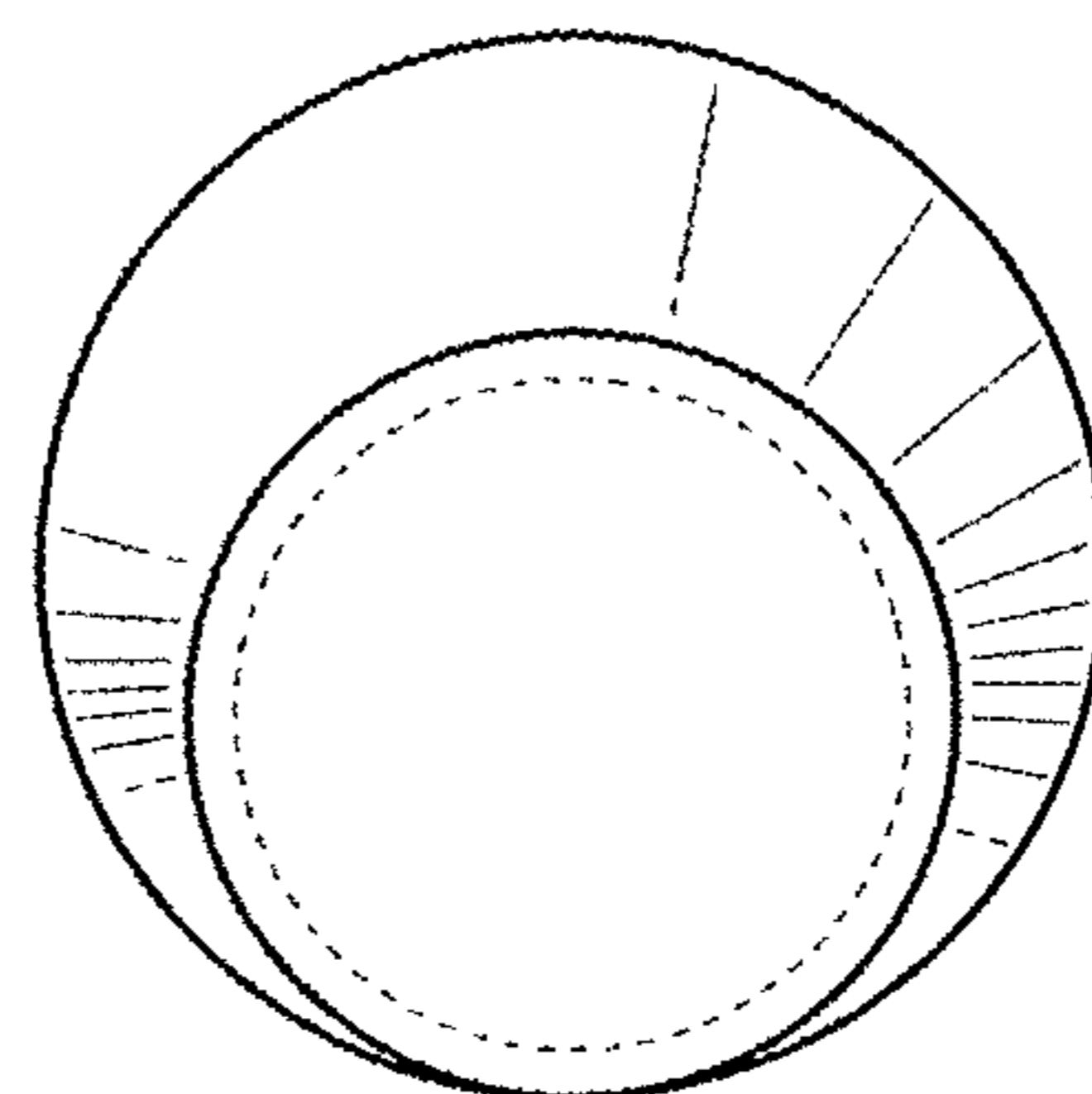


Fig. 5

