



US00D731035S

(12) **United States Design Patent**  
**Lo Cicero**

(10) **Patent No.:** **US D731,035 S**  
(45) **Date of Patent:** **\*\* Jun. 2, 2015**

(54) **DELTA RING SEAL FOR BALL VALVE SEAT**

(71) Applicant: **Charles Lo Cicero**, Vaughan (CA)

(72) Inventor: **Charles Lo Cicero**, Vaughan (CA)

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

(21) Appl. No.: **29/484,351**

(22) Filed: **Mar. 7, 2014**

(51) **LOC (10) Cl.** ..... **23-01**

(52) **U.S. Cl.**  
USPC ..... **D23/269**

(58) **Field of Classification Search**  
USPC ..... D23/249, 259, 260, 262, 266, 269;  
285/15, 95, 133.21, 232, 351; 277/351,  
277/352, 353, 354, 372, 504, 626; D8/349,  
D8/356, 382; D12/197, 217; D21/671,  
D21/694; D24/201, 204; D27/102, 137,  
D27/191; D30/129; D34/35  
CPC ..... F16J 15/02; F16J 15/06; F16J 15/08;  
F16J 15/18; F16J 15/20; F02M 55/005;  
F02M 55/168; F16L 19/00; F16L 19/04  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

D31,451	S	*	8/1899	Norris et al.	.....	D23/269
1,673,677	A	*	6/1928	Holland	.....	429/175
1,777,101	A	*	9/1930	McCormack	.....	277/653
3,064,983	A	*	11/1962	Halterman	.....	277/604
D196,724	S	*	10/1963	Davis et al.	.....	D24/129
D227,888	S	*	7/1973	Felix et al.	.....	D23/262
D227,890	S	*	7/1973	Felix et al.	.....	D23/262
D244,533	S	*	5/1977	Eidelberg et al.	.....	D23/269
4,203,180	A	*	5/1980	Striplin	.....	24/17 B
4,253,630	A	*	3/1981	Rigg	.....	248/346.5

4,319,756	A	*	3/1982	Brown	.....	277/507
4,490,998	A	*	1/1985	Wellekens	.....	70/419
D289,078	S	*	3/1987	Vassallo et al.	.....	D23/269
D318,428	S	*	7/1991	Kowk	.....	D9/455
D330,073	S	*	10/1992	Valls	.....	D23/269
D351,459	S	*	10/1994	Andersson	.....	D23/269
D362,902	S	*	10/1995	Reiber	.....	D23/269
D374,710	S	*	10/1996	Gustafsson	.....	D23/269
5,941,535	A	*	8/1999	Richard	.....	277/606
6,142,484	A	*	11/2000	Valls, Jr.	.....	277/602
D465,989	S	*	11/2002	Carsello et al.	.....	D8/352
D514,671	S	*	2/2006	Jones	.....	D23/269
D554,974	S	*	11/2007	Huang et al.	.....	D8/352
D556,866	S	*	12/2007	Darce	.....	D23/269
D557,386	S	*	12/2007	Darce	.....	D23/269
D557,771	S	*	12/2007	Darce	.....	D23/269
D559,363	S	*	1/2008	Darce	.....	D23/269
D564,656	S	*	3/2008	Matsutori et al.	.....	D24/109
D574,934	S	*	8/2008	Darce et al.	.....	D23/269
D720,838	S	*	1/2015	Yamagishi et al.	.....	D23/261
2005/0040645	A1	*	2/2005	Jones	.....	285/105
2008/0284166	A1	*	11/2008	Darce et al.	.....	285/337

\* cited by examiner

*Primary Examiner* — Eric Goodman

*Assistant Examiner* — Daniel J Domino

(74) *Attorney, Agent, or Firm* — The Miller Law Offices PLC; Steven J. Miller, Esq.

(57) **CLAIM**

The ornamental design for a delta ring seal for ball valve seat, as shown and described.

