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(12) **United States Design Patent** (10) **Patent No.:** **US D934,873 S**
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(54) **MOBILE COMPUTING SUPPORT SYSTEM HAVING AN ILLUMINATION REGION**

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(52) **U.S. Cl.**
USPC **D14/447**

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CPC A47B 21/04; A47B 2097/006; A47B 2097/005; A47B 2023/049; A45C 2011/002; A45C 2011/003; F16M 2200/00; F16M 13/00

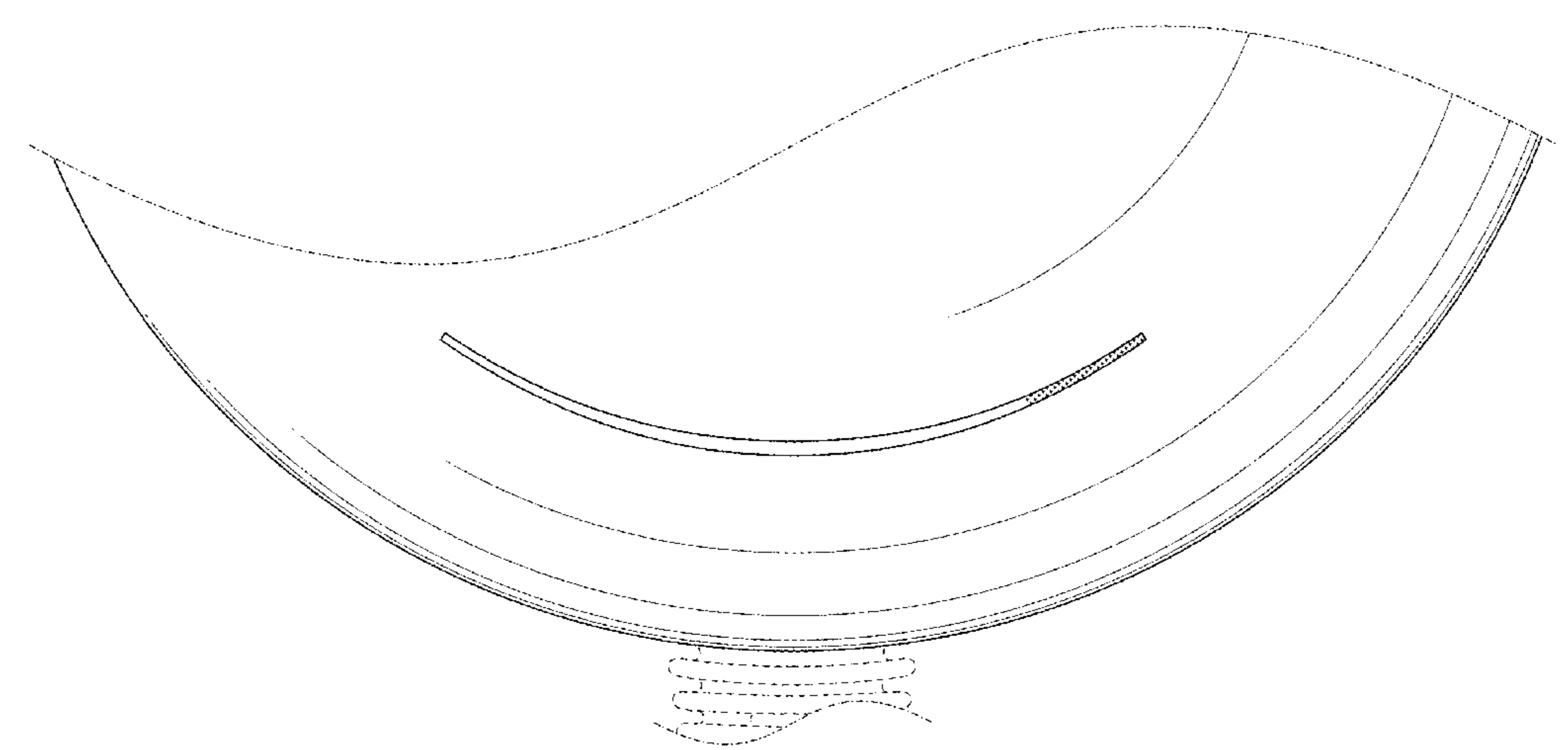
See application file for complete search history.