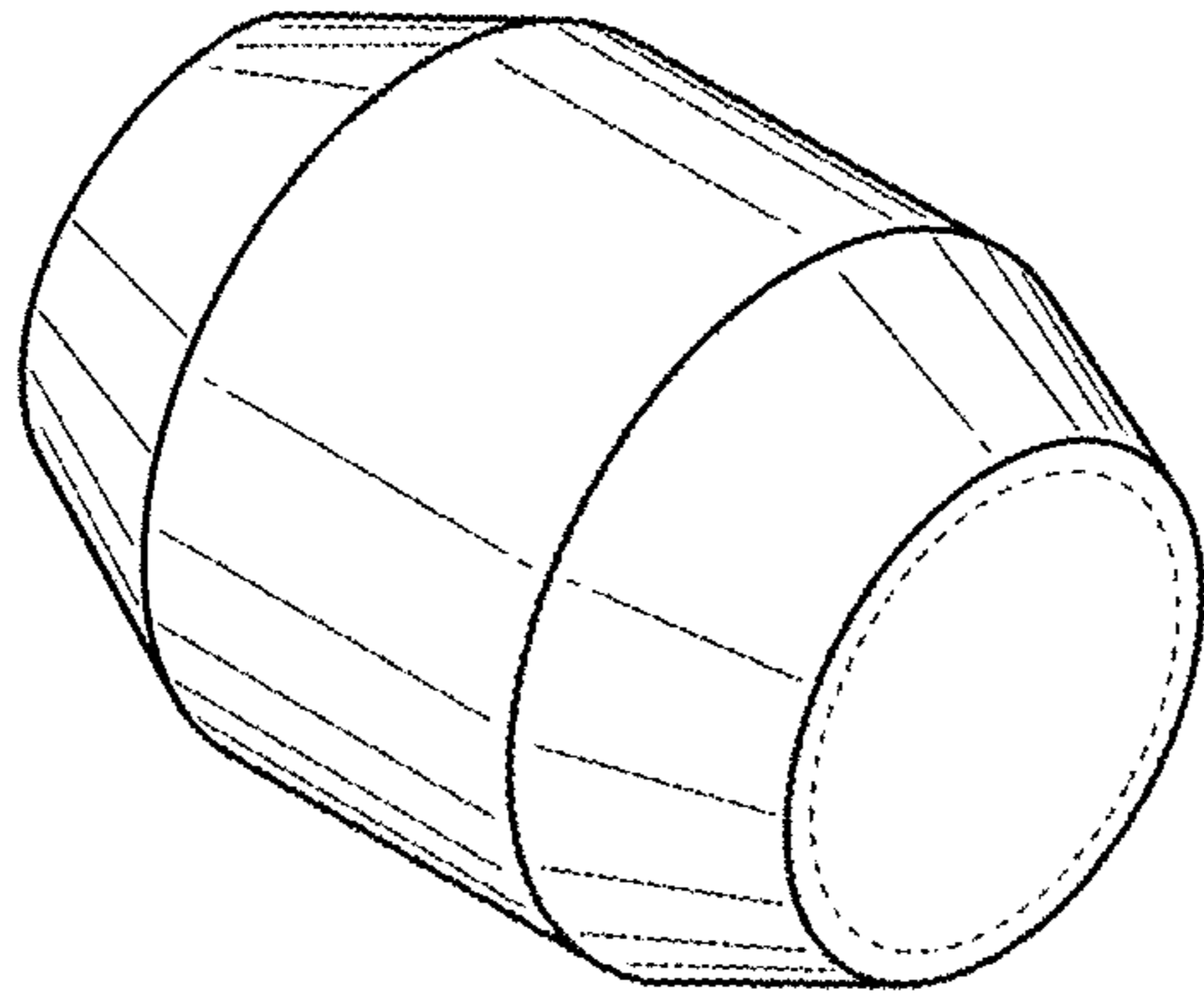


Fig. 6

