



US00D887650S

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

(10) **Patent No.:** **US D887,650 S**  
(45) **Date of Patent:** **\*\* Jun. 16, 2020**

(54) **PET WATER STATION**

CPC ..... A01K 5/00; A01K 5/01; A01K 5/0107;  
A01K 5/0114; A01K 5/0121; A01K  
5/0128; A01K 5/0135; A01K 7/005  
See application file for complete search history.

(71) Applicant: **MacNeil IP LLC**, Bolingbrook, IL  
(US)

(72) Inventors: **David F. MacNeil**, Fort Lauderdale, FL  
(US); **Frederick W. Masanek, Jr.**,  
Barrington, IL (US)

(56) **References Cited**

(73) Assignee: **MACNEIL IP LLC**, Bolingbrook, IL  
(US)

U.S. PATENT DOCUMENTS

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

(21) Appl. No.: **29/621,052**

(22) Filed: **Oct. 4, 2017**

D102,968	S	*	1/1937	Farber	.....	D7/505
D103,307	S	*	2/1937	Cory	.....	D7/601
2,651,926	A	*	9/1953	Enslein	.....	A47G 19/02 220/23.8
D172,715	S	*	7/1954	Hogan	.....	D23/362
2,738,891	A		3/1956	Pitto		
2,813,509	A		11/1957	Bruno		
3,195,510	A		7/1965	Bernstein		
D231,180	S	*	4/1974	Vigue	.....	D7/553.4
D233,581	S	*	11/1974	Bridges et al.	.....	D7/553.4
4,065,195	A		12/1977	Fahmie		
D251,652	S	*	4/1979	Molloy	.....	D7/553.7
D255,527	S	*	6/1980	Seager	.....	D7/549
D259,669	S	*	6/1981	Peterson	.....	D30/130
4,530,867	A	*	7/1985	Gorman	.....	A41H 3/00 428/198
4,576,118	A		3/1986	Meadow		
D299,010	S	*	12/1988	Wall	.....	D9/435
4,880,112	A		11/1989	Conrad		
4,907,539	A		3/1990	Abulhasan		
4,955,321	A		9/1990	Waldner		
4,989,846	A	*	2/1991	Quinn	.....	A47G 23/06 269/54.5
D321,809	S	*	11/1991	Zobrist	.....	D7/354
5,221,032	A	*	6/1993	Bott	.....	A45F 5/00 108/43
D362,090	S		9/1995	Baldwin et al.		
D362,389	S	*	9/1995	Frye	.....	D9/452
5,467,738	A		11/1995	Cass		
D371,644	S	*	7/1996	Lillelund	.....	D30/119
5,560,316	A	*	10/1996	Lillelund	.....	A01K 5/0114 119/61.5
5,605,247	A		2/1997	Earnshaw		
D384,778	S	*	10/1997	Powers	.....	D30/119
D392,884	S	*	3/1998	Hayes	.....	D9/431
5,743,210	A		4/1998	Lampe		
5,845,605	A	*	12/1998	Malamphy	.....	A01K 45/002 119/69.5
D411,709	S	*	6/1999	Curtis	.....	D7/387
D412,605	S	*	8/1999	Sharon	.....	D30/129
D413,209	S	*	8/1999	Jarke	.....	D6/406.3
D433,580	S	*	11/2000	Jarke	.....	D6/406.3
D435,705	S	*	12/2000	Powers	.....	D30/120

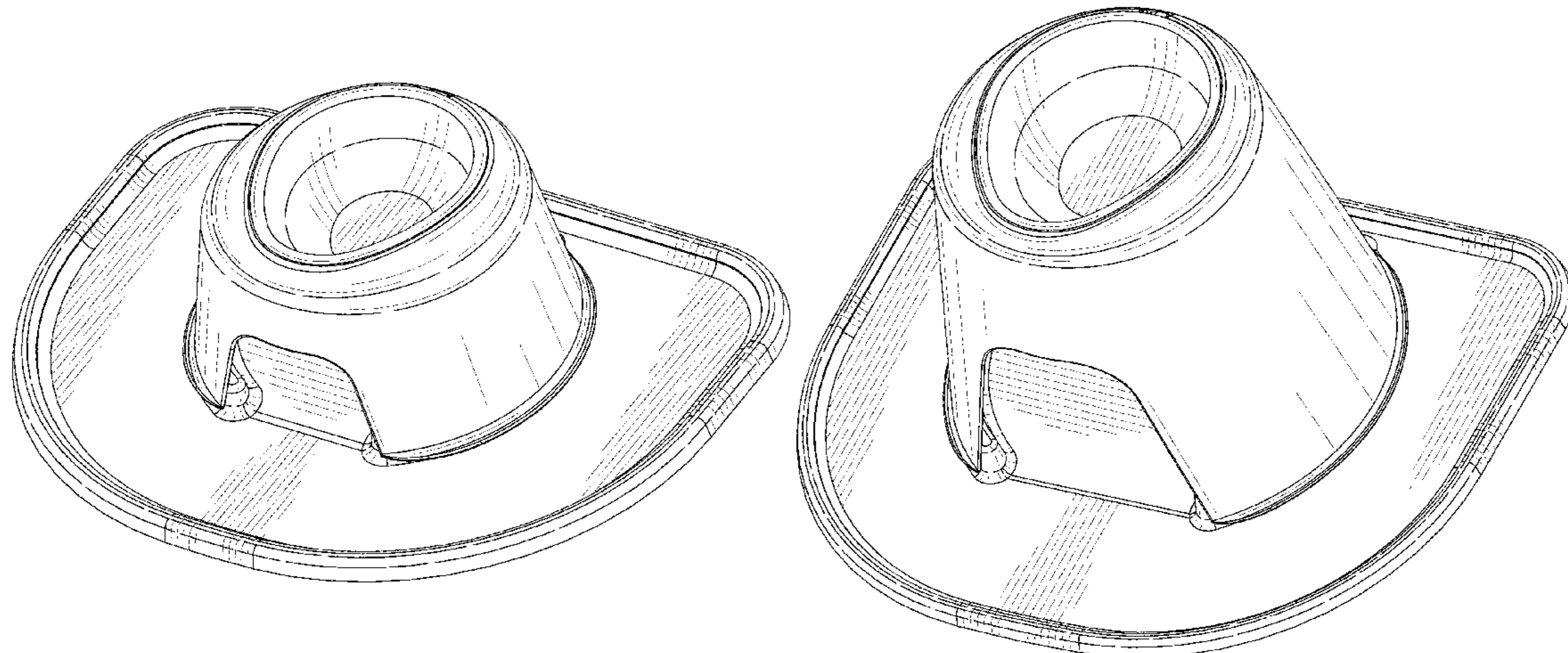
**Related U.S. Application Data**

(63) Continuation-in-part of application No. 29/602,916,  
filed on May 4, 2017, now Pat. No. Des. 873,503,  
which is a continuation-in-part of application No.  
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802,853.

(51) **LOC (12) Cl.** ..... **30-03**

(52) **U.S. Cl.**  
USPC ..... **D30/133; D30/129; D30/121**

(58) **Field of Classification Search**  
USPC ..... D30/133, 121, 128, 130, 132, 122, 129;  
119/52.1, 55, 61.5-61.56, 51.01, 51.03,  
119/59, 62, 63, 51.5, 57.8, 74, 61;  
D6/480-485; 248/188, 151; 312/204;  
108/153.1-157, 25-26; 220/23.87, 630,  
220/737, 743, 9.4, 495.01, 574, 212, 255,  
220/23.83, 575; 206/515, 557, 560, 562,  
206/563, 565; D7/586, 543, 550.1, 587,  
D7/505, 584, 545, 500, 553.1-553.8, 546,  
D7/555, 556, 504, 565, 562, 602, 507,  
D7/549, 558, 552.2, 560, 566, 548, 681;  
D9/429; 43/109; D22/122; 99/430,  
99/DIG. 15



# US D887,650 S

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6,209,487 B1	4/2001	Quinlan et al.		D774,361 S *	12/2016	Laurain	D6/616
D448,978 S *	10/2001	Isbell	D7/619.1	9,546,033 B2 *	1/2017	Everingham	B65D 51/28
D477,691 S	7/2003	Crowley		D781,109 S	3/2017	Rubino	
D487,823 S *	3/2004	Wang	D30/118	9,723,812 B2 *	8/2017	Jones	F16M 11/041
6,705,249 B2	3/2004	Quinlan et al.		D797,521 S *	9/2017	Kellow, Jr.	D7/619.1
D504,196 S	4/2005	Huthmaker et al.		D802,368 S *	11/2017	Peng	D7/553.2
D504,799 S	5/2005	Lawson et al.		D802,853 S *	11/2017	MacNeil	D30/133
6,912,970 B2	7/2005	Sage, Jr.		D807,705 S *	1/2018	Laurain	D7/555
D521,690 S	5/2006	Krcek et al.		D812,433 S *	3/2018	Kwok	D7/553.4
D523,186 S *	6/2006	Northrop	D30/133	D830,007 S *	10/2018	Harris	D30/129
D538,814 S *	3/2007	Cranford	D14/459	D834,765 S *	11/2018	Reissig	D30/129
D541,486 S *	4/2007	Mahaffey	D23/415	D836,990 S *	1/2019	Hakim	D7/553.4
D541,488 S *	4/2007	Marsh	D30/130	D850,858 S *	6/2019	Roaks	D7/555
D550,407 S *	9/2007	Spiwak	D30/129	D868,391 S *	11/2019	Townsend	D30/129
D551,400 S	9/2007	Tsengas et al.		D870,982 S *	12/2019	Tsai	D30/129
D558,931 S	1/2008	Hood et al.		2003/0106498 A1	6/2003	Mersits et al.	
D563,606 S *	3/2008	Hood	D30/129	2003/0152736 A1 *	8/2003	Bass	A47G 19/10 428/40.1
7,341,019 B1	3/2008	Tsenges					
7,387,082 B1 *	6/2008	Fried	A01K 5/0114 119/61.5	2004/0011934 A1 *	1/2004	Czepowicz	A47G 23/0241 248/311.2
D573,466 S *	7/2008	White	D9/456				
D582,265 S *	12/2008	Helfman	D9/425	2005/0039689 A1 *	2/2005	Mossmer	A01K 5/0128 119/61.5
D583,111 S	12/2008	Molina-Justin					
7,475,937 B2 *	1/2009	McGrew	A47G 19/10 297/148	2005/0039690 A1	2/2005	Sage, Jr.	
D590,551 S *	4/2009	Sperbeck	D30/129	2005/0045113 A1 *	3/2005	Wetterer	A01K 5/0114 119/61.54
7,673,934 B2 *	3/2010	Bearup	A47D 1/002 297/130				
7,681,525 B1	3/2010	Trulove		2005/0115508 A1	6/2005	Little	
D623,358 S	9/2010	Kim		2005/0229793 A1 *	10/2005	Wengrovsky	A47G 19/02 99/483
D623,359 S	9/2010	Kim					
7,789,041 B1	9/2010	Taylor		2005/0235919 A1	10/2005	Willinger et al.	
D625,885 S *	10/2010	Bianchi	D30/129	2006/0005775 A1 *	1/2006	Ritchey	A01K 5/0142 119/61.5
D630,512 S *	1/2011	Venier	D9/425				
D634,167 S *	3/2011	Foster	D7/700	2006/0096544 A1	5/2006	Spiwak	
D636,945 S *	4/2011	Anderson	D30/129	2006/0272589 A1 *	12/2006	Cheney	A01K 5/0114 119/61.54
D646,440 S	10/2011	Chance et al.					
D646,442 S	10/2011	Chance et al.		2007/0089678 A1 *	4/2007	Greenwood	A01K 5/0114 119/61.5
D646,852 S	10/2011	Chance et al.					
D653,000 S	1/2012	Rutherford		2007/0199512 A1 *	8/2007	Ellis	A01K 7/005 119/61.54
8,162,390 B2 *	4/2012	Zhong	A47D 1/103 297/130	2007/0264450 A1 *	11/2007	White	B32B 5/32 428/34.1
D659,300 S *	5/2012	Lipscomb	D30/121				
D659,913 S *	5/2012	Spectre	D30/130	2008/0245947 A1 *	10/2008	Webb	A47G 19/10 248/683
D659,914 S *	5/2012	Lipscomb	D30/121				
8,201,879 B2 *	6/2012	Hartenstine	A47D 1/002 297/153	2009/0126641 A1 *	5/2009	Anderson	A01K 5/0114 119/61.5
D669,231 S	10/2012	Chance et al.					
D670,041 S	10/2012	Chance et al.		2009/0199775 A1	8/2009	Shamoon	
D670,450 S	11/2012	Graves et al.		2009/0241844 A1	10/2009	Becattini, Jr. et al.	
D687,938 S *	8/2013	Furner	D23/366	2010/0012042 A1 *	1/2010	Lee	A01K 5/01 119/61.5
8,516,975 B2	8/2013	Becattini, Jr. et al.					
D694,849 S *	12/2013	Ots	D22/122	2010/0107984 A1	5/2010	Uffner et al.	
D703,393 S *	4/2014	Henley	D30/129	2010/0162961 A1	7/2010	Hove et al.	
D707,557 S *	6/2014	Corradini	D9/436	2010/0180827 A1	7/2010	Becattini, Jr. et al.	
8,752,507 B2	6/2014	Korrie		2010/0275852 A1 *	11/2010	Lipscomb	A01K 5/0114 119/61.5
D709,654 S *	7/2014	Lipscomb	D30/121				
D710,980 S *	8/2014	Pollard, Jr.	D23/308	2011/0253054 A1 *	10/2011	Hargrove	A01K 5/0114 119/61.54
D716,003 S	10/2014	Brown					
D717,104 S *	11/2014	Redfern	D7/392.1	2012/0186497 A1 *	7/2012	Spano	A01K 5/0114 108/26
D722,407 S *	2/2015	Roslonski	D30/130				
D725,836 S	3/2015	Avalos Sartorio et al.					
8,985,054 B2 *	3/2015	Lipscomb	A01K 45/002 119/74	2013/0334377 A1	12/2013	Lee	
D726,981 S *	4/2015	Yessin	D32/25	2014/0261203 A1	9/2014	Renforth et al.	
D727,576 S	4/2015	Avalos Sartorio et al.		2014/0346293 A1	11/2014	Qui	
9,044,077 B1 *	6/2015	Lin	A45D 44/00	2015/0101543 A1 *	4/2015	Baxter	A01K 5/0142 119/498
9,095,117 B1	8/2015	Kumar					
D744,173 S *	11/2015	Jones	D30/129	2015/0214090 A1 *	7/2015	Jin	H01L 21/67706 269/13
D744,174 S	11/2015	Jones et al.					
9,226,478 B1	1/2016	Uhl		2016/0073805 A1 *	3/2016	Laurain	A47G 19/02 220/575
D751,381 S *	3/2016	Torrison	D9/416				
D751,382 S *	3/2016	Torrison	D9/416	2017/0280675 A1 *	10/2017	MacNeil	A01K 5/0135
D755,447 S *	5/2016	Andrews	D30/129	2018/0014505 A1 *	1/2018	MacNeil	A01K 7/005
D757,373 S *	5/2016	Breit	D30/129				
D758,674 S *	6/2016	Youn	D30/129				
D767,941 S *	10/2016	Laurain	D6/616				
D770,099 S *	10/2016	Jones	D30/129				
9,504,285 B2 *	11/2016	Lin	B65D 73/00				

## FOREIGN PATENT DOCUMENTS

JP D1232810 3/2005

## OTHER PUBLICATIONS

International Searching Authority, Written Opinion, dated Aug. 17, 2017, seven pages.

Doctor'S Advice Peppy, Pet Feeding Systems, catalog, Aug. 31, 2002, vol. 20, Japan.

Benesse Corporation, Pet Feeding Station, web page, downloaded prior to Nov. 21, 2017, Japan.

Amazon.Com, Collapsible Pet Feeder—small, pink, web page, downloaded prior to Nov. 21, 2017, Japan.

T-K-Maxx, Pink Flexi Pet Bowl Duo, web page, downloaded prior to Nov. 21, 2017, Japan.

Iris Ohyama Incorporated, Pet Feeding Bowls, web page, Jul. 2, 2007.

Amazon.com, Double Bowl Feeding Station by Pupmoms, web page, Jan. 10, 2018.

National Center for Industrial Property Information and Training, house.richell.co.jp, Oblong Bowls, downloaded Jan. 10, 2018.

Nissen Company Limited, Oblong Bowl, web page, downloaded prior to Dec. 5, 2017, Japan.

National Center for Industrial Property Information and Training, www.e-narumi.com, Oblong Bowl, downloaded Jan. 10, 2018.

\* cited by examiner

*Primary Examiner* — Susan Moon Lee

(74) *Attorney, Agent, or Firm* — Perkins IP Law Group LLC; Jefferson Perkins

## (57) CLAIM

We claim the ornamental design for a pet water station, as shown and described.

## DESCRIPTION

FIG. 1 is a top perspective of a first embodiment of a pet water station in accordance with our design;

FIG. 2 is an exploded top perspective view thereof;

FIG. 3 is an exploded bottom perspective view thereof;

FIG. 4 is a top plan view of the pet water station of FIG. 1;

FIG. 5 is a front elevation view thereof;

FIG. 6 is a rear elevation view thereof;

FIG. 7 is a left side elevation view thereof, the right side view being a mirror image;

FIG. 8 is a top perspective view of the stand component of the pet water station of FIG. 1, shown separately for clarity;

FIG. 9 is a top plan view thereof;

FIG. 10 is a front elevation view thereof;

FIG. 11 is a rear elevation view thereof;

FIG. 12 is a right side elevation view thereof, the left side view being a mirror image;

FIG. 13 is a transverse sectional view thereof;

FIG. 14 is a longitudinal sectional view thereof, taken at a right angle to the transverse sectional view of FIG. 13;

FIG. 15 is a top perspective view of the mat component of the pet water station of FIG. 1, shown separately for clarity;

FIG. 16 is a top plan view thereof;

FIG. 17 is a front elevation view thereof;

FIG. 18 is rear elevation view thereof;

FIG. 19 is a left side elevation view thereof, the right side view being a mirror image;

FIG. 20 is a transverse sectional view thereof;

FIG. 21 is a longitudinal sectional view thereof, taken at a right angle to the transverse sectional view of FIG. 20;

FIG. 22 is a top perspective view of a second embodiment of the pet water station;

FIG. 23 is an exploded top perspective view thereof;

FIG. 24 is an exploded bottom perspective view thereof;

FIG. 25 is a top plan view of the pet water station of FIG. 22;

FIG. 26 is a front elevation view thereof;

FIG. 27 is a rear elevation view thereof;

FIG. 28 is a left side elevation view thereof, the right side view being a mirror image;

FIG. 29 is a top perspective view of the stand component of the pet water station of FIG. 22, shown separately for clarity;

FIG. 30 is a top plan view thereof;

FIG. 31 is a front elevation view thereof;

FIG. 32 is a rear elevation view thereof;

FIG. 33 is a right side elevation view thereof, the left side view being a mirror image;

FIG. 34 is a transverse sectional view thereof;

FIG. 35 is a longitudinal sectional view thereof, taken at a right angle to the transverse sectional view of FIG. 34;

FIG. 36 is a top perspective view of the mat component of the pet water station of FIG. 22, shown separately for clarity;

FIG. 37 is a top plan view thereof;

FIG. 38 is a front elevation view thereof;

FIG. 39 is rear elevation view thereof;

FIG. 40 is a right side elevation view thereof, the left side view being a mirror image;

FIG. 41 is a transverse sectional view thereof;

FIG. 42 is a longitudinal sectional view thereof, taken at a right angle to the transverse sectional view of FIG. 41;

FIG. 43 is a top perspective view of a third embodiment of the pet water station;

FIG. 44 is an exploded top perspective view thereof;

FIG. 45 is an exploded bottom perspective view thereof;

FIG. 46 is a top plan view of the pet water station of FIG. 43;

FIG. 47 is a front elevation view thereof;

FIG. 48 is a rear elevation view thereof;

FIG. 49 is a left side elevation view thereof, the right side view being a mirror image;

FIG. 50 is a top perspective view of the stand component of the pet water station of FIG. 43, shown separately for clarity;

FIG. 51 is a top plan view thereof;

FIG. 52 is a front elevation view thereof;

FIG. 53 is a rear elevation view thereof;

FIG. 54 is a right side elevation view thereof, the left side view being a mirror image;

FIG. 55 is a transverse sectional view thereof;

FIG. 56 is a longitudinal sectional view thereof, taken at a right angle to the transverse sectional view of FIG. 55;

FIG. 57 is a top perspective view of the mat component of the pet water station of FIG. 43, shown separately for clarity;

FIG. 58 is a top plan view thereof;

FIG. 59 is a front elevation view thereof;

FIG. 60 is rear elevation view thereof;

FIG. 61 is a left side elevation view thereof, the right side view being a mirror image;

FIG. 62 is a transverse sectional view thereof;

FIG. 63 is a longitudinal sectional view thereof, taken at a right angle to the transverse sectional view of FIG. 20;

FIG. 64 is a top perspective view of a fourth embodiment of the pet water station;

FIG. 65 is an exploded top perspective view thereof;

FIG. 66 is an exploded bottom perspective view thereof;

FIG. 67 is a top plan view of the pet water station of FIG. 64;

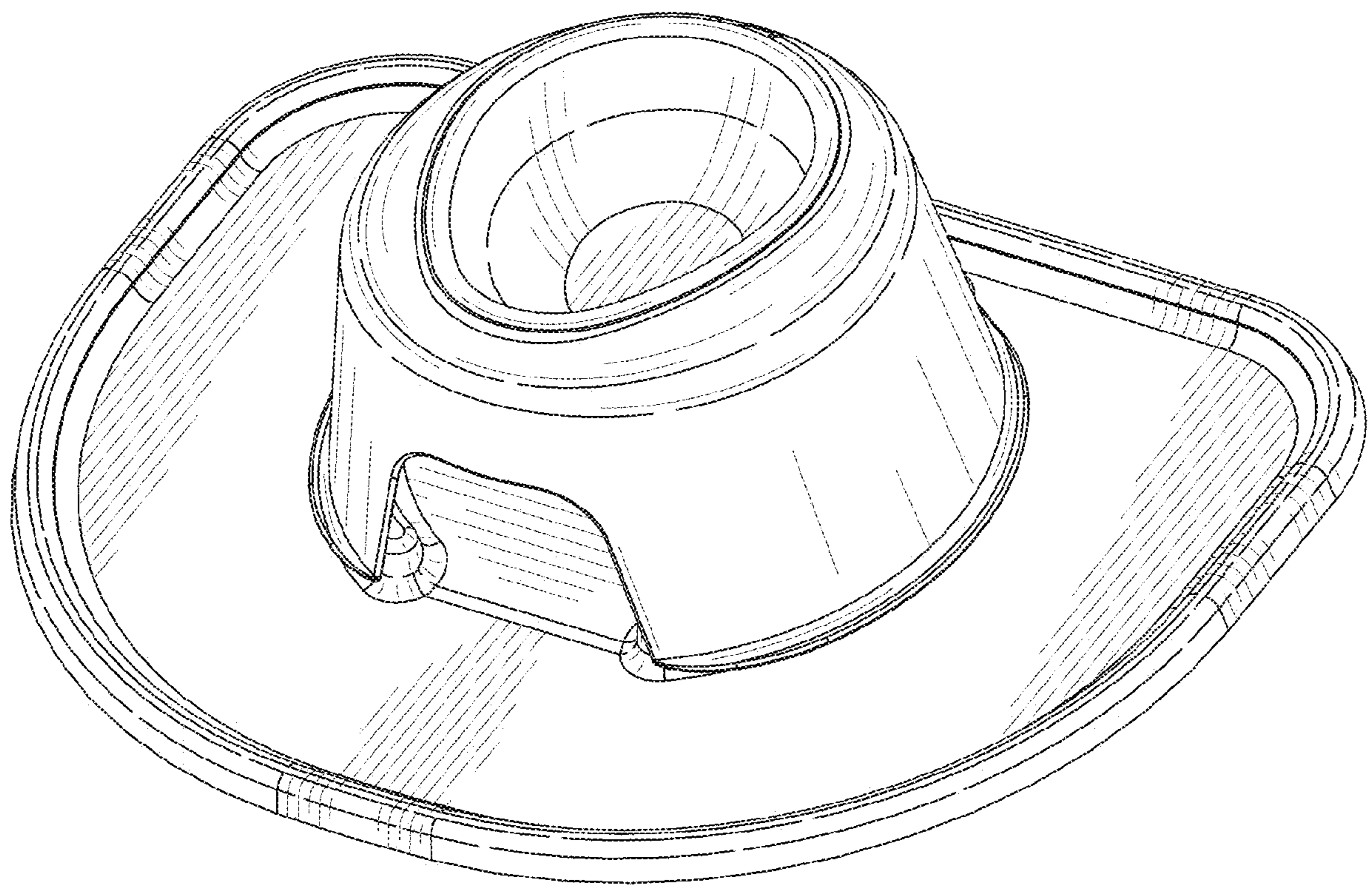
FIG. 68 is a front elevation view thereof;

FIG. 69 is a rear elevation view thereof;

FIG. 70 is a left side elevation view thereof, the right side view being a mirror image;  
 FIG. 71 is a top perspective view of the stand component of the pet water station of FIG. 64, shown separately for clarity;  
 FIG. 72 is a top plan view thereof;  
 FIG. 73 is a front elevation view thereof;  
 FIG. 74 is a rear elevation view thereof;  
 FIG. 75 is a right side elevation view thereof, the left side view being a mirror image;  
 FIG. 76 is a transverse sectional view thereof;  
 FIG. 77 is a longitudinal sectional view thereof, taken at a right angle to the transverse sectional view of FIG. 76;  
 FIG. 78 is a top perspective view of the mat component of the pet water station of FIG. 64, shown separately for clarity;  
 FIG. 79 is a top plan view thereof;  
 FIG. 80 is a front elevation view thereof;  
 FIG. 81 is rear elevation view thereof;  
 FIG. 82 is a right side elevation view thereof, the left side view being a mirror image;  
 FIG. 83 is a transverse sectional view thereof;  
 FIG. 84 is a longitudinal sectional view thereof, taken at a right angle to the transverse sectional view of FIG. 83;  
 FIG. 85 is a top perspective view of a fifth embodiment of the pet water station;  
 FIG. 86 is an exploded top perspective view thereof;  
 FIG. 87 is an exploded bottom perspective view thereof;  
 FIG. 88 is a top plan view of the pet water station of FIG. 85;  
 FIG. 89 is a front elevation view thereof;  
 FIG. 90 is a rear elevation view thereof;

FIG. 91 is a left side elevation view thereof, the right side view being a mirror image;  
 FIG. 92 is a top perspective view of the stand component of the pet water station of FIG. 85, shown separately for clarity;  
 FIG. 93 is a top plan view thereof;  
 FIG. 94 is a front elevation view thereof;  
 FIG. 95 is a rear elevation view thereof;  
 FIG. 96 is a right side elevation view thereof, the left side view being a mirror image;  
 FIG. 97 is a transverse sectional view thereof;  
 FIG. 98 is a longitudinal sectional view thereof, taken at a right angle to the transverse sectional view of FIG. 97;  
 FIG. 99 is a top perspective view of the mat component of the pet water station of FIG. 85, shown separately for clarity;  
 FIG. 100 is a top plan view thereof;  
 FIG. 101 is a front elevation view thereof;  
 FIG. 102 is rear elevation view thereof;  
 FIG. 103 is a left side elevation view thereof, the right side view being a mirror image;  
 FIG. 104 is a transverse sectional view thereof; and,  
 FIG. 105 is a longitudinal sectional view thereof, taken at a right angle to the transverse sectional view of FIG. 104.  
 The bottoms of the assembled stations shown in FIGS. 1-7, 22-28, 43-49, 64-70 and 85-91, the bottoms of the stands shown in FIGS 8-14, 29-35, 50-56, 71-77 and 92-98, and the bottoms of the mats shown in FIGS. 15-21, 36-42, 57-63, 78-84 and 99-105 are unadorned and form no portion of the claimed design. Broken lines and unshaded portions contained within broken lines are shown for illustrative purposes only and form no part of the claimed design.

**1 Claim, 57 Drawing Sheets**



*FIG. 1*

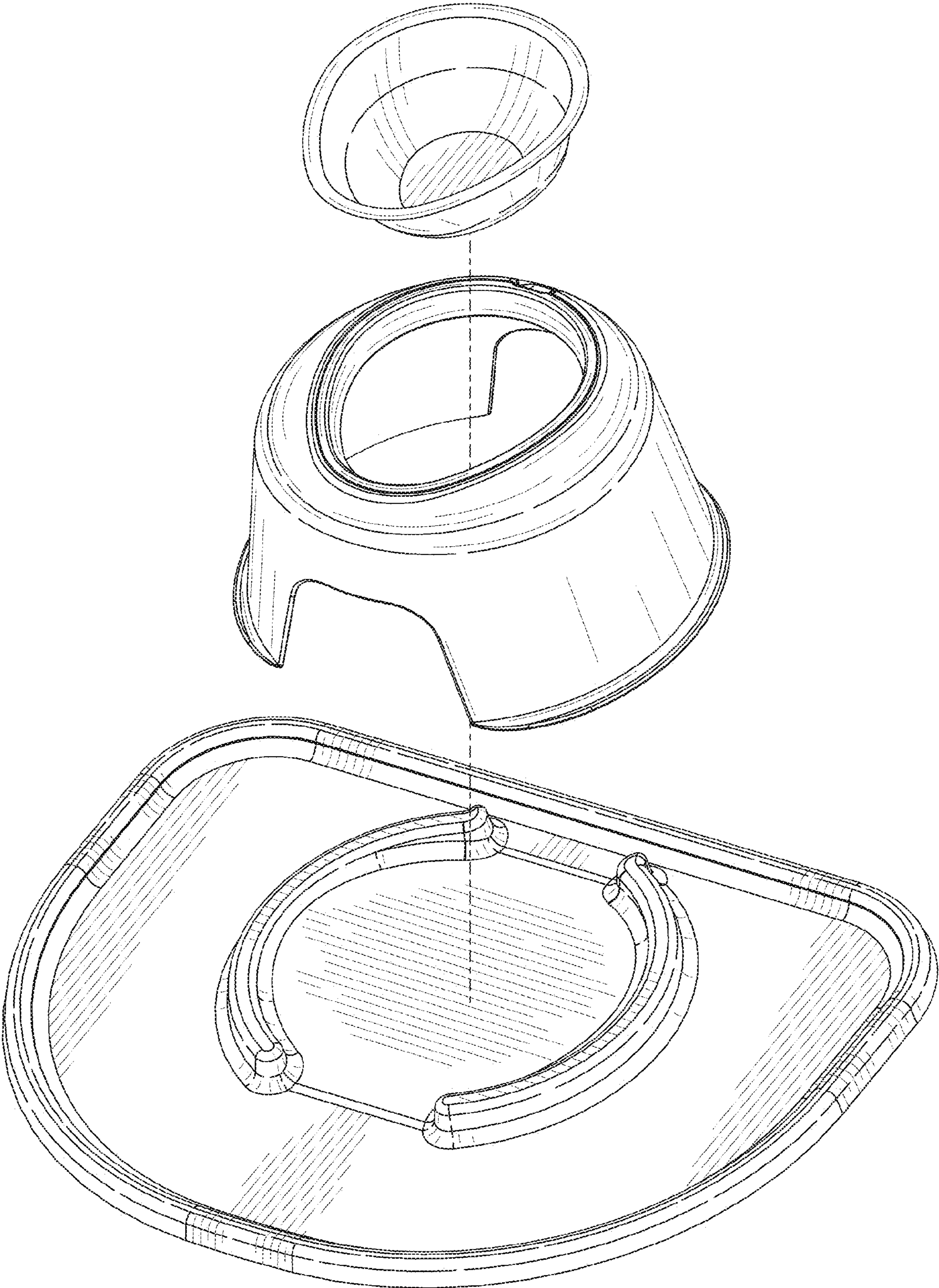


FIG. 2

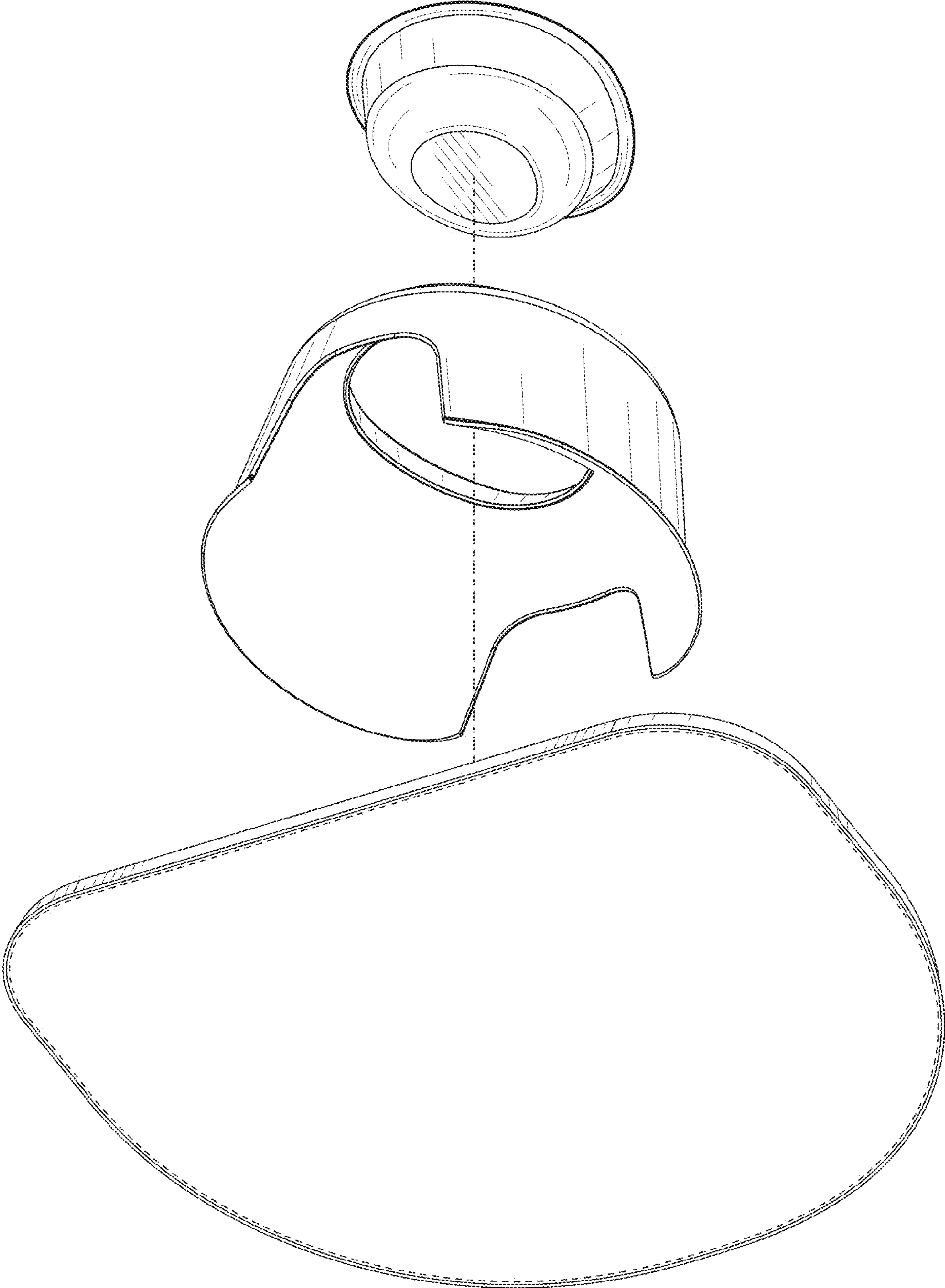


FIG. 3

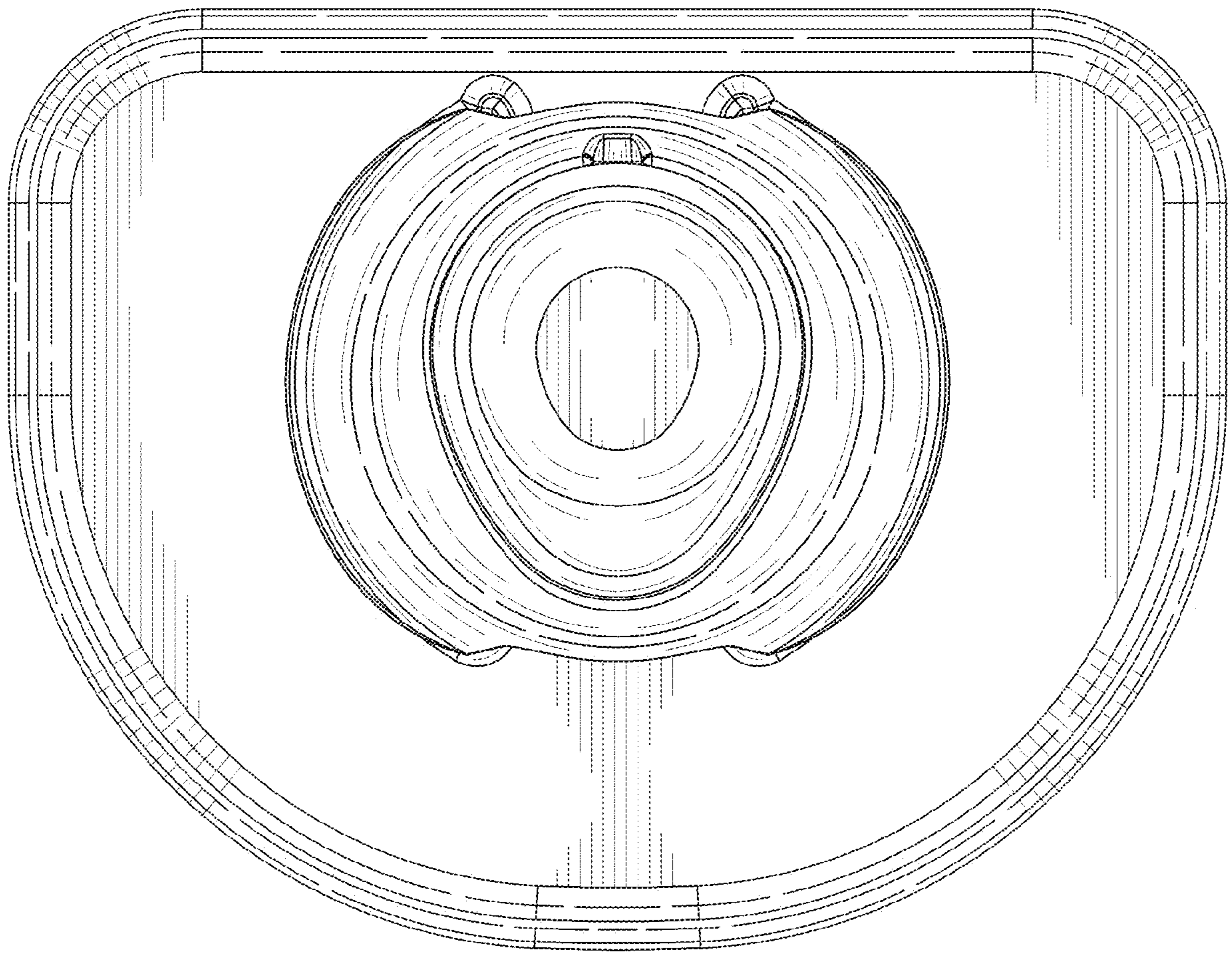
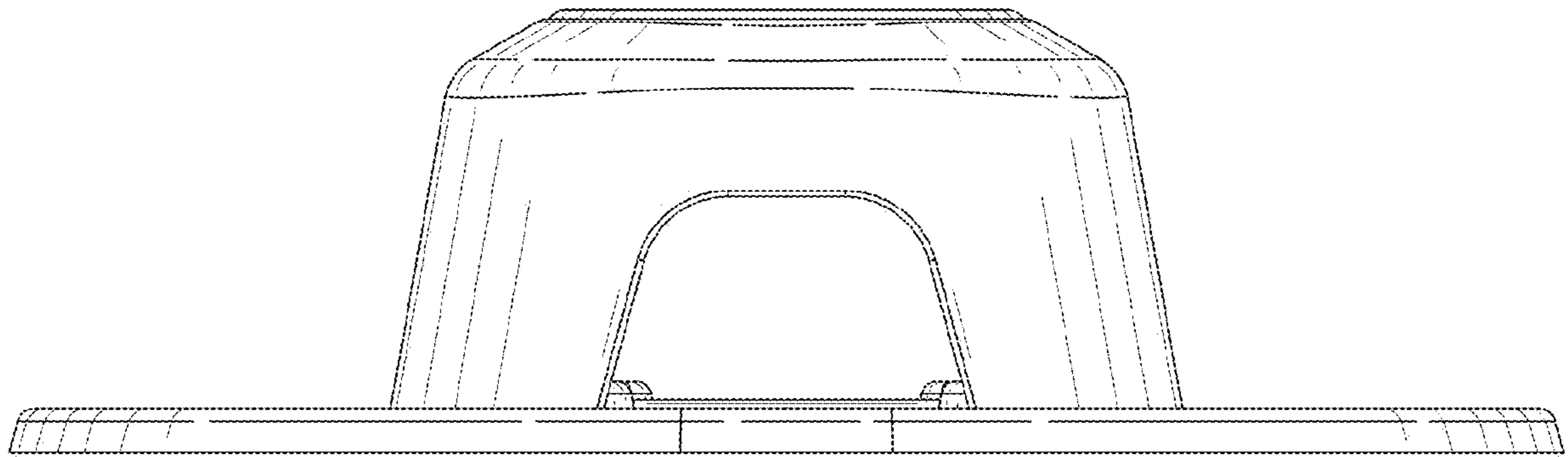
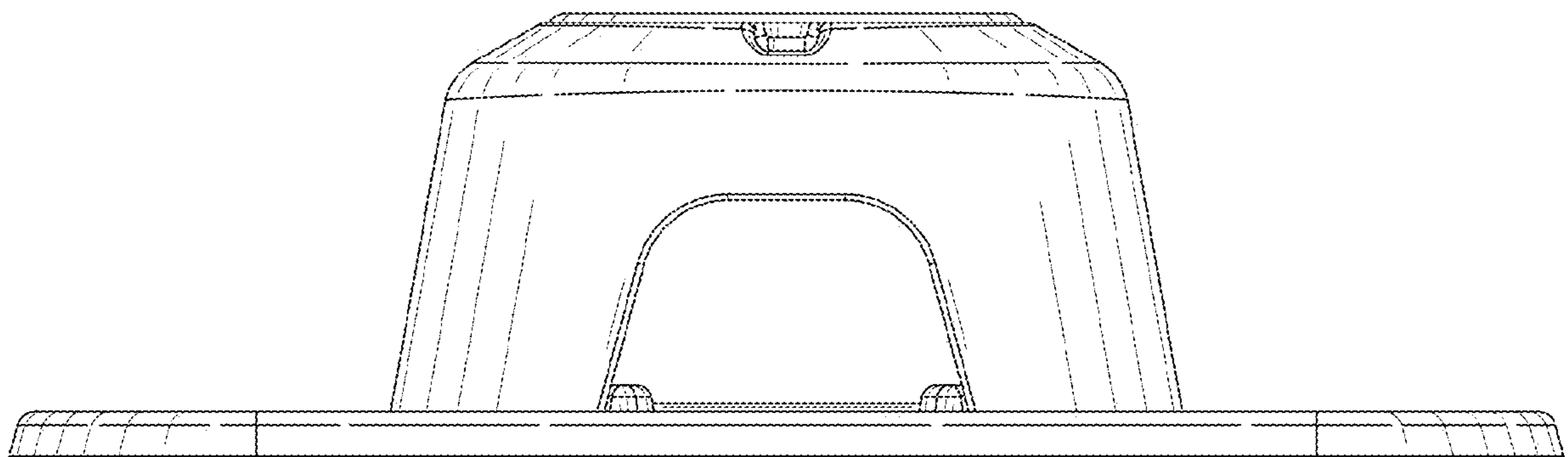