D520,448 S *	5/2006	Lodato	D13/110
D563,480 S	3/2008	Blaseflug et al.	
D567,287 S	4/2008	Del Castillo et al.	
D586,215 S *	2/2009	Gonzalez	D9/516
D607,323 S	1/2010	Bruno et al.	
D612,234 S *	3/2010	Westemeyer	D9/434
D621,514 S	8/2010	Wightman	
D644,122 S	8/2011	Kight	
D653,205 S	1/2012	Baker et al.	
D666,480 S *	9/2012	Peacock	D8/380
D671,924 S	12/2012	Choi et al.	
D673,528 S	1/2013	Trotsky	
D675,644 S	2/2013	Frost et al.	
D684,158 S *	6/2013	Derry	D14/452
D688,252 S *	8/2013	Paul	D14/447
D692,898 S *	11/2013	Luijben	D14/447
D693,353 S *	11/2013	Shu	D14/447
D719,959 S	12/2014	Vogel	
D720,845 S	1/2015	Kang et al.	
D722,603 S	2/2015	Lay et al.	
D724,596 S *	3/2015	Sirichai	D14/440
D725,660 S	3/2015	Trotsky	
D735,210 S *	7/2015	Kim	D14/447
9,081,426 B2	7/2015	Armstrong	
D737,264 S *	8/2015	Shamsadov	D14/251
9,215,293 B2	12/2015	Miller	
D748,639 S	2/2016	Khodapanah et al.	
D749,044 S	2/2016	Huang	
D749,596 S *	2/2016	Khodapanah	D14/447
D752,054 S	3/2016	Baumann et al.	
D752,529 S	3/2016	Loretan et al.	
D753,095 S	4/2016	Jou et al.	
D754,736 S	4/2016	Moon et al.	
D755,797 S *	5/2016	Liu	D14/452
D756,366 S	5/2016	Floersch et al.	
9,348,143 B2	5/2016	Gao et al.	
D759,657 S	7/2016	Kujawski et al.	
D765,084 S	8/2016	Akana et al.	
9,417,452 B2	8/2016	Schowengerdt et al.	
D768,635 S	10/2016	Due	
9,470,906 B2	10/2016	Kaji et al.	
D772,739 S *	11/2016	Browning	D10/74
D773,325 S	12/2016	Browning et al.	
D775,658 S	1/2017	Luo et al.	
D776,667 S	1/2017	Fujioka	
D777,778 S	1/2017	Park et al.	
9,547,174 B2	1/2017	Gao et al.	
9,671,566 B2	6/2017	Abovitz et al.	
D794,288 S	8/2017	Beers et al.	
9,740,006 B2	8/2017	Gao	
D797,749 S *	9/2017	Awad	D14/447
9,791,700 B2	10/2017	Schowengerdt et al.	
D805,084 S *	12/2017	Aryeh	D14/447

(56) **References Cited**

U.S. PATENT DOCUMENTS

D222,388 S	10/1971	Meldrum
D279,797 S	7/1985	Brunetto
D436,599 S	1/2001	Greene
D485,820 S	1/2004	Murakami
6,850,221 B1	2/2005	Tickle
D514,570 S	2/2006	Ohta
D519,504 S	4/2006	Tagliabue et al.



D805,734	S	12/2017	Fisher et al.	
9,851,563	B2	12/2017	Gao et al.	
9,857,591	B2	1/2018	Welch et al.	
9,874,749	B2	1/2018	Bradski	
D810,753	S	2/2018	Sakata et al.	
D832,276	S *	10/2018	Miles	D14/451
D837,258	S	1/2019	Lee et al.	
D849,752	S *	5/2019	Huebner	D14/447
D849,753	S *	5/2019	Divine, Jr.	D14/447
10,484,522	B1 *	11/2019	McHatet	H04B 1/3888
D873,806	S	1/2020	Lee et al.	
D877,066	S *	3/2020	Zhang	D13/108
D888,066	S *	6/2020	Wang	D14/451
2006/0028436	A1	2/2006	Armstrong	
2007/0081123	A1	4/2007	Lewis	
2012/0127062	A1	5/2012	Bar-Zeev et al.	
2012/0162549	A1	6/2012	Gao et al.	
2013/0082922	A1	4/2013	Miller	
2013/0117377	A1	5/2013	Miller	
2013/0125027	A1	5/2013	Abovitz	
2013/0208234	A1	8/2013	Lewis	
2013/0242262	A1	9/2013	Lewis	
2014/0071539	A1	3/2014	Gao	
2014/0177023	A1	6/2014	Gao et al.	
2014/0218468	A1	8/2014	Gao et al.	
2014/0267420	A1	9/2014	Schowengerdt	
2014/0306866	A1	10/2014	Miller et al.	
2015/0016777	A1	1/2015	Abovitz et al.	
2015/0103306	A1	4/2015	Kaji et al.	
2015/0178939	A1	6/2015	Bradski et al.	
2015/0205126	A1	7/2015	Schowengerdt	
2015/0222883	A1	8/2015	Welch	
2015/0222884	A1	8/2015	Cheng	
2015/0268415	A1	9/2015	Schowengerdt et al.	
2015/0302652	A1	10/2015	Miller et al.	
2015/0309263	A2	10/2015	Abovitz et al.	
2015/0326570	A1	11/2015	Publicover et al.	
2015/0346490	A1	12/2015	TeKolste et al.	
2015/0346495	A1	12/2015	Welch et al.	
2016/0011419	A1	1/2016	Gao	
2016/0026253	A1	1/2016	Bradski et al.	
2019/0111855	A1 *	4/2019	Aloe	H04M 1/04

OTHER PUBLICATIONS

Design U.S. Appl. No. 29/663,752 to Natsume et al., filed Sep. 18, 2018.

Design U.S. Appl. No. 29/663,748 to Natsume et al., filed Sep. 18, 2018.

Design U.S. Appl. No. 29/663,745 to Natsume et al., filed Sep. 18, 2018.

