

US00D797273S

(12) **United States Design Patent** (10) **Patent No.:** **US D797,273 S**
Leatzow et al. (45) **Date of Patent:** **** Sep. 12, 2017**

- (54) **AIR FILTRATION DEVICE FILTER PIN**
- (71) Applicant: **Illinois Tool Works, Inc.**, Glenview, IL (US)
- (72) Inventors: **Derek J. Leatzow**, Chicago, IL (US);
Keith A. Grider, Chicago, IL (US);
Daniel J. Greene, Chicago, IL (US);
Antonio J. Belton, Richton Park, IL (US)
- (73) Assignee: **Illinois Tool Works Inc.**, Glenview, IL (US)
- (**) Term: **15 Years**
- (21) Appl. No.: **29/533,119**
- (22) Filed: **Jul. 14, 2015**

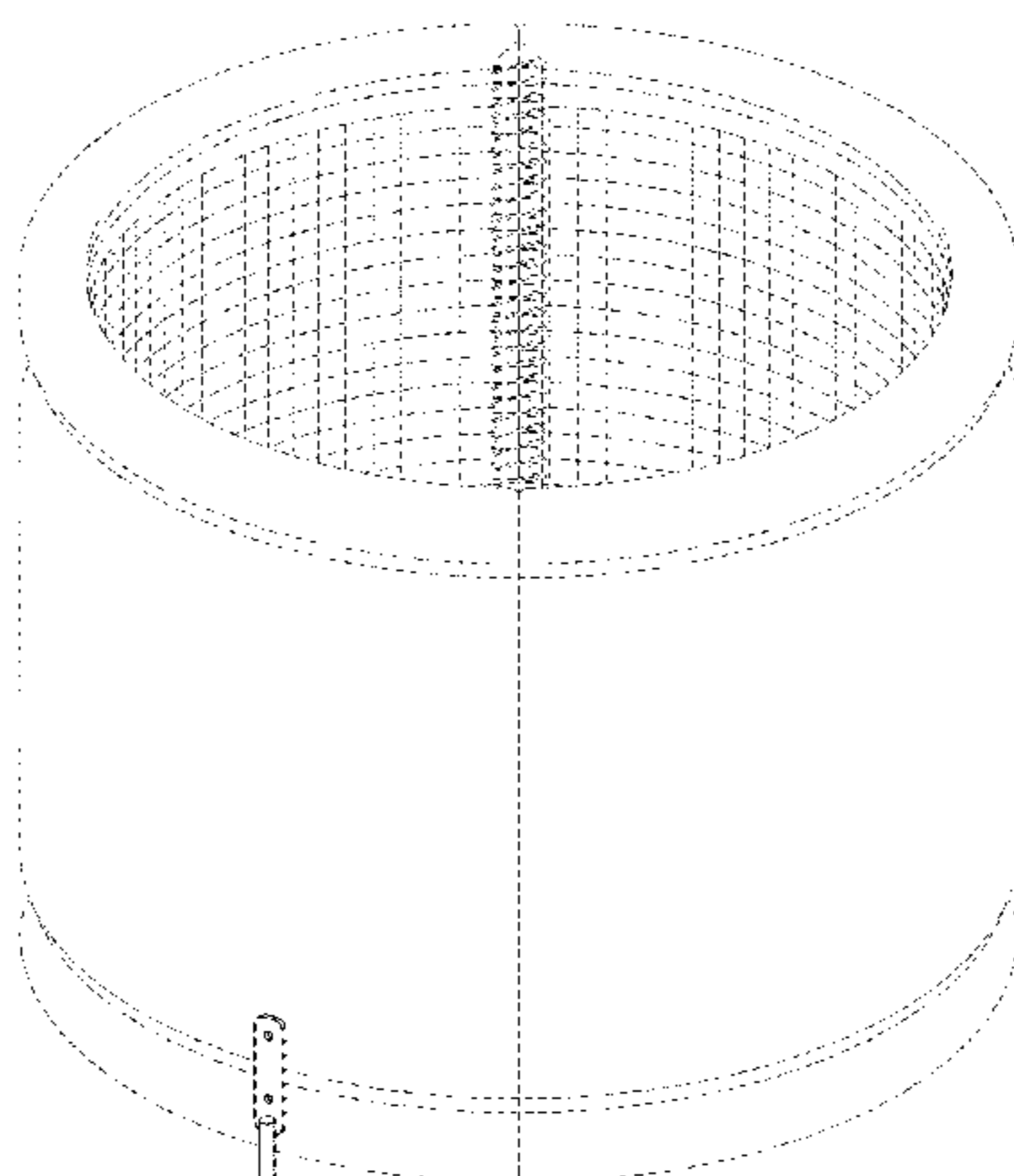
(56) **References Cited**

U.S. PATENT DOCUMENTS

D45,277	S	*	2/1914	Vaughan	.....	30/167
2,593,949	A	*	4/1952	Williams	.....	B01F 13/002
						15/236.06
D195,362	S	*	6/1963	Geisler	.....	D8/89
3,780,260	A		12/1973	Elsner		
D230,563	S	*	3/1974	Stahel	.....	D28/59
D256,548	S	*	8/1980	Grunstad	.....	D7/649
4,560,477	A		12/1985	Moldow		
4,629,482	A		12/1986	Davis		
4,658,707	A		4/1987	Hawkins et al.		
4,772,297	A		9/1988	Anzai		
D298,407	S	*	11/1988	Vowell, Jr.	.....	D8/14
4,786,295	A		11/1988	Newman et al.		
4,859,220	A		8/1989	Leber et al.		
4,940,474	A		7/1990	Larsson et al.		
D310,015	S	*	8/1990	Evenson	.....	D8/102
4,960,143	A		10/1990	Dore et al.		
D312,564	S	*	12/1990	Tam	.....	D8/102
4,979,967	A		12/1990	Walter et al.		
5,013,333	A		5/1991	Beaufoy et al.		
D320,071	S		9/1991	Cook		
5,069,691	A		12/1991	Travis et al.		
5,096,474	A		3/1992	Miller, Jr. et al.		
5,120,331	A		6/1992	Landy		
5,163,818	A		11/1992	Betsill et al.		
5,230,723	A		7/1993	Travis et al.		
5,242,474	A		9/1993	Herbst et al.		
D350,270	S	*	9/1994	Jensen	.....	D8/89
5,433,763	A		7/1995	Shagott et al.		
5,436,216	A		7/1995	Toyao et al.		
D365,388	S		12/1995	Williams		
D365,389	S		12/1995	Williams		
5,505,763	A		4/1996	Reighard et al.		
5,588,985	A		12/1996	Shagott et al.		
5,593,470	A		1/1997	Shagott et al.		
D383,202	S		9/1997	Meister et al.		
D386,576	S		11/1997	Wang et al.		
D390,910	S		2/1998	Sundquist		
5,753,000	A		5/1998	Chiu et al.		
5,813,089	A		9/1998	Nolan et al.		
D401,306	S		11/1998	Ward et al.		
5,840,094	A		11/1998	Osendorf et al.		
D403,414	S		12/1998	Shelton et al.		
D404,807	S		1/1999	Nepsund et al.		
5,858,044	A		1/1999	Nepsund et al.		
5,862,737	A		1/1999	Chiu et al.		
D407,808	S		4/1999	Nepsund et al.		
D410,074	S		5/1999	Lee		
5,925,172	A		7/1999	Rick et al.		

Related U.S. Application Data

- (63) Continuation of application No. 29/449,728, filed on Mar. 15, 2013.
- (51) **LOC (10) Cl.** **23-04**
- (52) **U.S. Cl.**
USPC **D23/365**
- (58) **Field of Classification Search**
USPC D23/365, 209, 363, 358, 386, 354, 341,
D23/364, 314, 323, 330, 499; 55/385.3,
55/502, 497, 506, 505, 521, 495, 422,
55/493, DIG. 30; 210/435, 130, 136,