FIG. 4

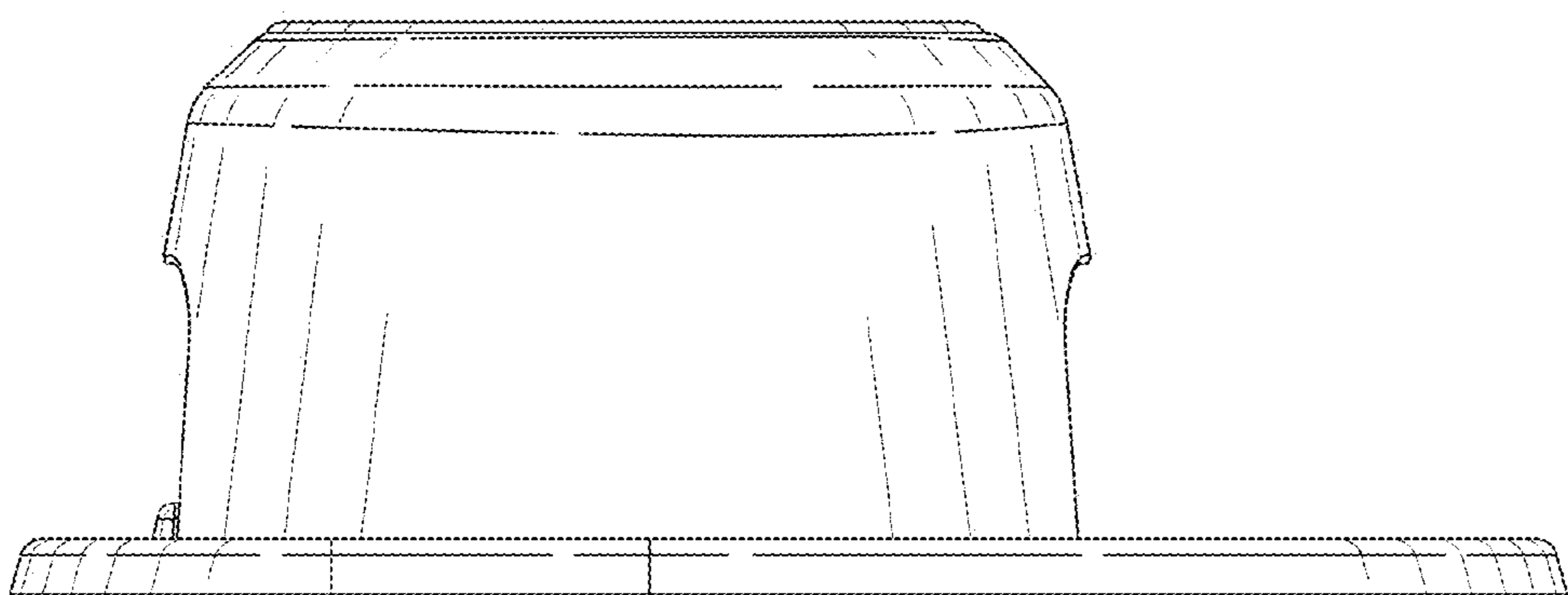




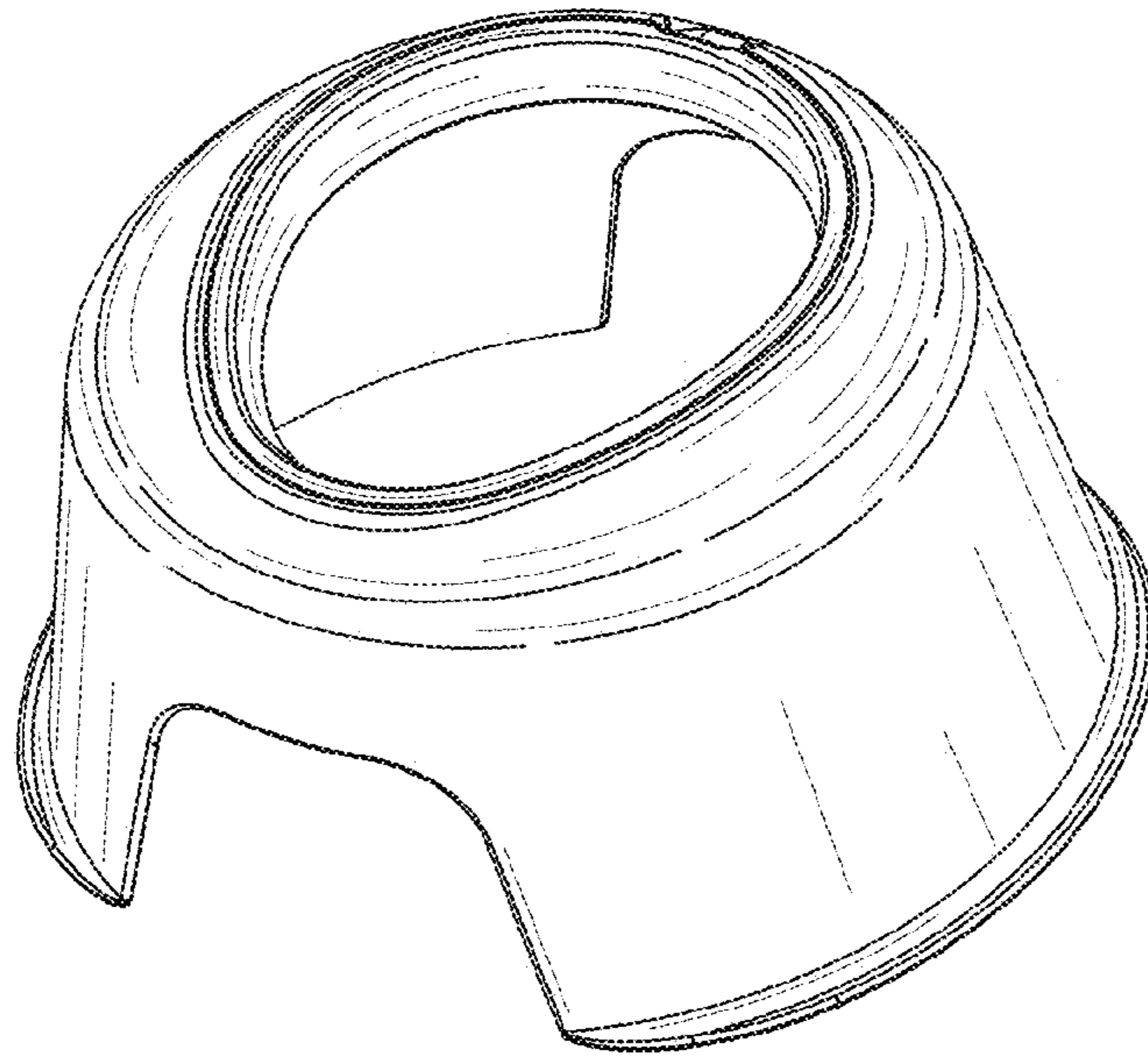
**FIG. 5**



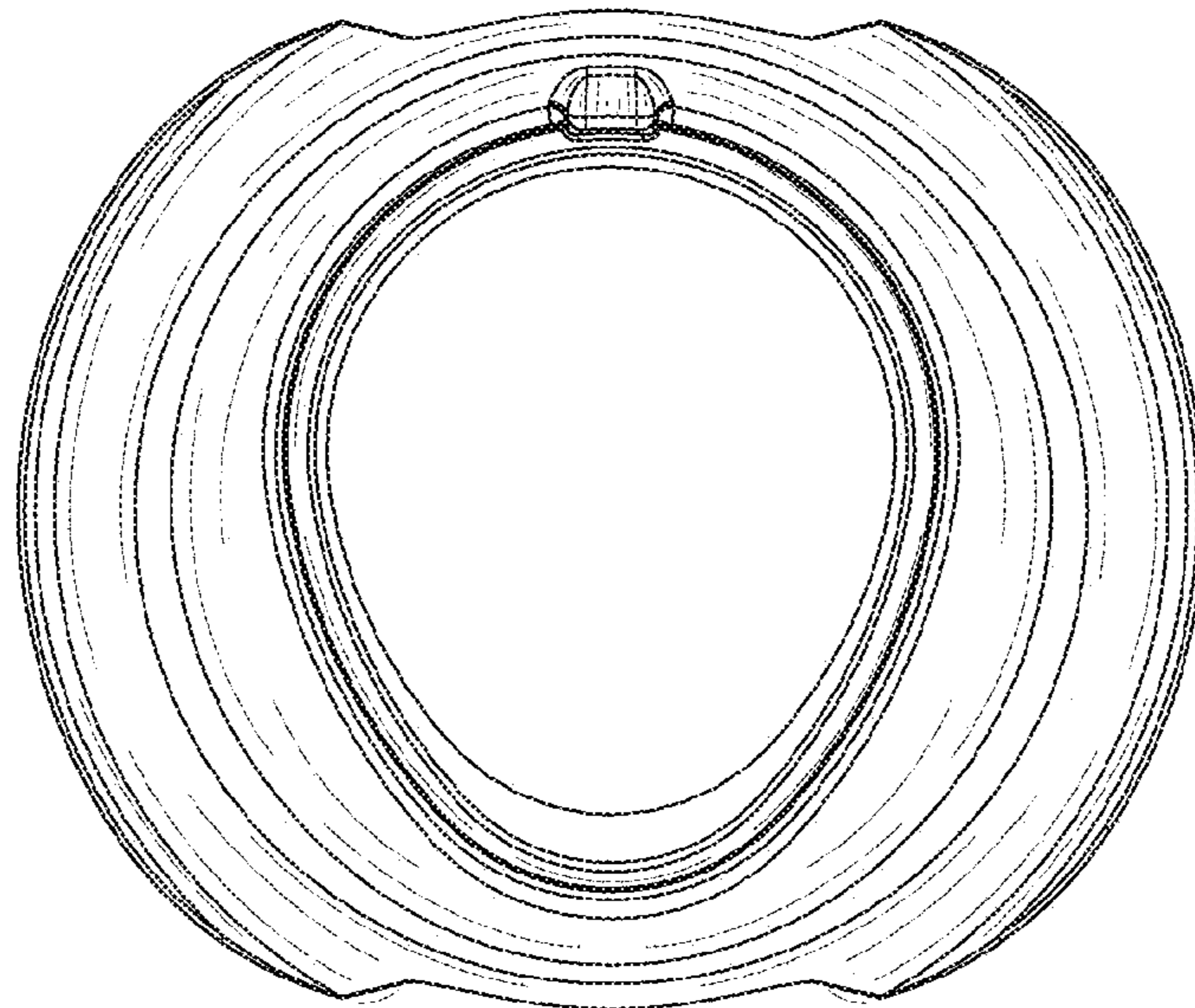
**FIG. 6**



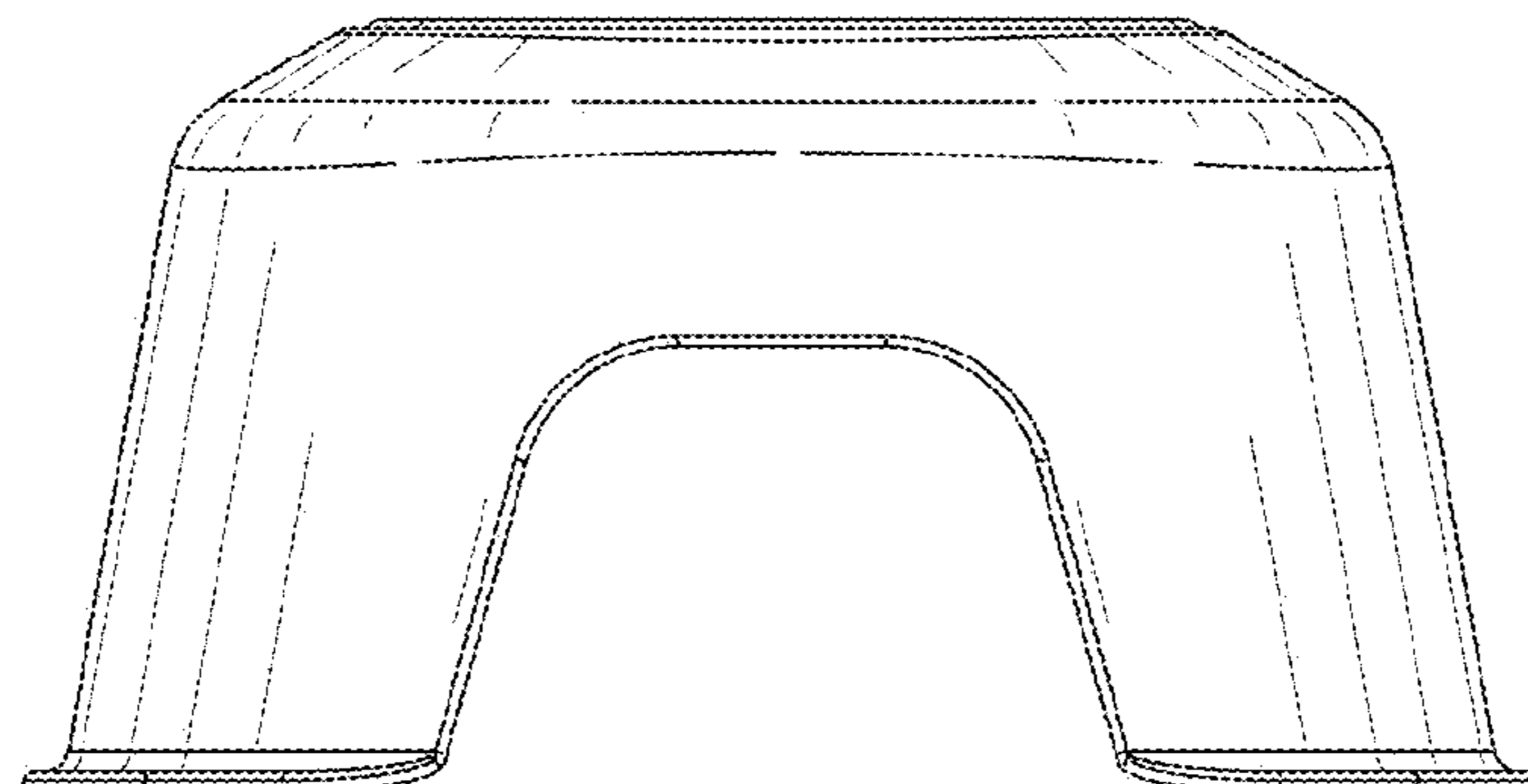
**FIG. 7**



**FIG. 8**



**FIG. 9**



**FIG. 10**

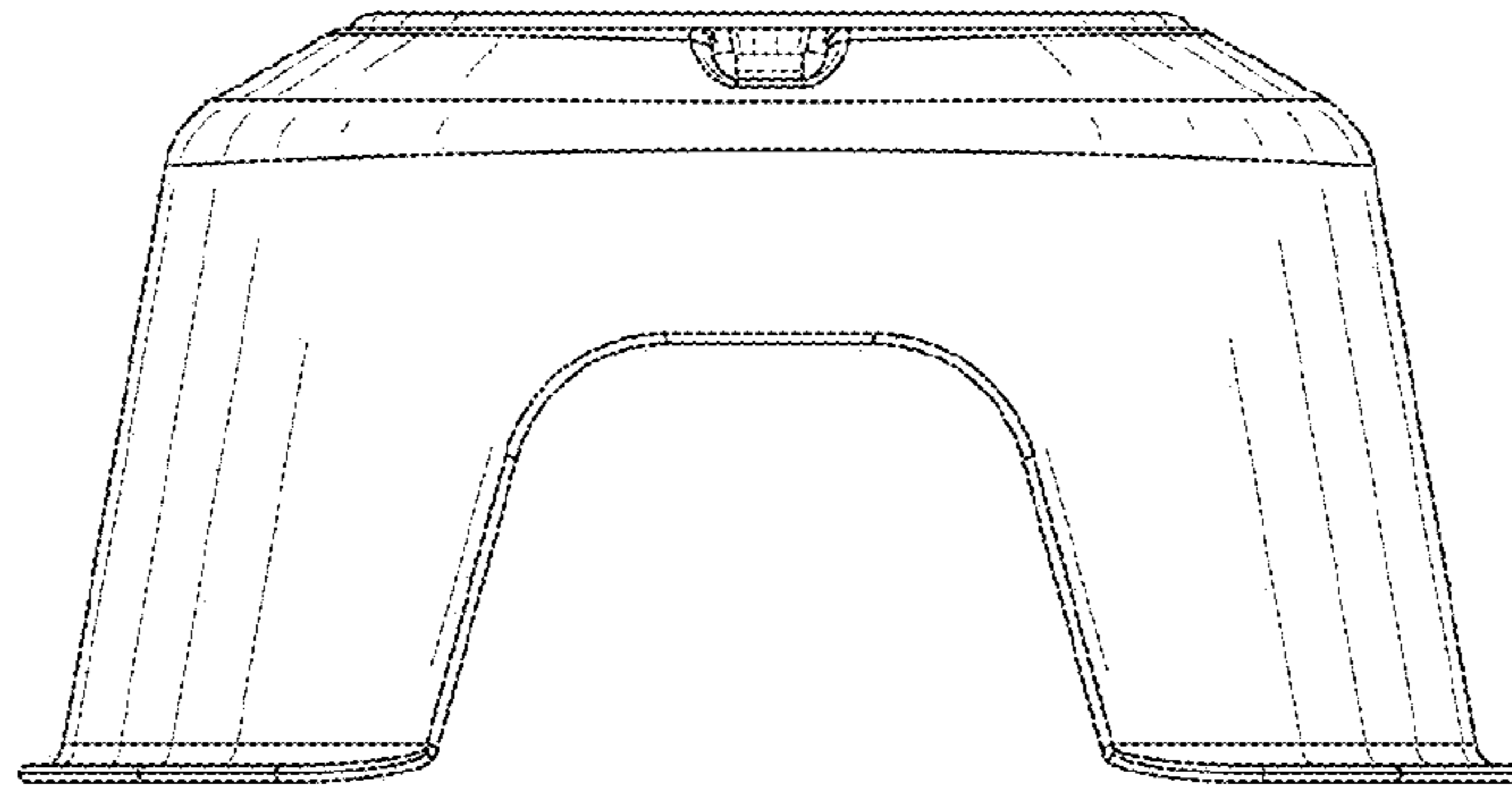


FIG. 11

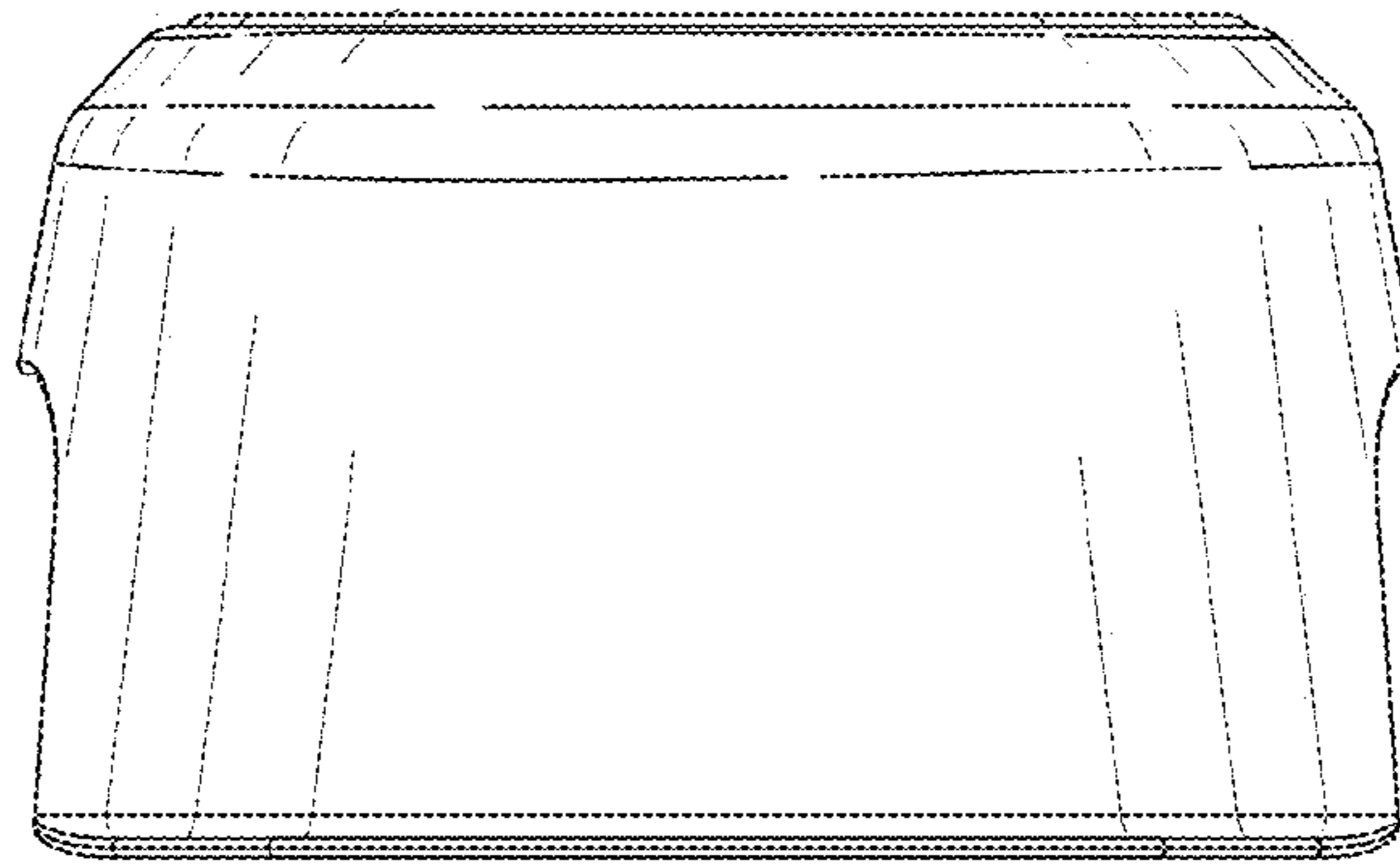


FIG. 12

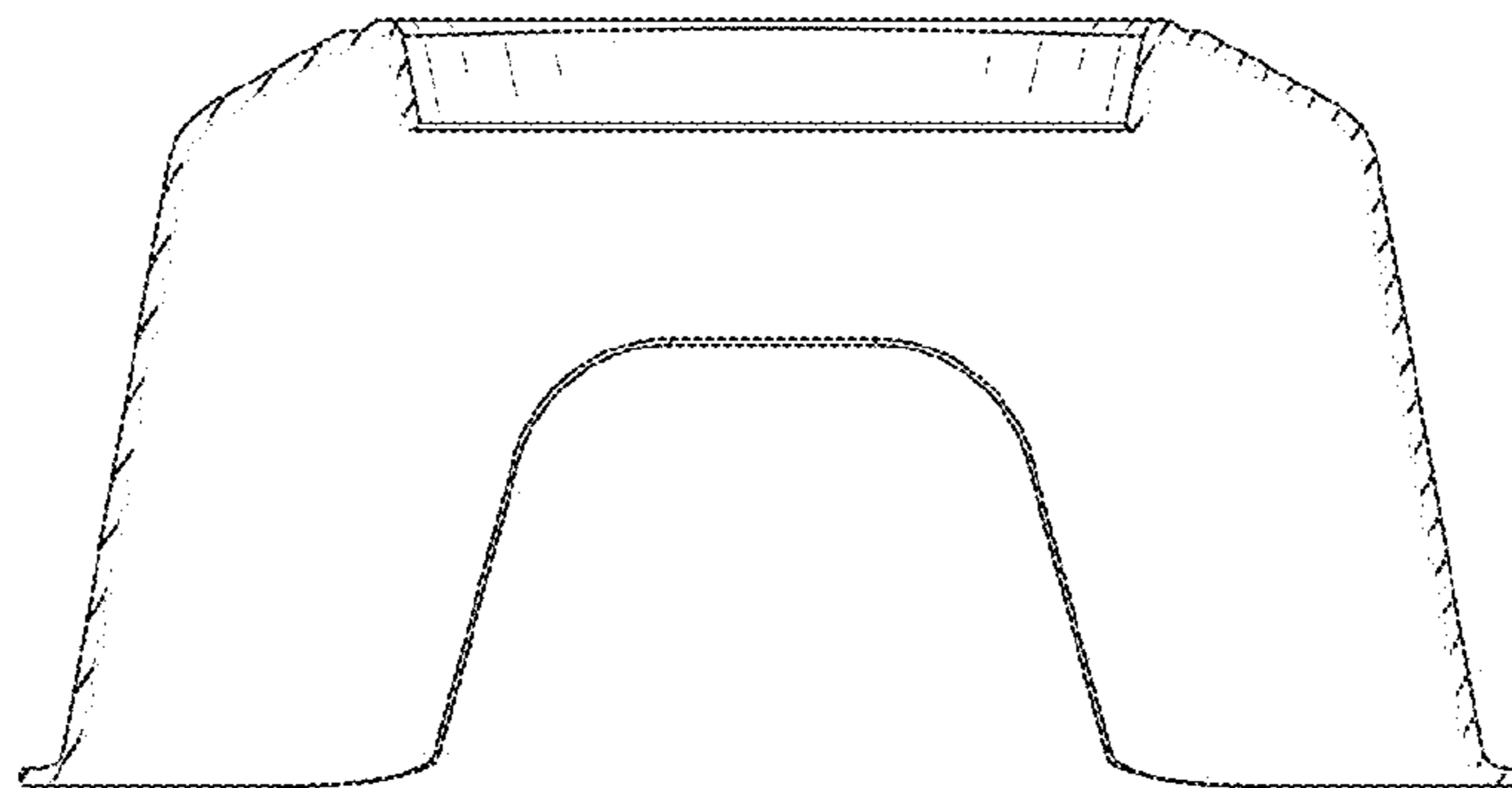


FIG. 13

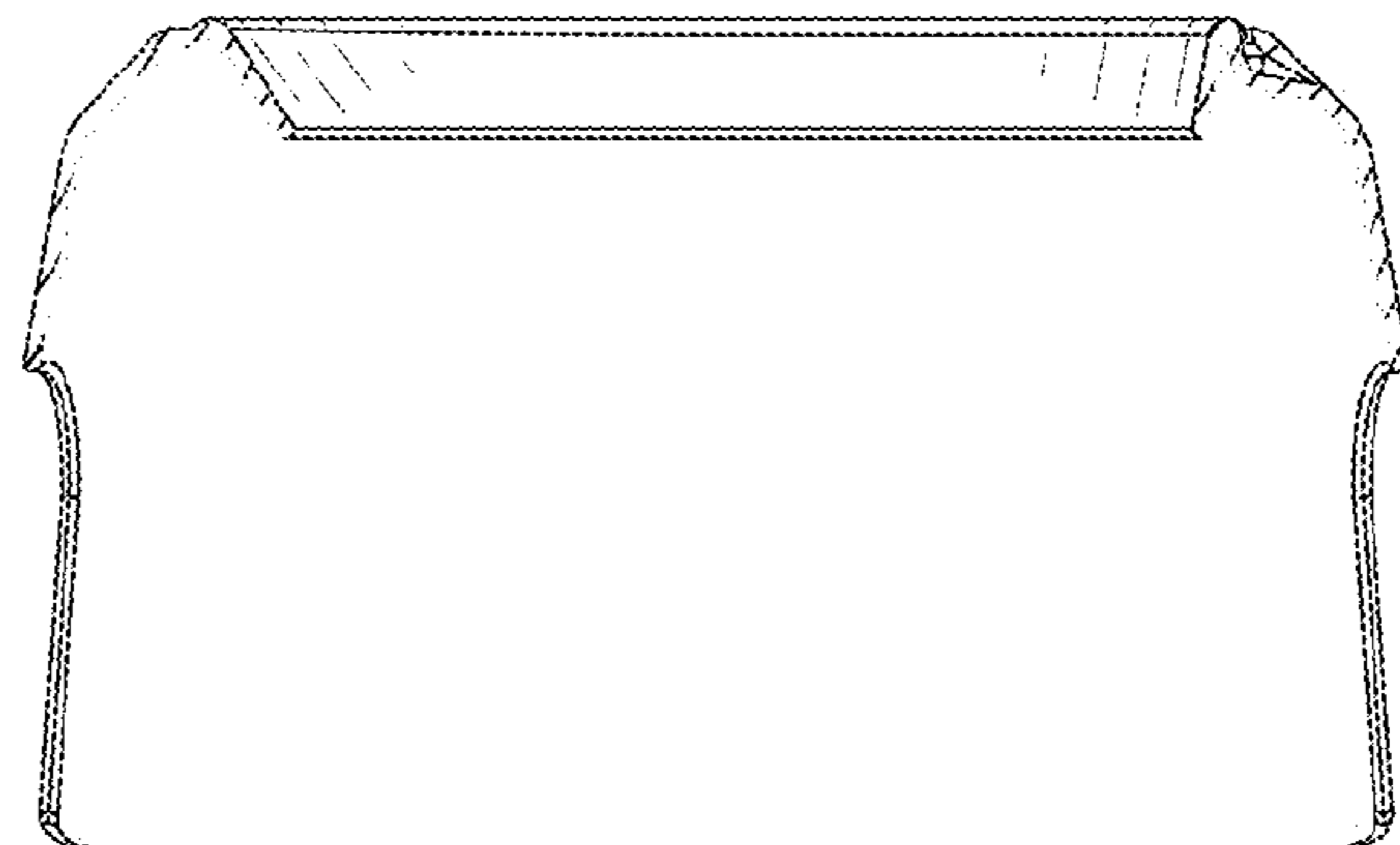


FIG. 14

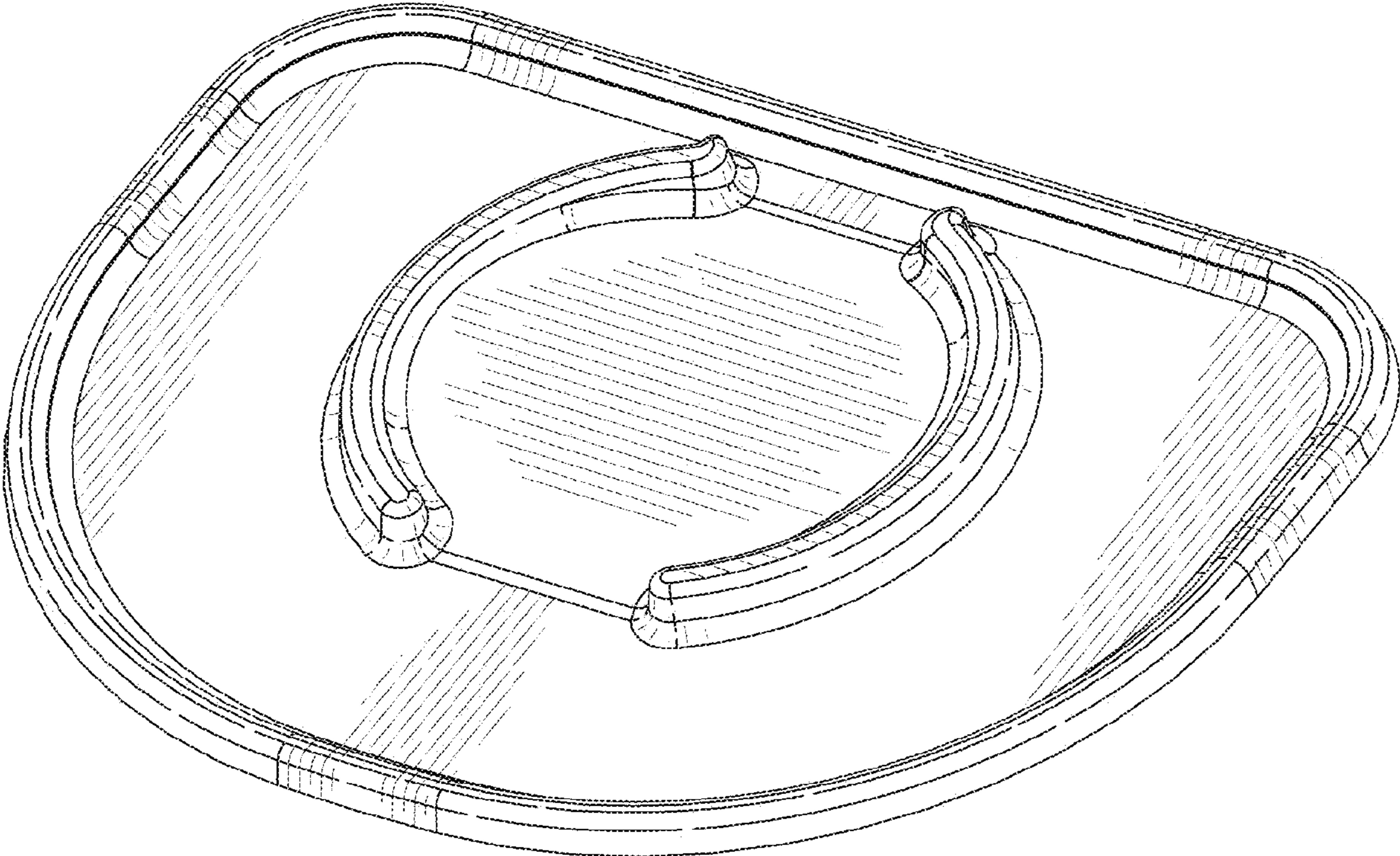


FIG. 15

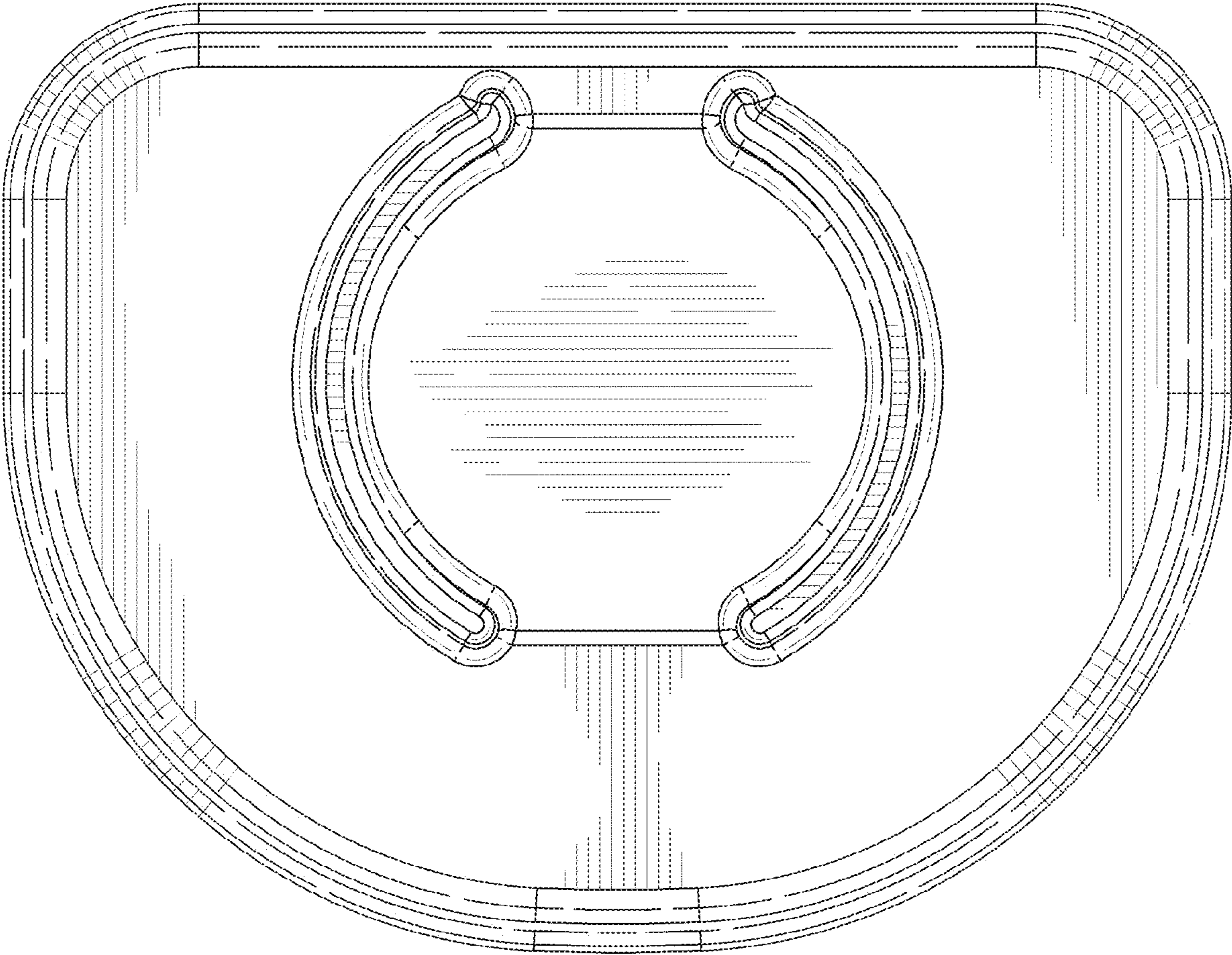
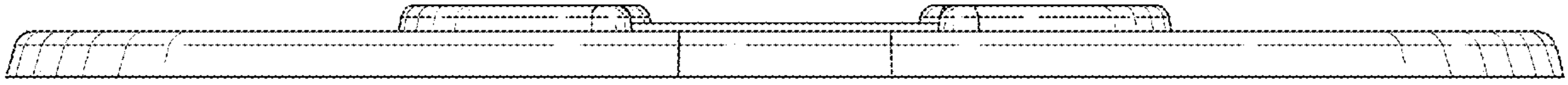
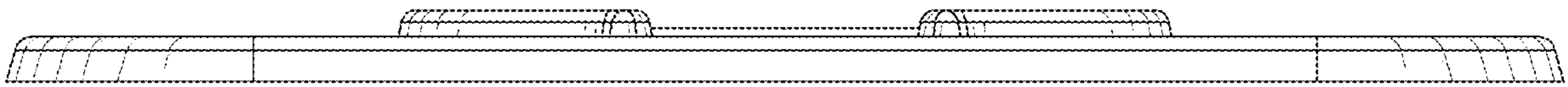