Design U.S. Appl. No. 29/657,667 to Natsume et al., filed Jul. 24, 2018.

Design U.S. Appl. No. 29/657,652 to Natsume et al., filed Jul. 24, 2018.

Design U.S. Appl. No. 29/657,674 to Natsume et al., filed Jul. 24, 2018.

U.S. Appl. No. 15/992,032 to Aguirre et al., filed May 29, 2018.

ARToolkit: <https://web.archive.org/web/20051013062315/http://www.hitl.washington.edu:80/artoolkit/documentation/hardware.htm>, archived Oct. 13, 2005.

Azuma, “a Survey of Augmented Reality,” *Teleoperators and Virtual Environments* 6, 4 (Aug. 1997), pp. 355-385. <https://web.archive.org/web/20010604100006/http://www.cs.unc.edu/~azuma/ARpresence.pdf>.

Azuma, “Predictive Tracking for Augmented Realty,” TR95-007, Department of Computer Science, UNC—Chapel Hill, NC, Feb. 1995.

Bimber, et al., “Spatial Augmented Reality—Merging Real and Virtual Worlds,” 2005 <https://web.media.mit.edu/~raskar/book/BimberRaskarAugmentedRealityBook.pdf>.

Jacob, “Eye Tracking in Advanced Interface Design,” Human-Computer Interaction Lab Naval Research Laboratory, Washington, D.C. / paper/ in *Virtual Environments and Advanced Interface Design*, ed. by W. Barfield and T.A. Furness, pp. 258-288, Oxford University Press, New York (1995).

Tanriverdi and Jacob, “Interacting With Eye Movements in Virtual Environments,” Department of Electrical Engineering and Computer Science, Tufts University, Medford, MA—paper/Proc. ACM CHI 2000 Human Factors in Computing Systems Conference, pp. 265-272, Addison-Wesley/ACM Press (2000).

Mixed Wallpapers, wallup.net/minimalism-gradient-pink-orange/, posted on Mar. 19, 2018, accessed on Feb. 5, 2021 (2018).

Orange-Pink Gradient by Halaxega on DeviantArt, deviantart.com/halaxega/art/Orange-Pink-Gradient-144567726, published Nov. 23, 2009, accessed on Feb. 5, 2021 (2009).

* cited by examiner

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(57) CLAIM

The ornamental design for a mobile computing support system having an illumination region, as shown and described.

DESCRIPTION

FIG. 1 is a view of a front of the mobile computing support system having an illumination region in an illuminated state showing a first image in a first sequence for the illumination region of our design;

FIG. 2 is a front view showing a second image in the first sequence thereof;

FIG. 3 is a front view showing a third image in the first sequence thereof;

FIG. 4 is a front view showing a fourth image in the first sequence thereof;

FIG. 5 is a front view showing a fifth image in the first sequence thereof;

FIG. 6 is a front view showing a sixth image in the first sequence thereof;

FIG. 7 is a view of the front of the mobile computing support system having an illumination region in an illuminated state showing a first image in a second sequence for the illumination region of our design;

FIG. 8 is a front view showing a second image in the second sequence thereof;

FIG. 9 is a front view showing a third image in the second sequence thereof;

FIG. 10 is a front view showing a fourth image in the second sequence thereof;

FIG. 11 is a front view showing a fifth image in the second sequence thereof; and,

FIG. 12 is a front view showing a sixth image in the second sequence thereof.

The dash-dash lines depicting various optional components of a mobile computing support system are included for illustrating environmental structure and form no part of the claimed design. The dot-dash lines are used to show a region broken away and form no part of the claimed design.

The appearance of the illumination region sequentially transitions between the images shown for the first sequence in FIGS. 1-6. The appearance of the illumination region sequentially transitions between the images shown for the second sequence in FIGS. 7-12. The process or period in which one image transitions to another in the first sequence or in the second sequence forms no part of the claimed design.

The difference in shading in the first sequence indicates a contrast in the illumination of the first sequence and does not depict any particular color, texture, or material. The difference in shading in the second sequence indicates a contrast in the illumination of the second sequence and does not depict any particular color, texture, or material.