210/248, 339, 448, 452, 497.1; D15/5;
D8/47, 89, 102, 323
CPC B01D 46/0004; B01D 46/0041; B01D
46/30; B01D 46/0086; B01D 46/0024;
B01D 46/44; B01D 46/444; B01D 46/46;
B01D 46/446; H01L 2924/0002; H01L
2924/00; H03H 1/0007; H05K 1/162;
H01R 13/7197
See application file for complete search history.



D416,317	S	11/1999	Bellil et al.	
D416,613	S	11/1999	Bellil et al.	
D416,614	S	11/1999	Bellil et al.	
D417,911	S	12/1999	Jane et al.	
6,013,121	A	1/2000	Chiu et al.	
D422,070	S	3/2000	Bellil et al.	
6,036,757	A	3/2000	Gatchell et al.	
D423,659	S	4/2000	Schippanoski	
6,062,977	A	5/2000	Hague	
6,065,424	A	5/2000	Shacham et al.	
6,066,194	A	5/2000	Huggins et al.	
6,091,888	A	7/2000	Jane et al.	
6,099,608	A	8/2000	Harms et al.	
D434,841	S	12/2000	Lozzio et al.	
6,156,085	A	12/2000	Chiu et al.	
D437,635	S	2/2001	Lozzio et al.	
D438,214	S	2/2001	Gieseke et al.	
D438,944	S	3/2001	Terpko et al.	
6,209,347	B1	4/2001	Corrigan et al.	
6,283,458	B1	9/2001	Cox et al.	
D450,377	S	11/2001	Terpko et al.	
6,345,516	B1	2/2002	Kesler et al.	
6,348,086	B1	2/2002	Harms et al.	
6,361,590	B1	3/2002	Gilbert, Jr. et al.	
6,391,102	B1	5/2002	Bodden et al.	
6,494,940	B1	12/2002	Hak	
D470,216	S	2/2003	Gustafson et al.	
6,517,475	B1	2/2003	Brown et al.	
D480,127	S	9/2003	Cox et al.	
6,640,792	B2	11/2003	Harvey et al.	
D491,654	S	6/2004	Gatchell et al.	
6,790,257	B2	9/2004	Jeng et al.	
D499,177	S	11/2004	Kosmider et al.	
6,899,745	B2	5/2005	Gatchell et al.	
D509,292	S	9/2005	Gatchell et al.	
6,938,886	B2	9/2005	Glucksman	
D513,797	S	1/2006	Wang	
D515,190	S	2/2006	Bartholmey et al.	
7,014,686	B2	3/2006	Gatchell et al.	
7,168,427	B2	1/2007	Bachinski et al.	
7,258,715	B2	8/2007	Cox et al.	
D572,356	S	7/2008	Harber	
7,537,647	B2	5/2009	Adair et al.	
D596,472	S *	7/2009	Cook	D8/47
7,594,944	B2	9/2009	Oh	
D614,470	S *	4/2010	Parshad	D8/102
7,808,246	B2	10/2010	Sobue et al.	
7,815,705	B2	10/2010	Ehrenberg	
7,874,431	B2	1/2011	Eisengraeber-Pabst et al.	
7,892,337	B2	2/2011	Palmerton et al.	
7,915,847	B2	3/2011	Jeung	
8,016,922	B2	9/2011	Ehrenberg	
D647,188	S	10/2011	Bergami	
8,042,694	B2	10/2011	Driml et al.	
D652,497	S	1/2012	Troxell et al.	
D655,379	S	3/2012	Doyle et al.	
D671,633	S	11/2012	Glasbrenner	
8,323,370	B2	12/2012	Troxell et al.	
8,486,170	B2	7/2013	Conrad et al.	
D694,871	S	12/2013	Maholick et al.	
8,640,360	B2	2/2014	Stamm et al.	
D707,338	S	6/2014	Ediger et al.	
D713,023	S	9/2014	Chen et al.	
D715,911	S	10/2014	Lin	
9,120,044	B2	9/2015	Cornell	
D752,937	S *	4/2016	Schneider	D8/47
D774,571	S *	12/2016	Robertson	D15/135
2004/0035094	A1	2/2004	Jersey	
2004/0065202	A1	4/2004	Gatchell et al.	
2004/0187455	A1	9/2004	Niakan et al.	
2007/0221061	A1	9/2007	Steiner et al.	
2014/0260144	A1	9/2014	Williams et al.	
2014/0260996	A1	9/2014	Grider et al.	