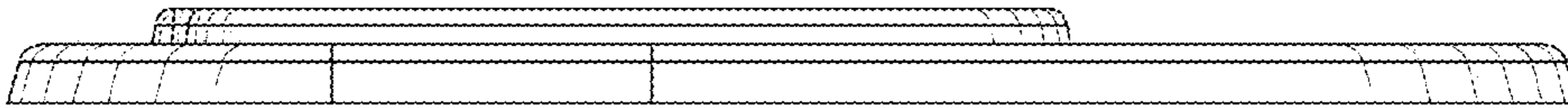
FIG. 16



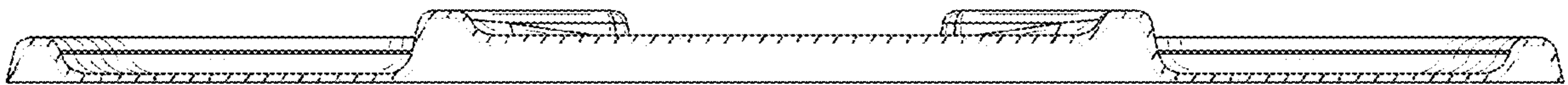
**FIG. 17**



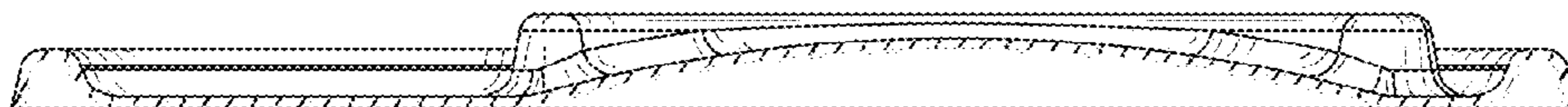
**FIG. 18**



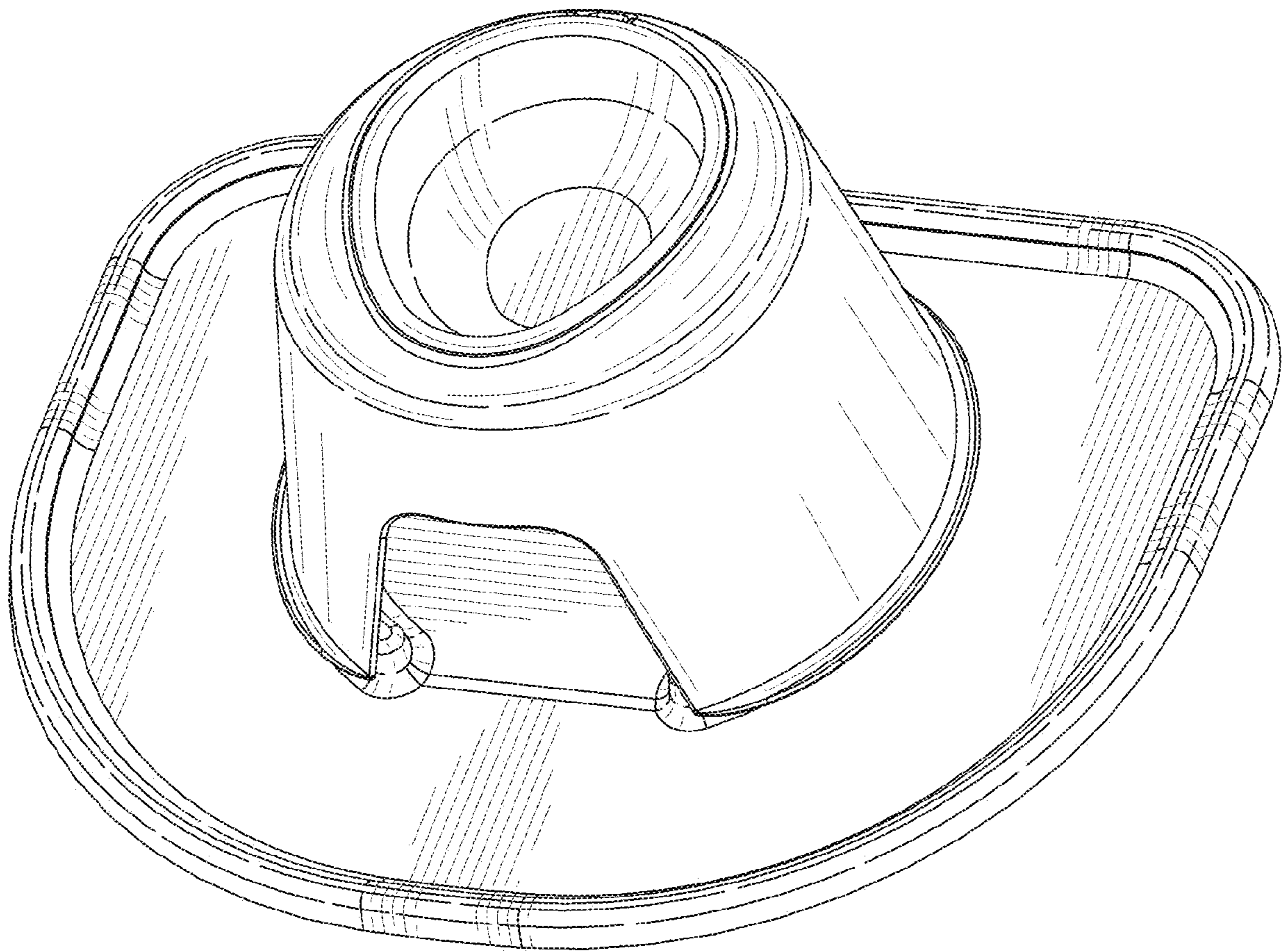
**FIG. 19**



**FIG. 20**



**FIG. 21**



**FIG. 22**

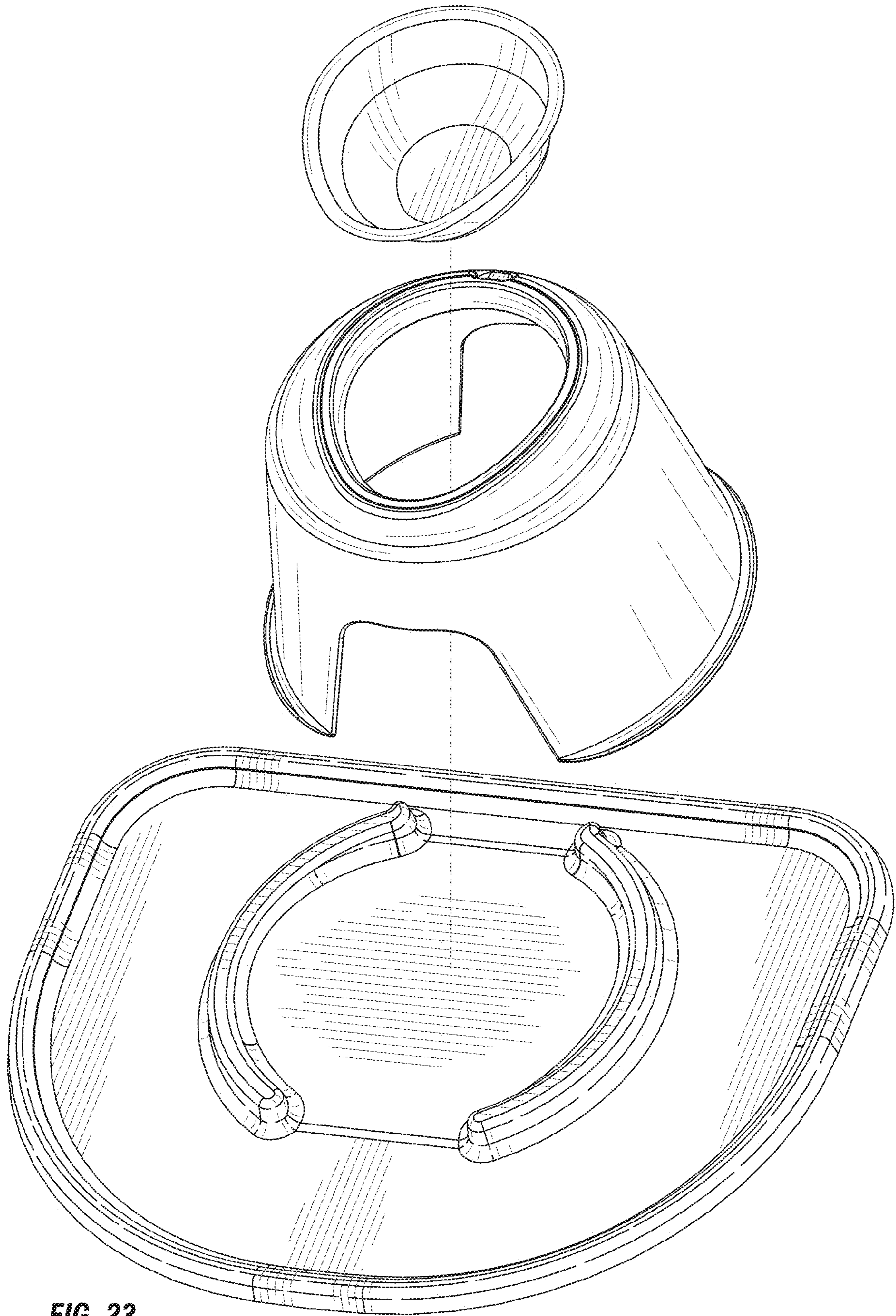
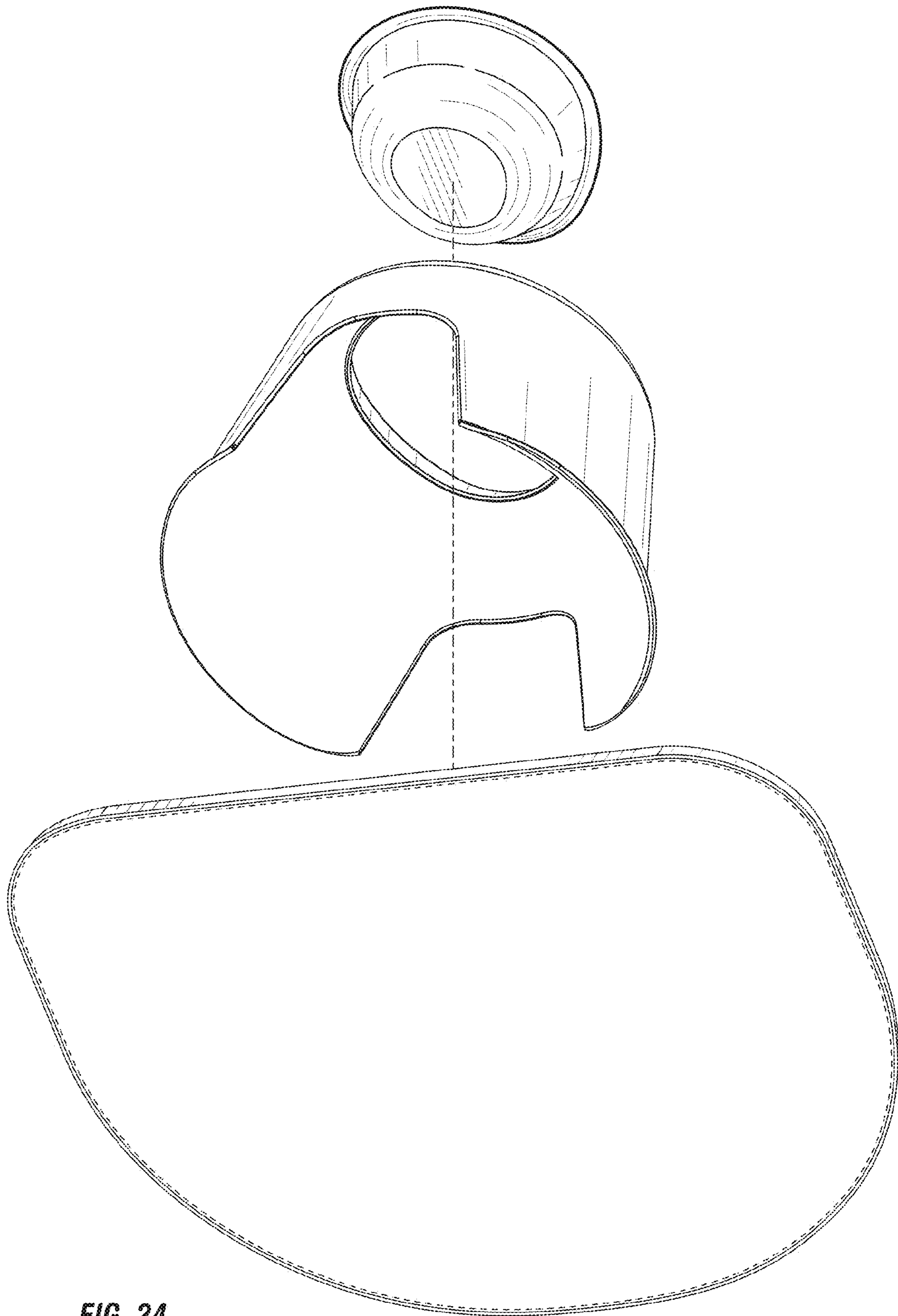


FIG. 23





**FIG. 24**

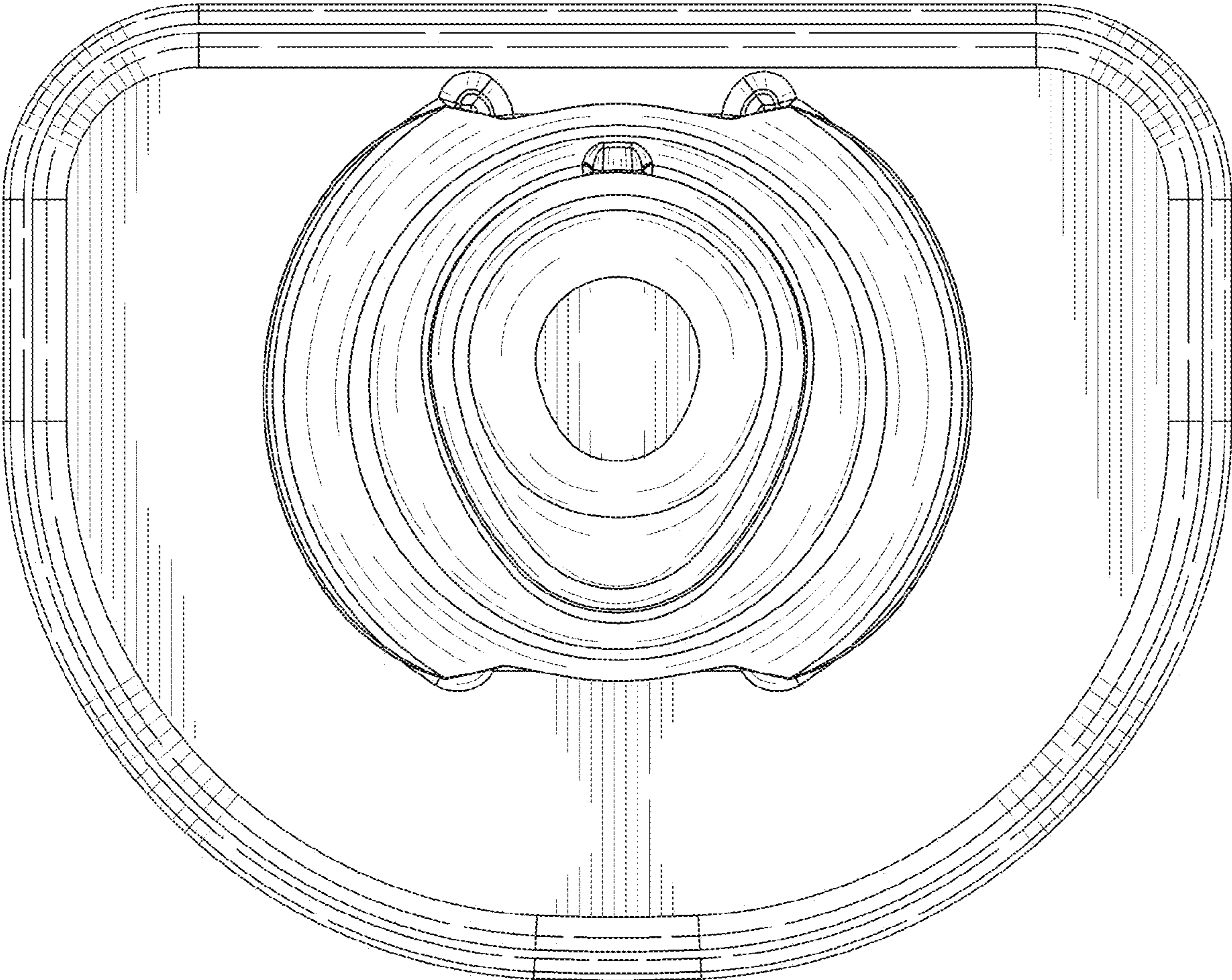


FIG. 25

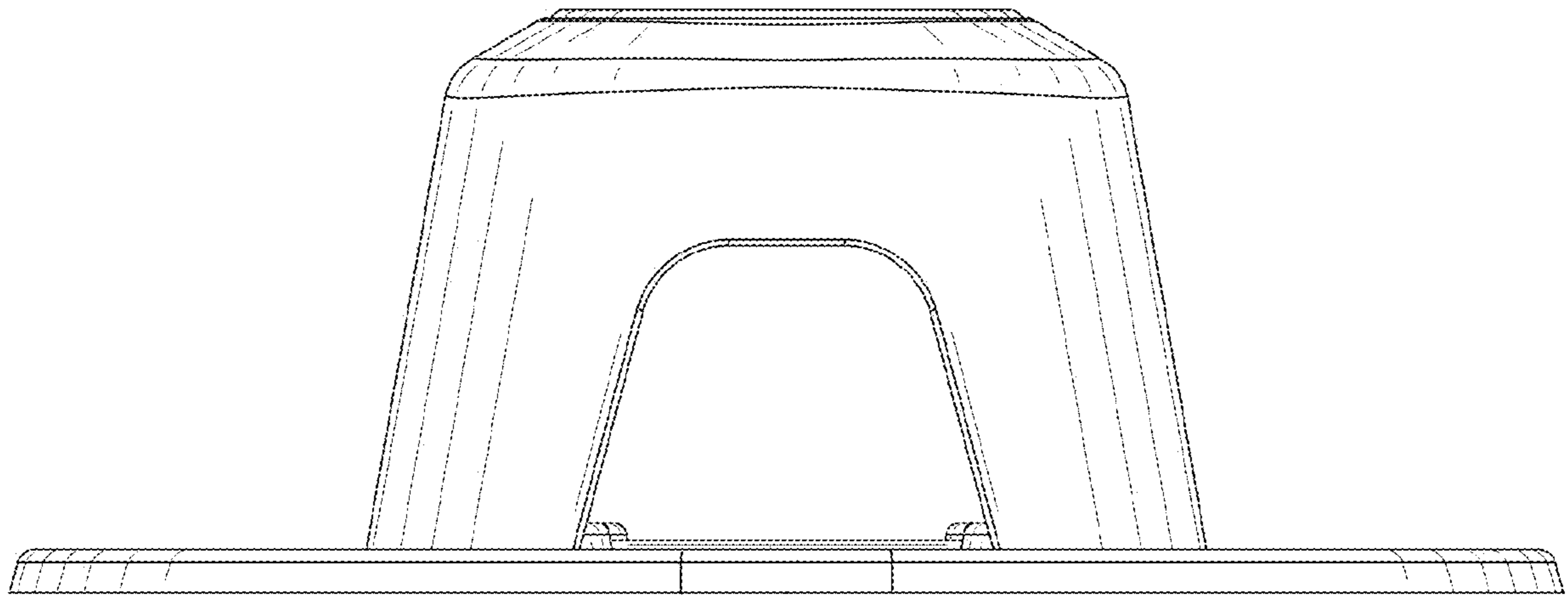


FIG. 26

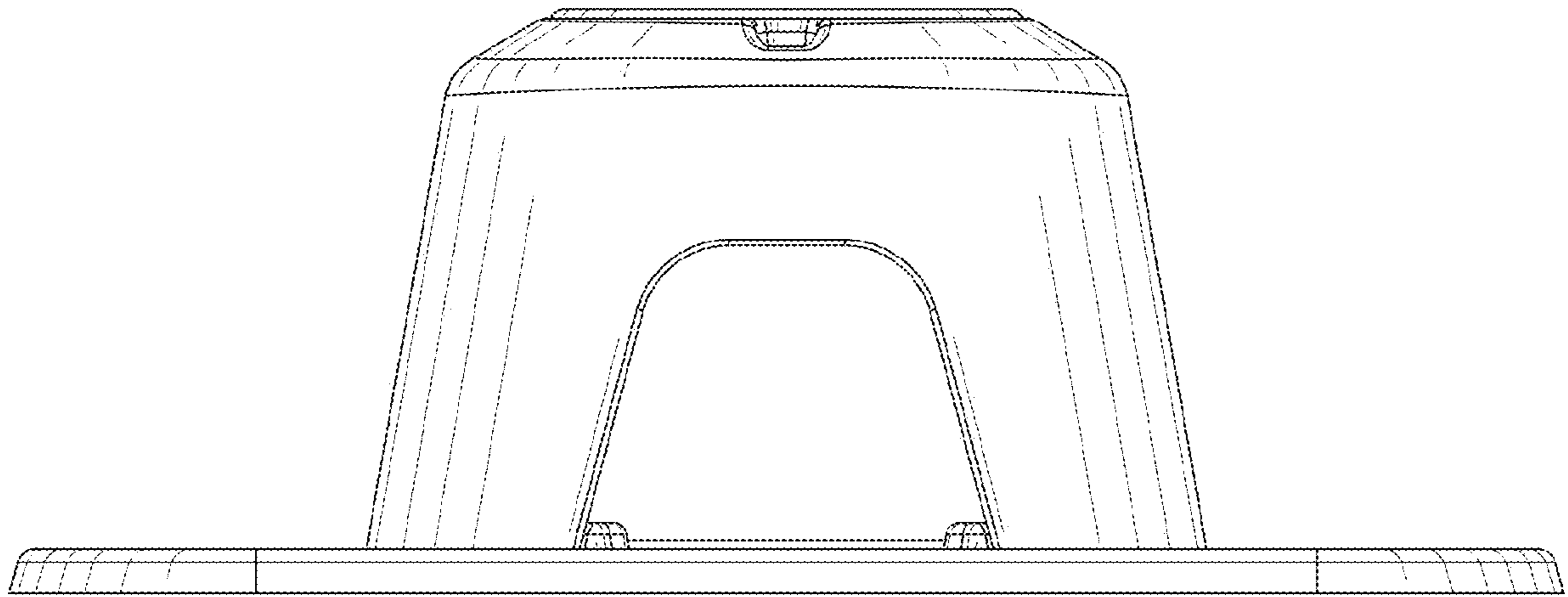


FIG. 27

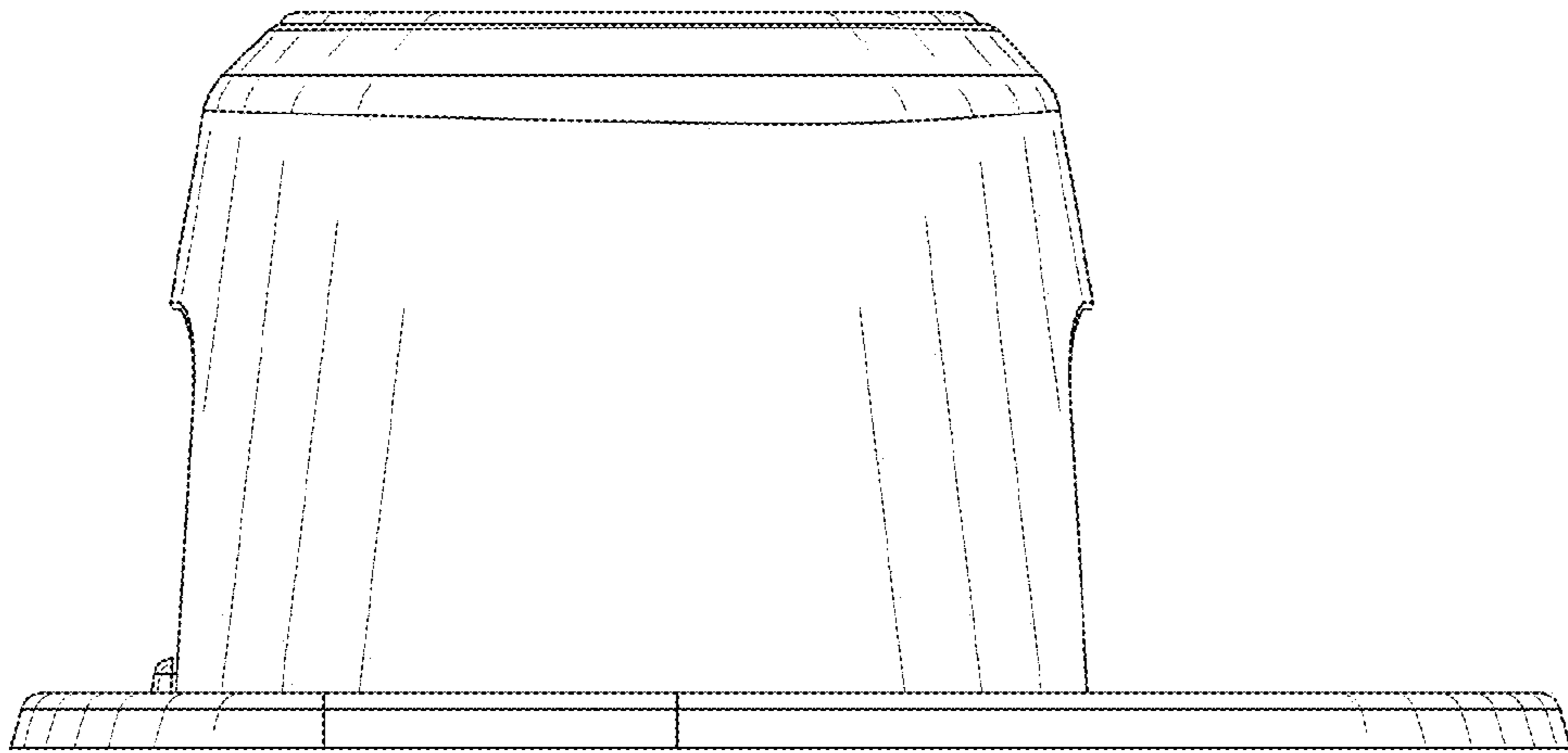
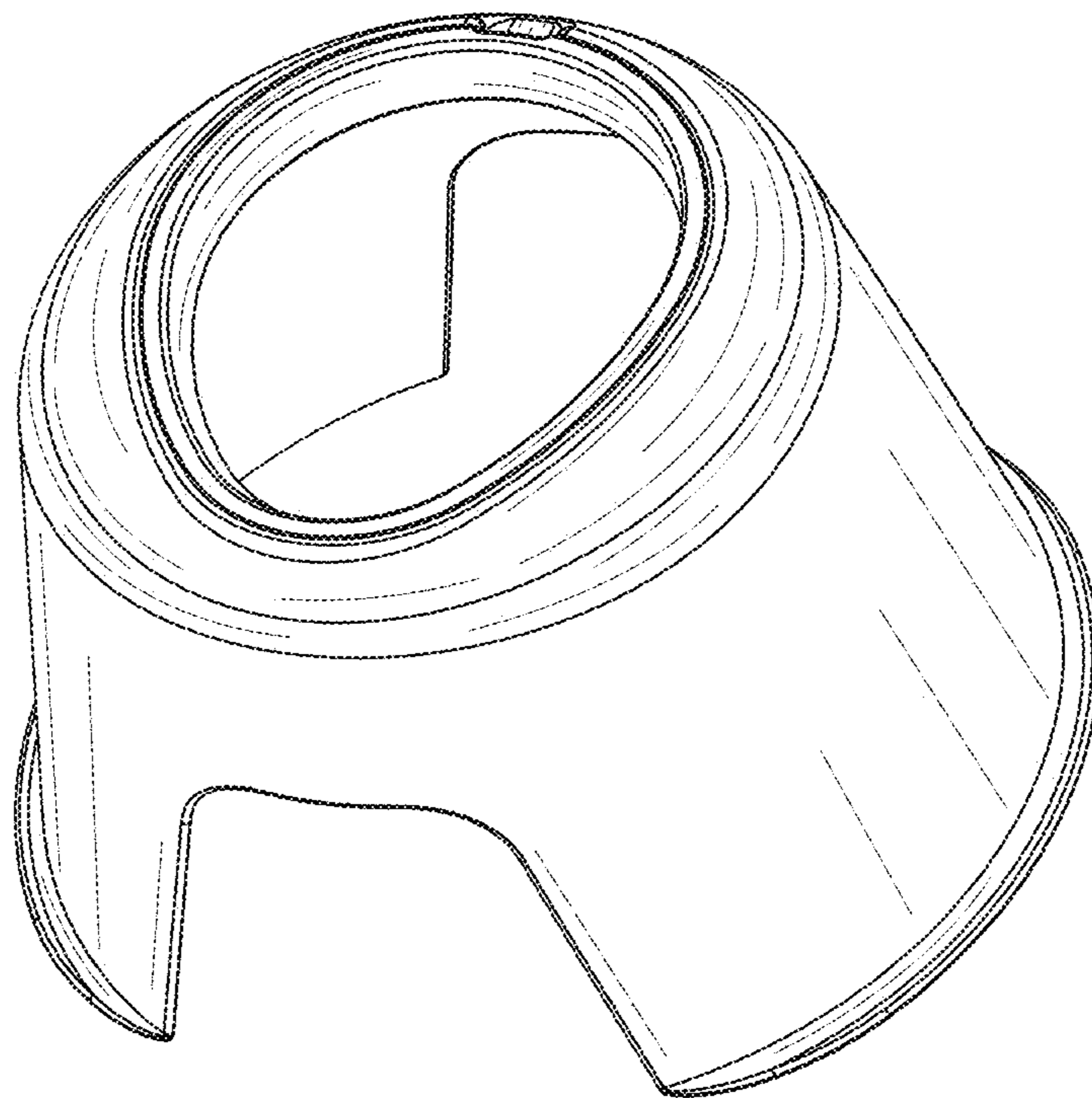
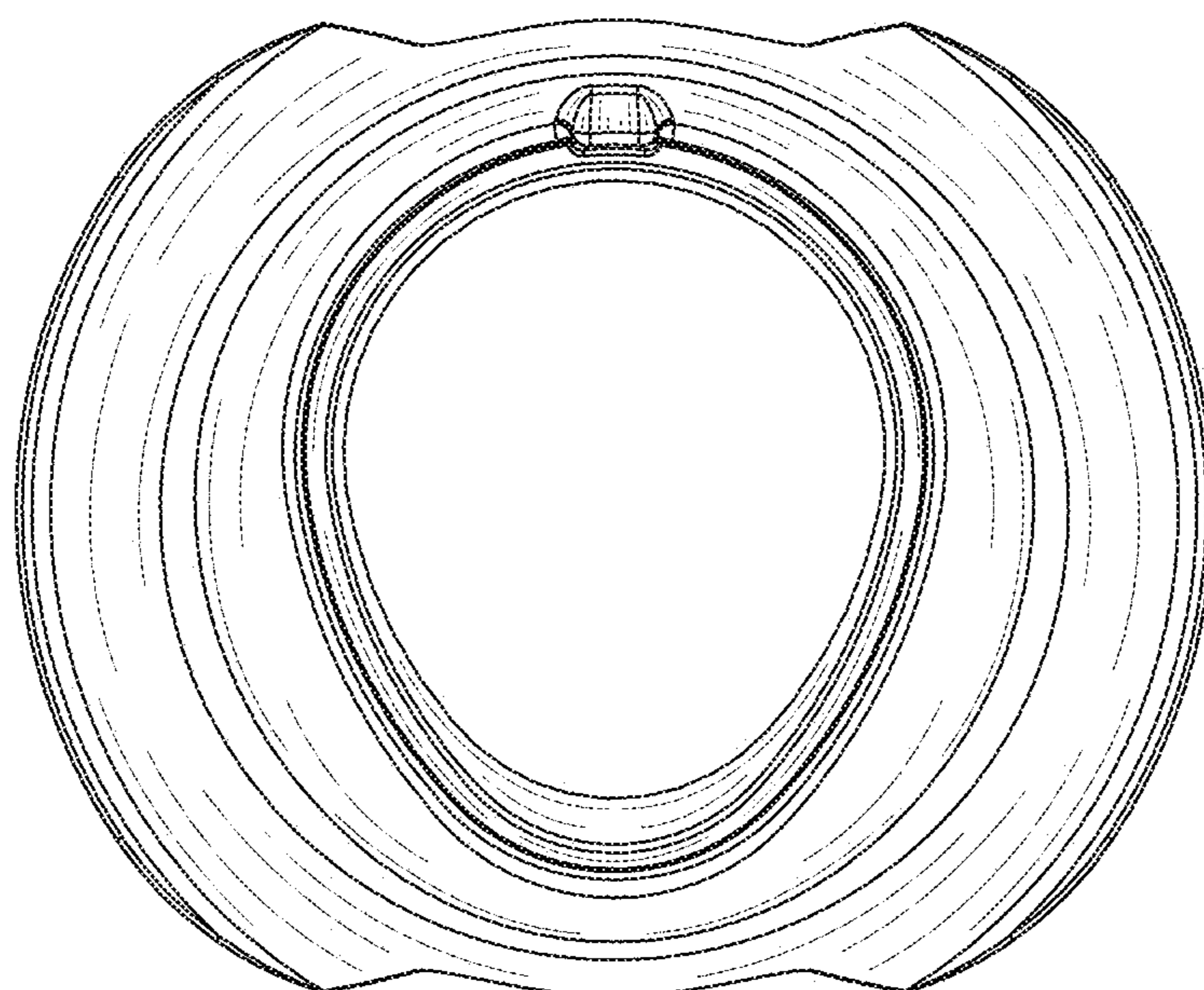