1 Claim, 12 Drawing Sheets

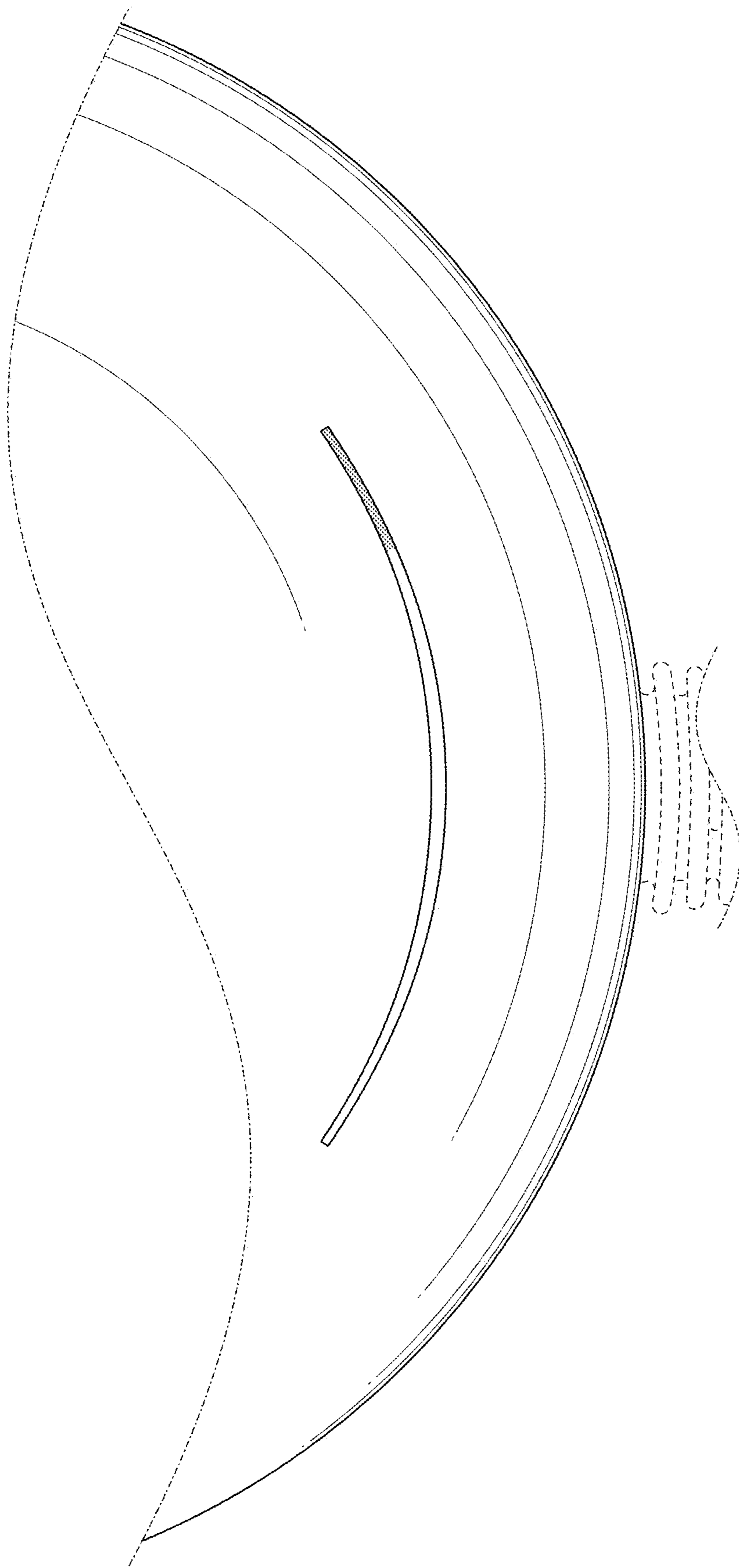


FIG. 1