FOREIGN PATENT DOCUMENTS

CN	101010142	A	8/2007
WO	WO 2006012520	A2	2/2006

OTHER PUBLICATIONS

Features of DefendAir HEPA 500, DRI-EAZ, available at http://www.drieaz.com/_DEC/DEC_Product_Base.aspx?decID=1041&AspxAutoDetectCookieSupport=1 (Features tab), printed Jul. 27, 2013 (1 page).

DRI-EAZ, Owner's Manual DefendAir HEPA 500 Air Scrubber 115v Model, available at http://www.drieaz.com/_DEC/Uploads/Document/Manuals/DefendAir%20HEPA%20500%20Owner's%20Manual.pdf, Copyright 2004 (18 pages).

Guide to Air Scrubbing, DRI-EAZ, available at http://www.drieaz.com/_DEC/Uploads/Document/Docs/Guide%20to%20Air%20Scrubbing.pdf, printed Jul. 27, 2013 (16 pages).

DRI-EAZ Air Filtration HEPA 500 Flyer, available at http://www.drieaz.com/_DEC/Uploads/Document/Manuals/DE_HEPA500_Filters_Restoration_Print.pdf, printed Jul. 27, 2013 (1 page).

Photograph of filters of DRI-EAZ DefendAir HEPA 500, available at http://www.drieaz.com/_DEC/Uploads/Document/Manuals/F284_HEPA500_DOP_Carbon_Photo.jpg, printed Jul. 27, 2013 (1 page).

First Stage Pre-Filter for DefendAir HEPA 500, DRI-EAZ, available at http://www.drieaz.com/_DEC/DEC_Product_Base.aspx?decID=1097, printed Jul. 27, 2013 (1 page).

Second Stage Pre-Filter for DefendAir HEPA 500, DRI-EAZ, available at http://www.drieaz.com/_DEC/DEC_Product_Base.aspx?decID=1098, printed Jul. 27, 2013 (1 page).

Activated Carbon Filter for DefendAir HEPA 500, DRI-EAZ, available at http://www.drieaz.com/_DEC/DEC_Product_Base.aspx?decID=1109, printed Jul. 27, 2013 (1 page).

HEPA 500 Filters for DefendAir HEPA 500, DRI-EAZ, available at http://www.drieaz.com/_DEC/DEC_Product_Base.aspx?decID=1096, printed Jul. 27, 2013 (1 page).

DOP Stage 2 HEPA 500 Pre-Filter for DefendAir HEPA 500, DRI-EAZ, available at http://www.drieaz.com/_DEC/DEC_Product_Base.aspx?decID=1129, printed Jul. 27, 2013 (1 page).

Specs of DefendAir HEPA 500, DRI-EAZ, available at http://www.drieaz.com/_DEC/DEC_Product_Base.aspx?decID=1041&AspxAutoDetectCookieSupport=1 (Specs tab), printed Jul. 27, 2013 (1 page).

Overview of PRED600HC Portable Air Scrubber, Abatement Technologies, available at <http://www.abatement.com/government-industry-schools/port-air-scrub-pred600hc.htm> (Overview tab), Copyright 2013 (2 pages).

"The Predator 600 Portable Air Scrubber, Big Time Performance in a Small Package"; Brochure, available at <http://www.abatement.com/pdf/pred600-brochure.pdf>, Copyright 2012 (2 pages).