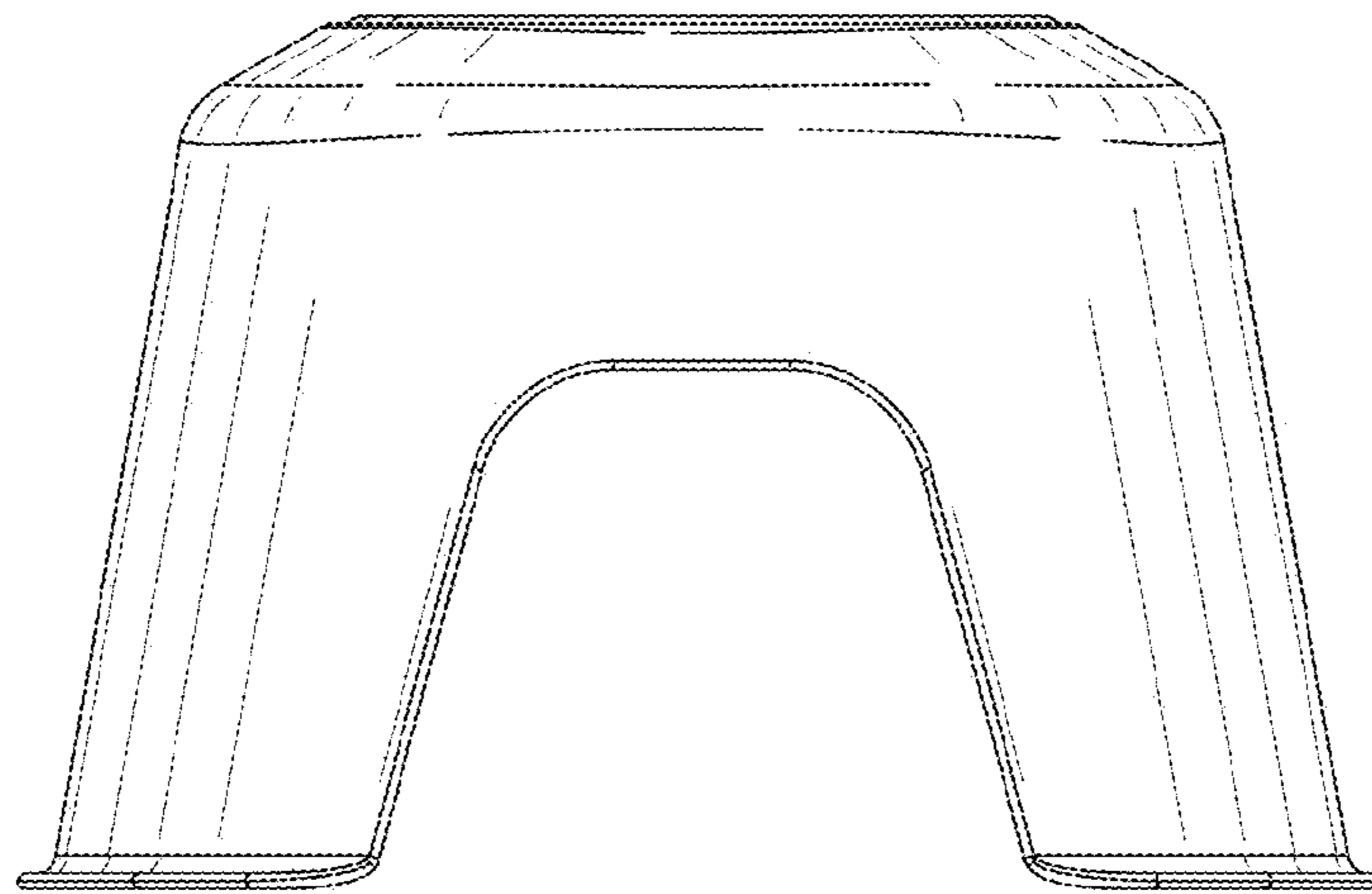
FIG. 28



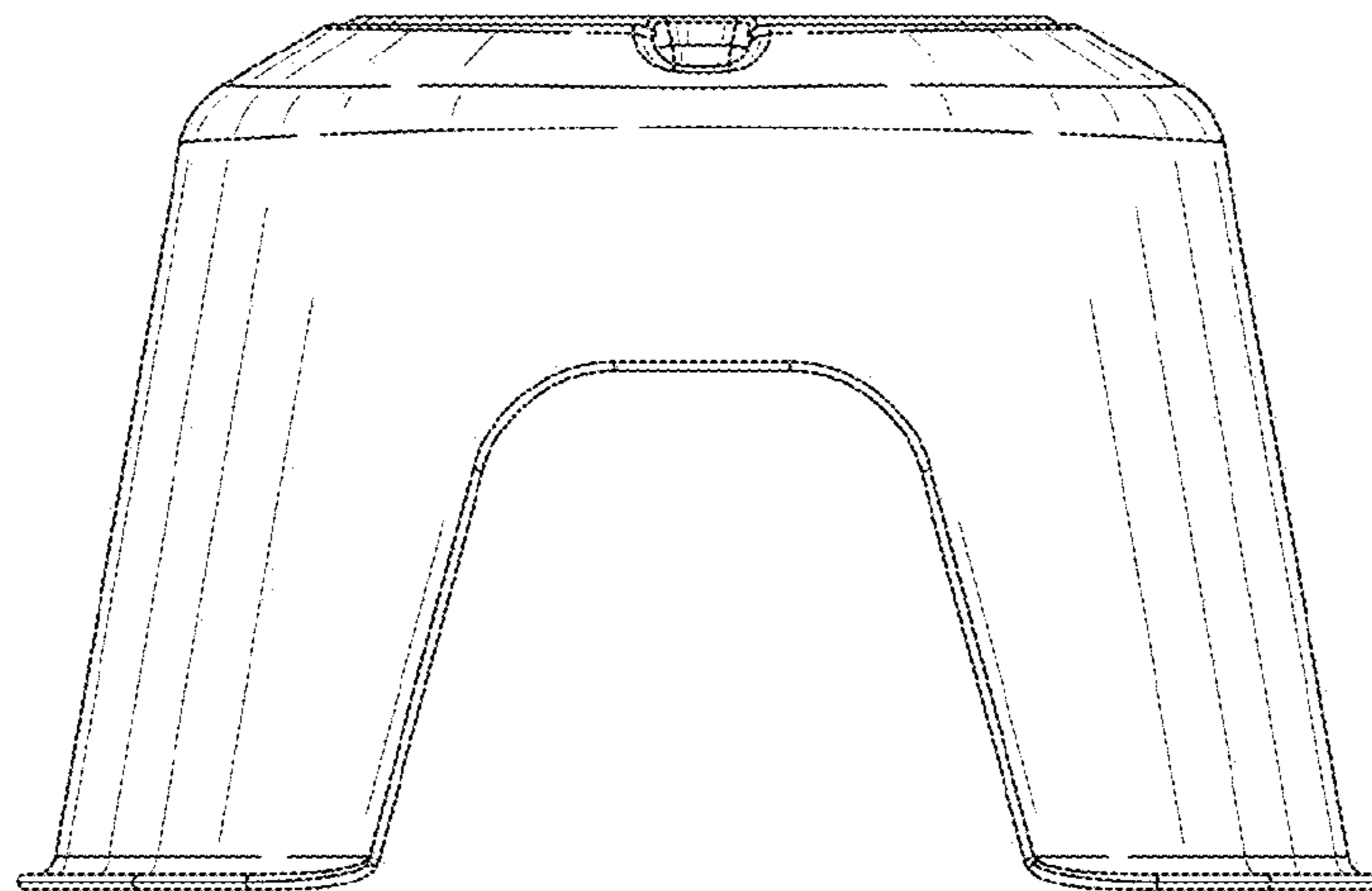
**FIG. 29**



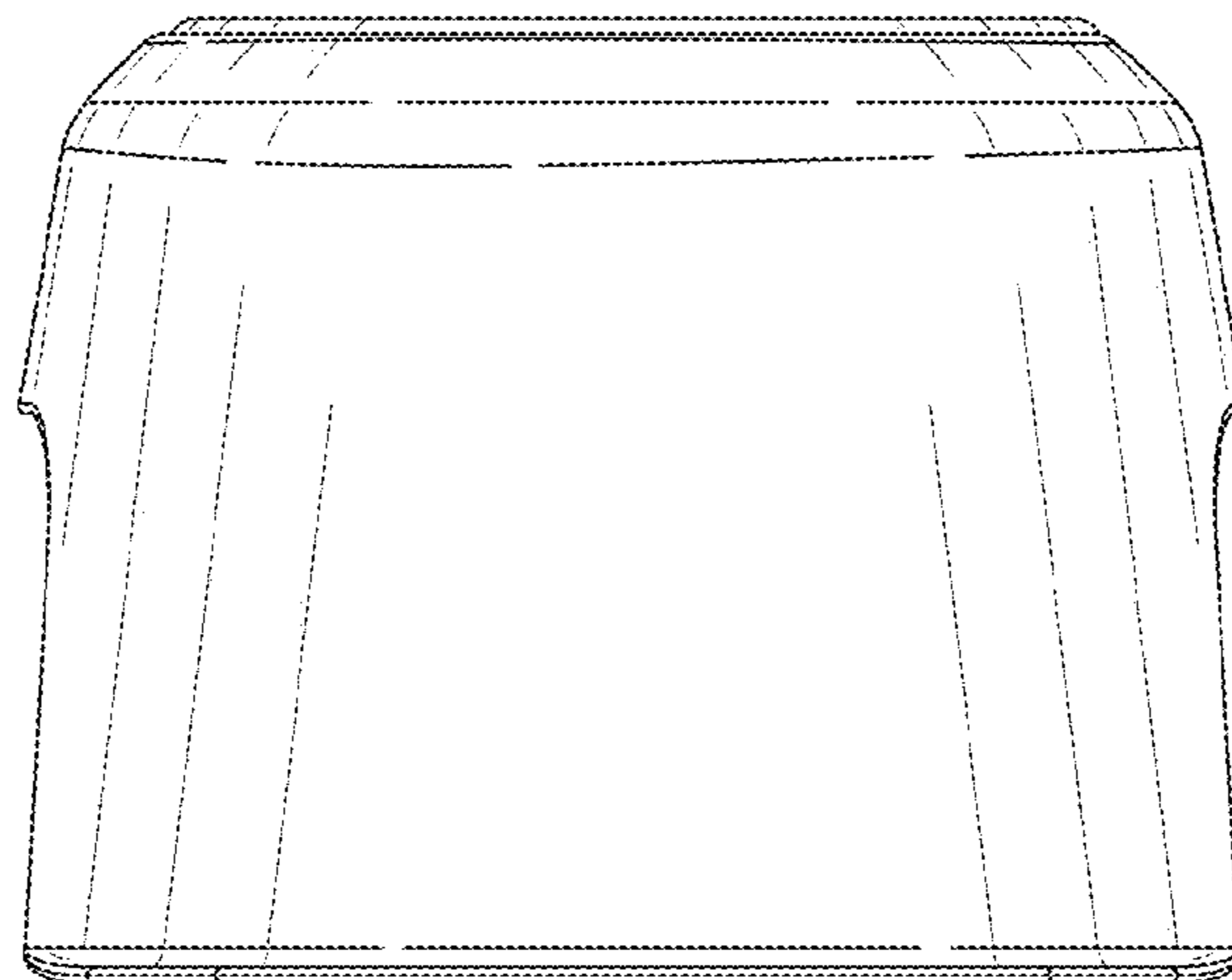
**FIG. 30**



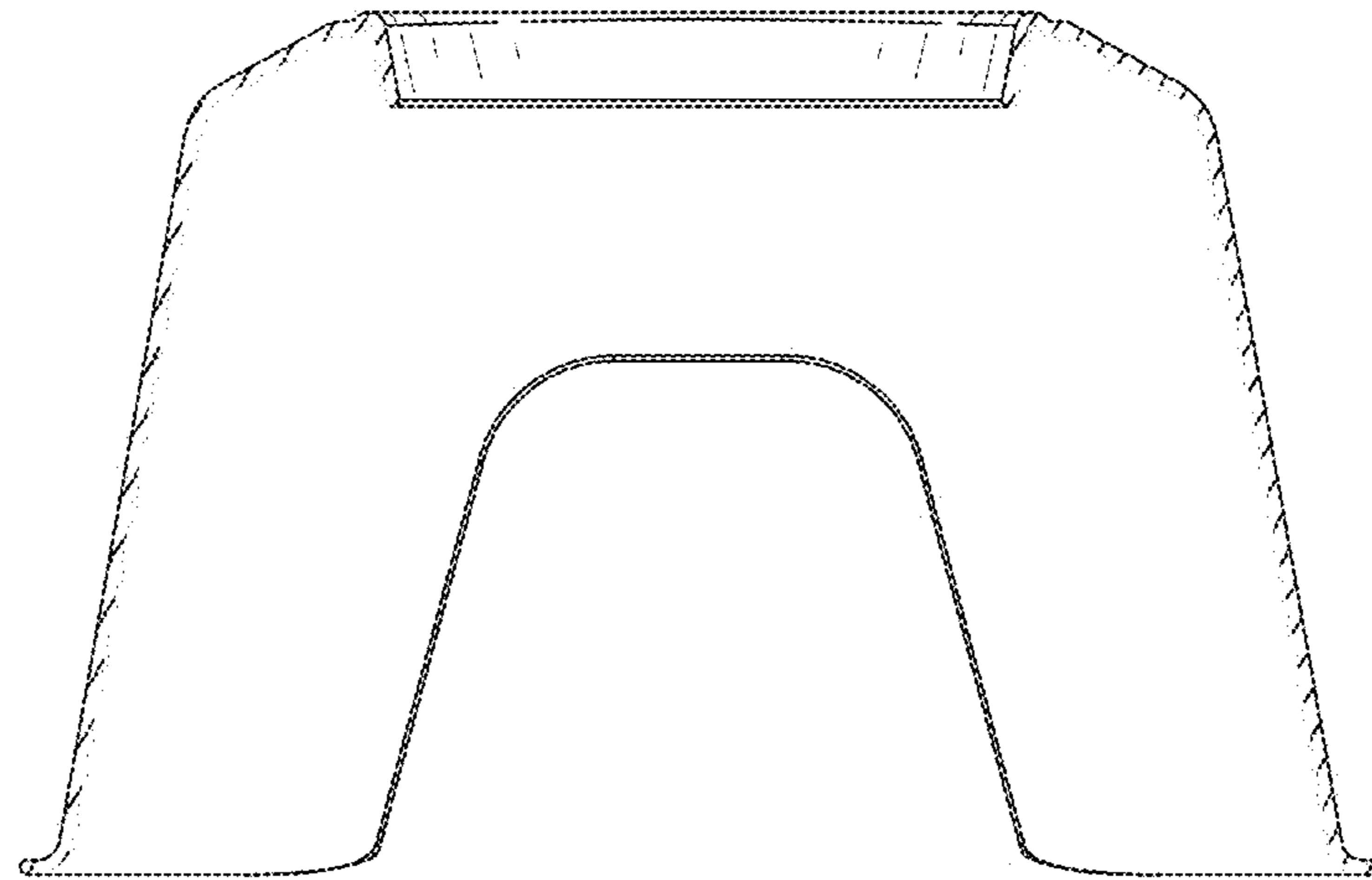
**FIG. 31**



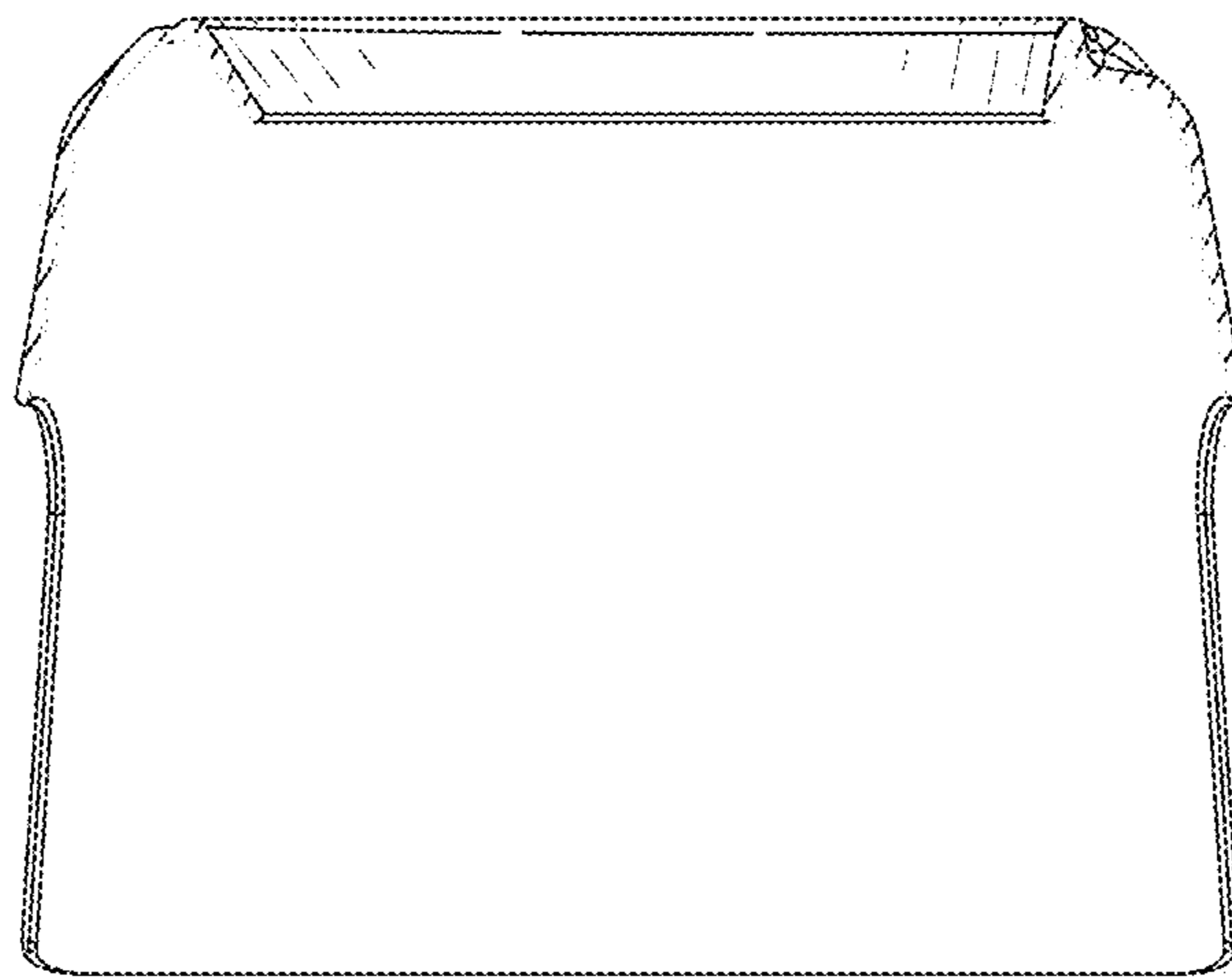
**FIG. 32**



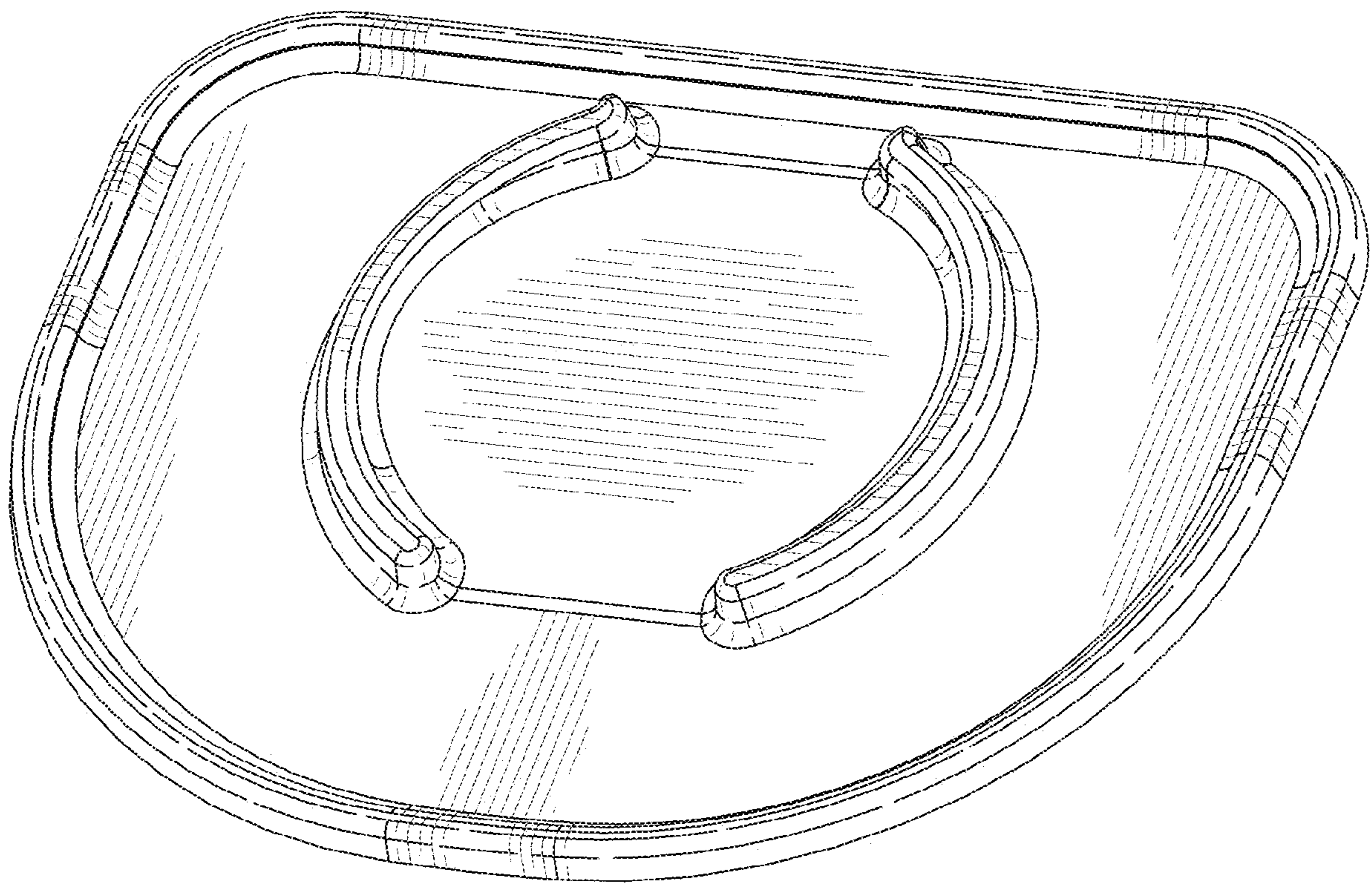
**FIG. 33**



**FIG. 34**



**FIG. 35**



**FIG. 36**

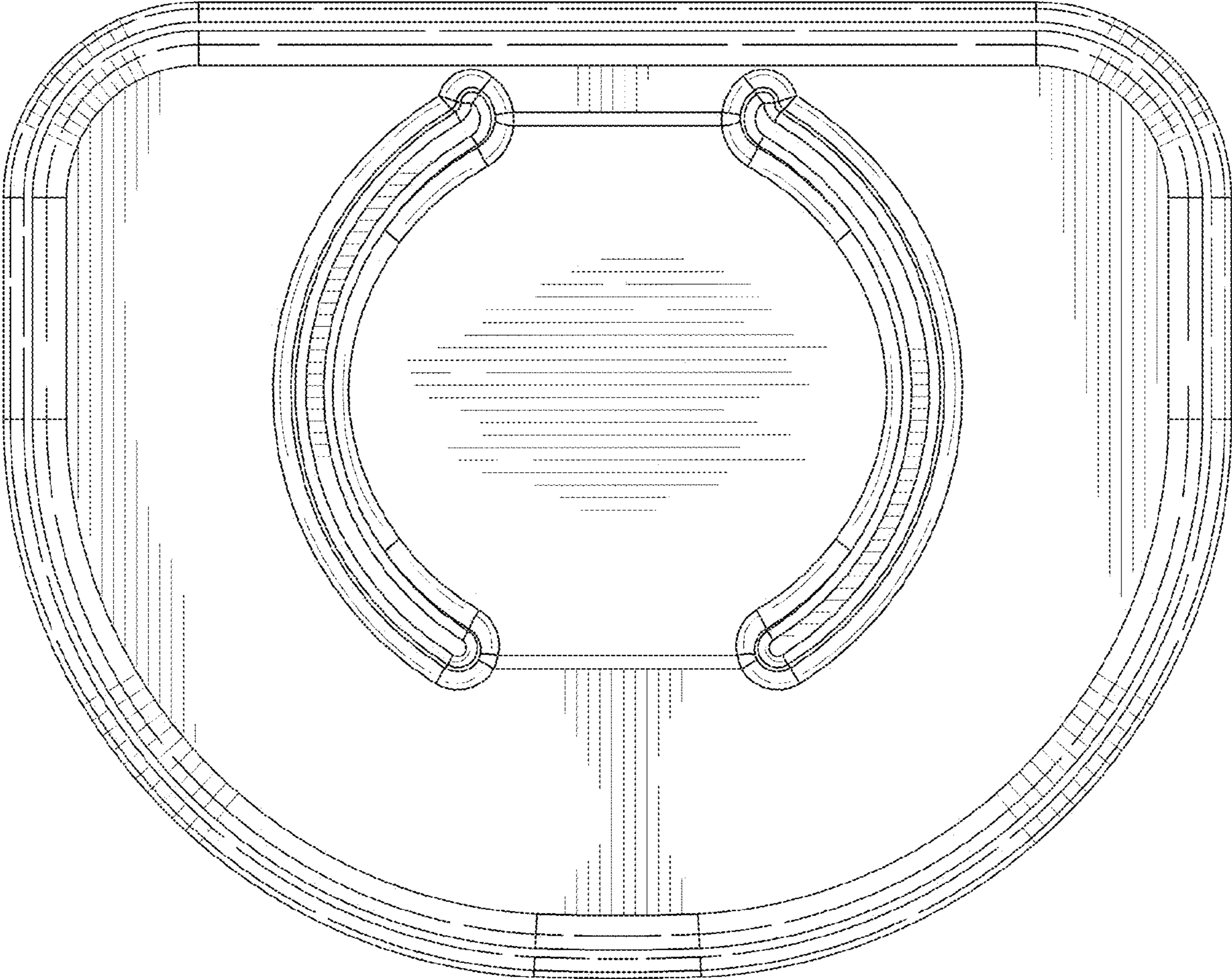
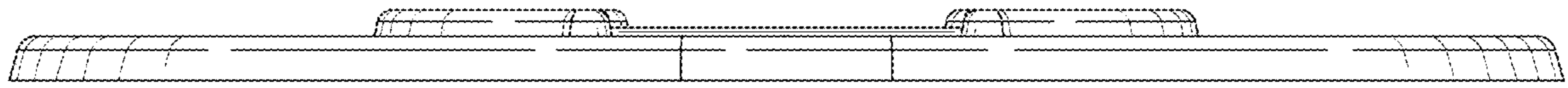
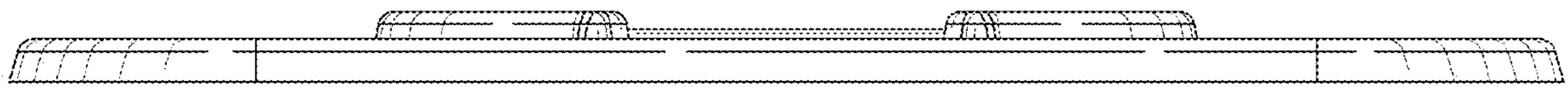


FIG. 37

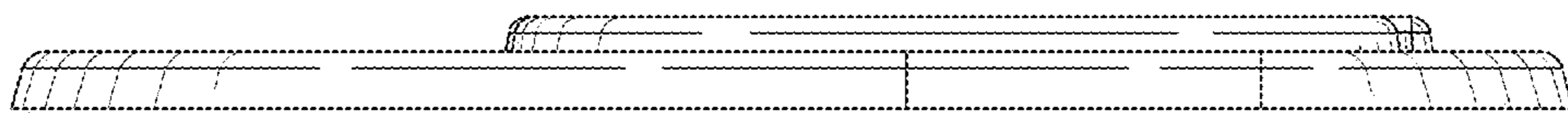




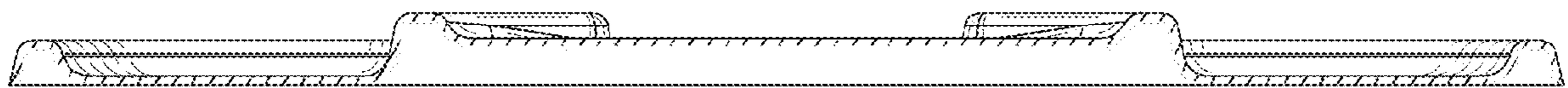
**FIG. 38**



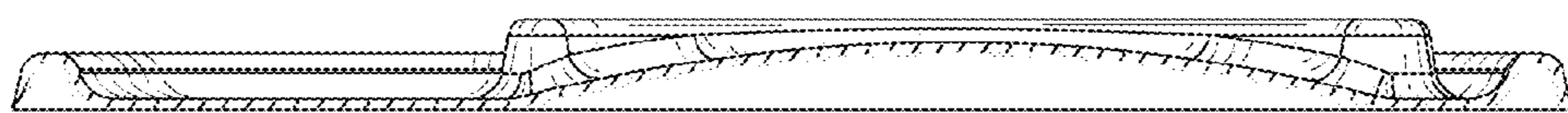
**FIG. 39**



**FIG. 40**



**FIG. 41**



**FIG. 42**

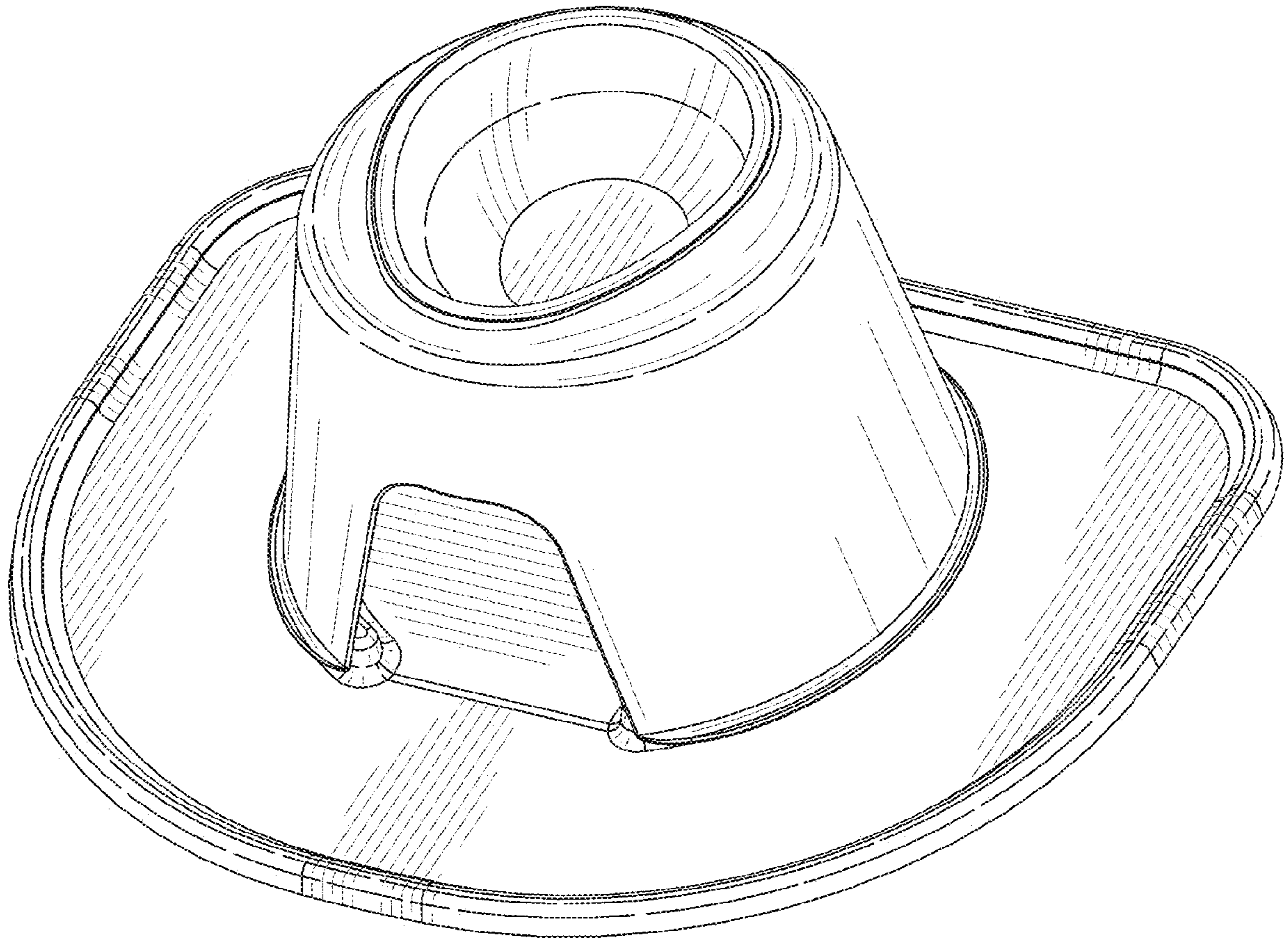


FIG. 43

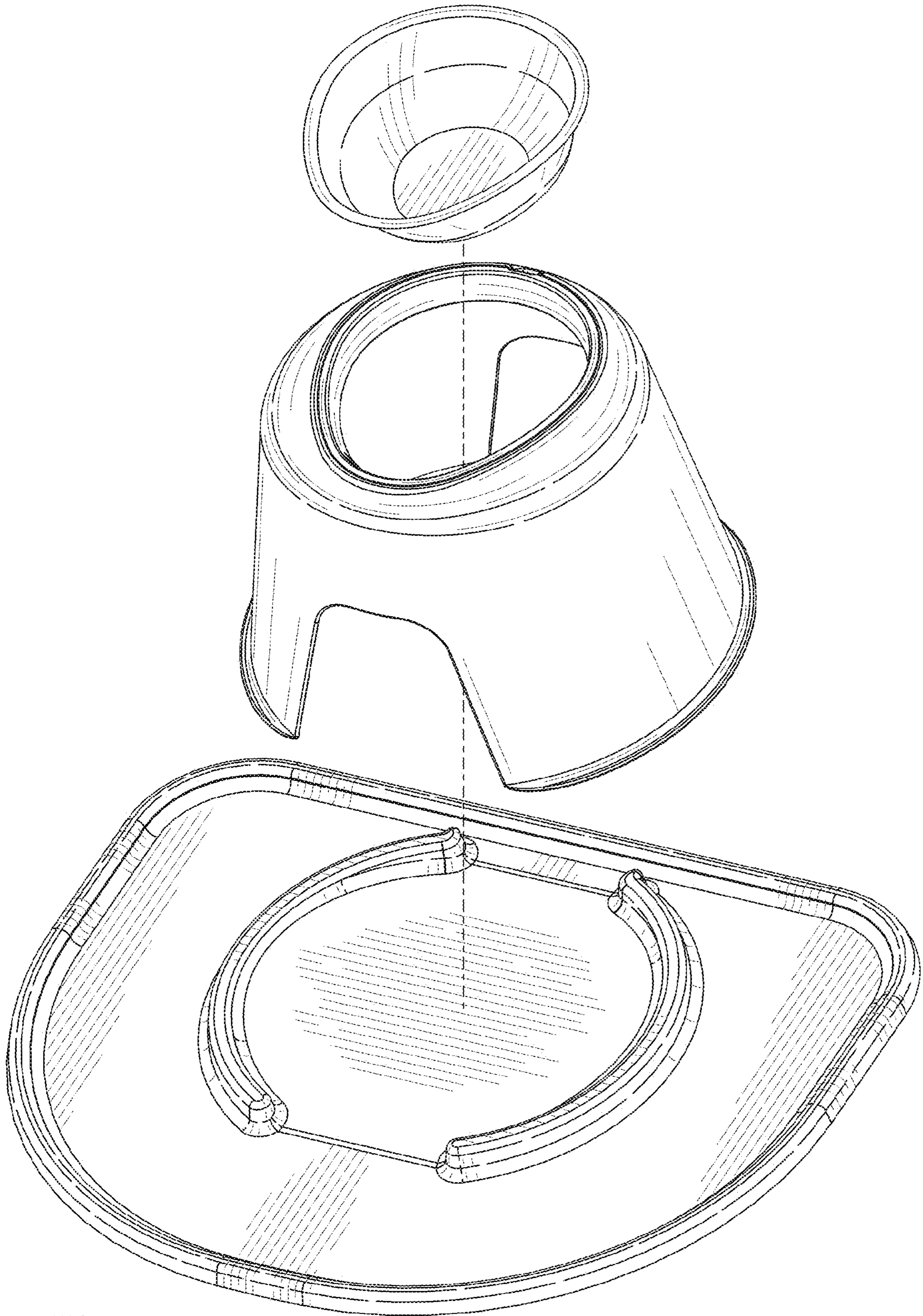
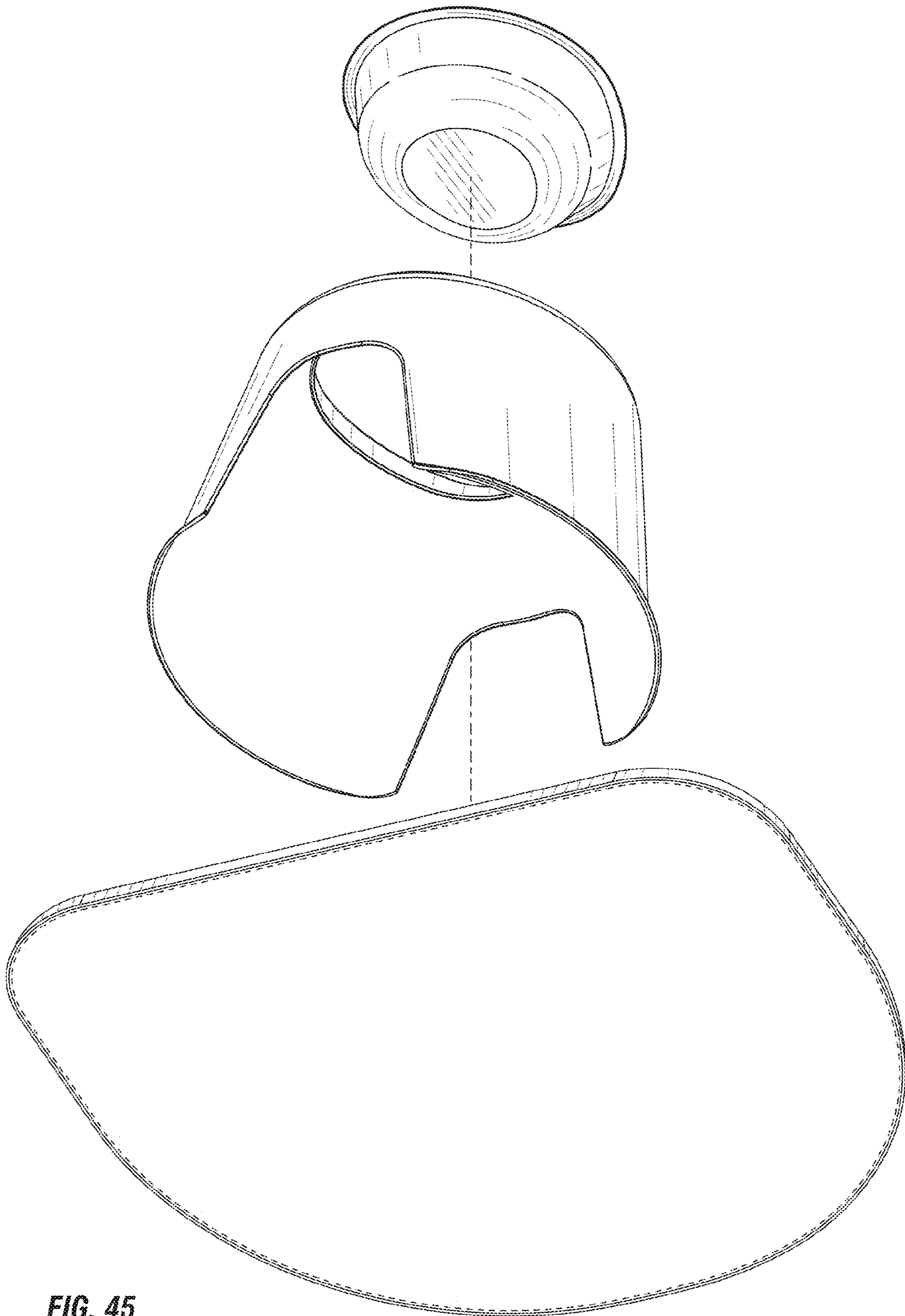
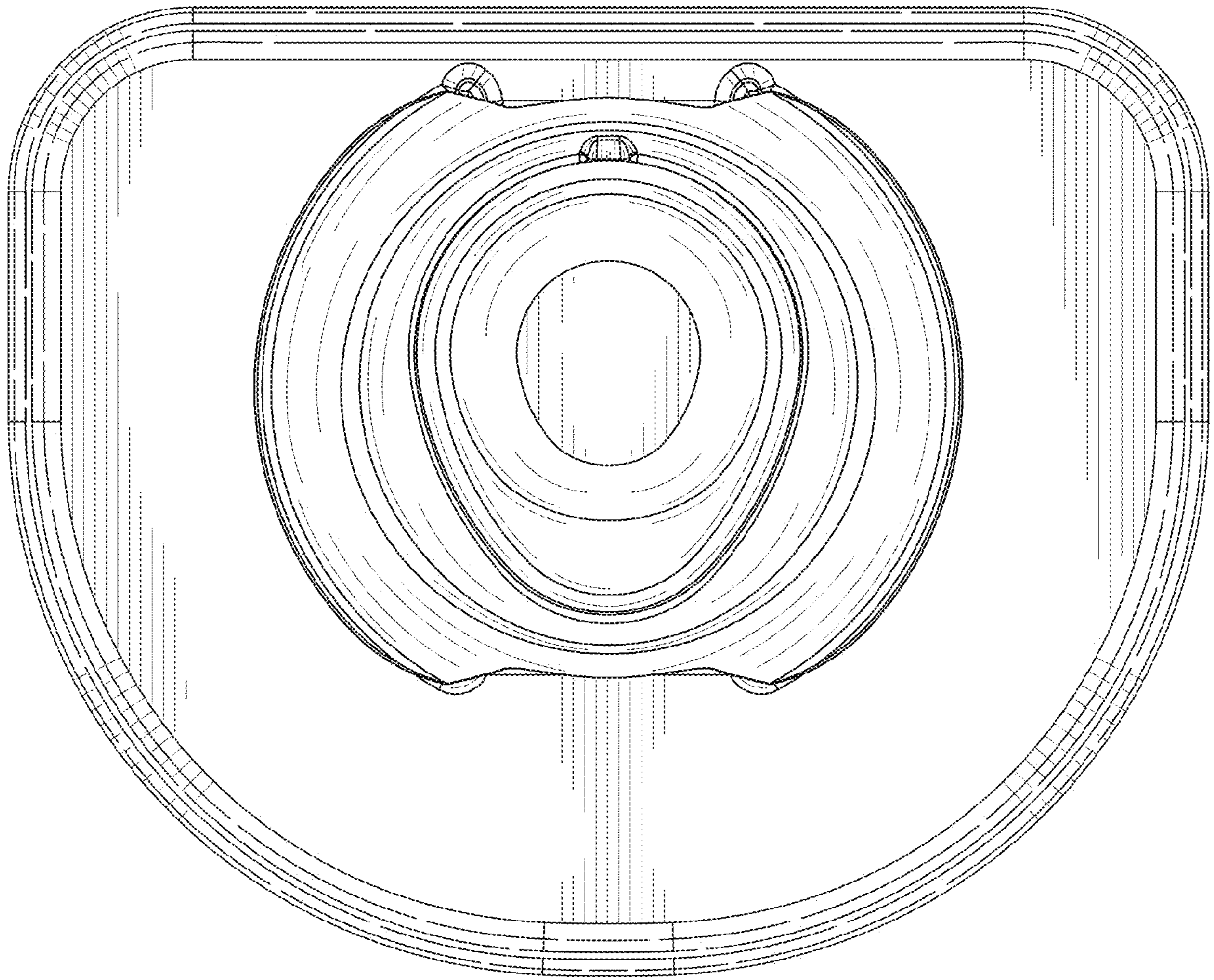