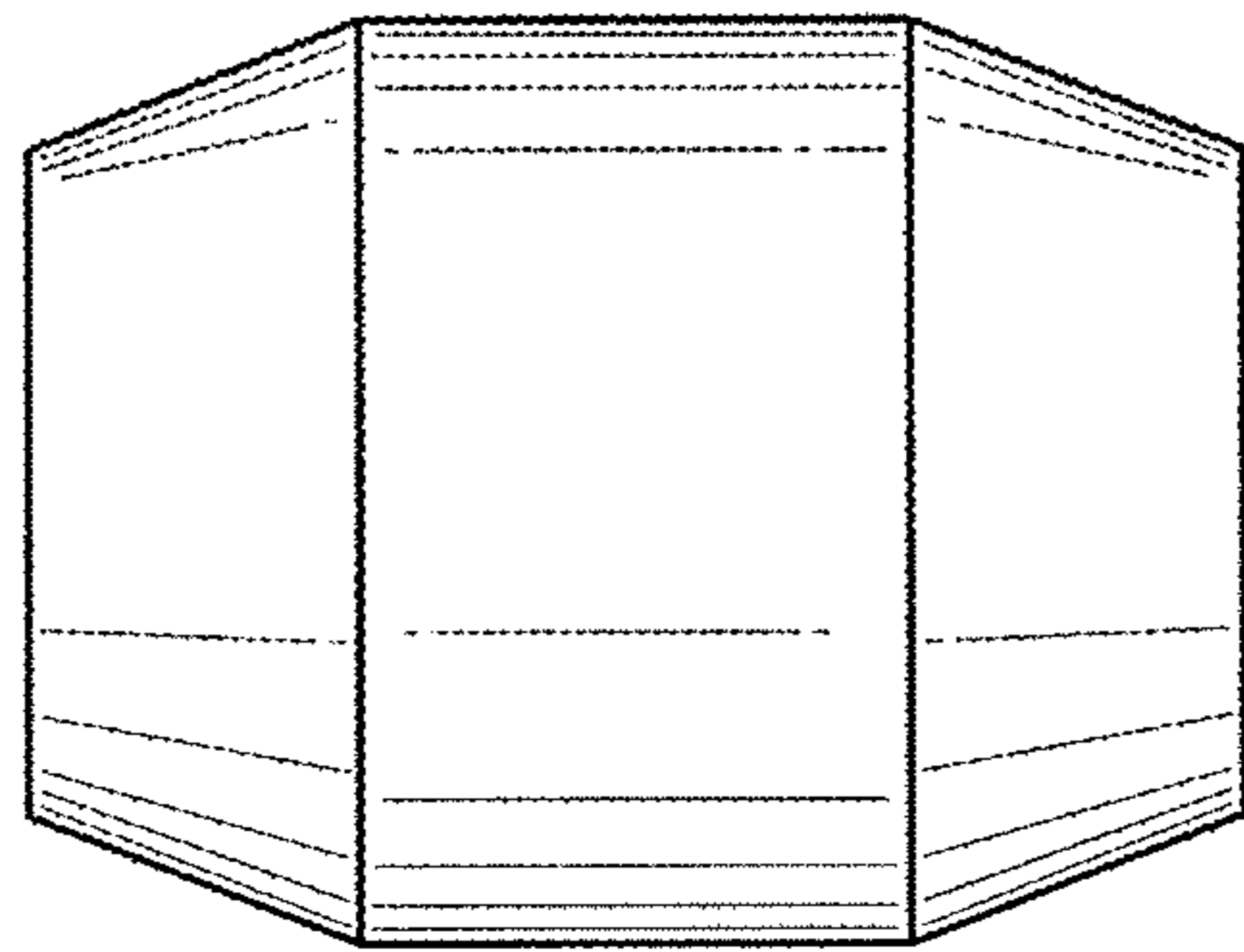


Fig. 7