"Warning! Are the Molded Plastic Scrubbers You Are Using Safe? or, Could They Expose You to Fire and Safety Risks?," White Paper by Abatement Technologies, available at <http://www.abatement.com/pdf/benefits-rotational-molded-plastic-cabinets.pdf>, printed Jul. 27, 2013 (3 pages).

Specs of PRED600HC Portable Air Scrubber, Abatement Technologies, available at <http://www.abatement.com/government-industry-schools/port-air-scrub-pred600hc.htm> (Specs tab), Copyright 2013 (2 pages).

Comparison of PRED600HC Portable Air Scrubber, Abatement Technologies, available at <http://www.abatement.com/government-industry-schools/port-air-scrub-pred600hc.htm> (Comparison tab), Copyright 2013 (3 pages).

Photos of PRED600HC Portable Air Scrubber, Abatement Technologies, available at <http://www.abatement.com/government-industry-schools/port-air-scrub-pred600hc.htm> (Photos tab), Copyright 2013 (2 pages).

Filters and Accessories for PRED600HC Portable Air Scrubber, Abatement Technologies, available at <http://www.abatement.com/government-industry-schools/port-air-scrub-pred600hc.htm> (Filters & Accessories tab), Copyright 2013 (2 pages).

Related Products for PRED600HC Portable Air Scrubber, Abatement Technologies, available at <http://www.abatement.com/government-industry-schools/port-air-scrub-pred600hc.htm> (Related Products tab), Copyright 2013 (3 pages).

International Search Report and Written Opinion for International Application No. PCT/US2014/024800, mailed Oct. 13, 2014 (16 pages).

International Search Report and Written Opinion for International Application No. PCT/US2014/024837, mailed Oct. 13, 2014 (15 pages).

* cited by examiner

Primary Examiner — David Muller

Assistant Examiner — Nathan Johnston

(74) *Attorney, Agent, or Firm* — Neal, Gerber & Eisenberg LLP

(57) **CLAIM**

The ornamental design for an air filtration device filter pin, as shown and described.

DESCRIPTION

FIG. 1 is a top front perspective view of an air filtration device filter pin showing our new design.

FIG. 2 is a top plan view thereof.

FIG. 3 is a bottom plan view thereof.

FIG. 4 is a front elevation view thereof.

FIG. 5 is a rear elevation thereof.

FIG. 6 is a left side elevation view thereof; and,

FIG. 7 is a right side elevation view thereof.

The broken lines are shown for environmental purposes only and form no part of the claimed design.