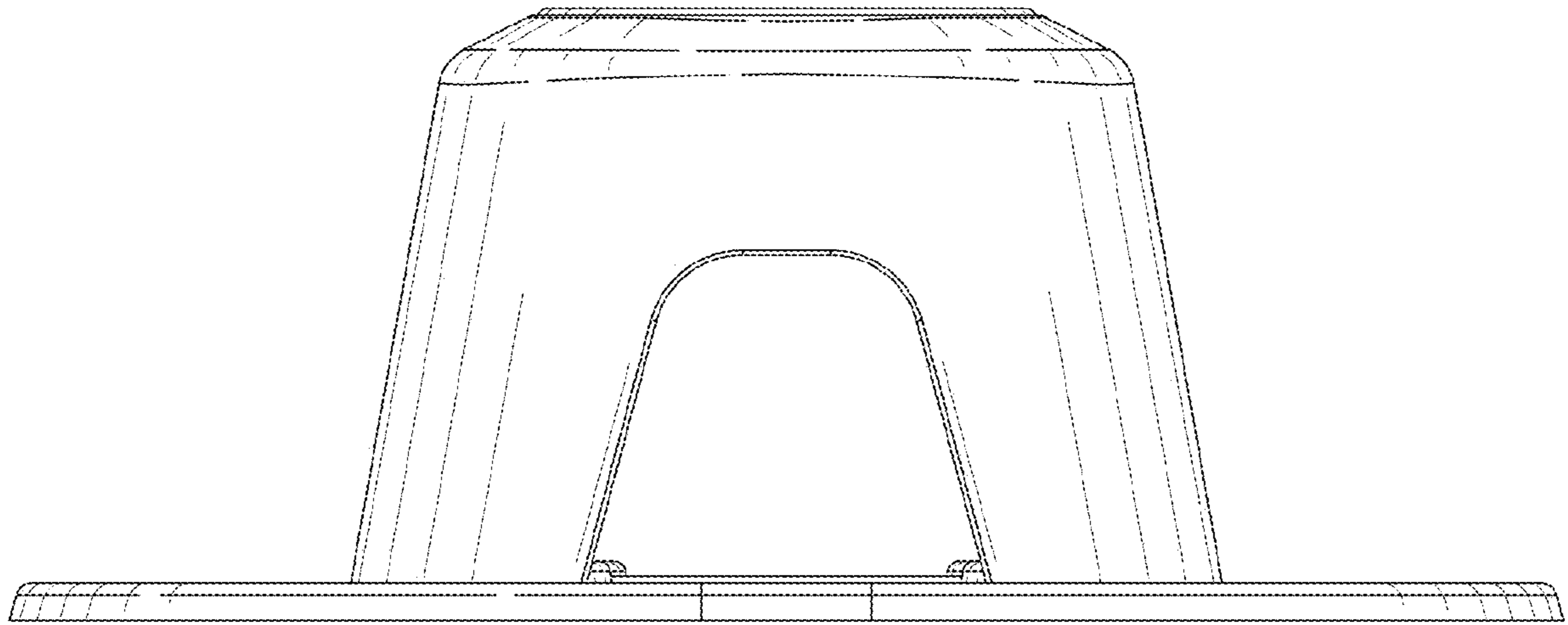
FIG. 44



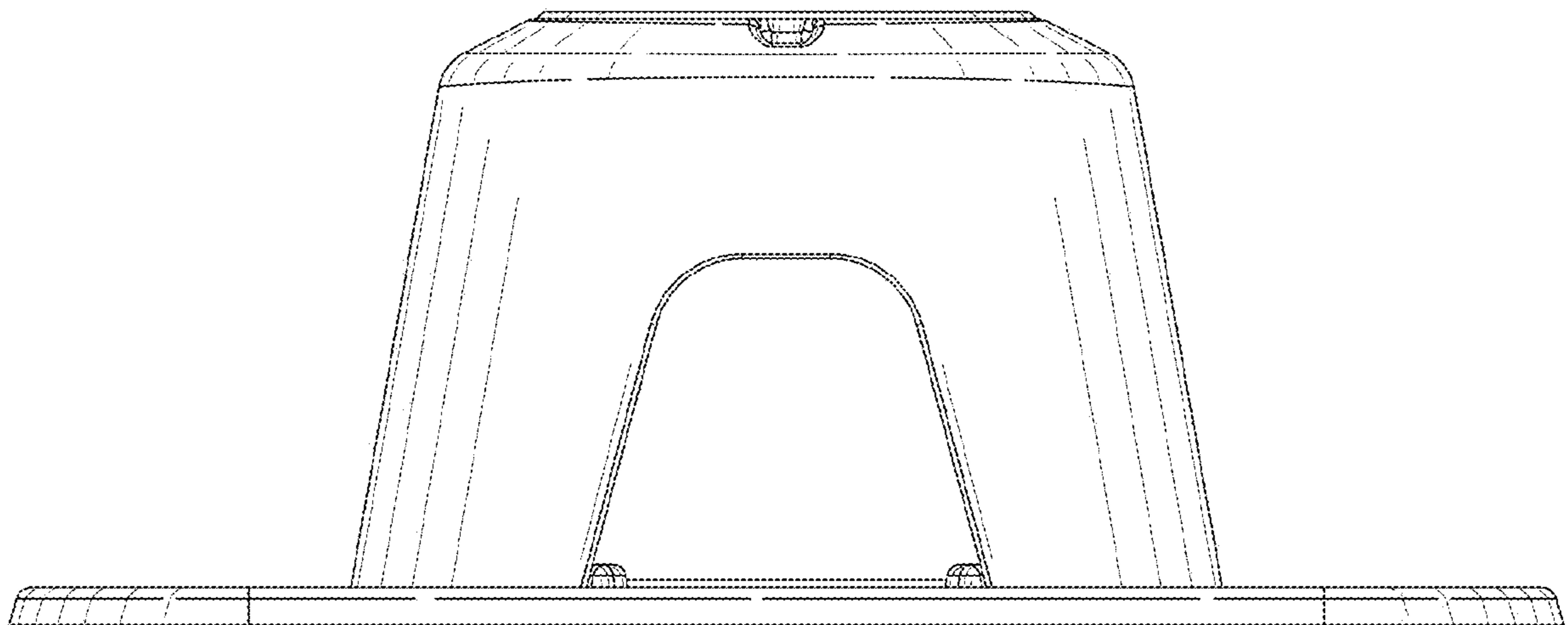
**FIG. 45**



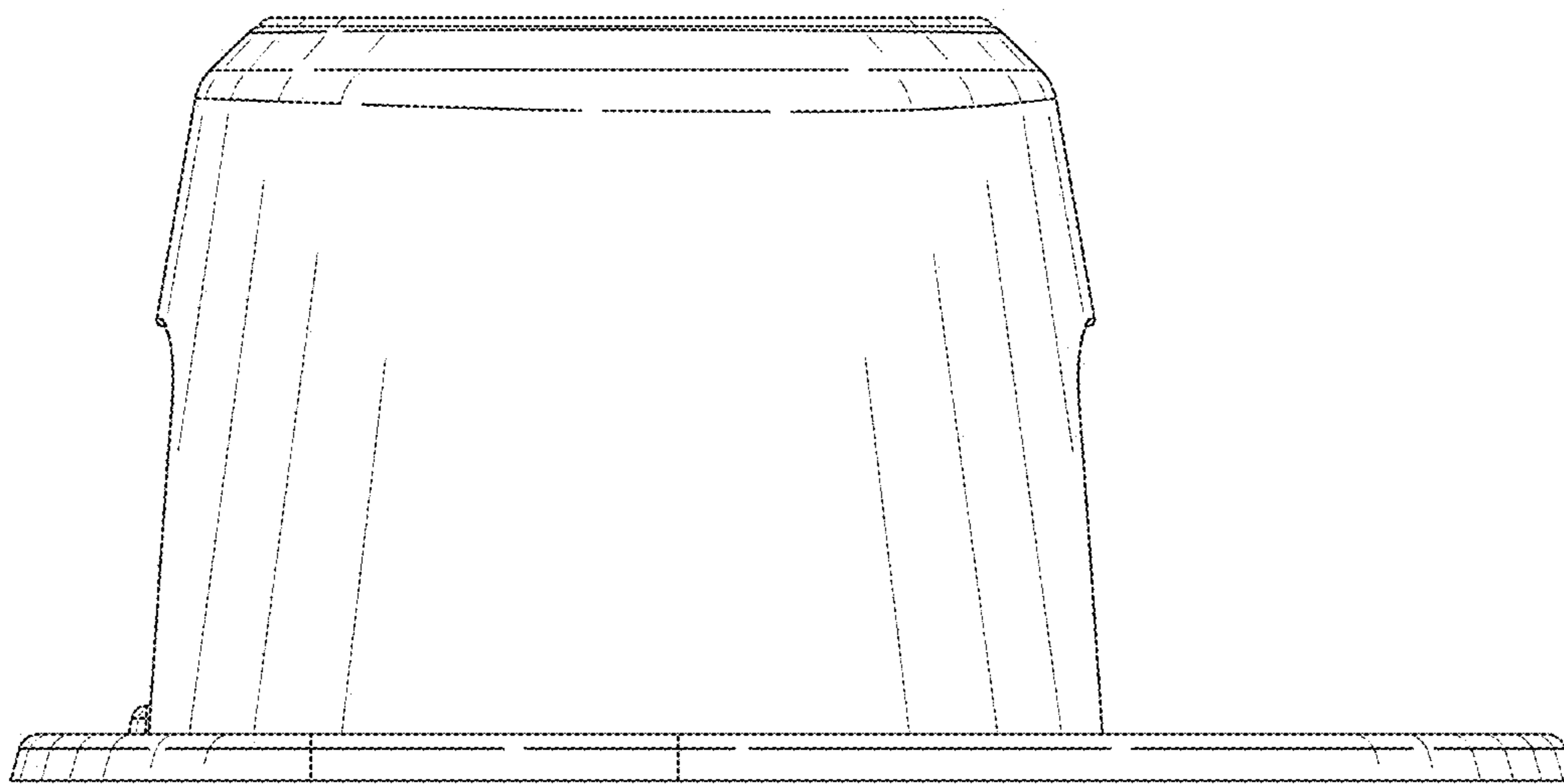
**FIG. 46**



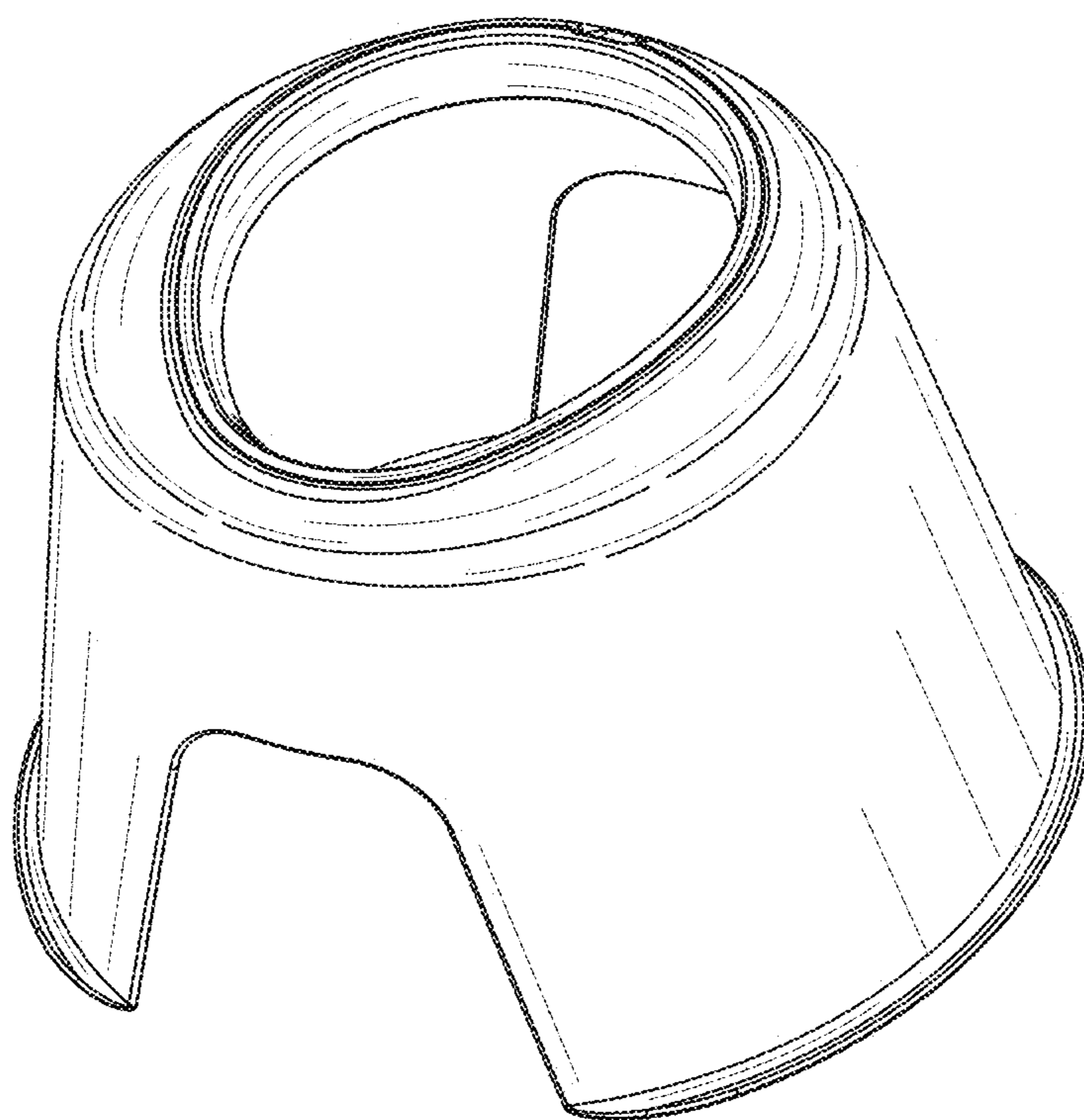
**FIG. 47**



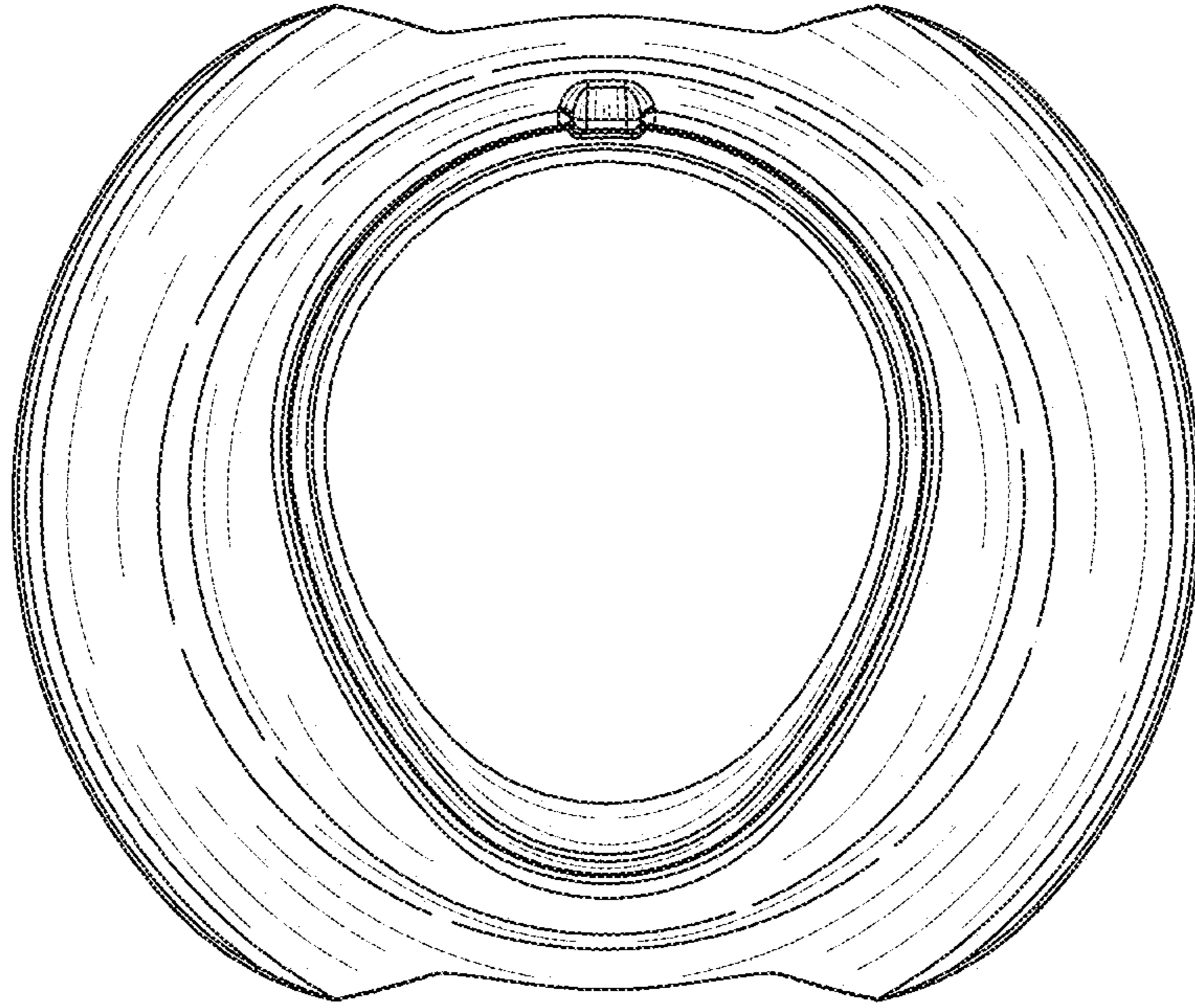
**FIG. 48**



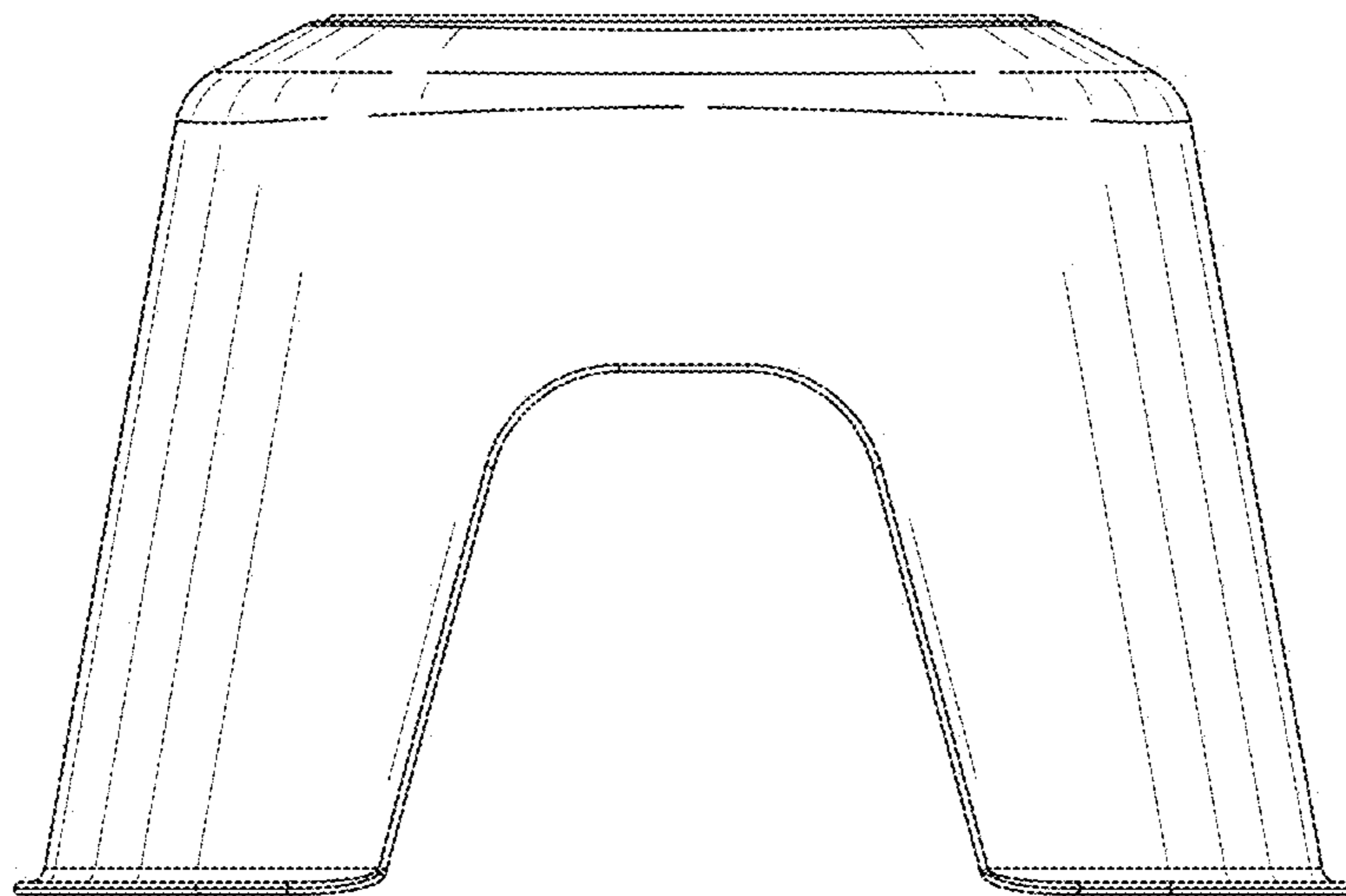
**FIG. 49**



**FIG. 50**

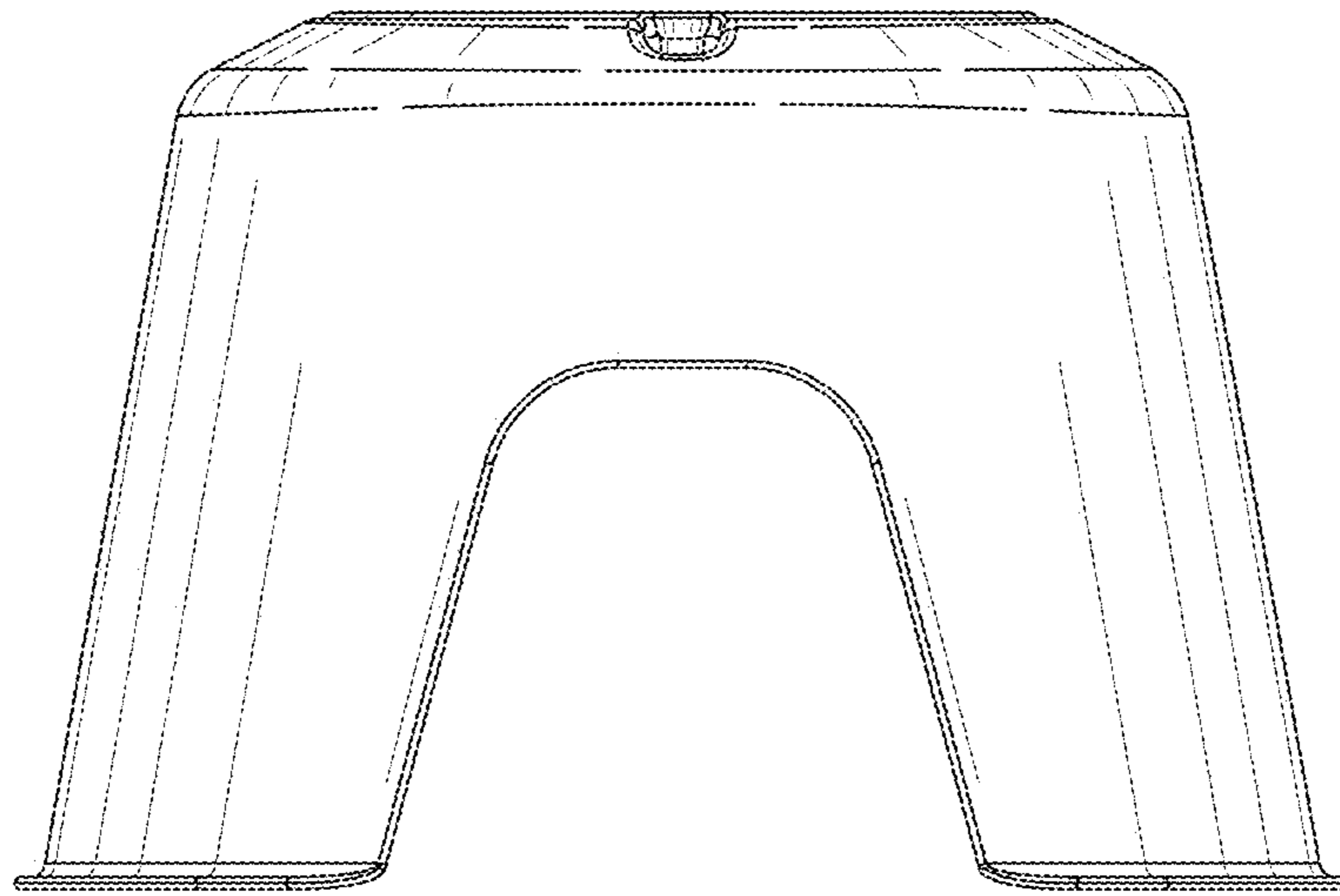


**FIG. 51**

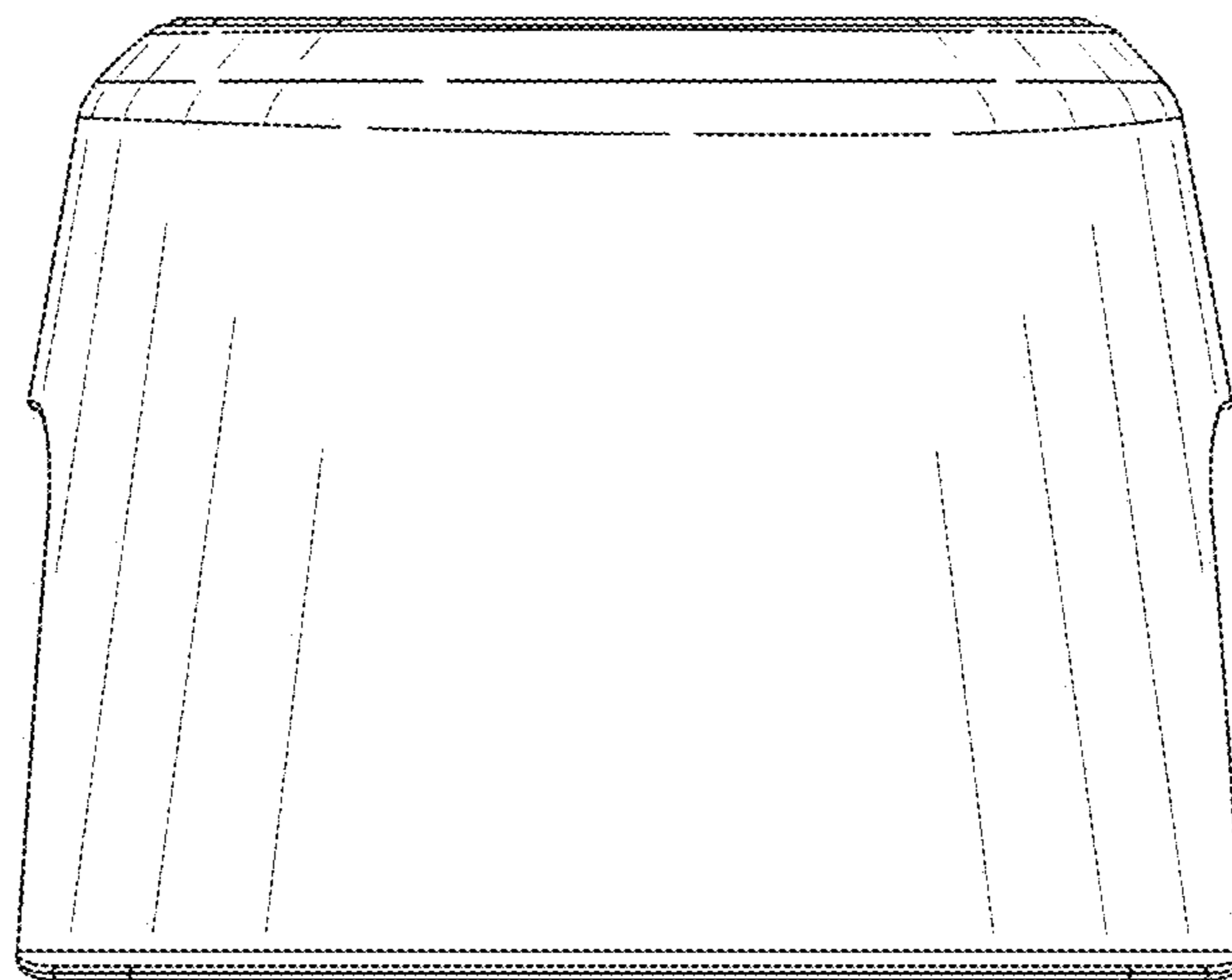


**FIG. 52**

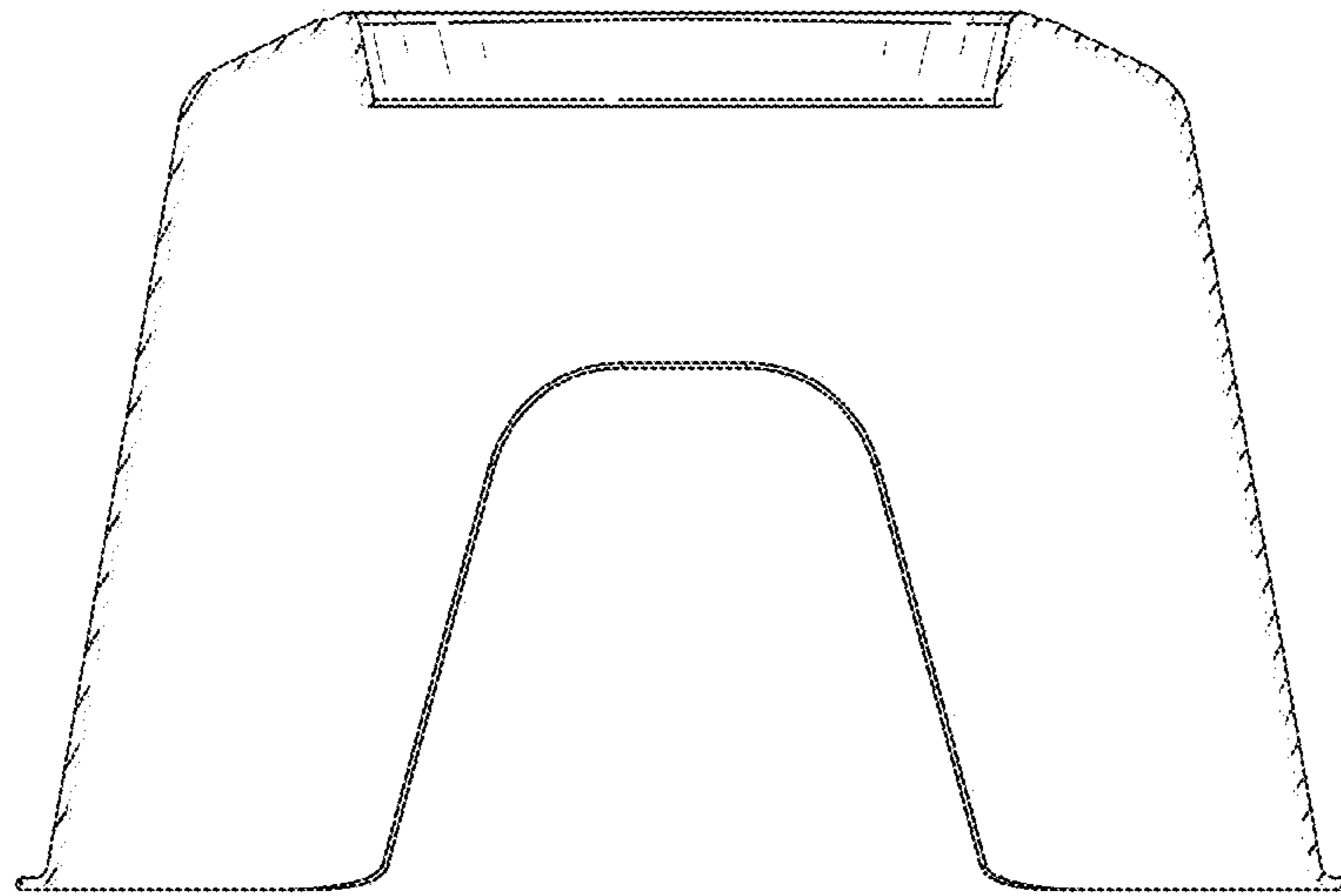




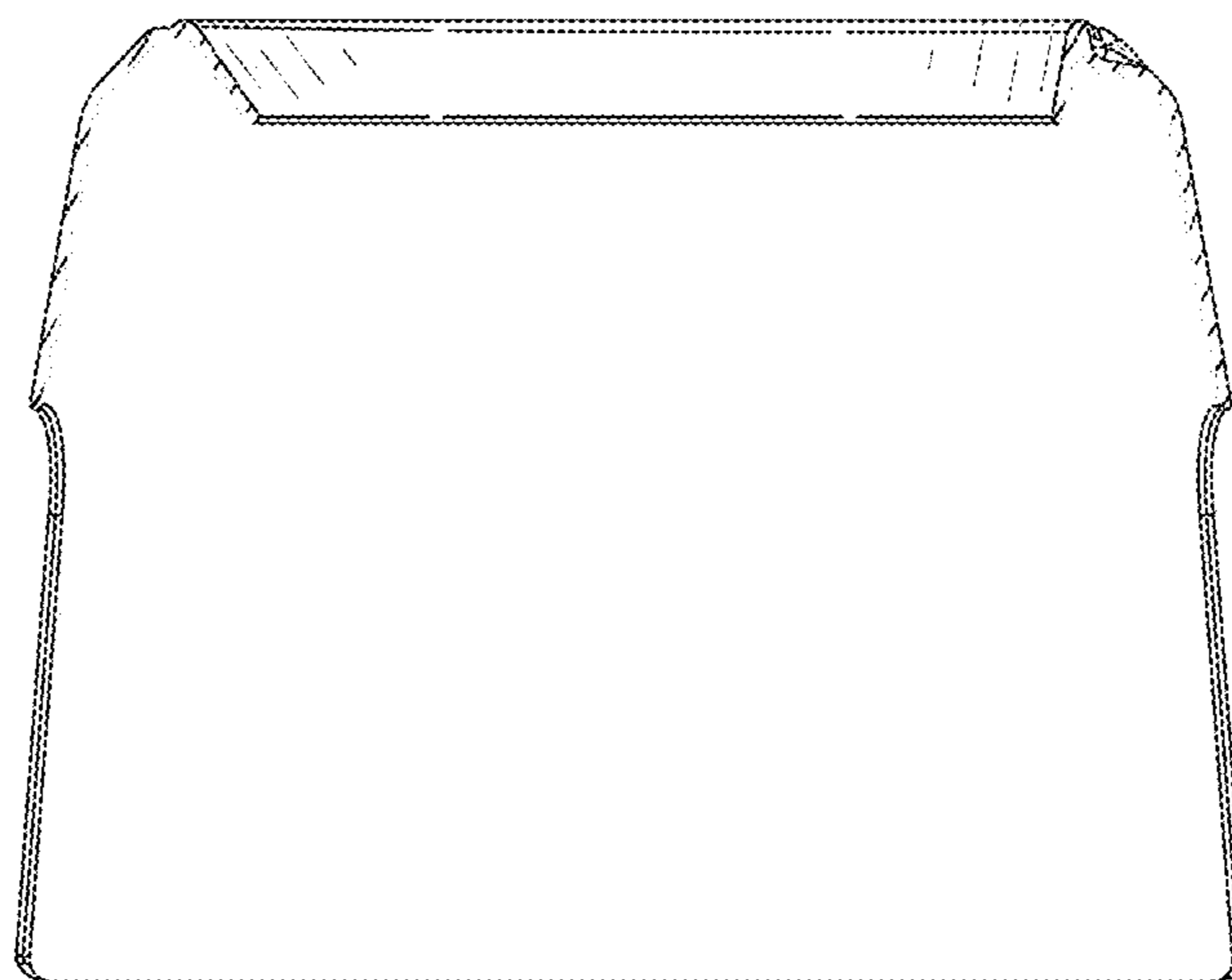
**FIG. 53**



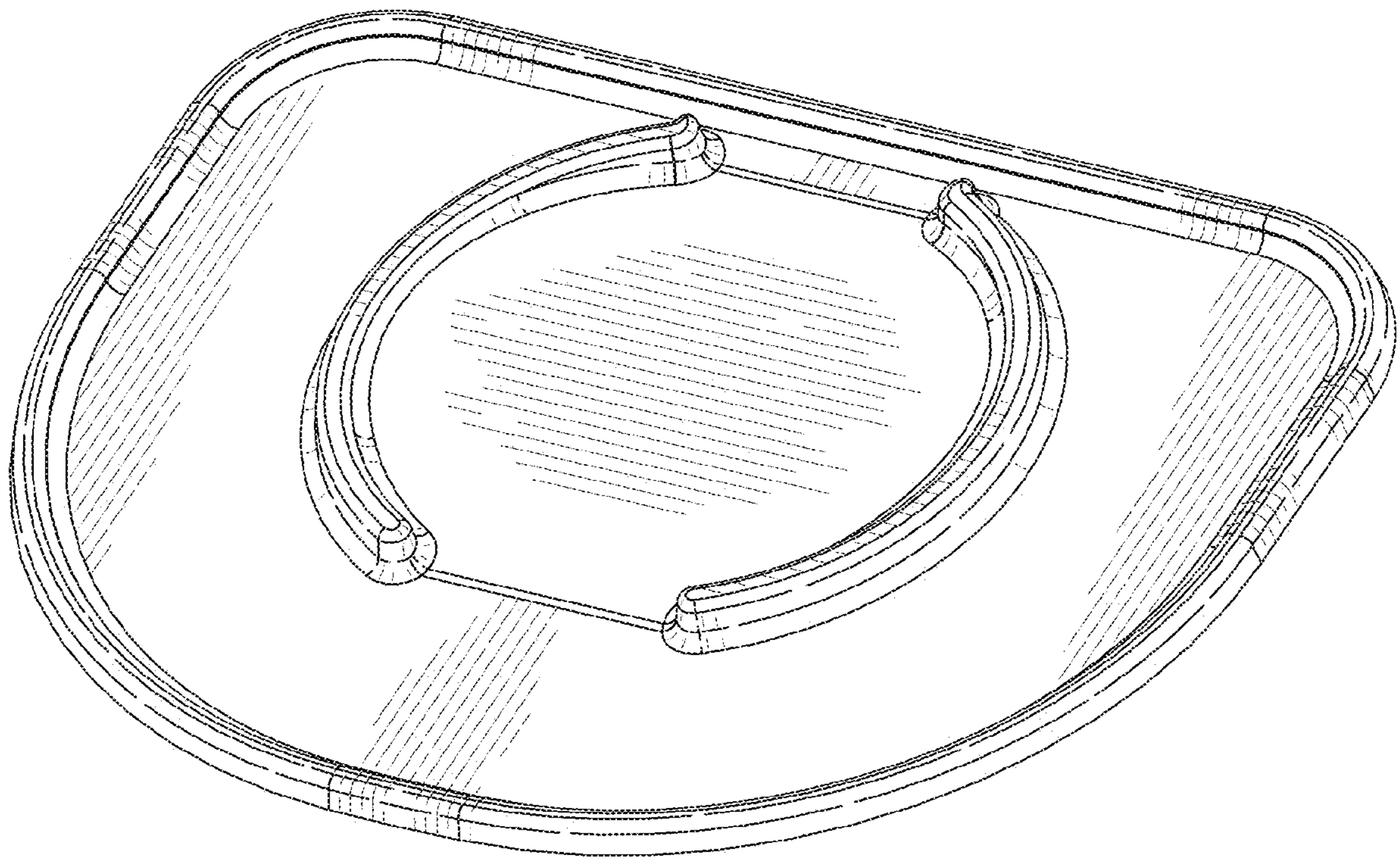
**FIG. 54**



**FIG. 55**



**FIG. 56**



**FIG. 57**

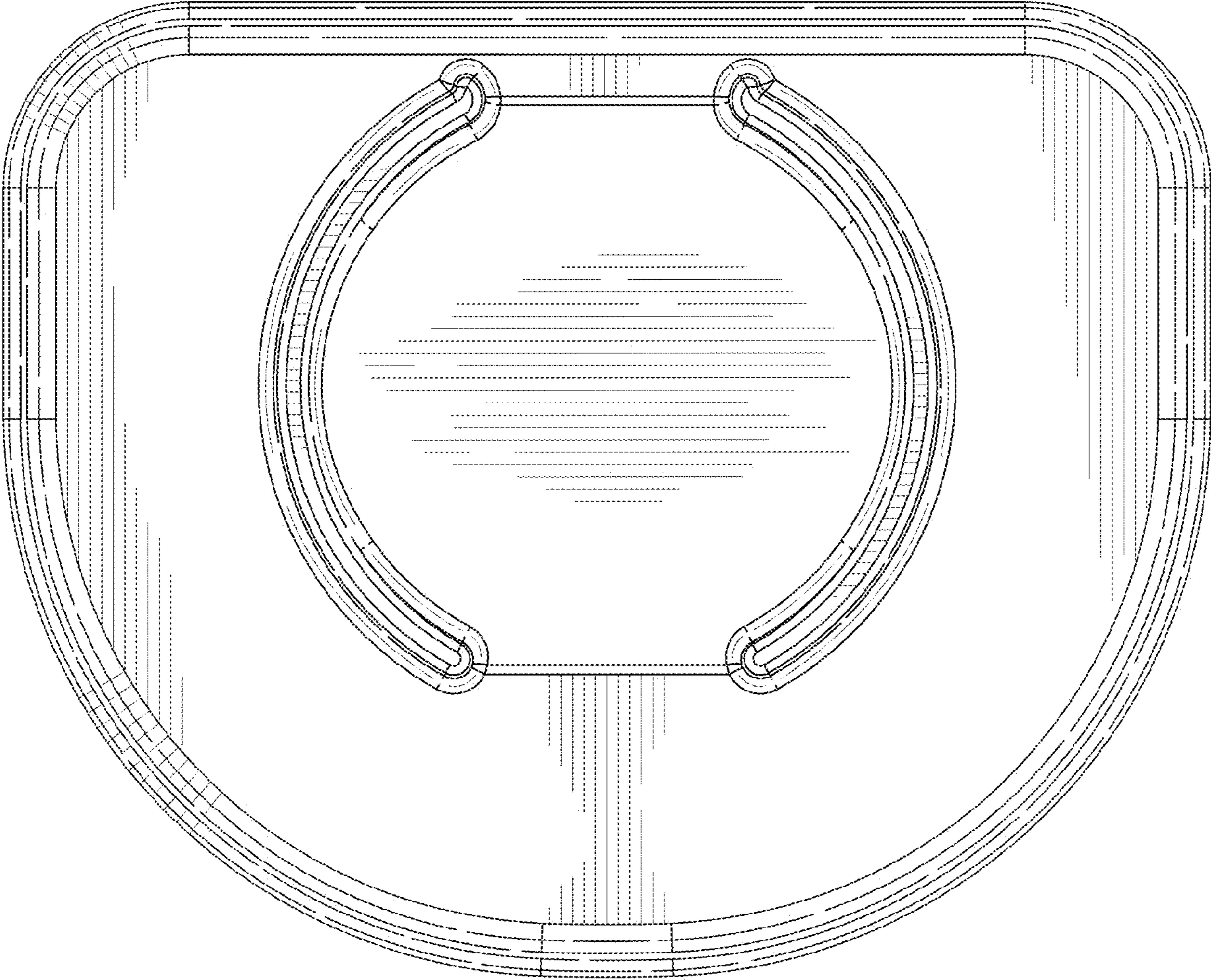
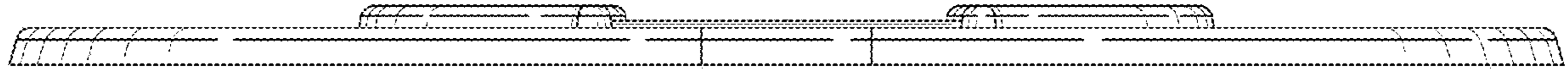
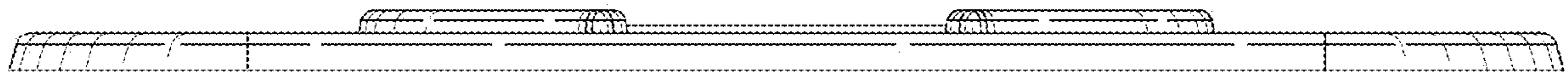