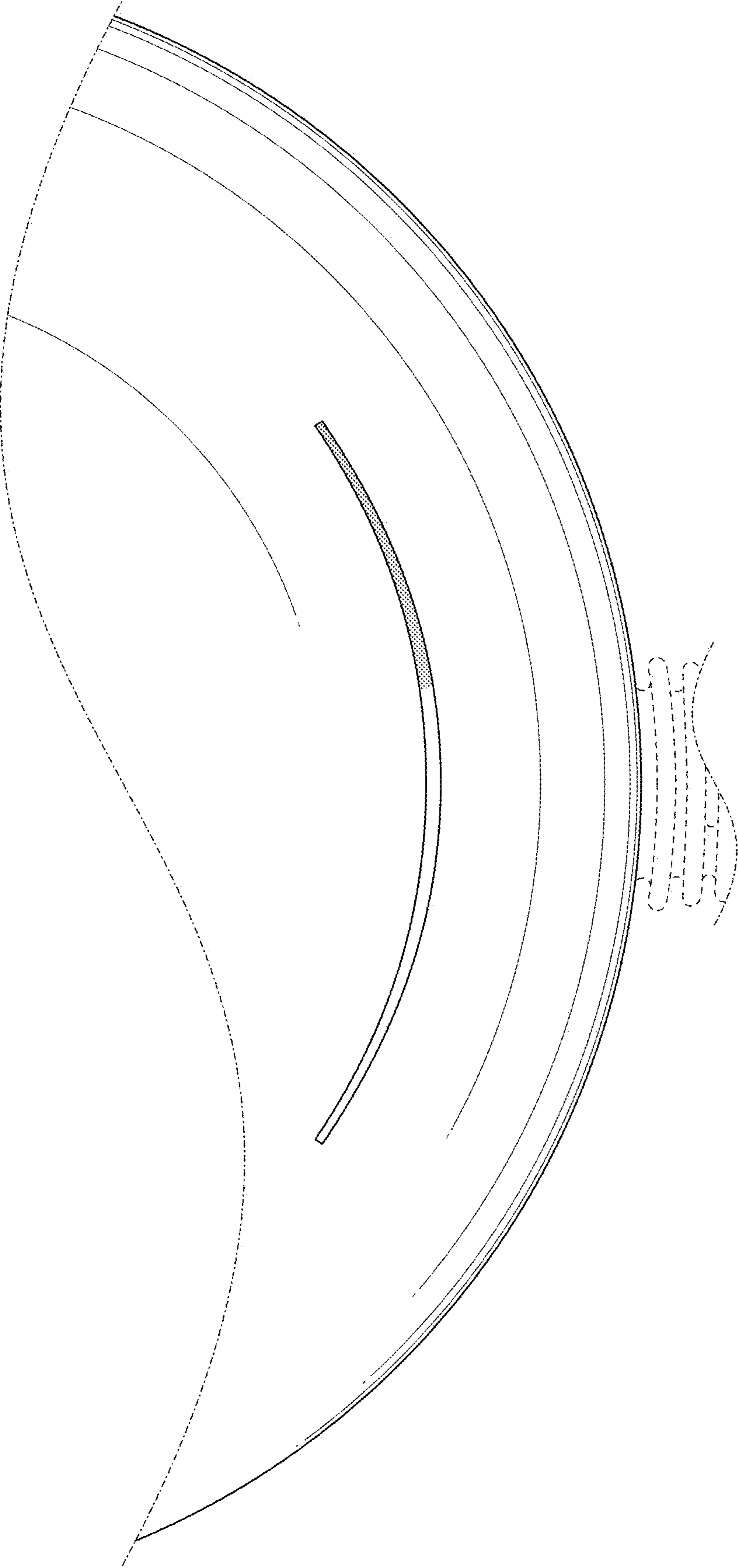


FIG. 2

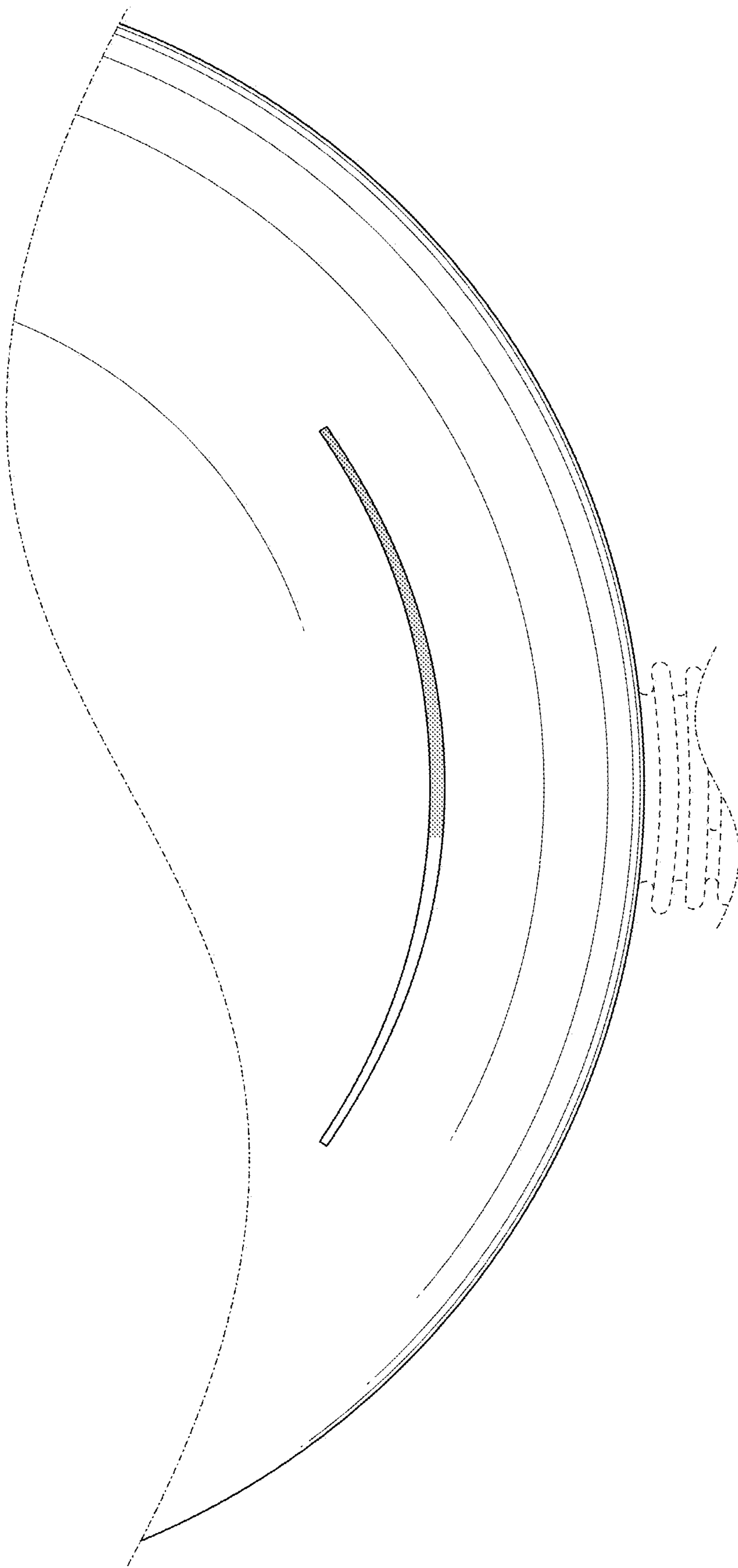