1 Claim, 7 Drawing Sheets

FIG. 1

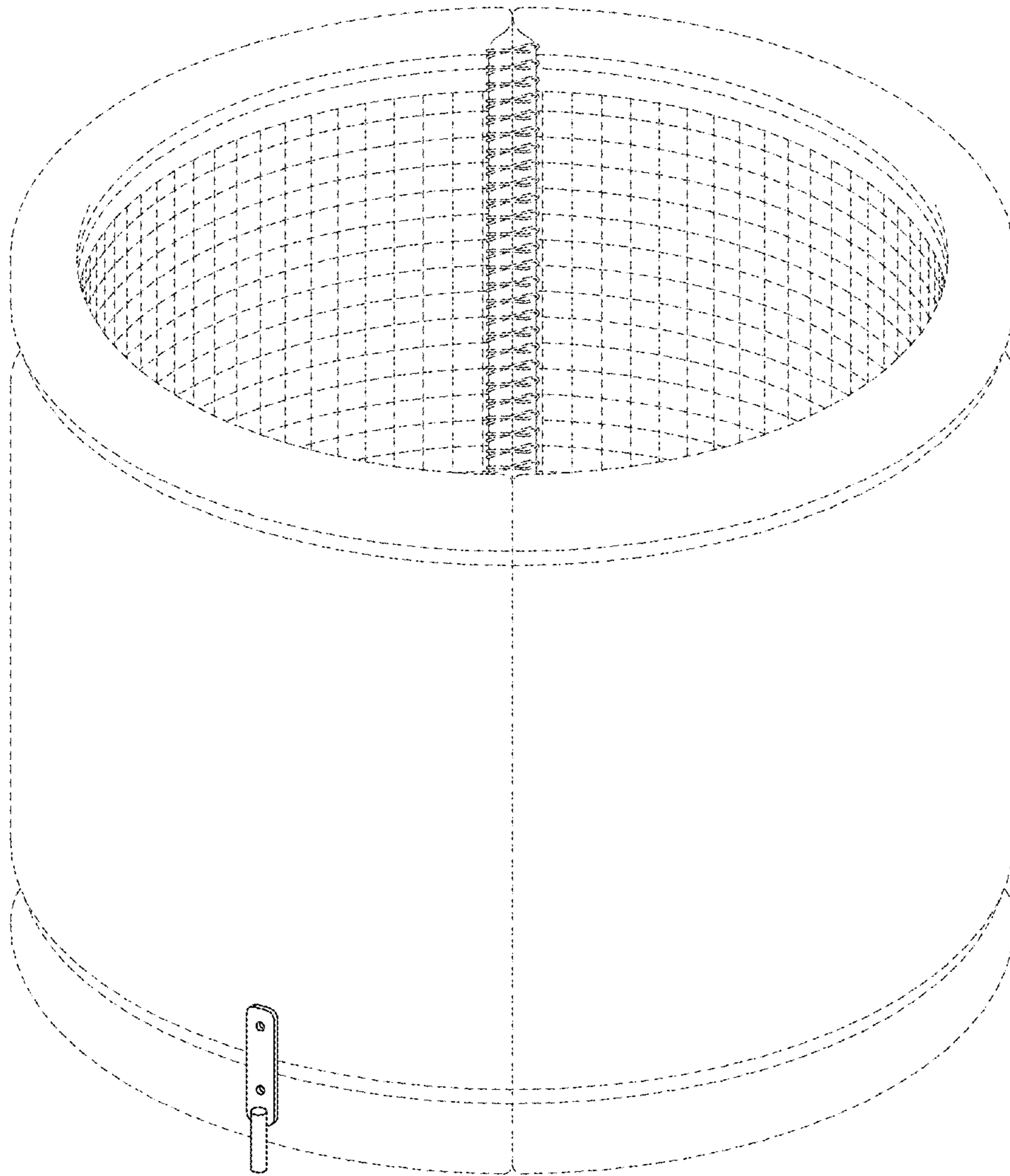


FIG. 2