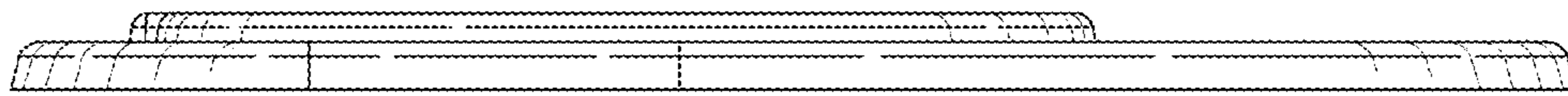
FIG. 58



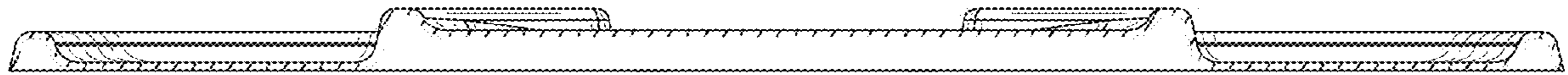
**FIG. 59**



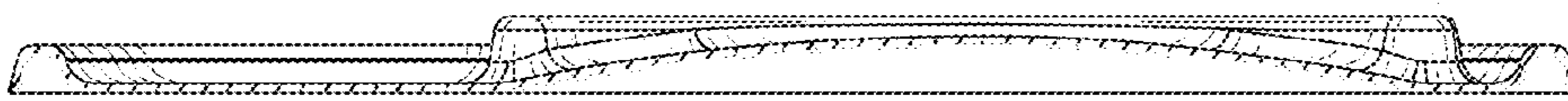
**FIG. 60**



**FIG. 61**



**FIG. 62**



**FIG. 63**

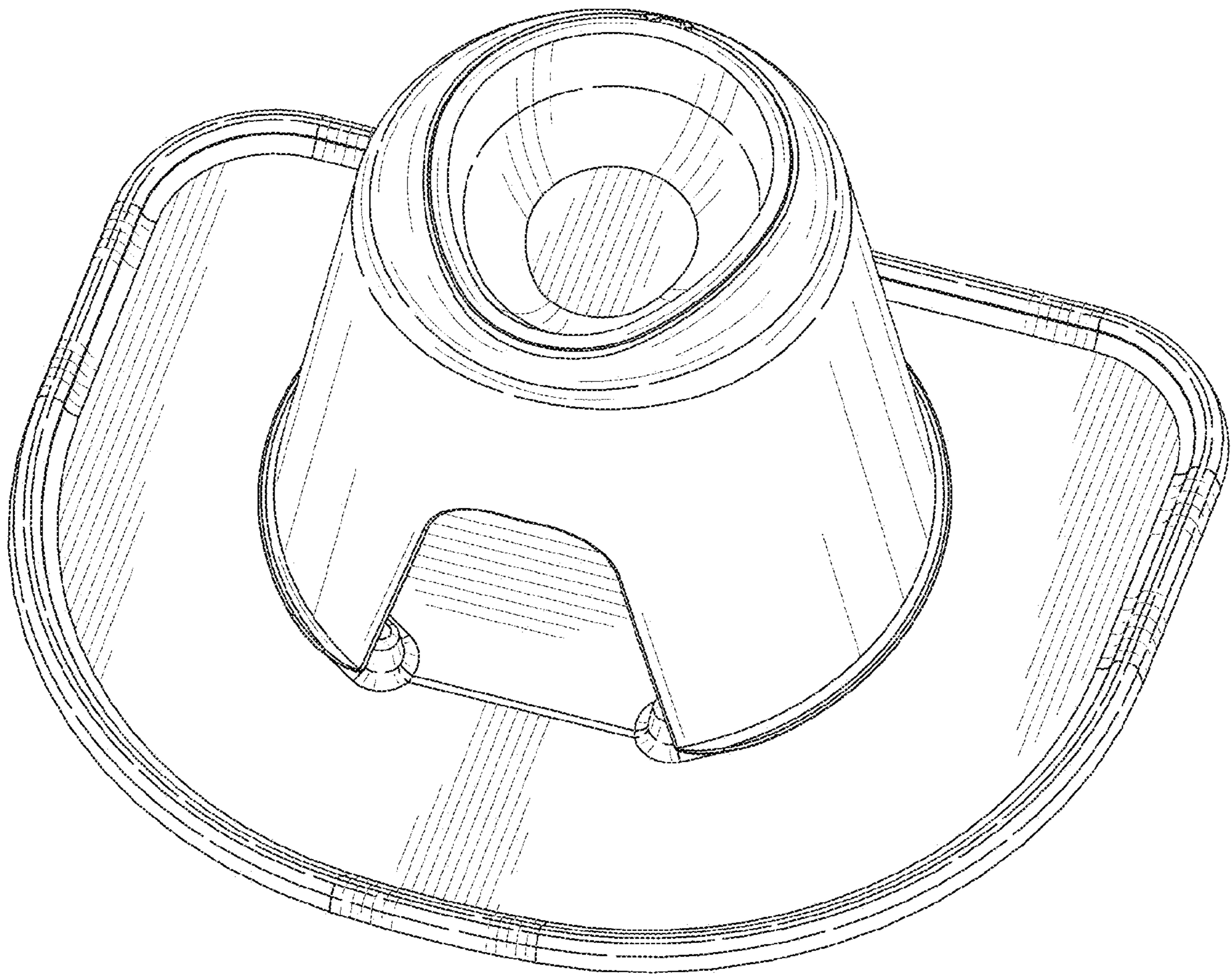


FIG. 64

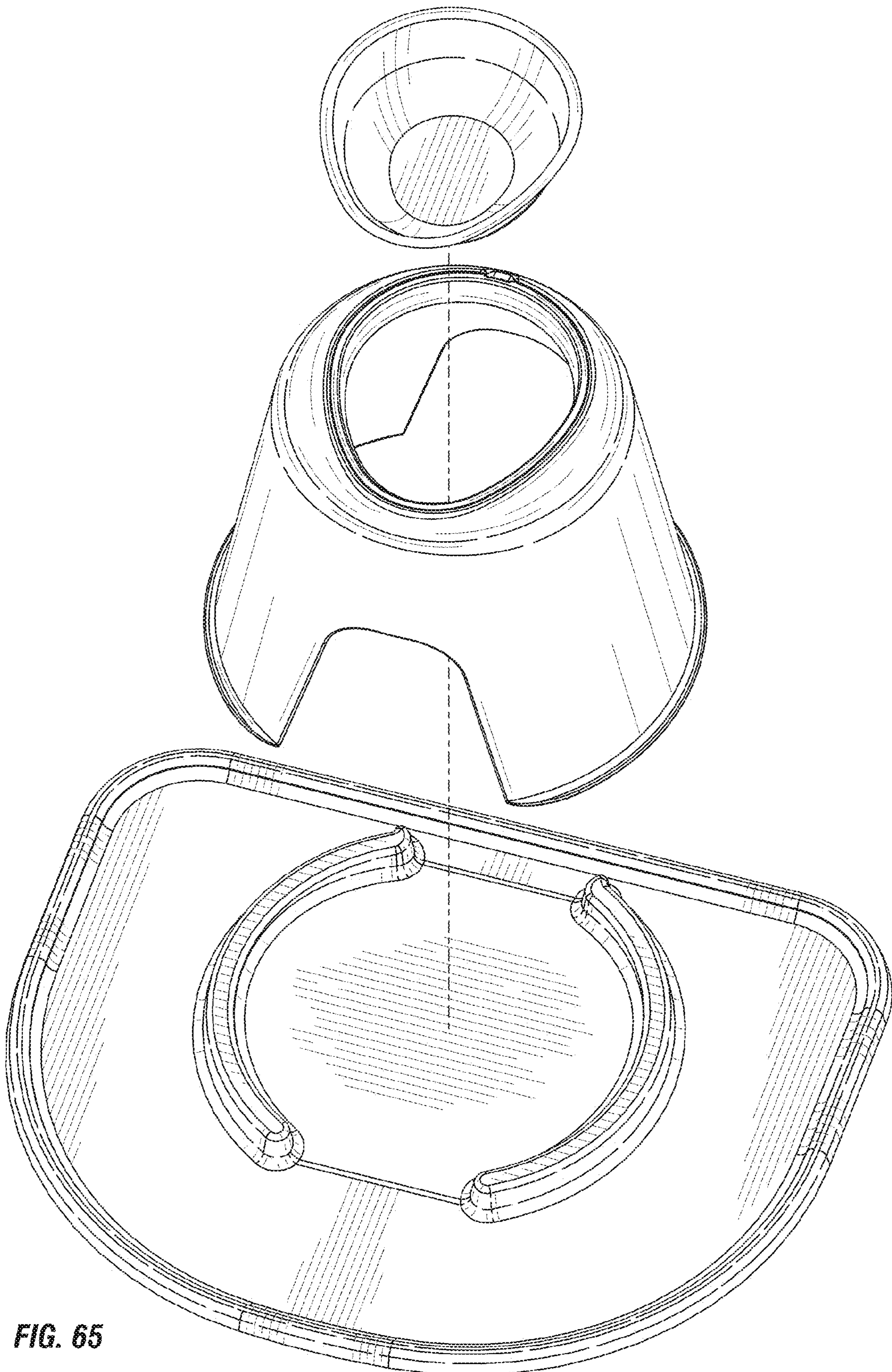
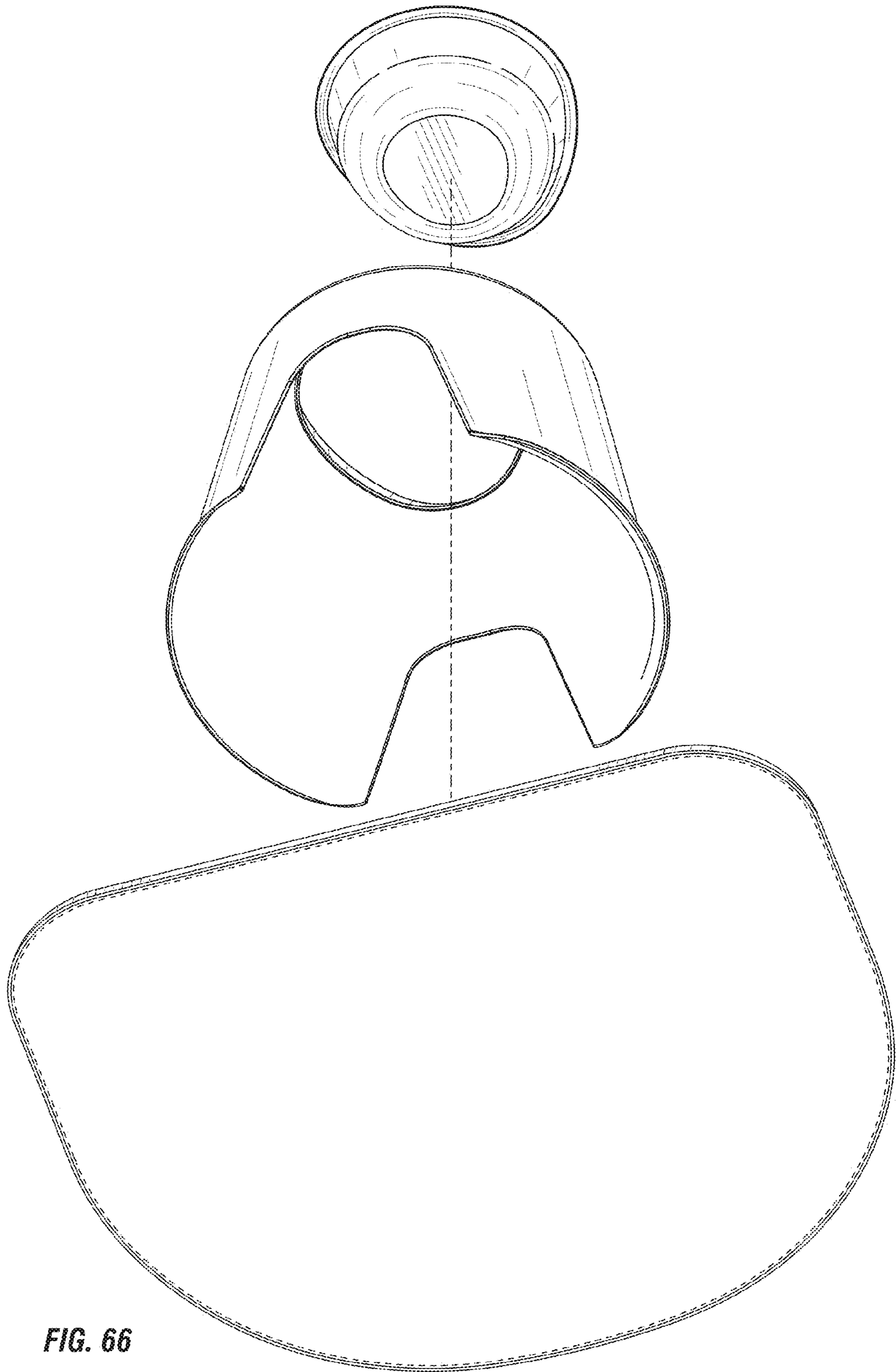
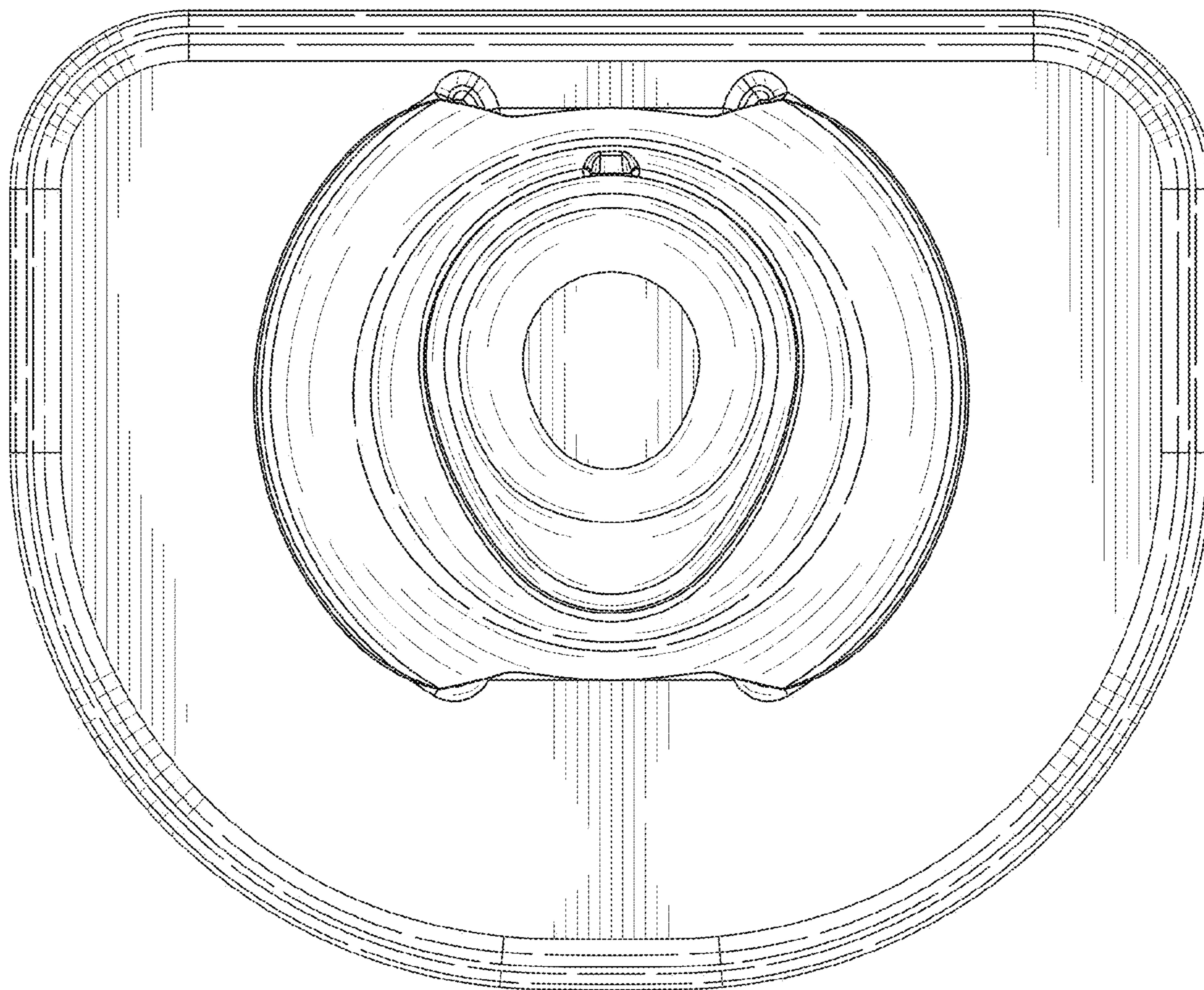