FIG. 3

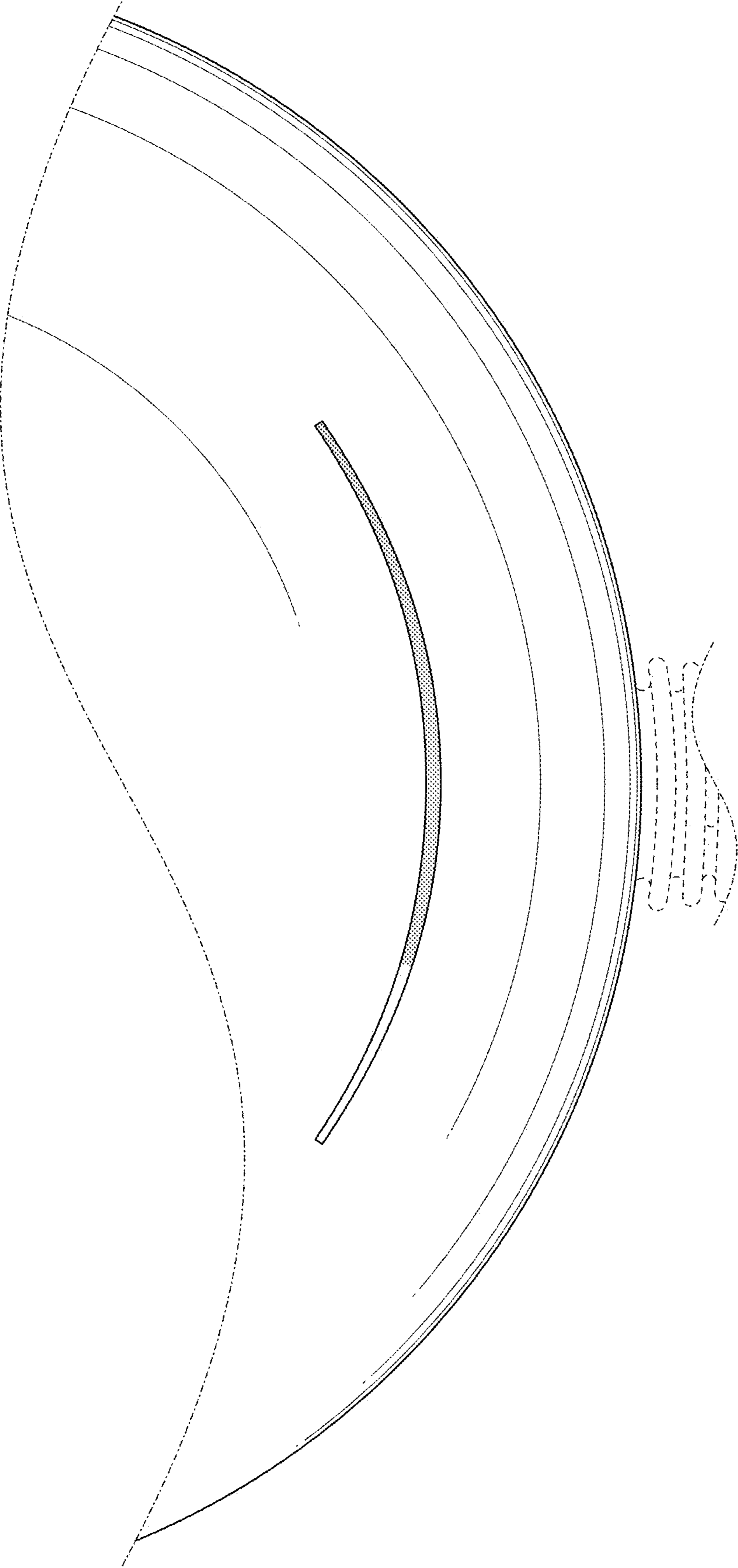


FIG. 4