**DESCRIPTION**

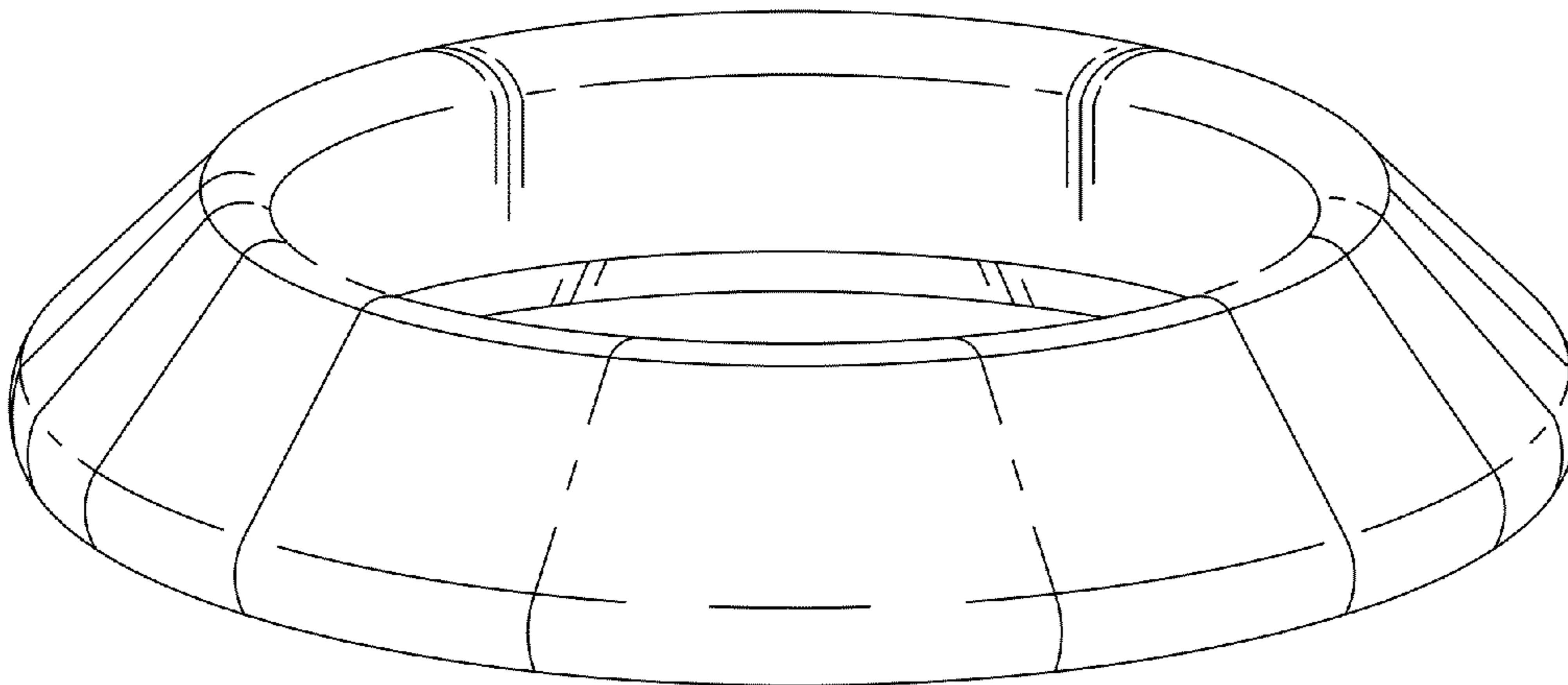
FIG. 1 is a top and side perspective view of a delta ring seal for ball valve seat;

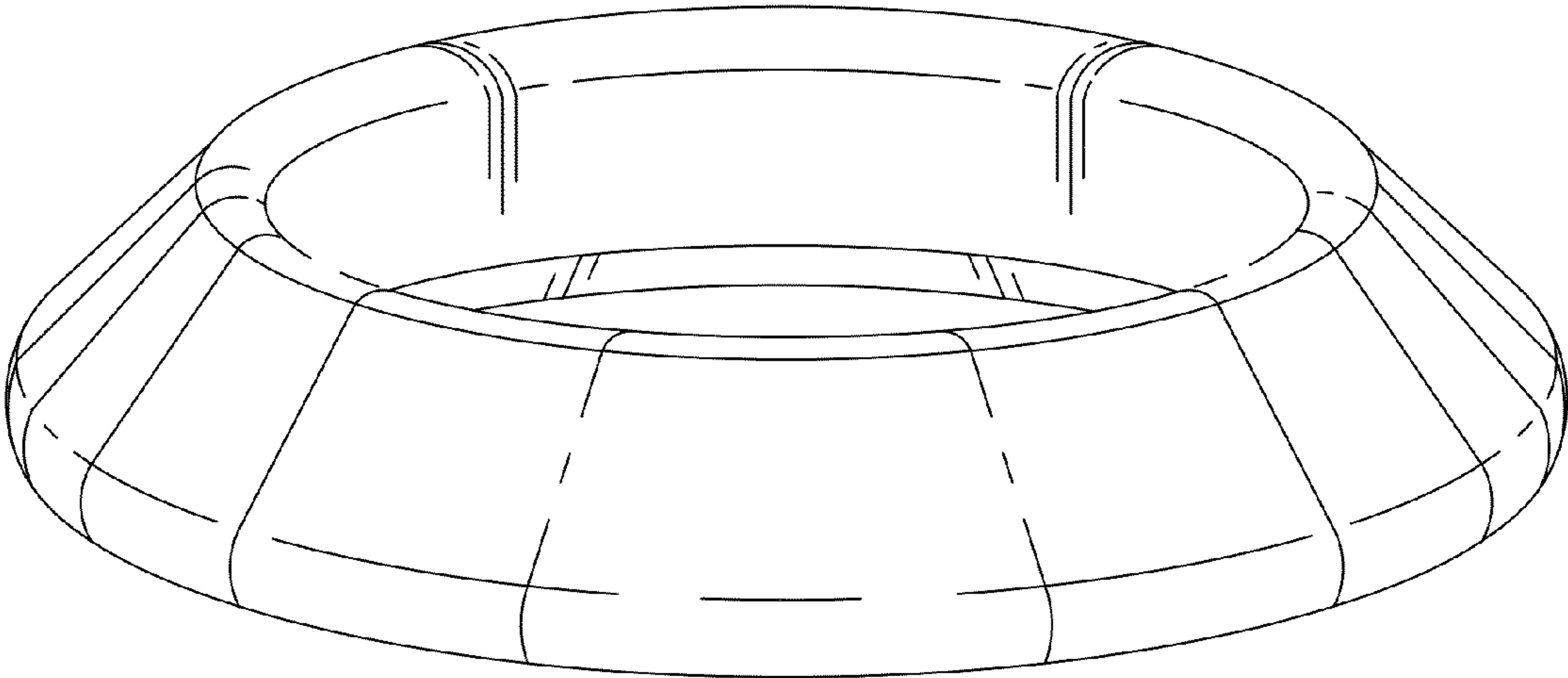
FIG. 2 is a side perspective view thereof;