FIG. 65

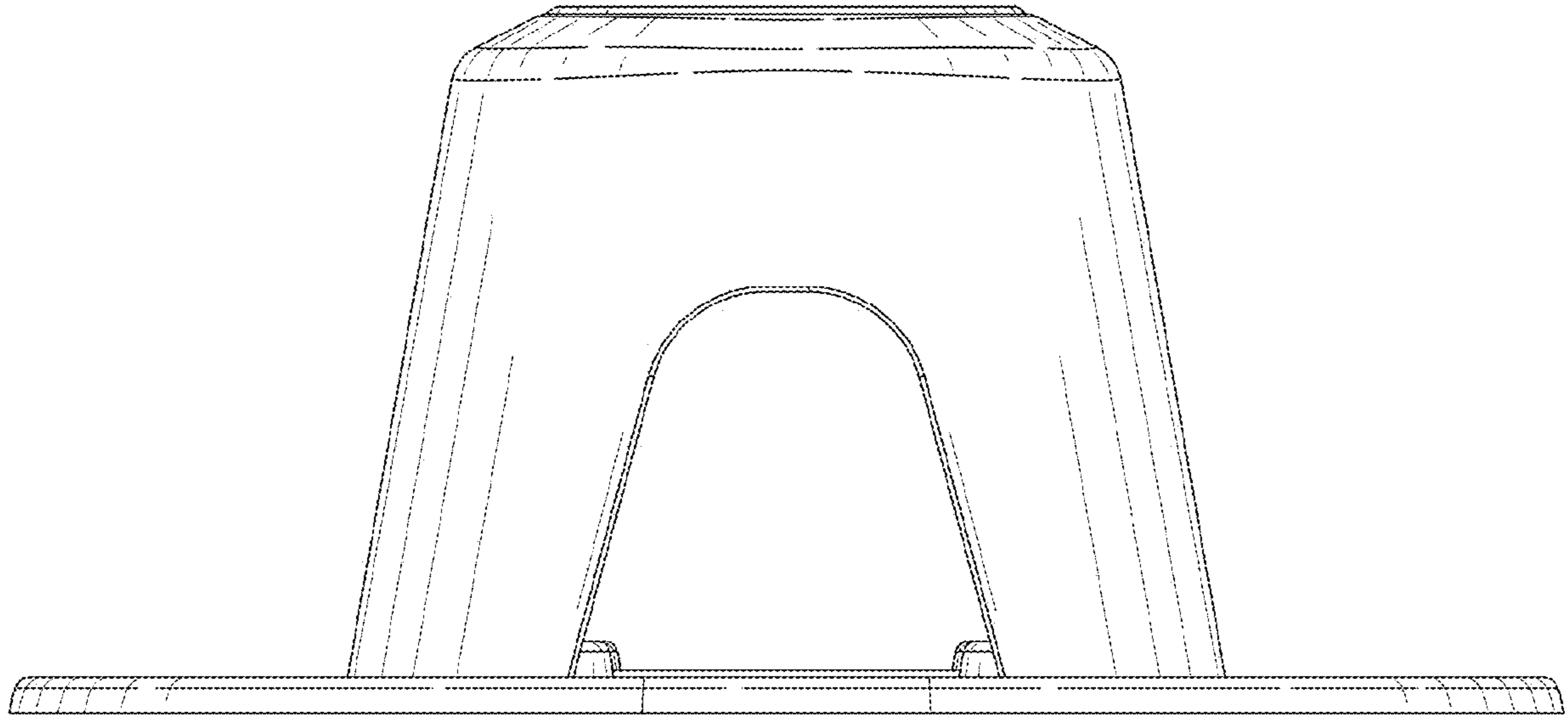


**FIG. 66**

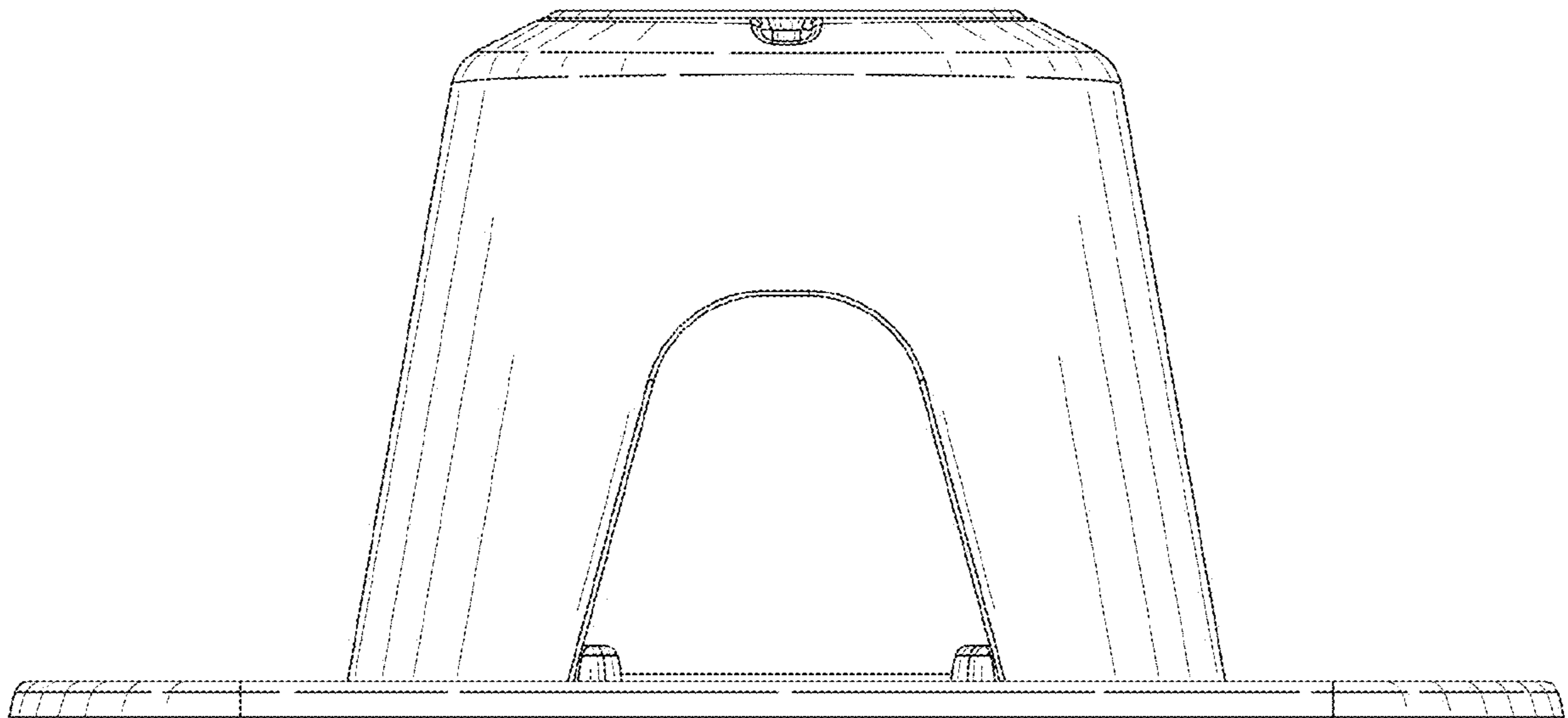




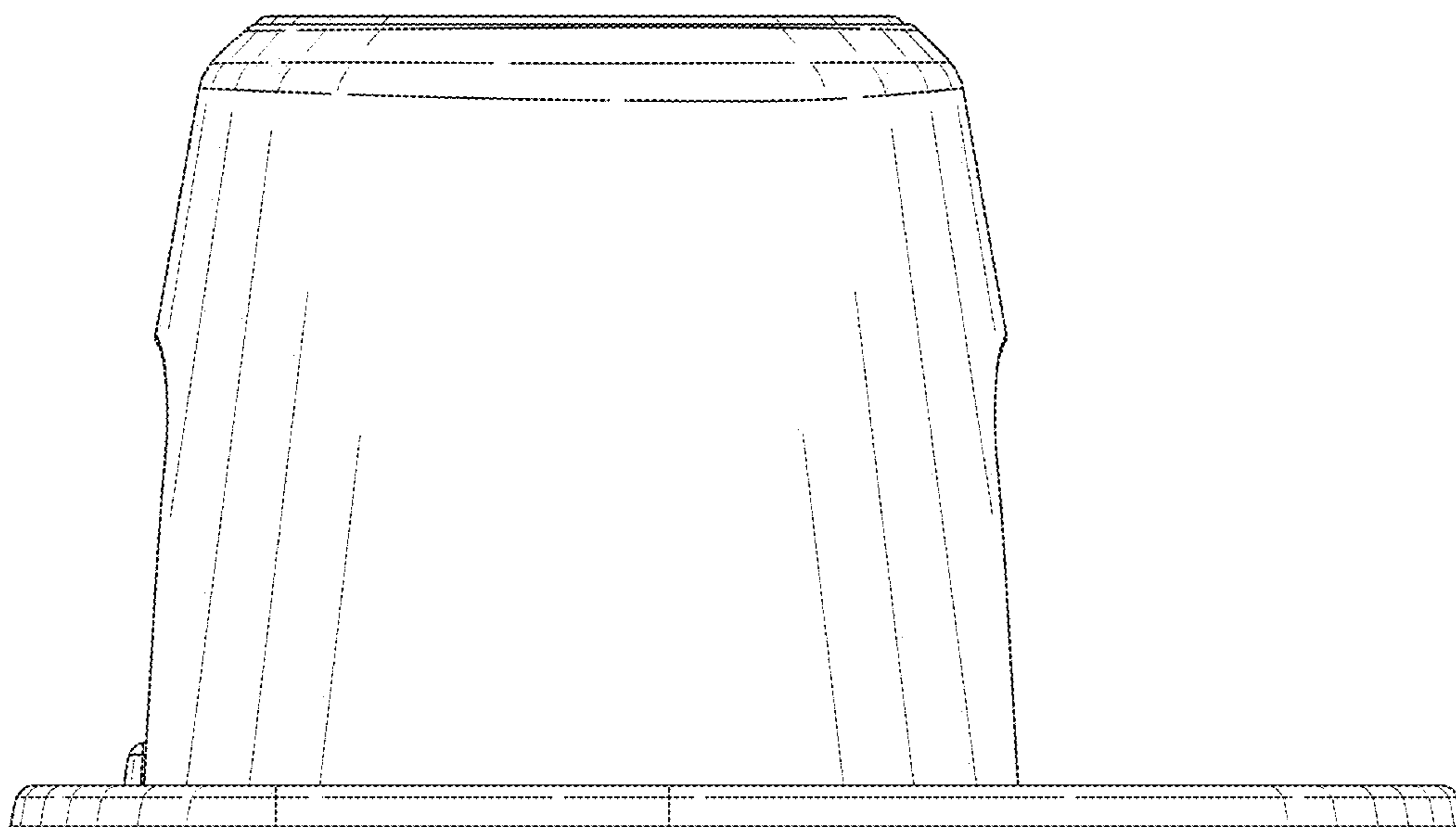
**FIG. 67**



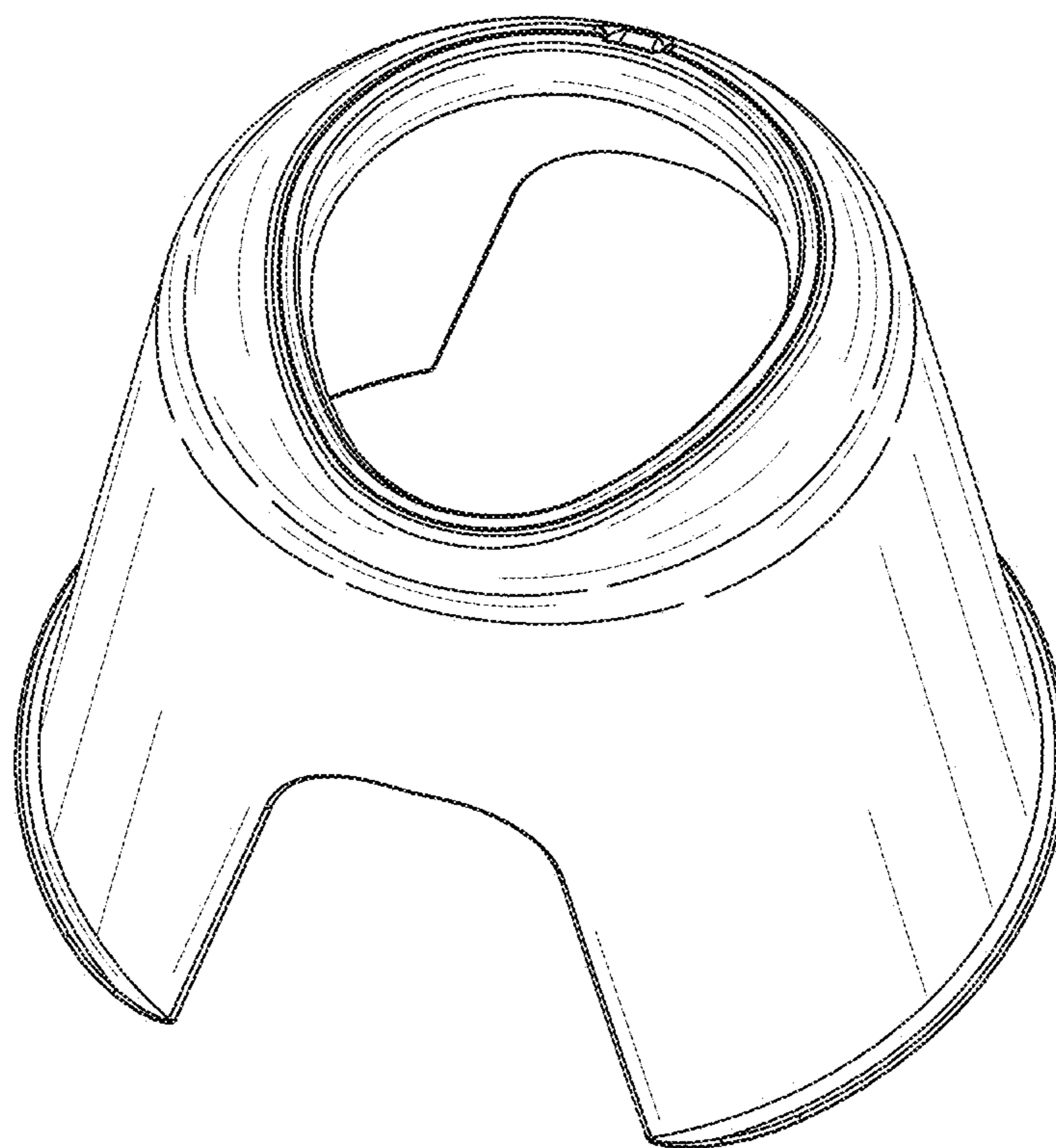
**FIG. 68**



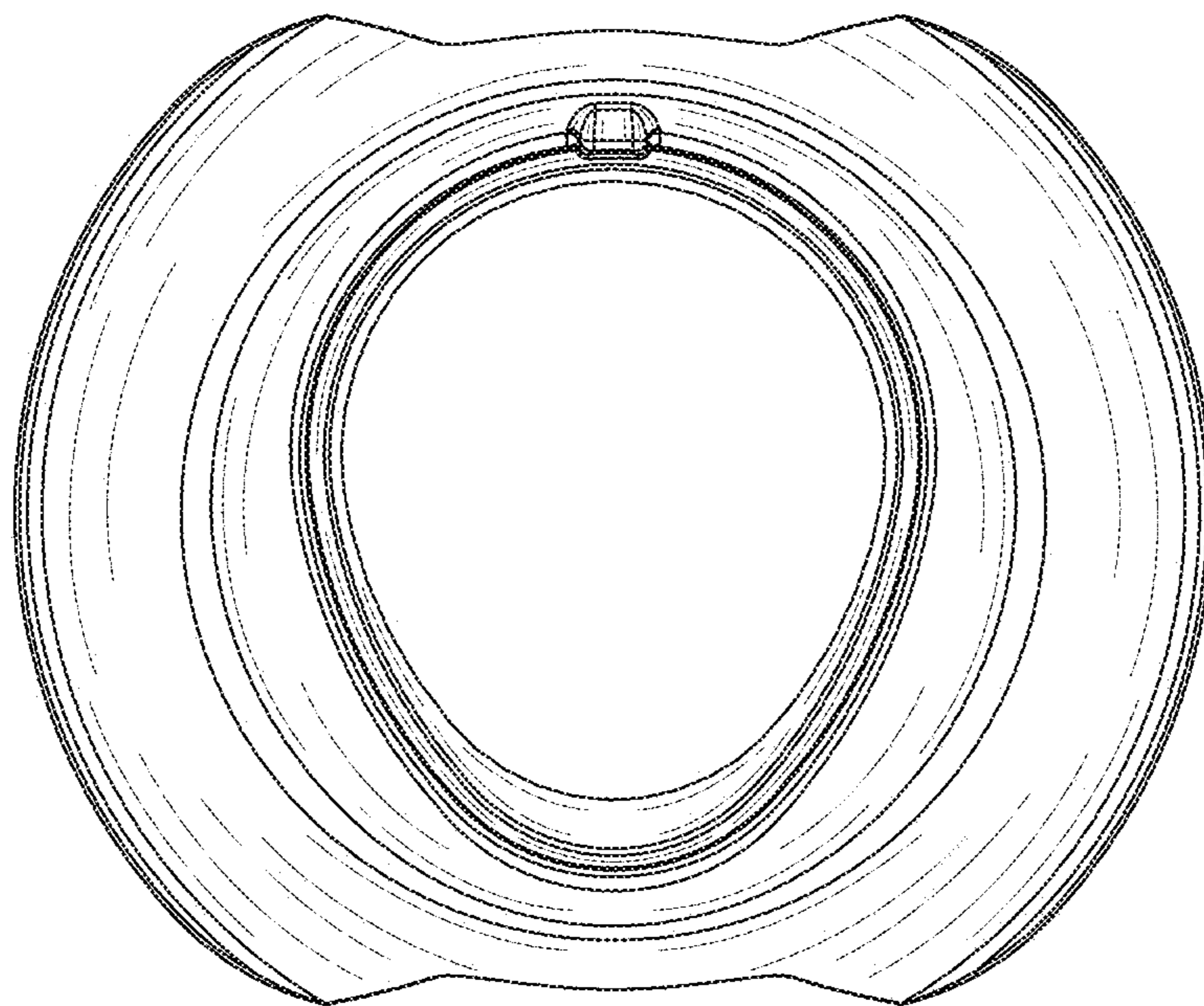
**FIG. 69**



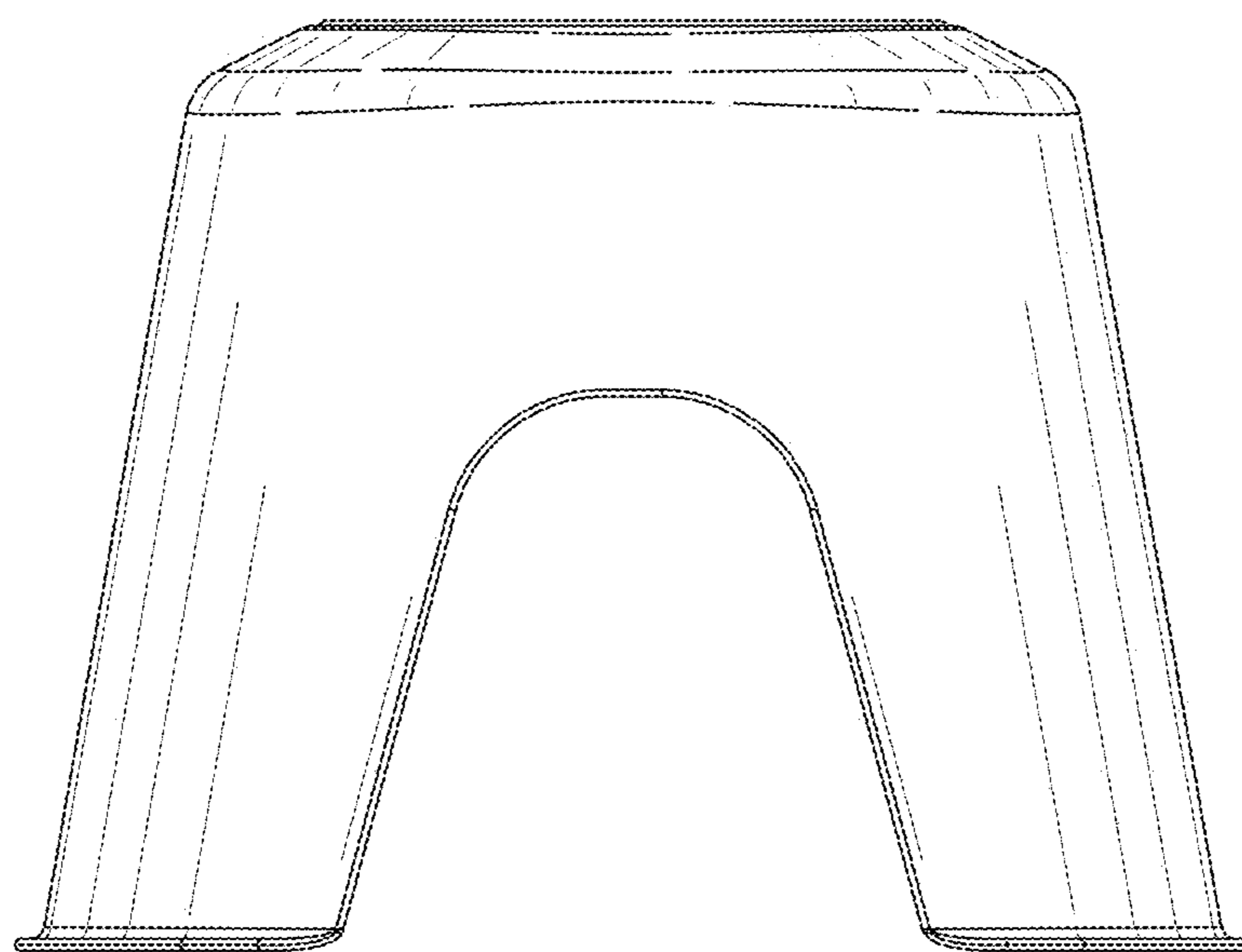
**FIG. 70**



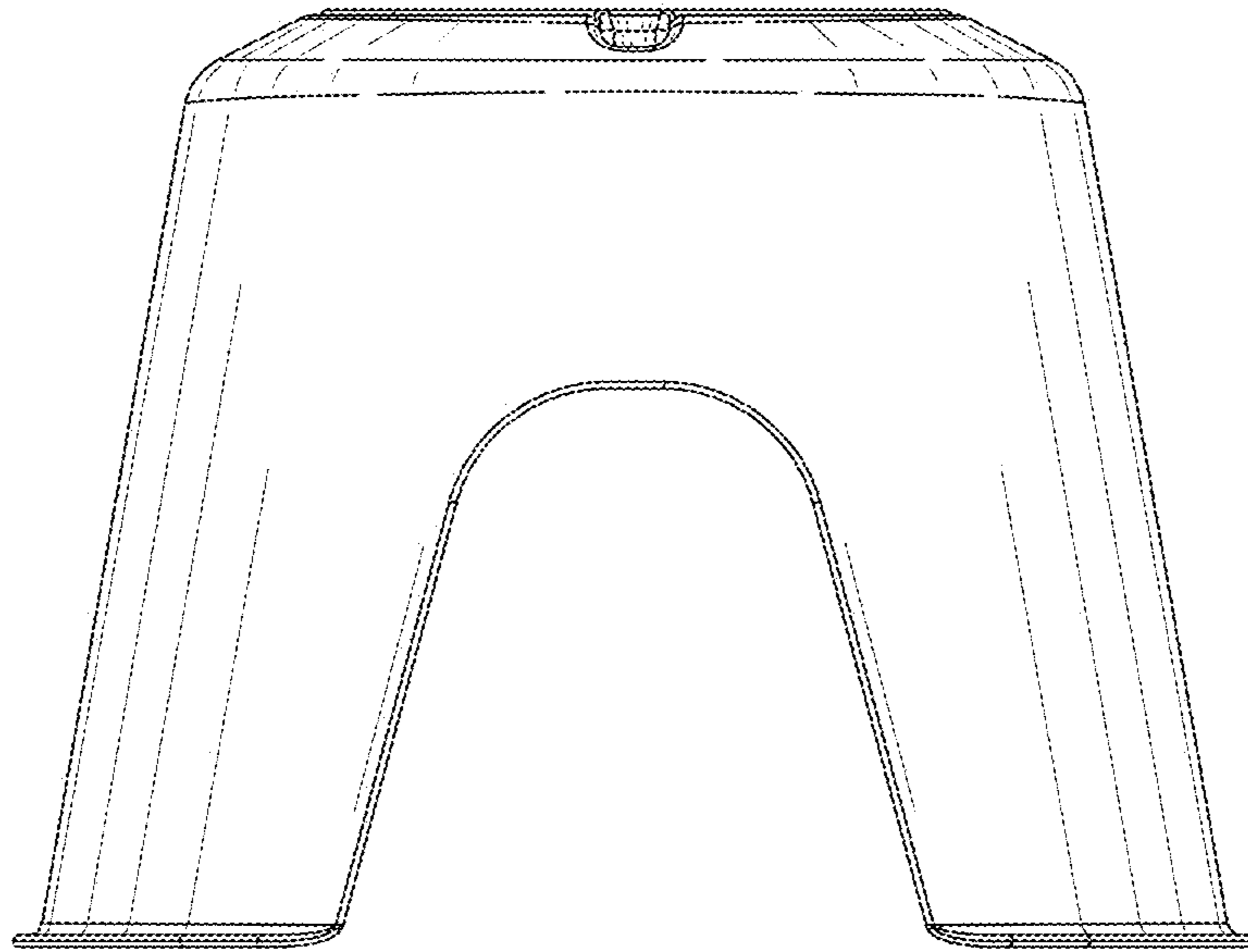
**FIG. 71**



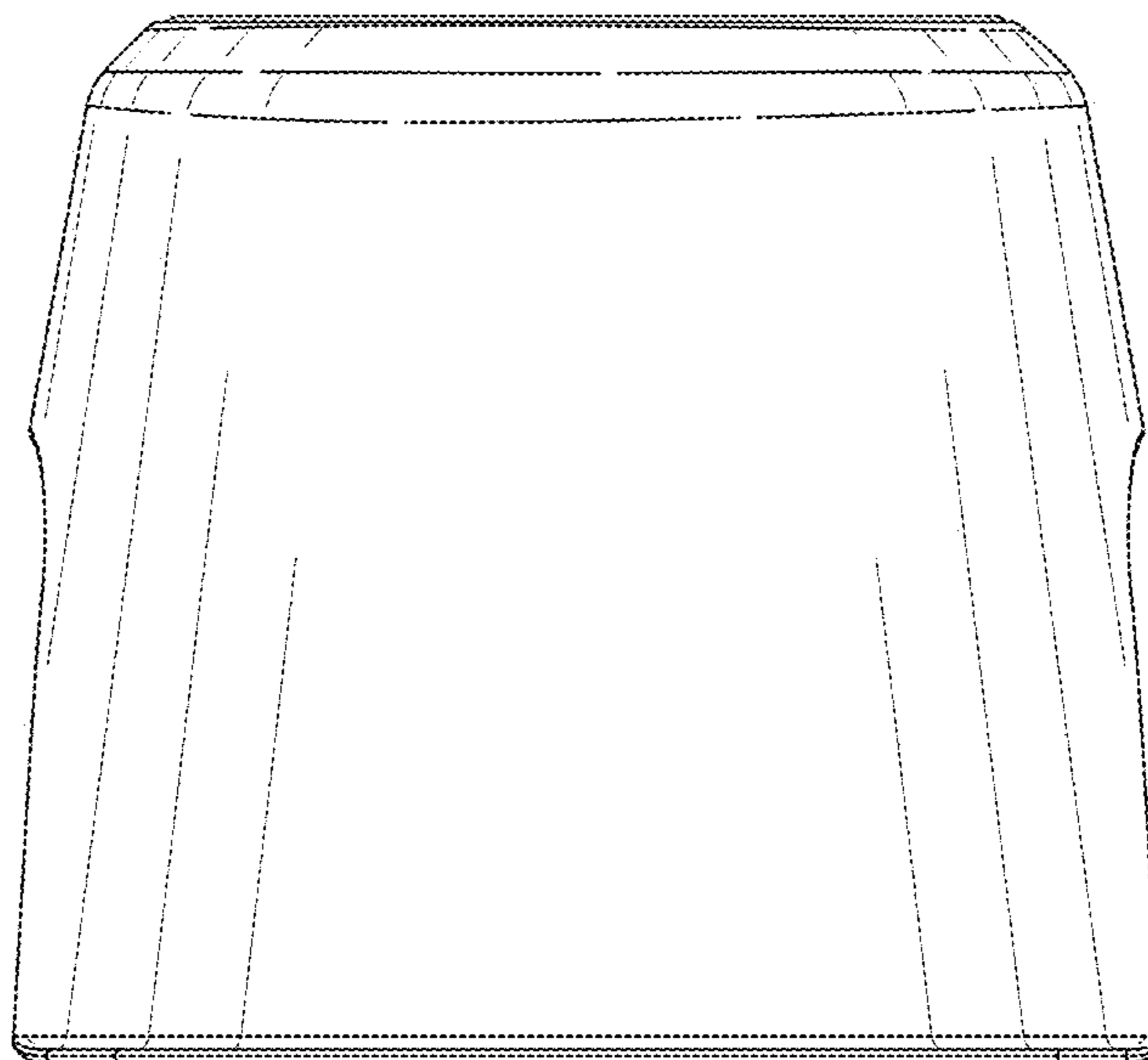
**FIG. 72**



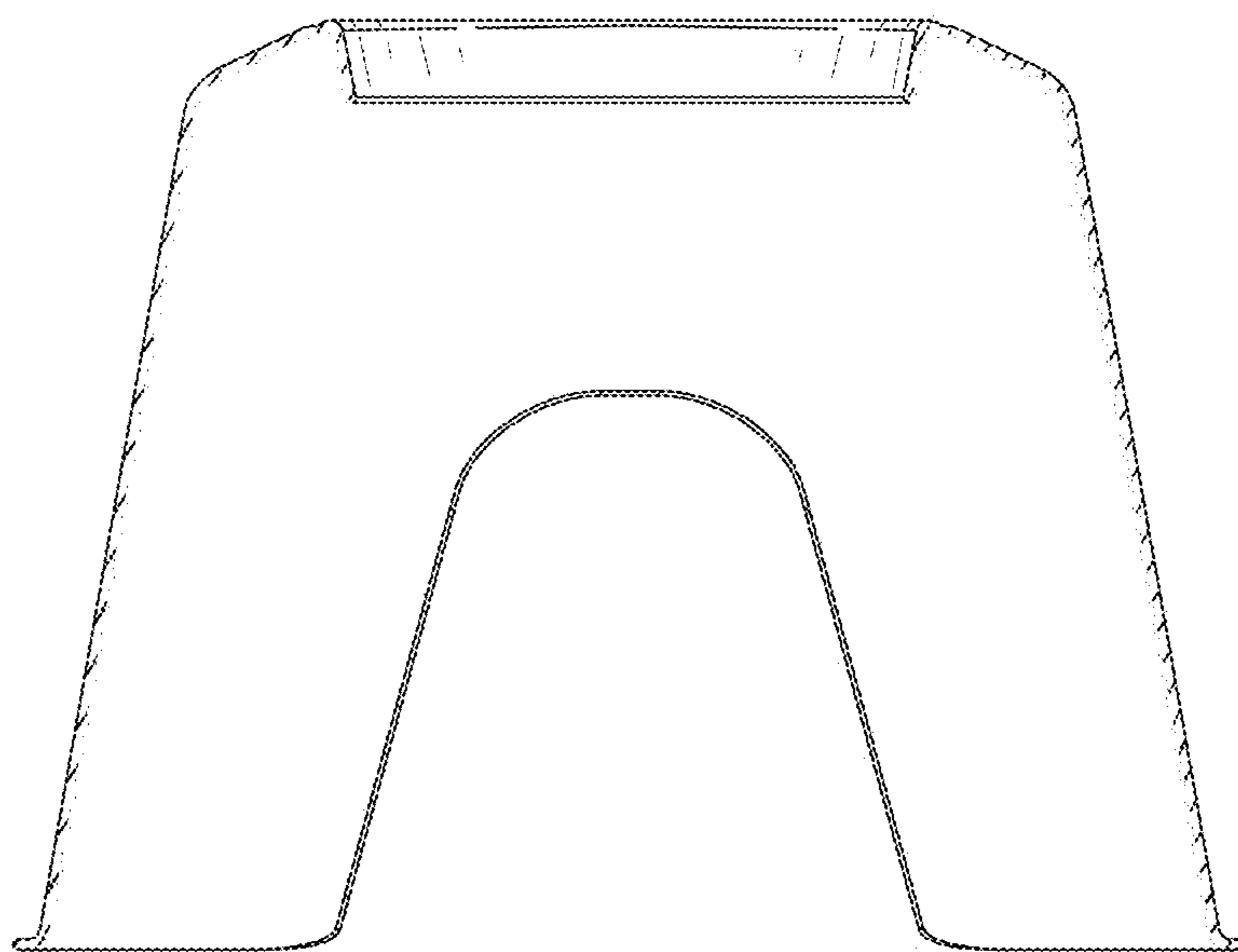
**FIG. 73**



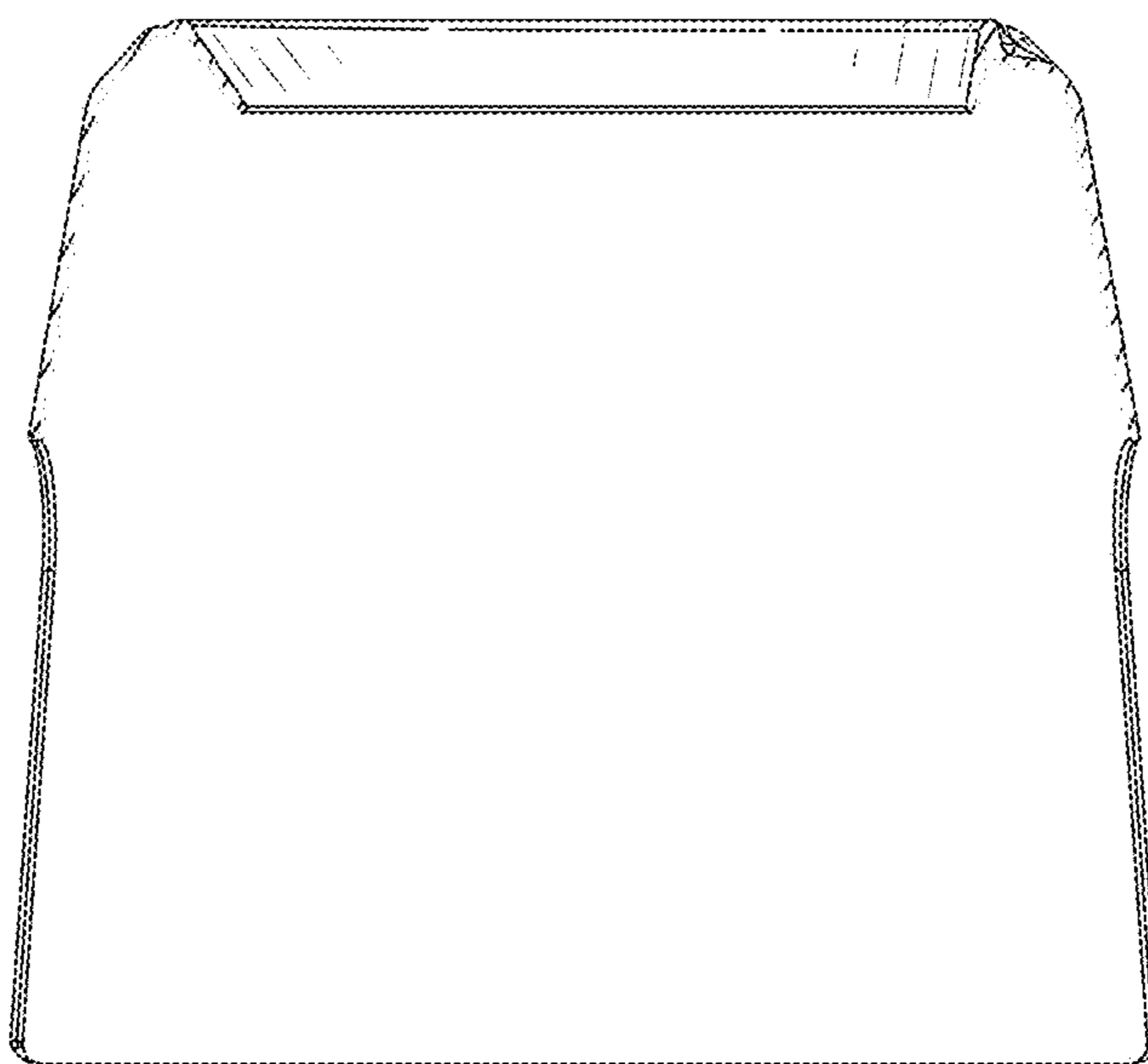
**FIG. 74**



**FIG. 75**



**FIG. 76**



**FIG. 77**

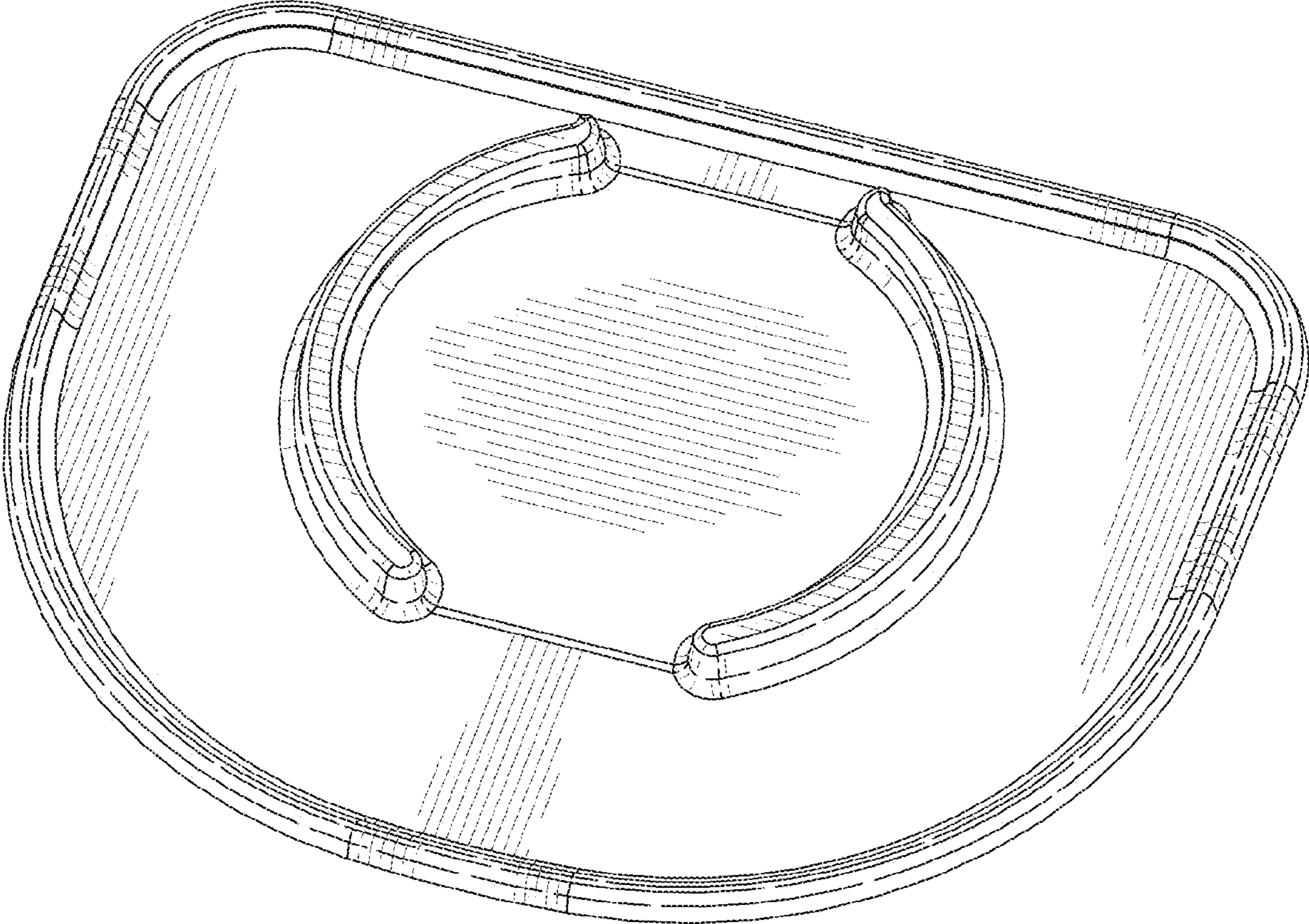
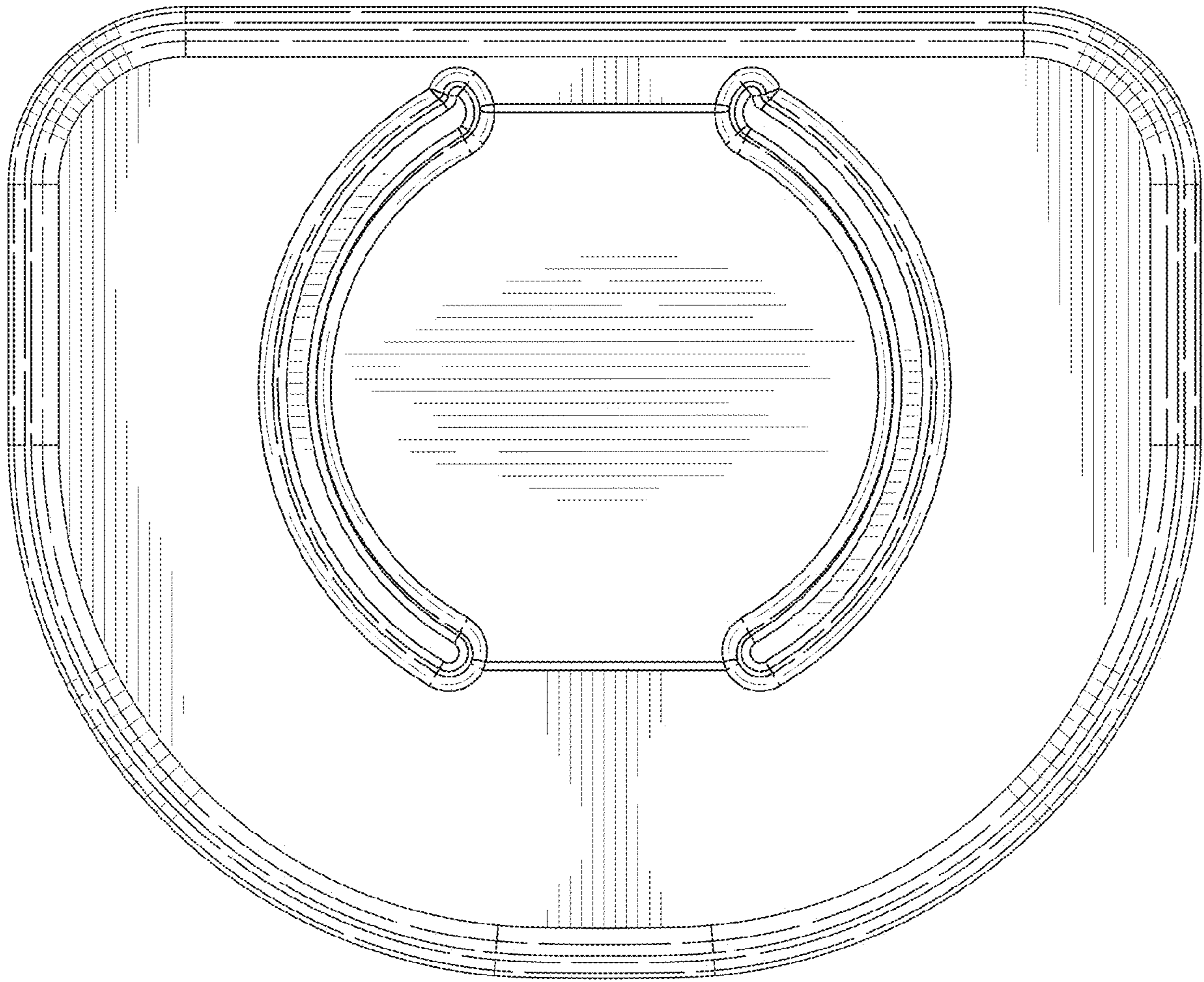
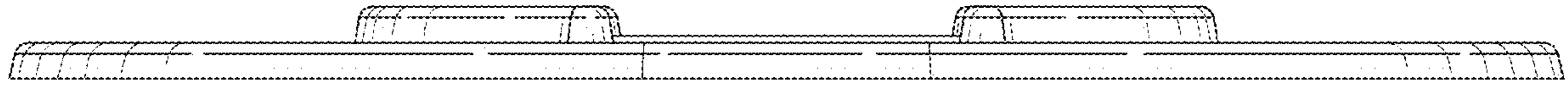


FIG. 78

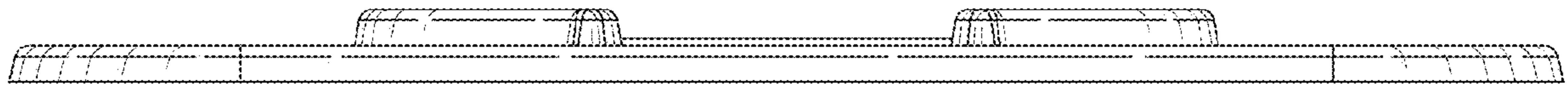


**FIG. 79**

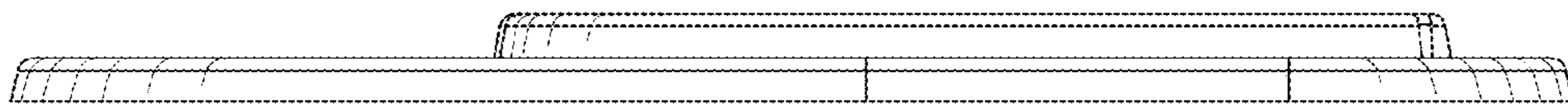




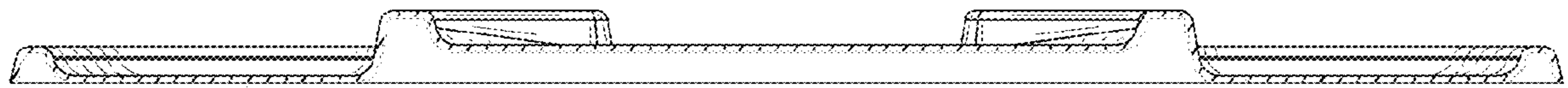
**FIG. 80**



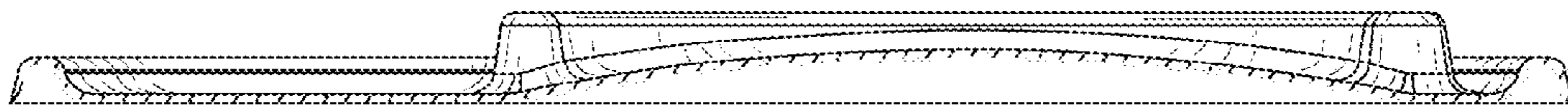
**FIG. 81**



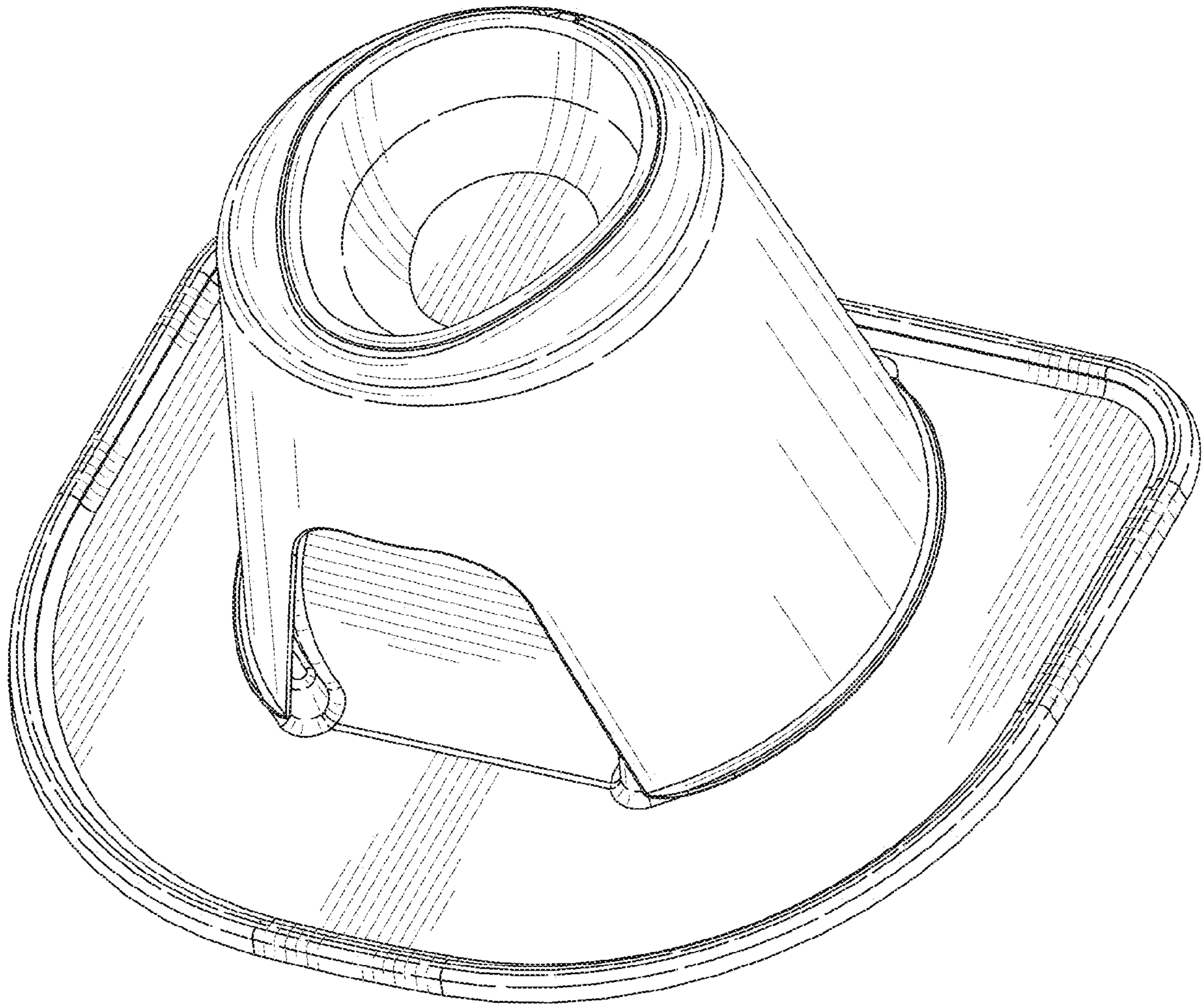
**FIG. 82**



**FIG. 83**



**FIG. 84**



**FIG. 85**

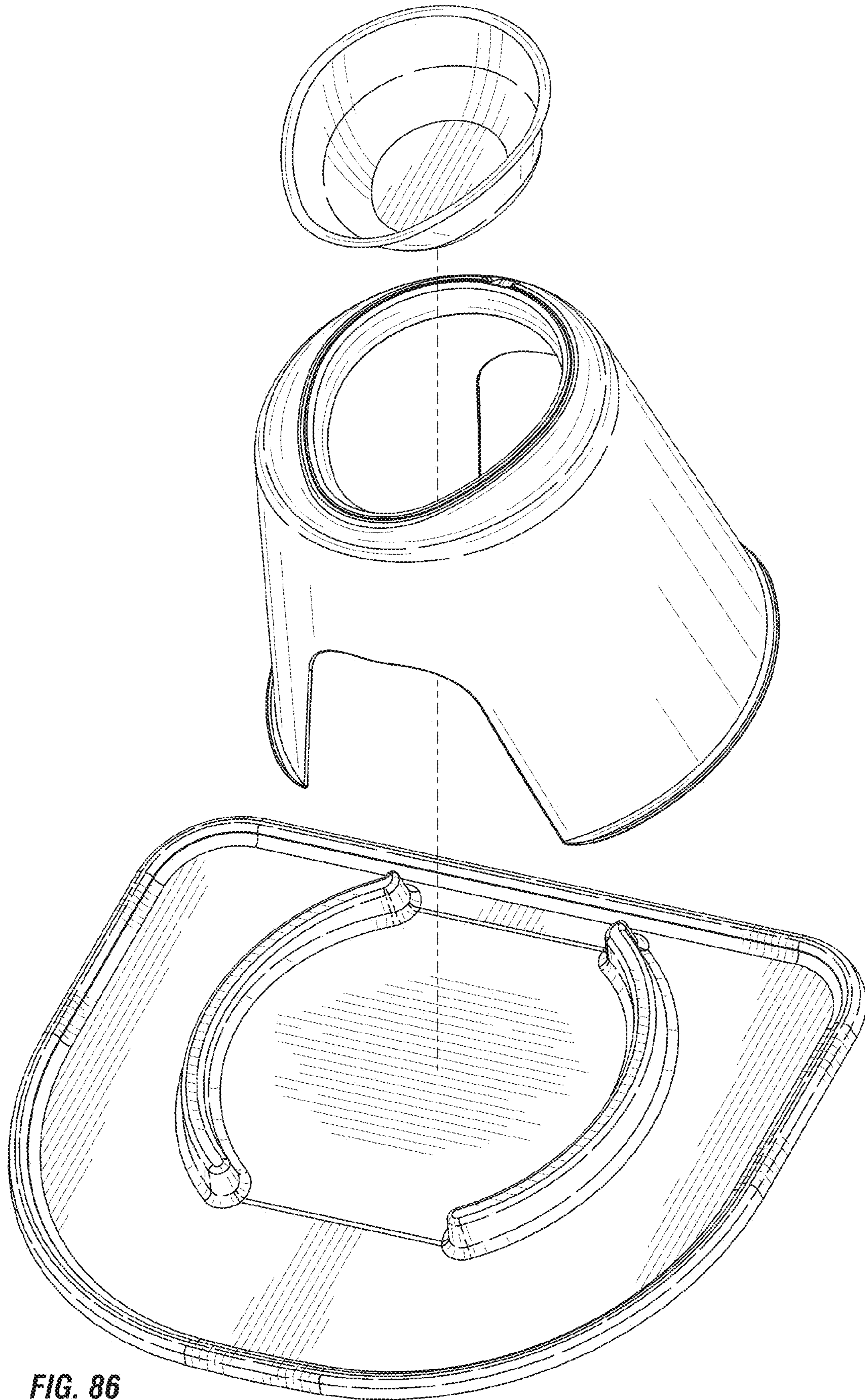
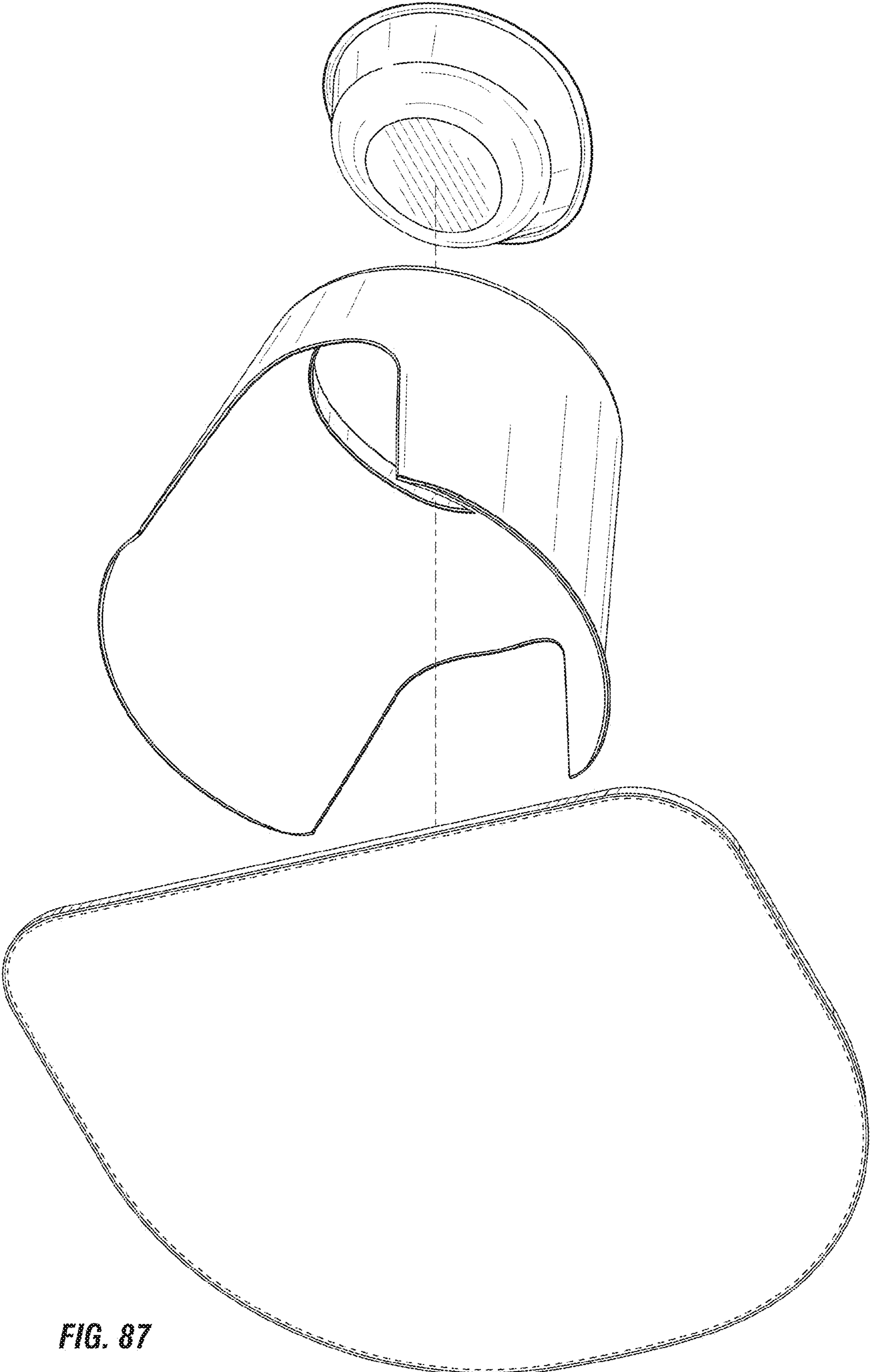
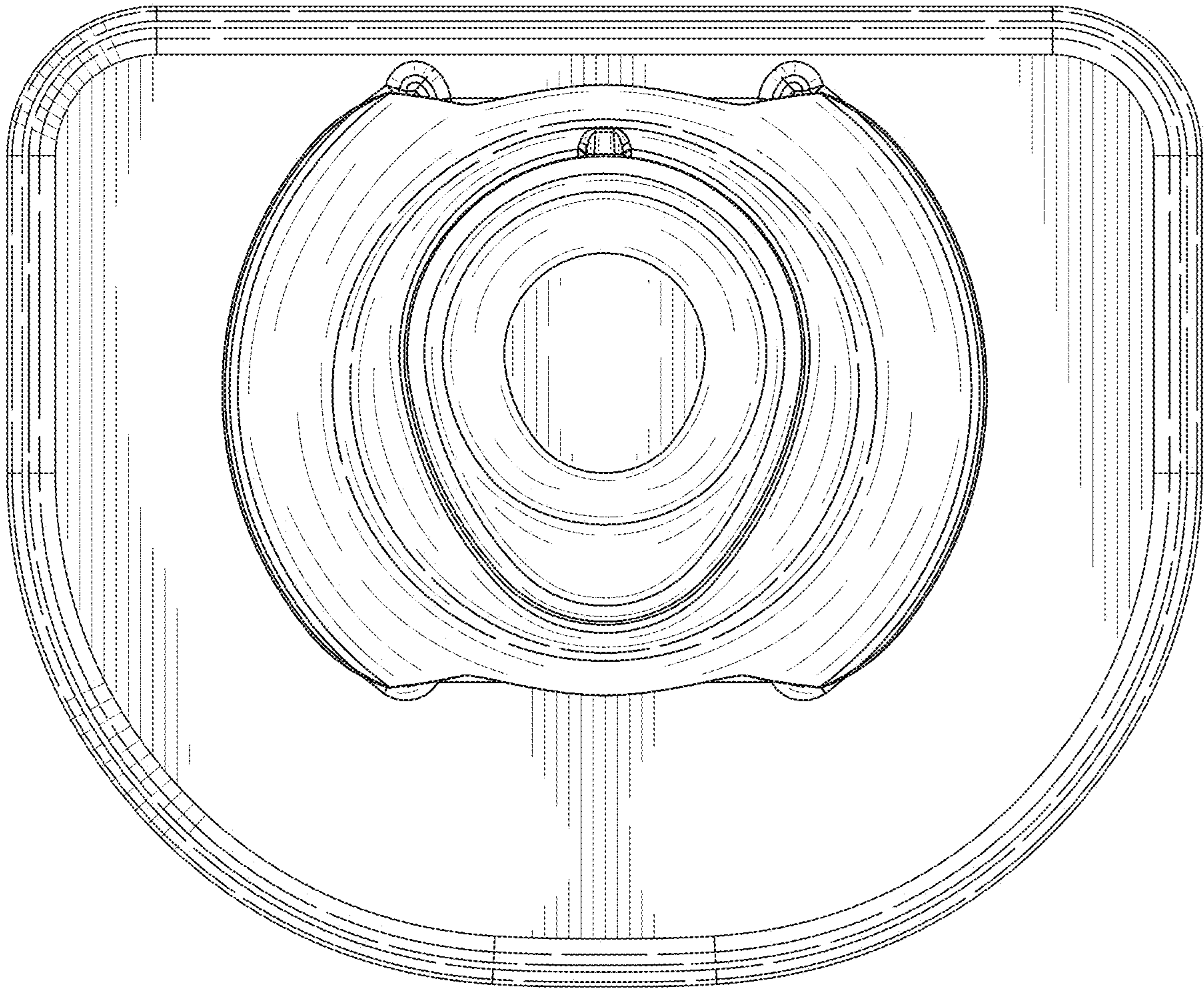