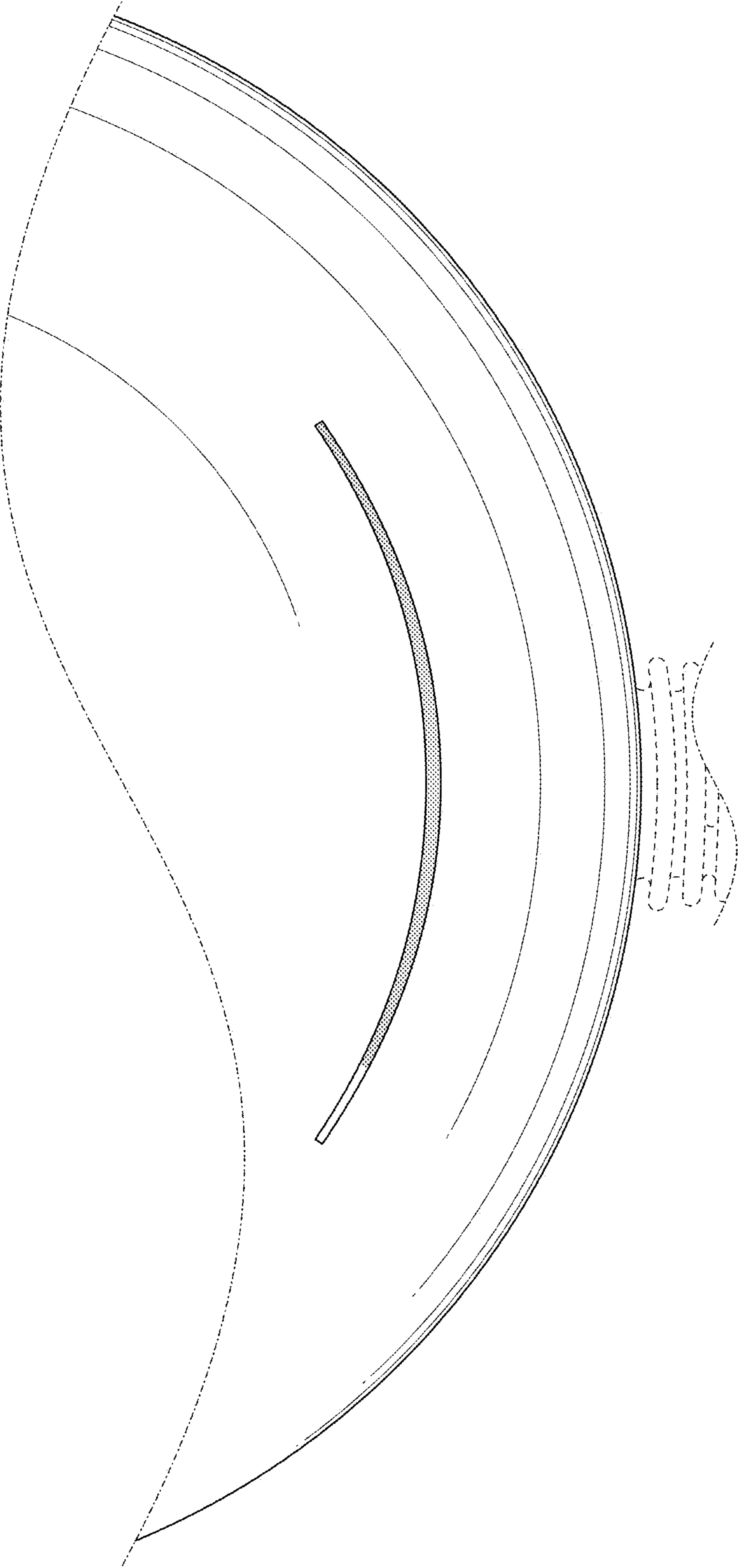


FIG. 5

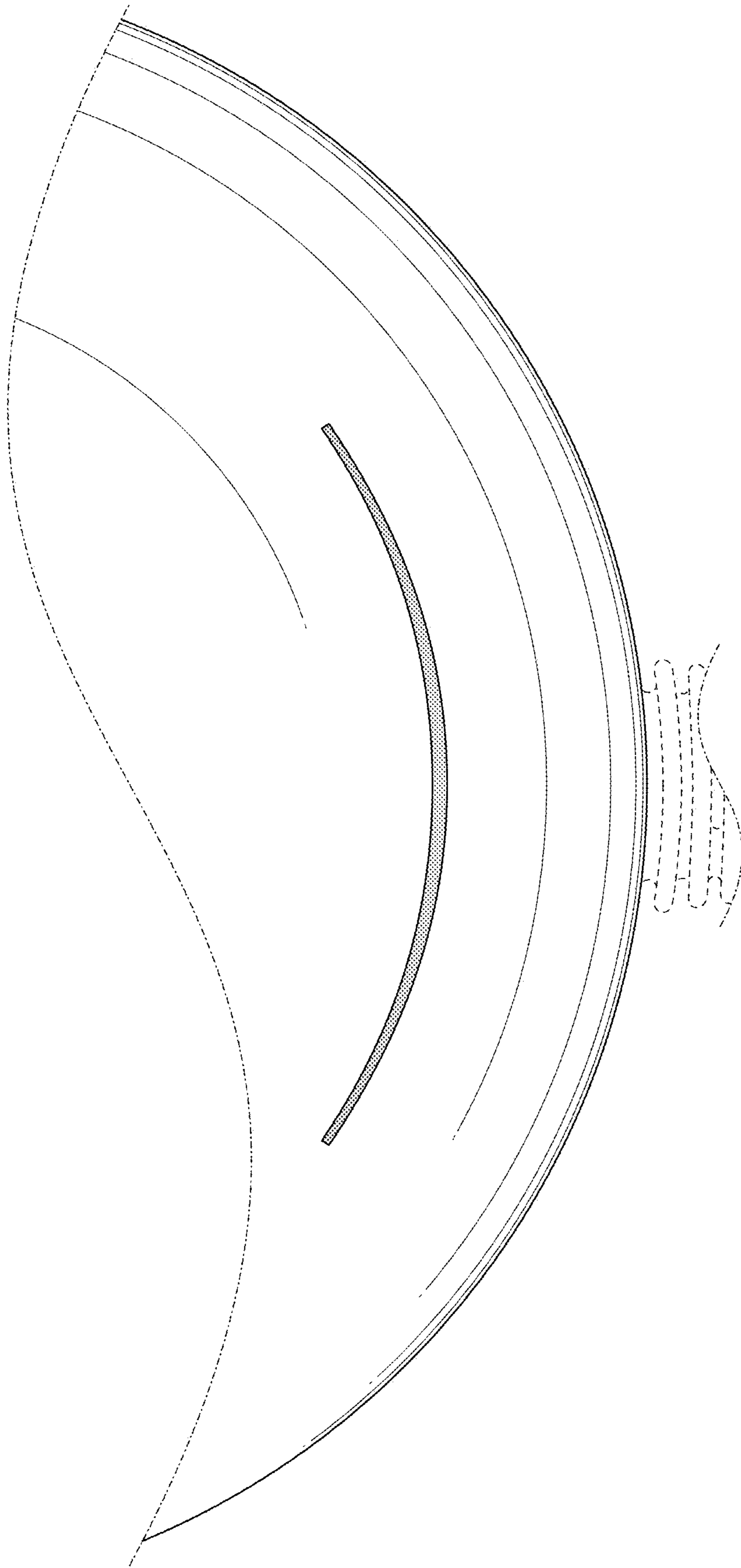