FIG. 3 is a bottom and side perspective view thereof; and,

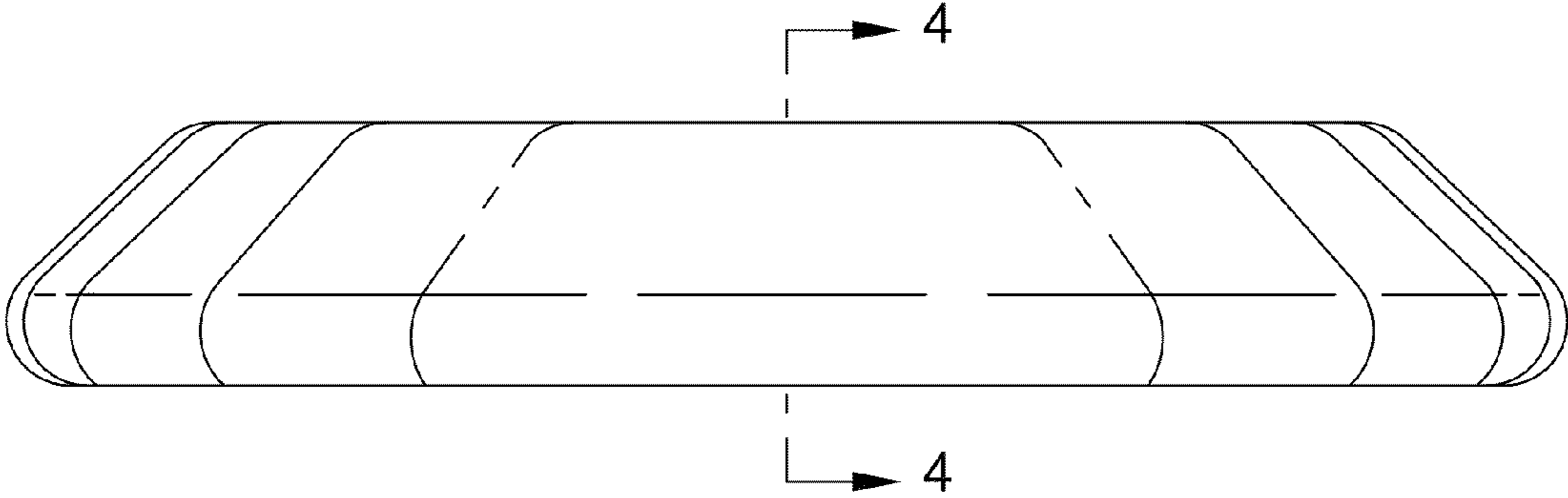
FIG. 4 is a cross sectional view through line 4-4 of FIG. 2.