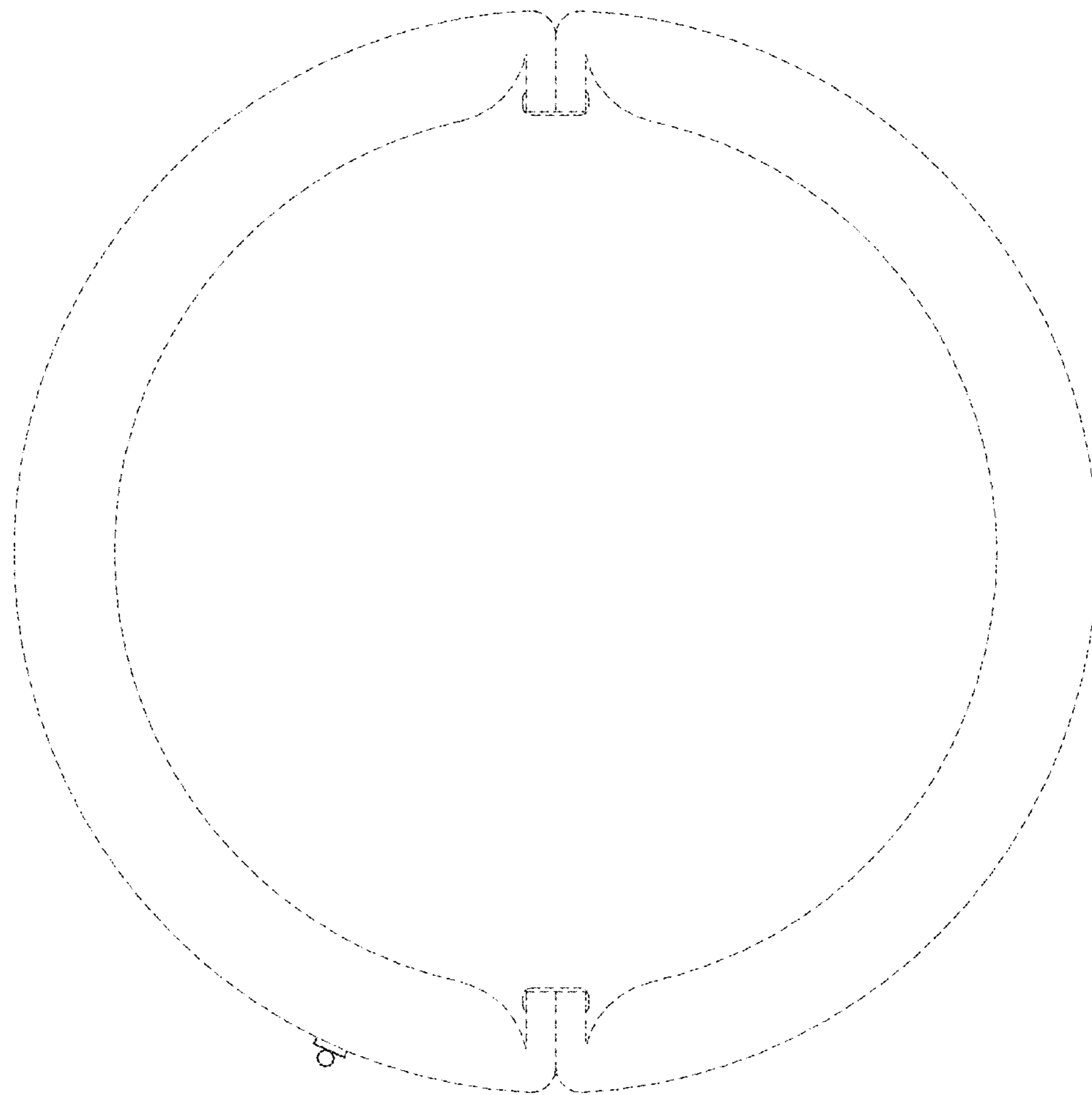


FIG. 3

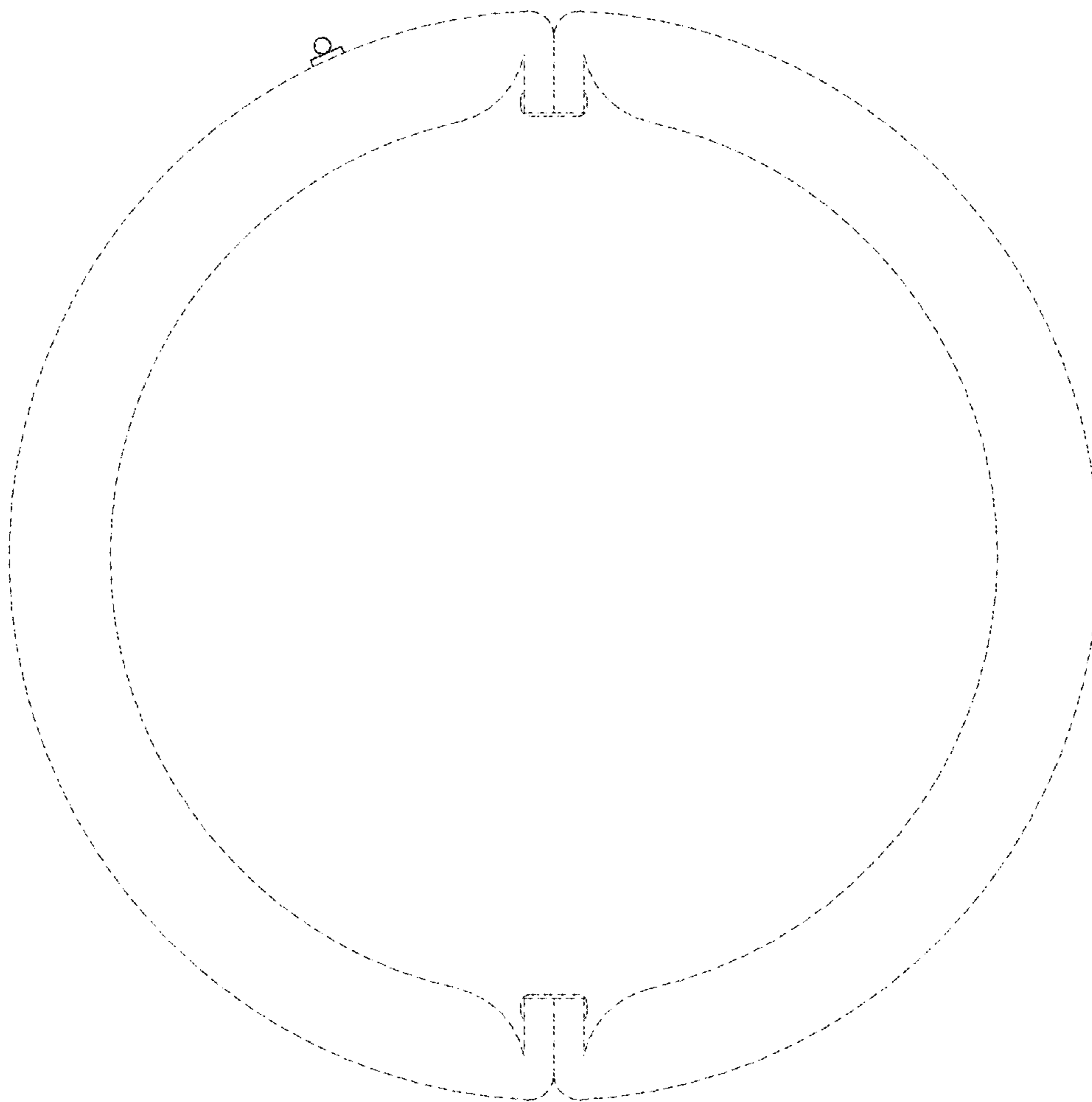