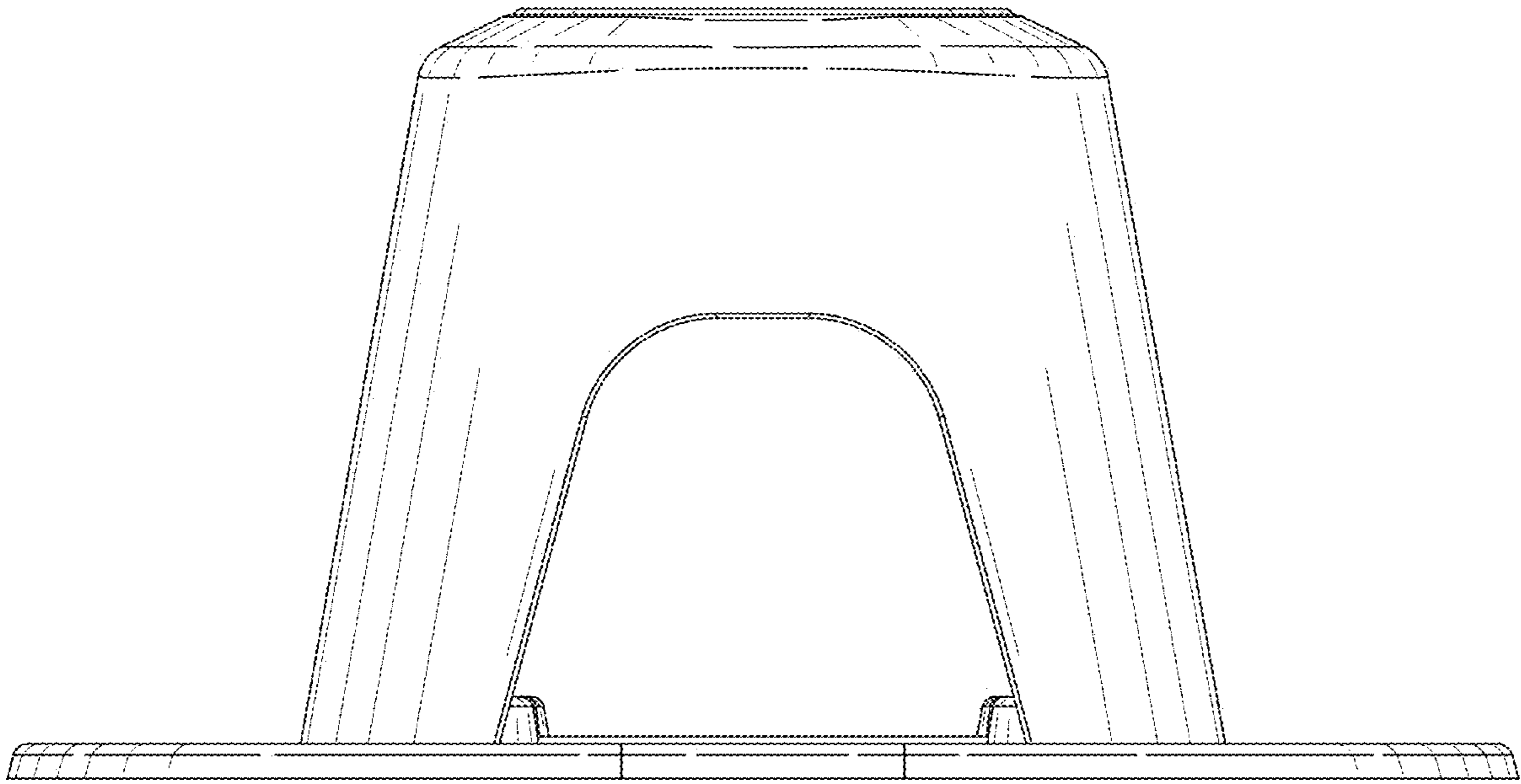
FIG. 86



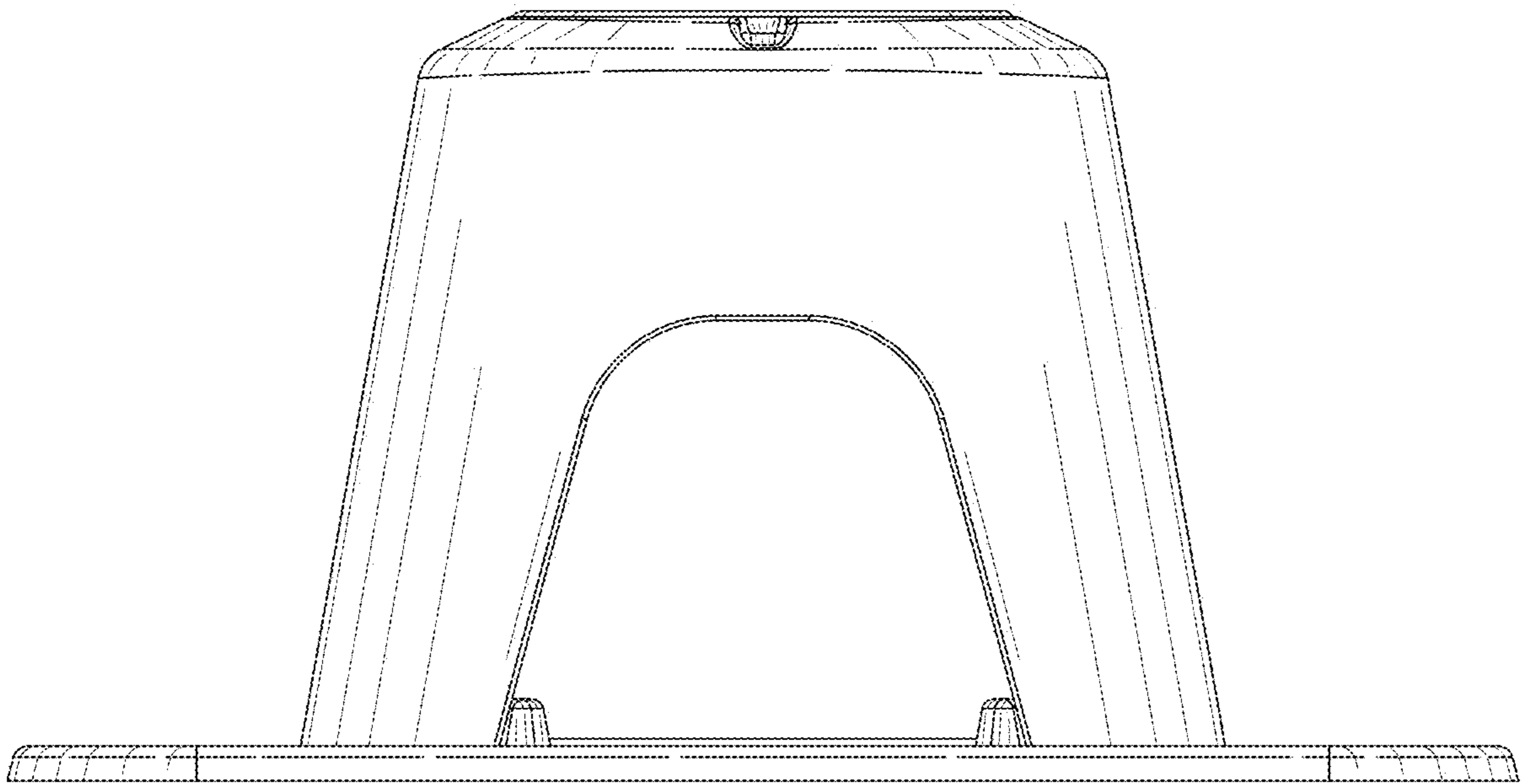
**FIG. 87**



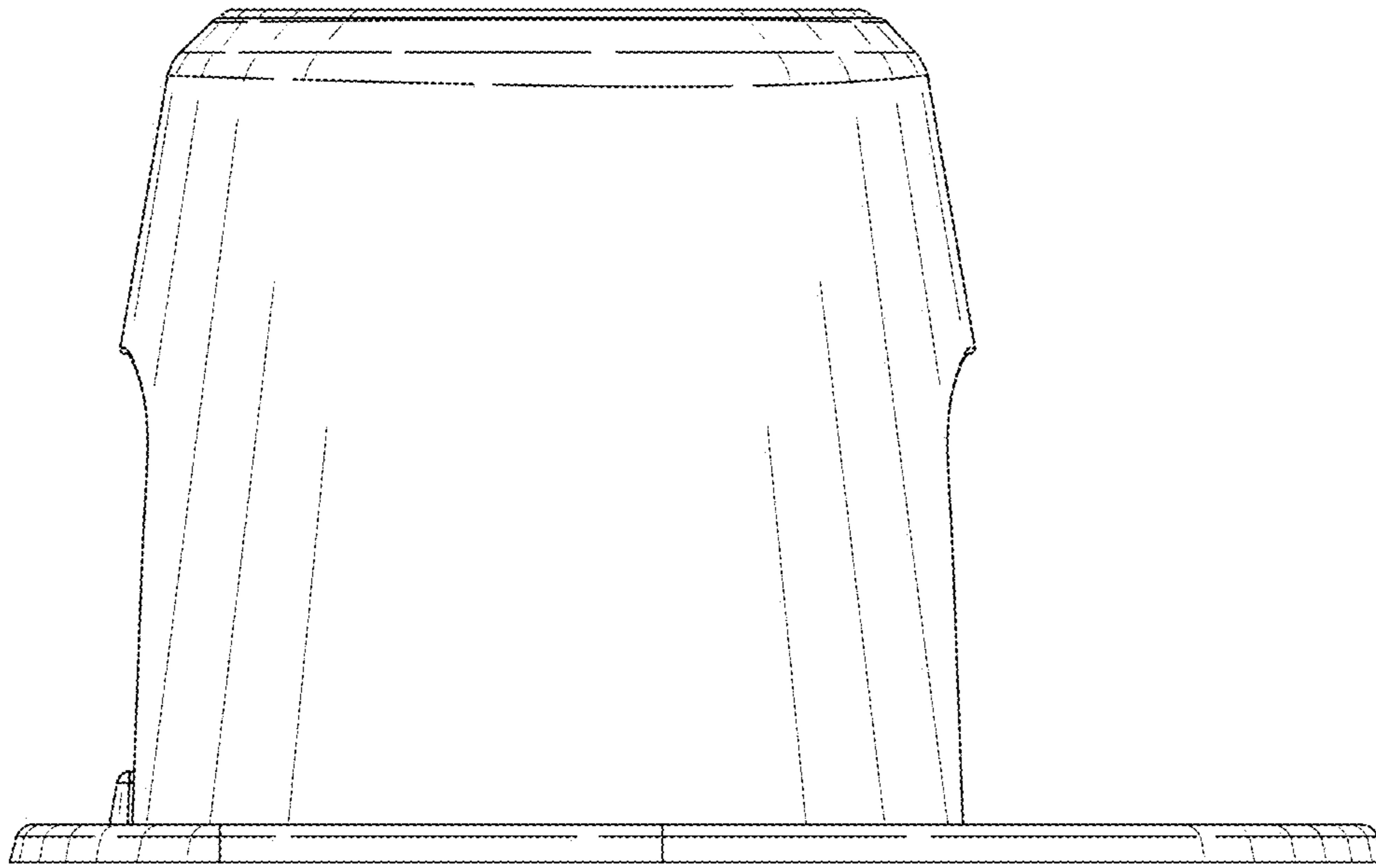
**FIG. 88**



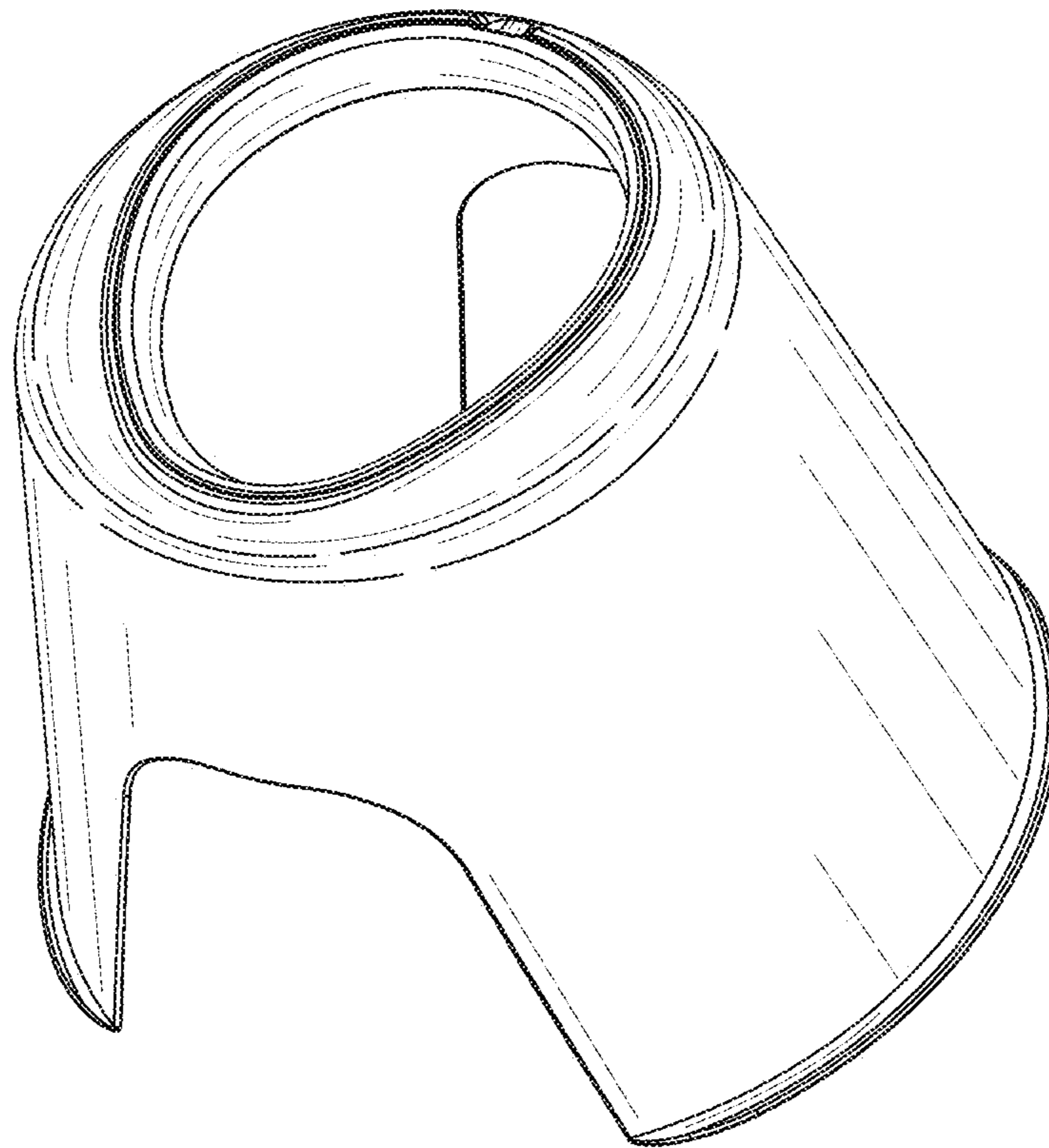
**FIG. 89**



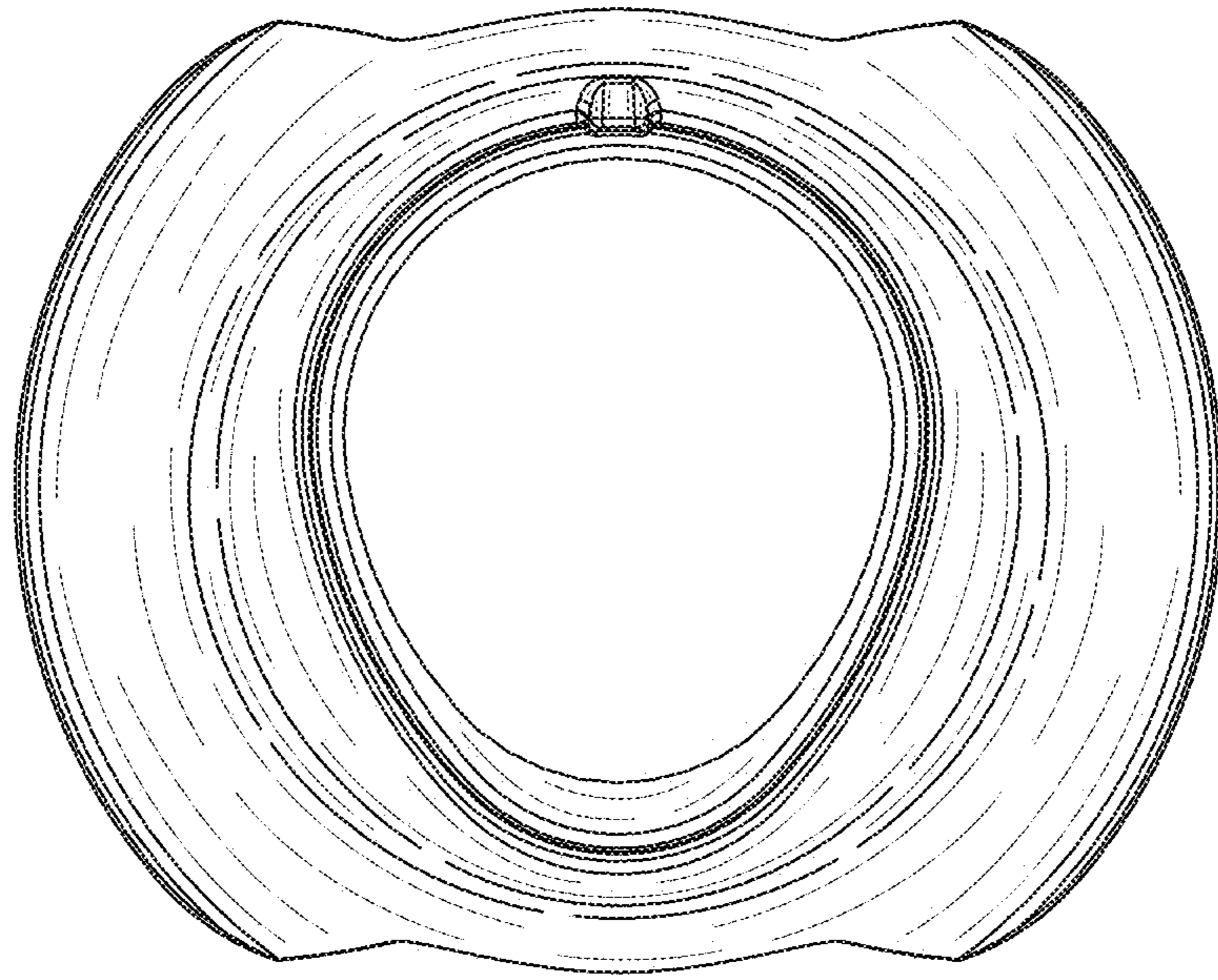
**FIG. 90**



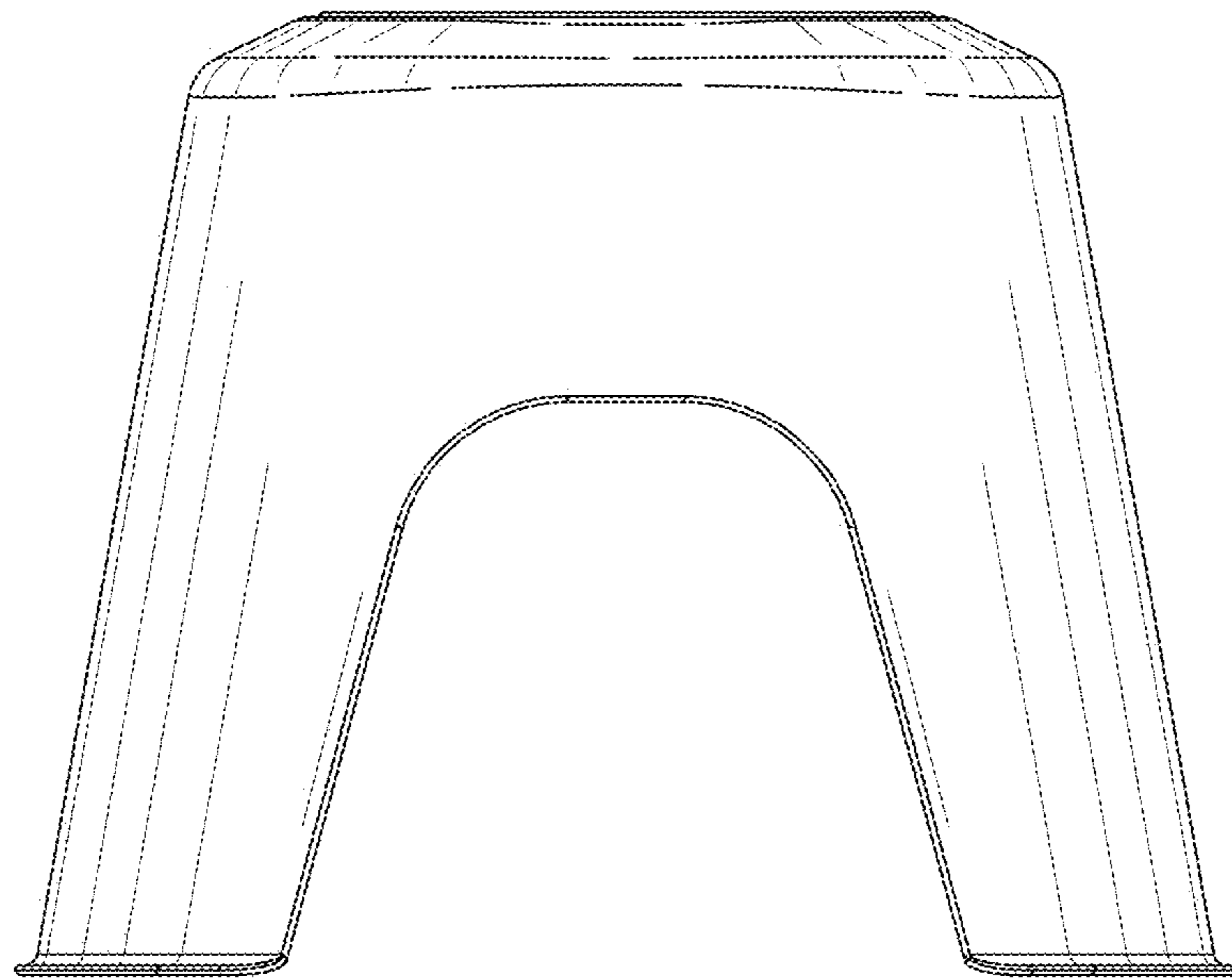
**FIG. 91**



**FIG. 92**

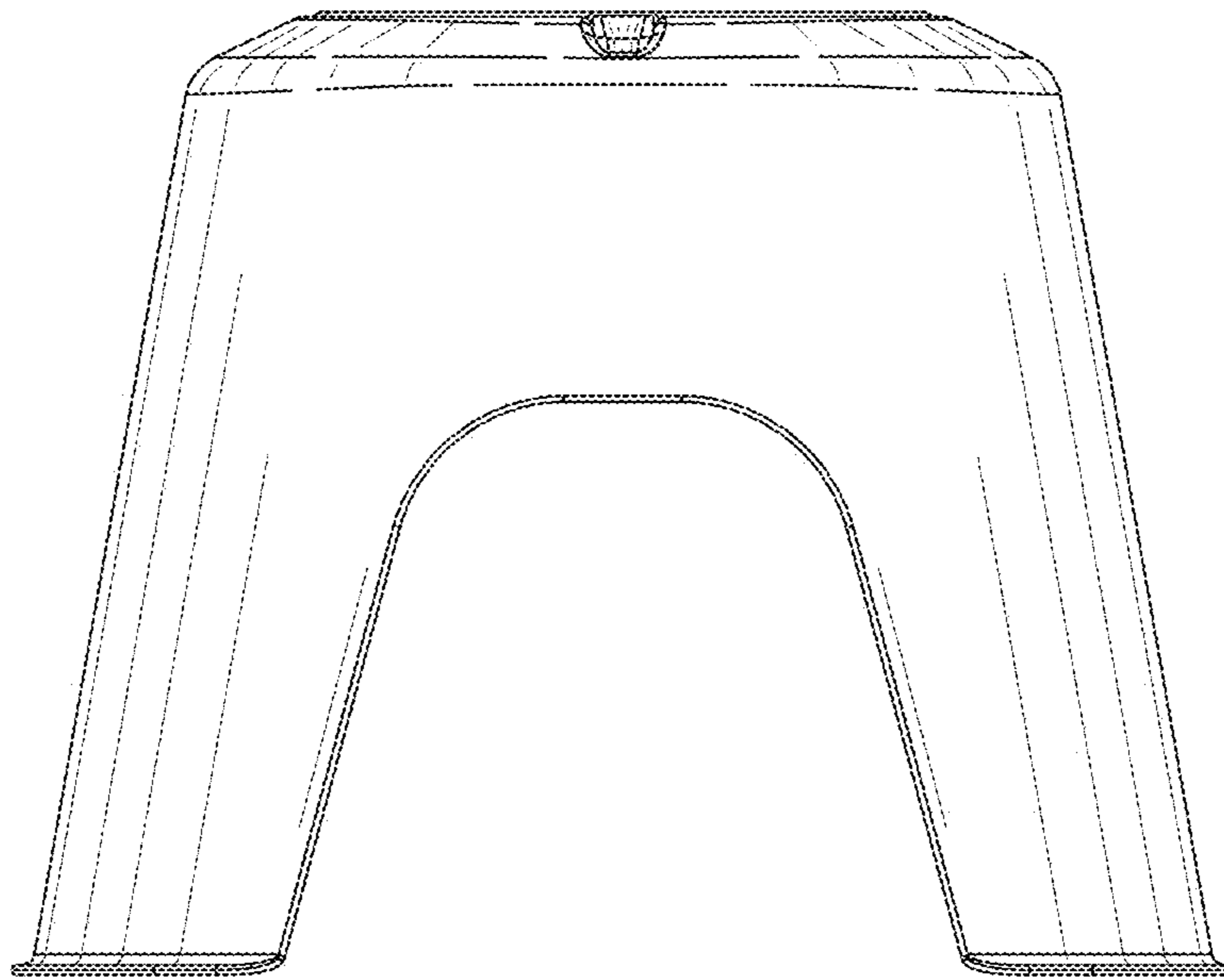


**FIG. 93**

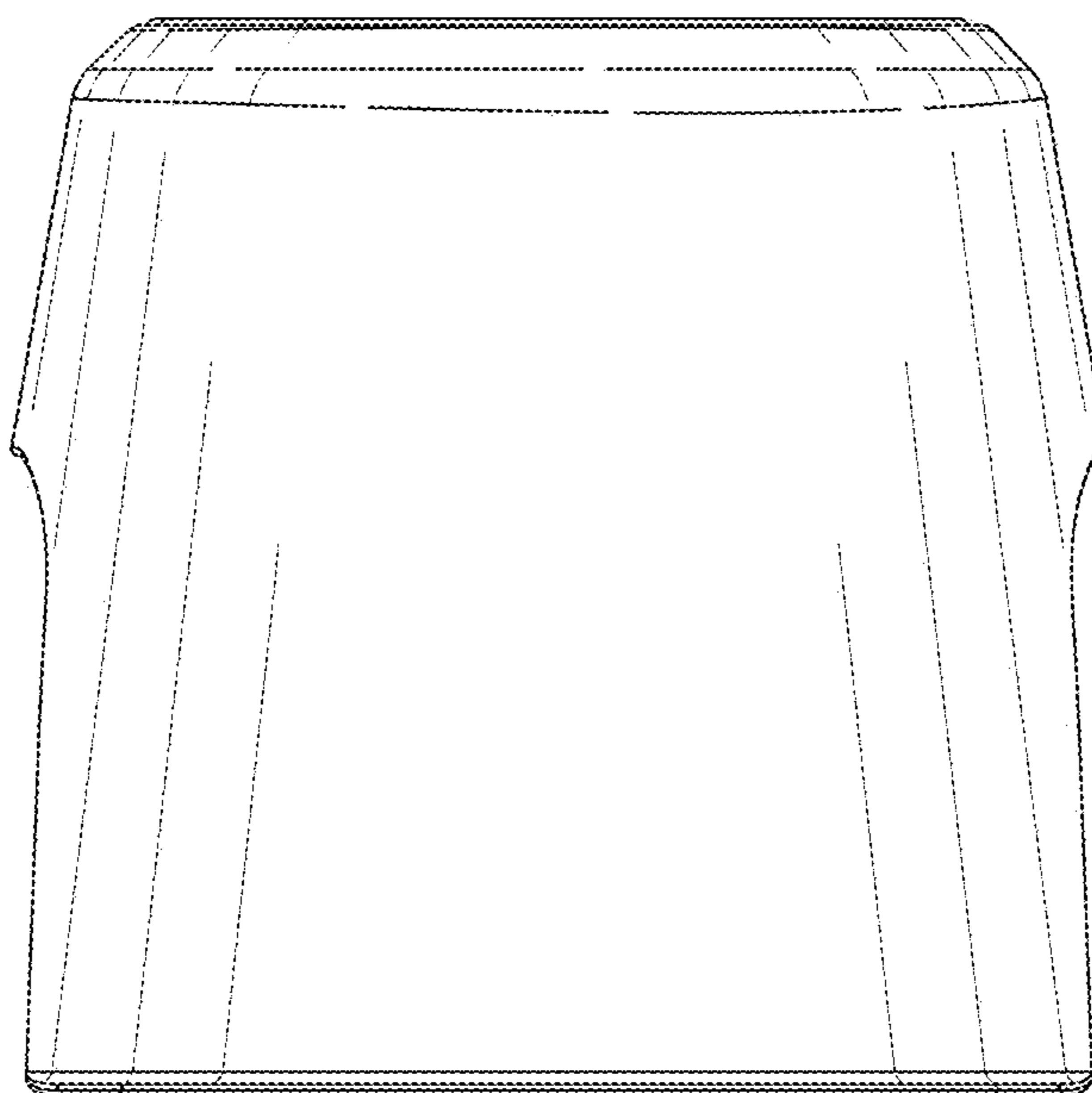


**FIG. 94**

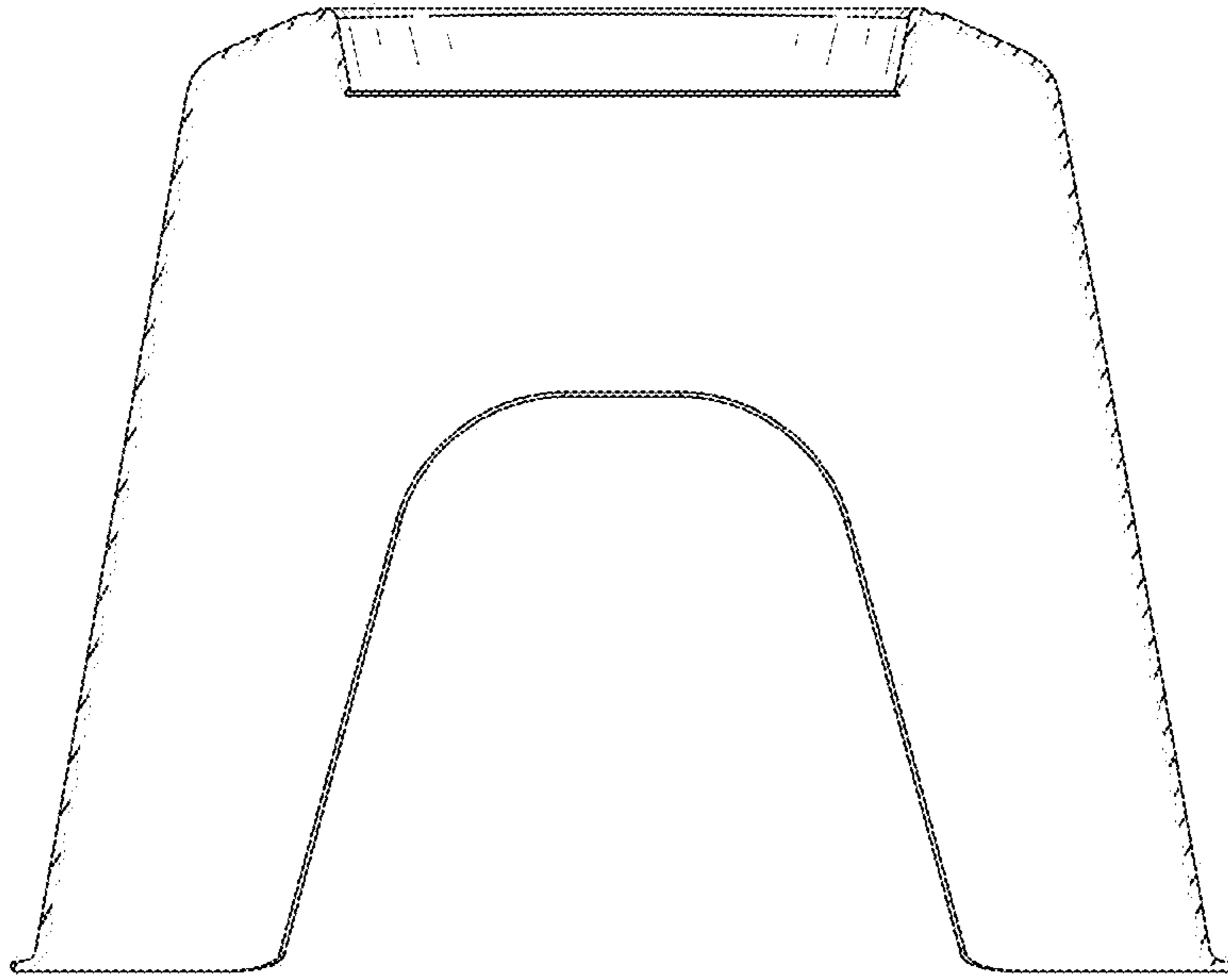




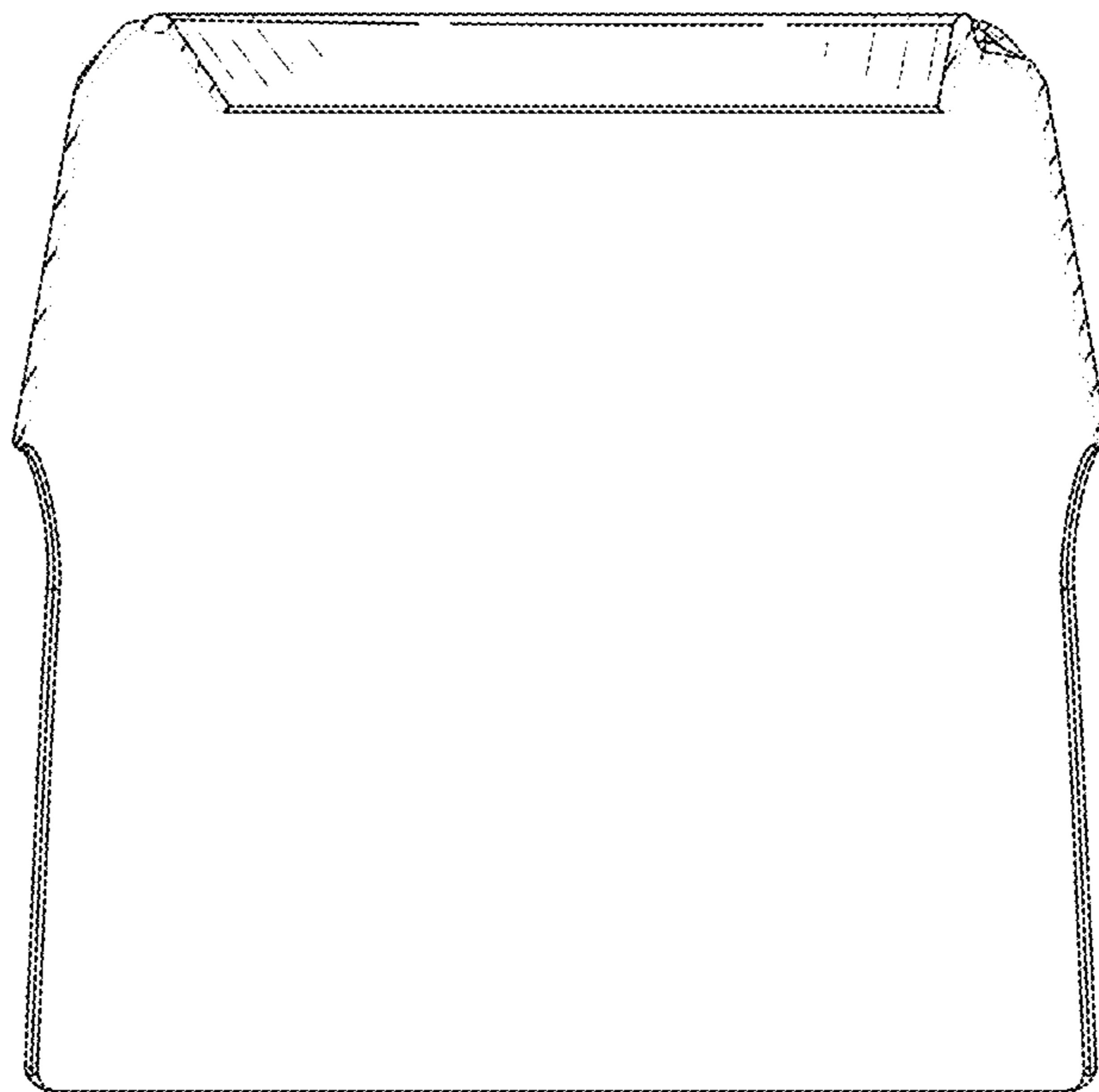
**FIG. 95**



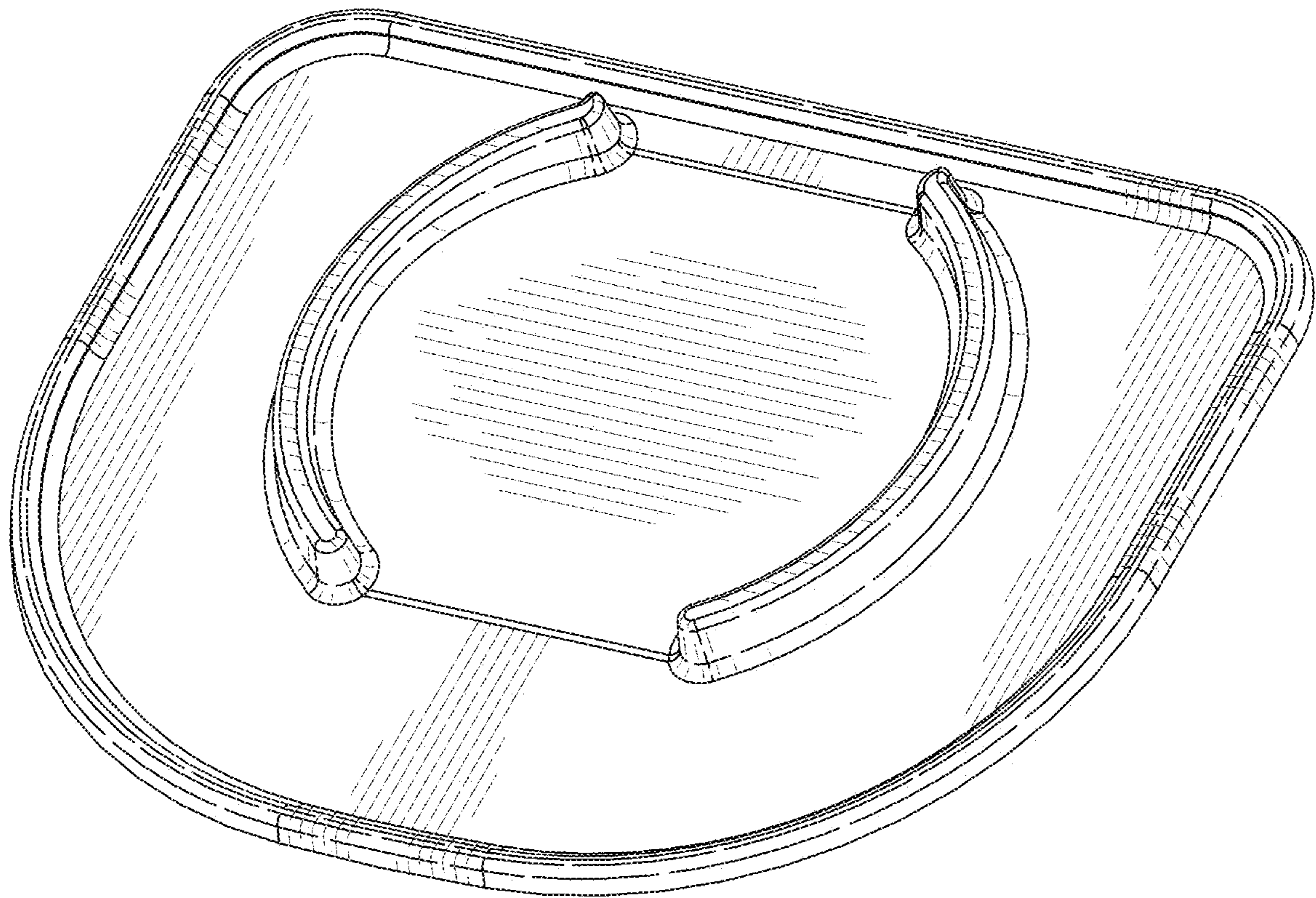
**FIG. 96**



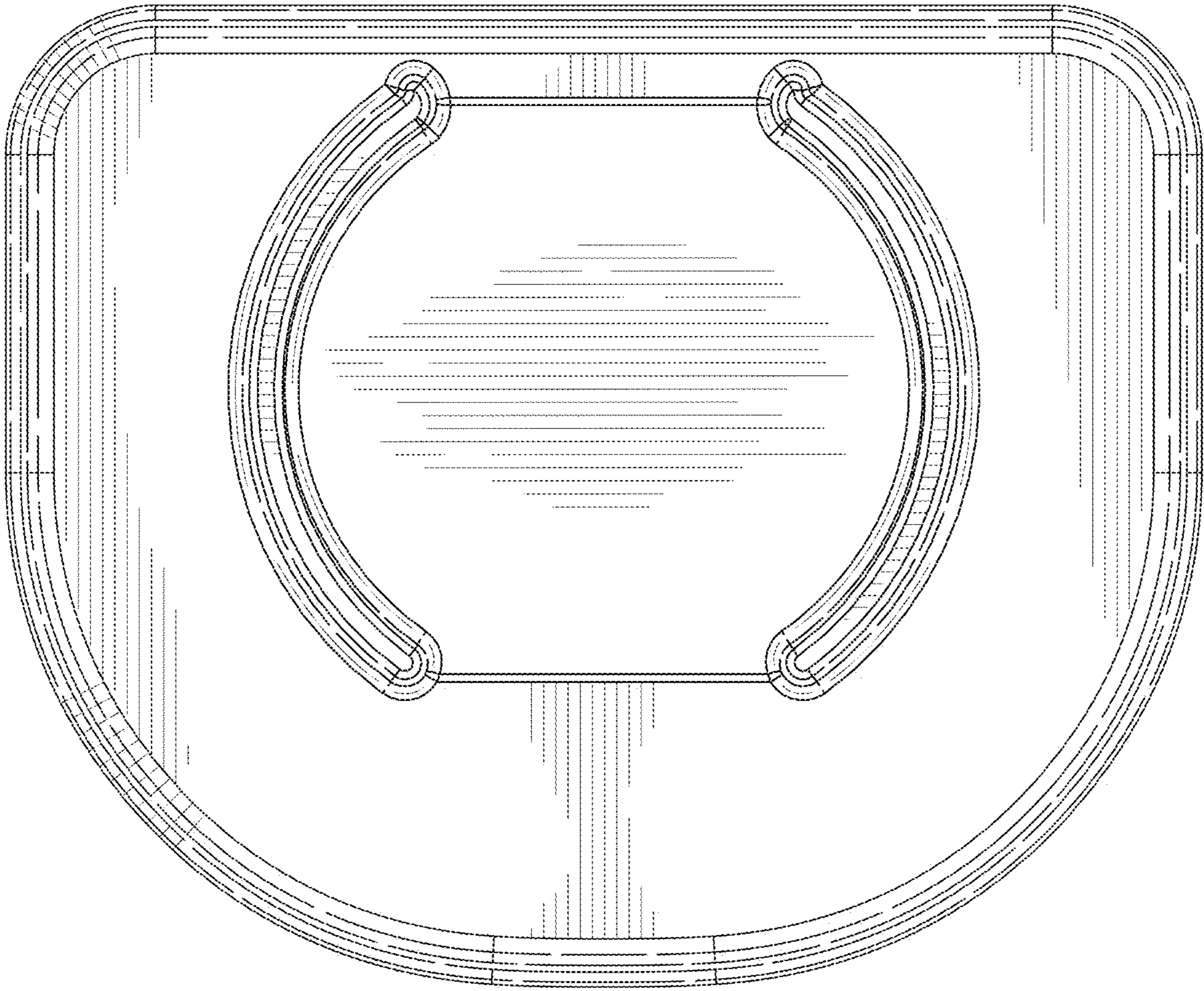
**FIG. 97**



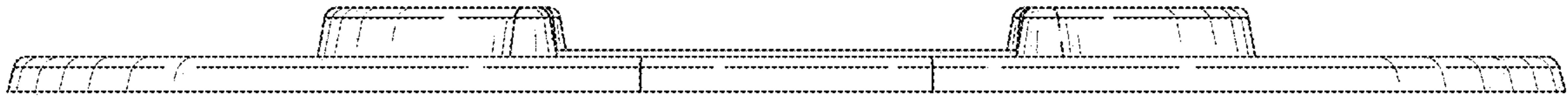
**FIG. 98**



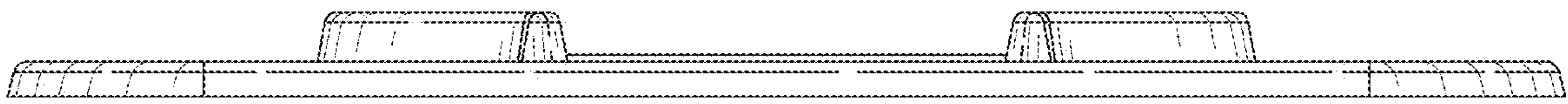
**FIG. 99**



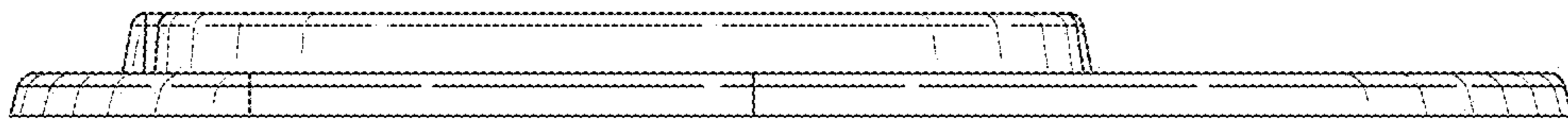
**FIG. 100**



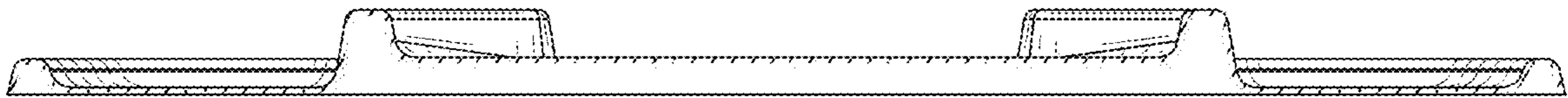
**FIG. 101**



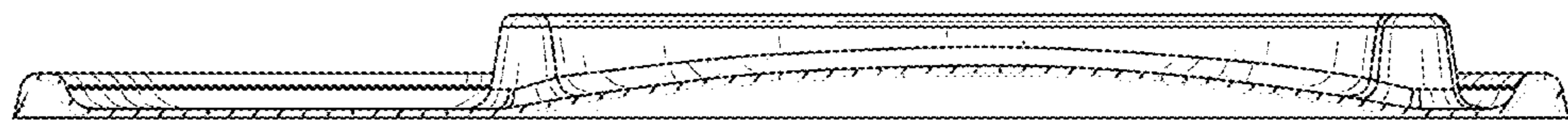
**FIG. 102**



**FIG. 103**



**FIG. 104**



**FIG. 105**