**1 Claim, 2 Drawing Sheets**

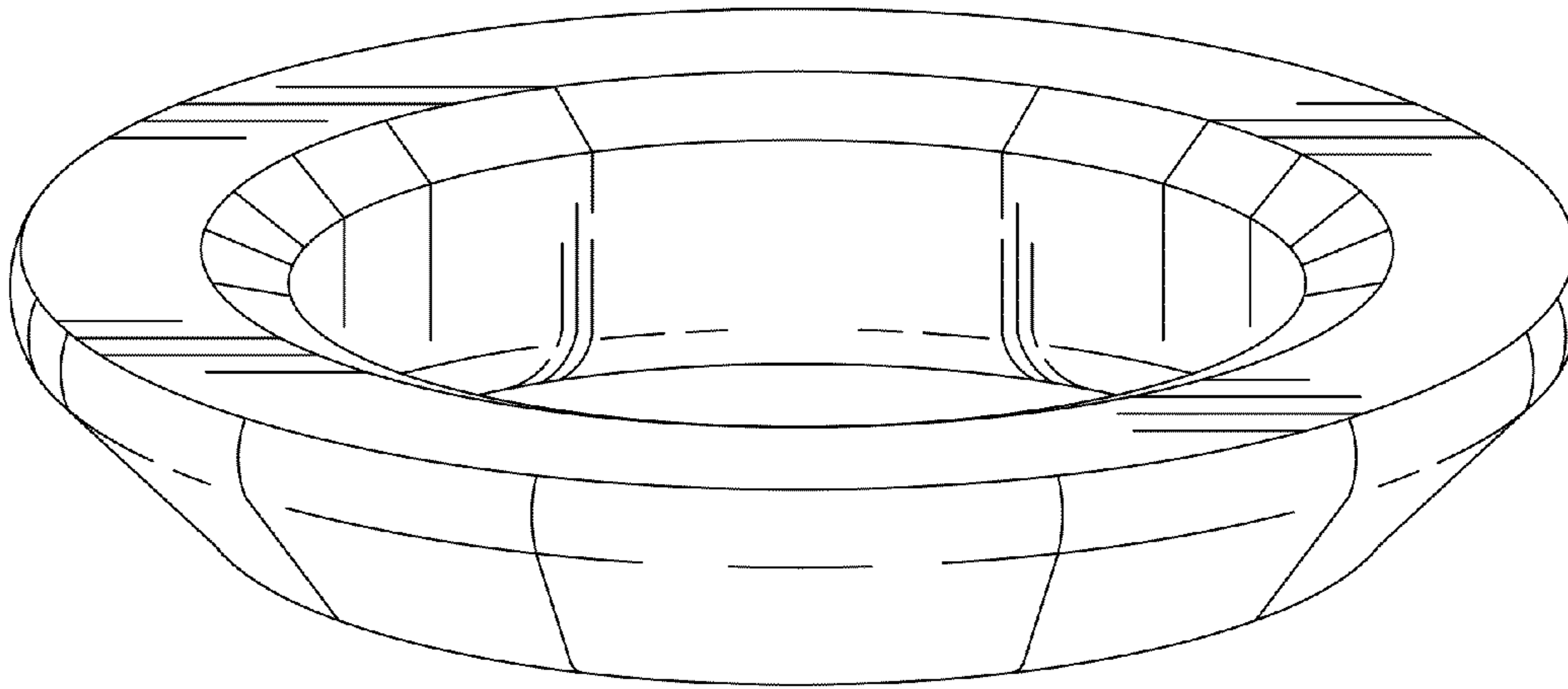




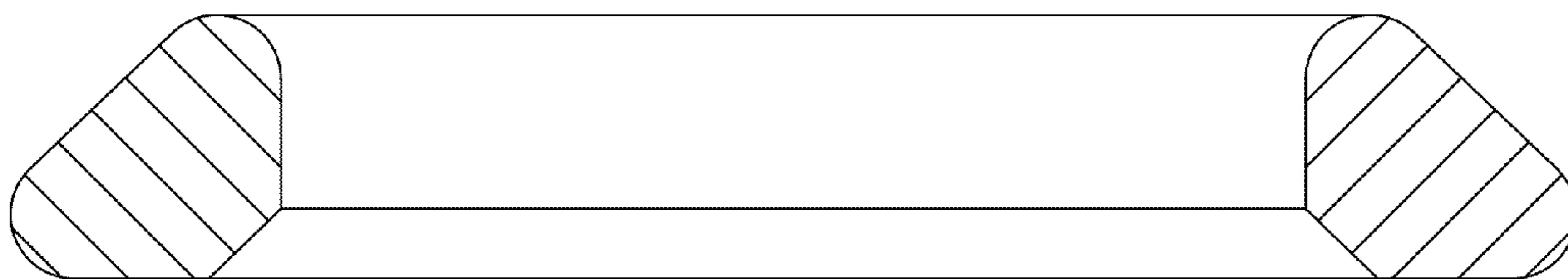
**FIG. 1**



**FIG. 2**



**FIG. 3**



**FIG. 4**