FIG. 4

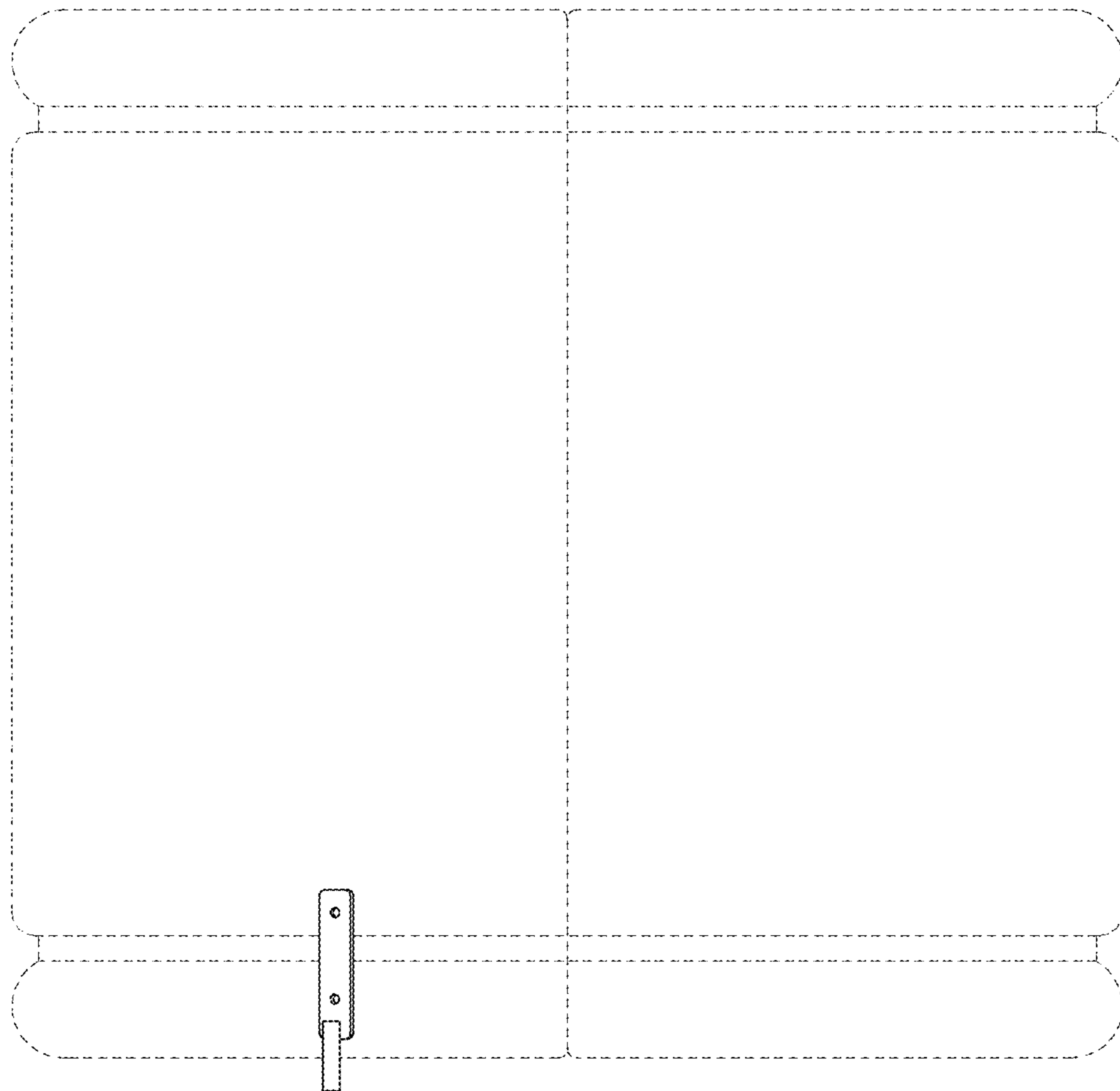


FIG. 5