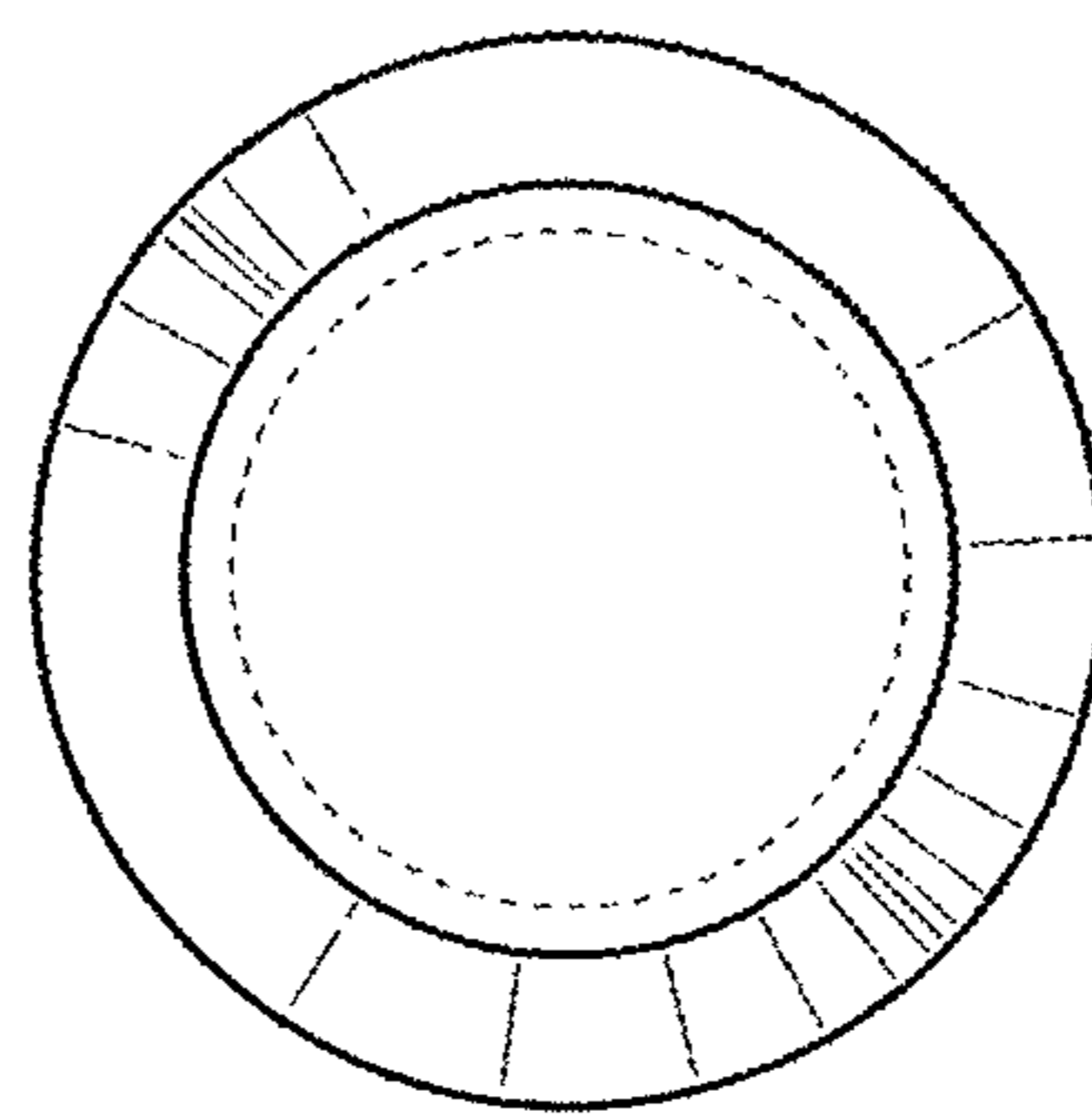


Fig. 8