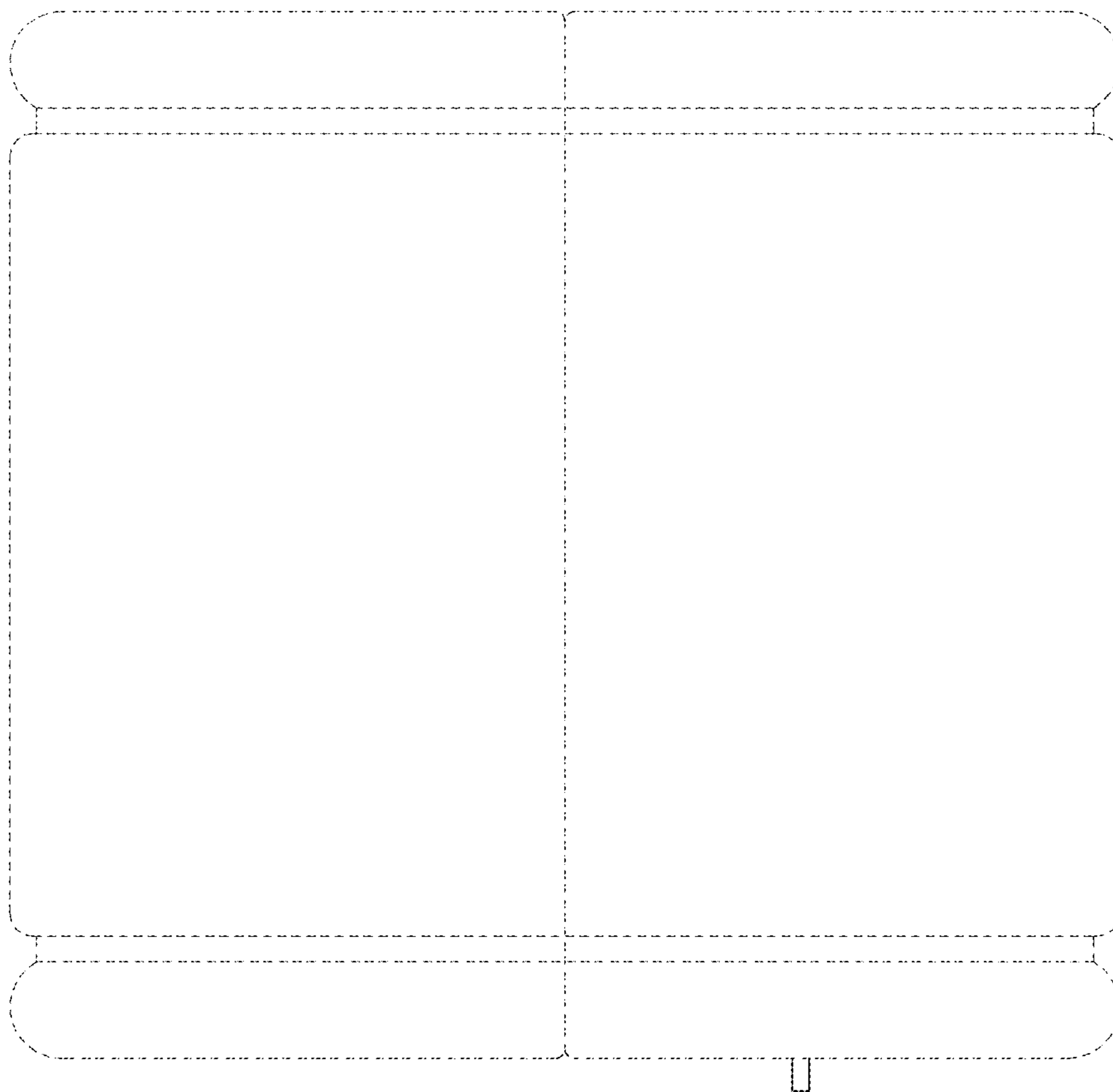


FIG. 6

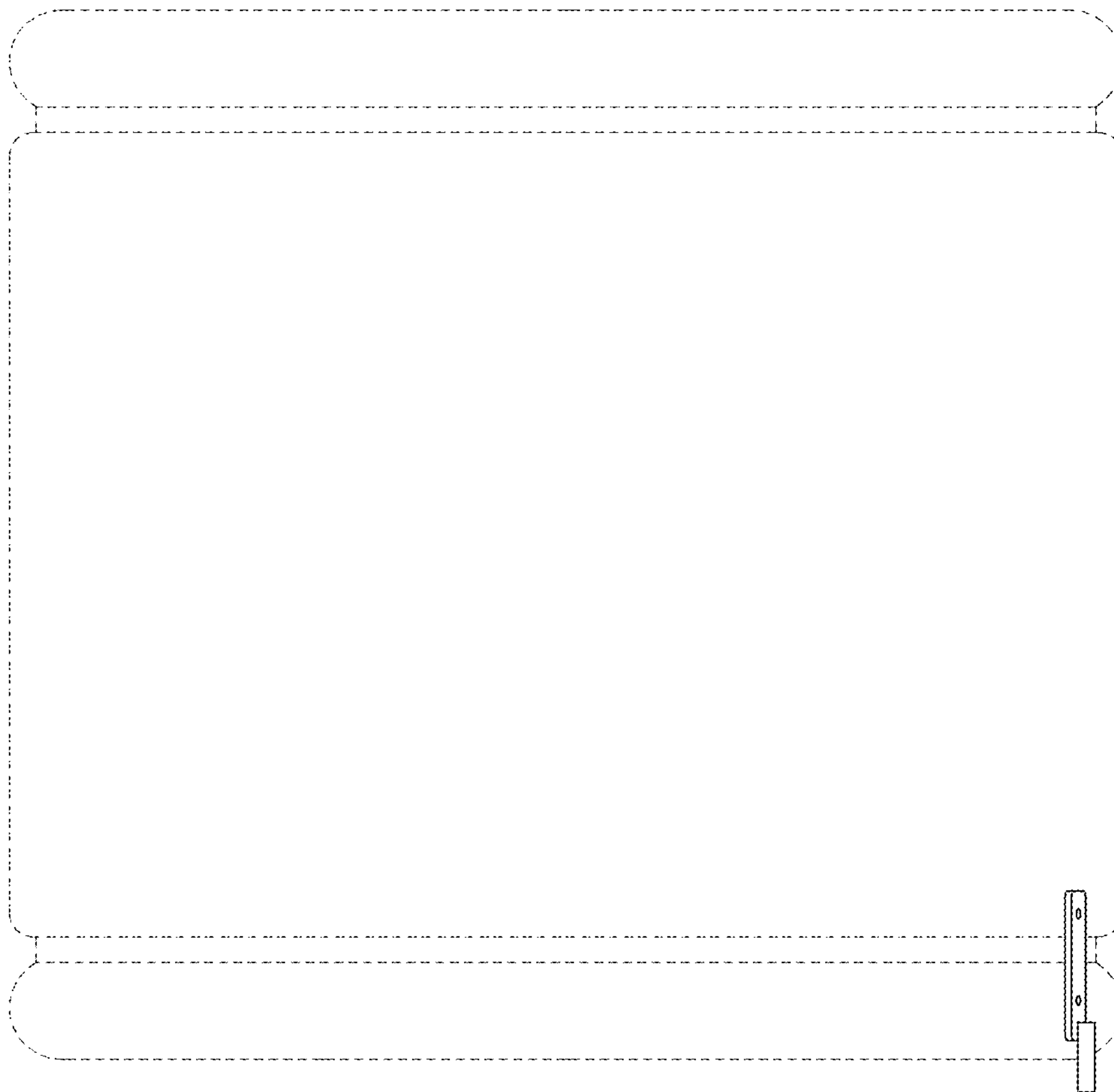


FIG. 7