FIG. 6

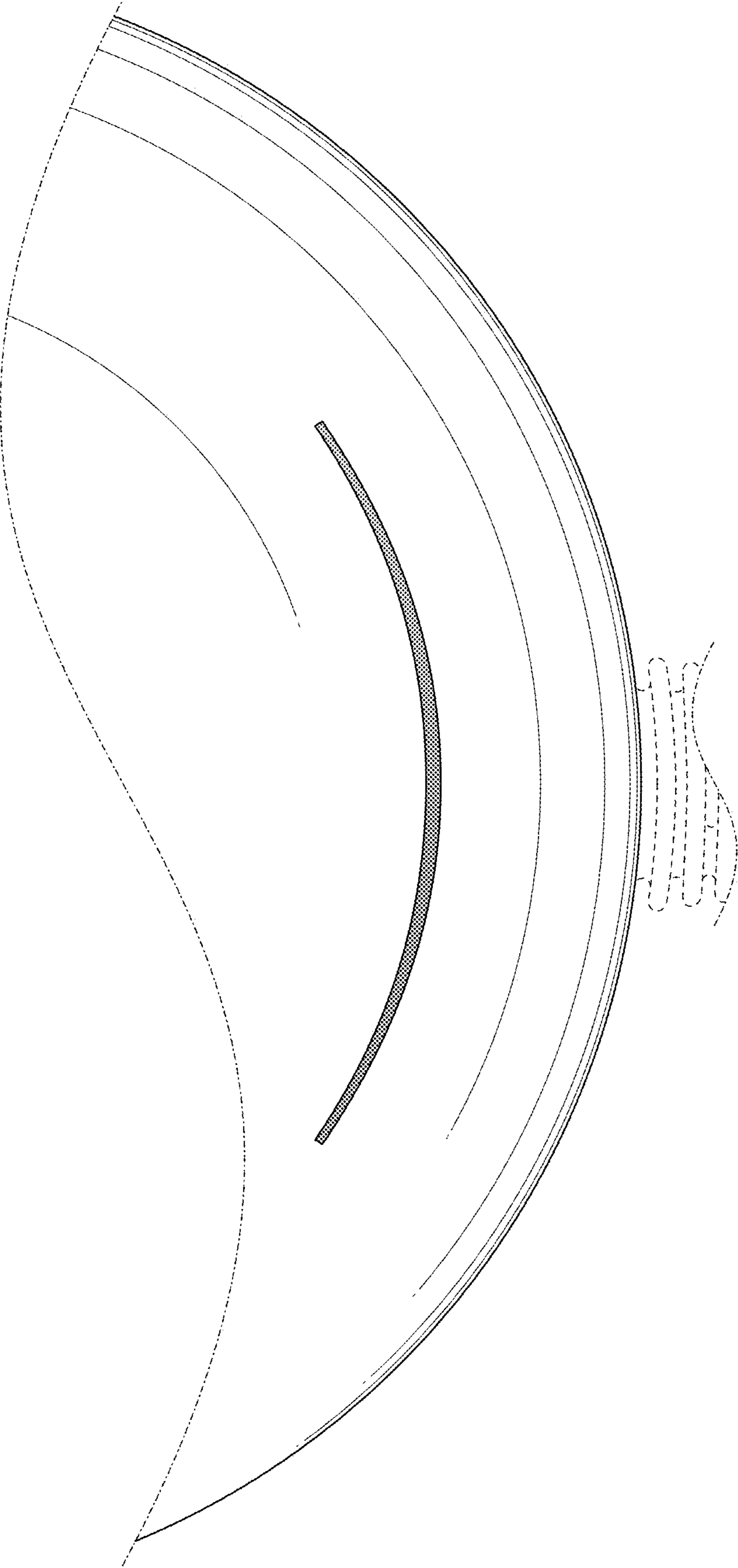


FIG. 7

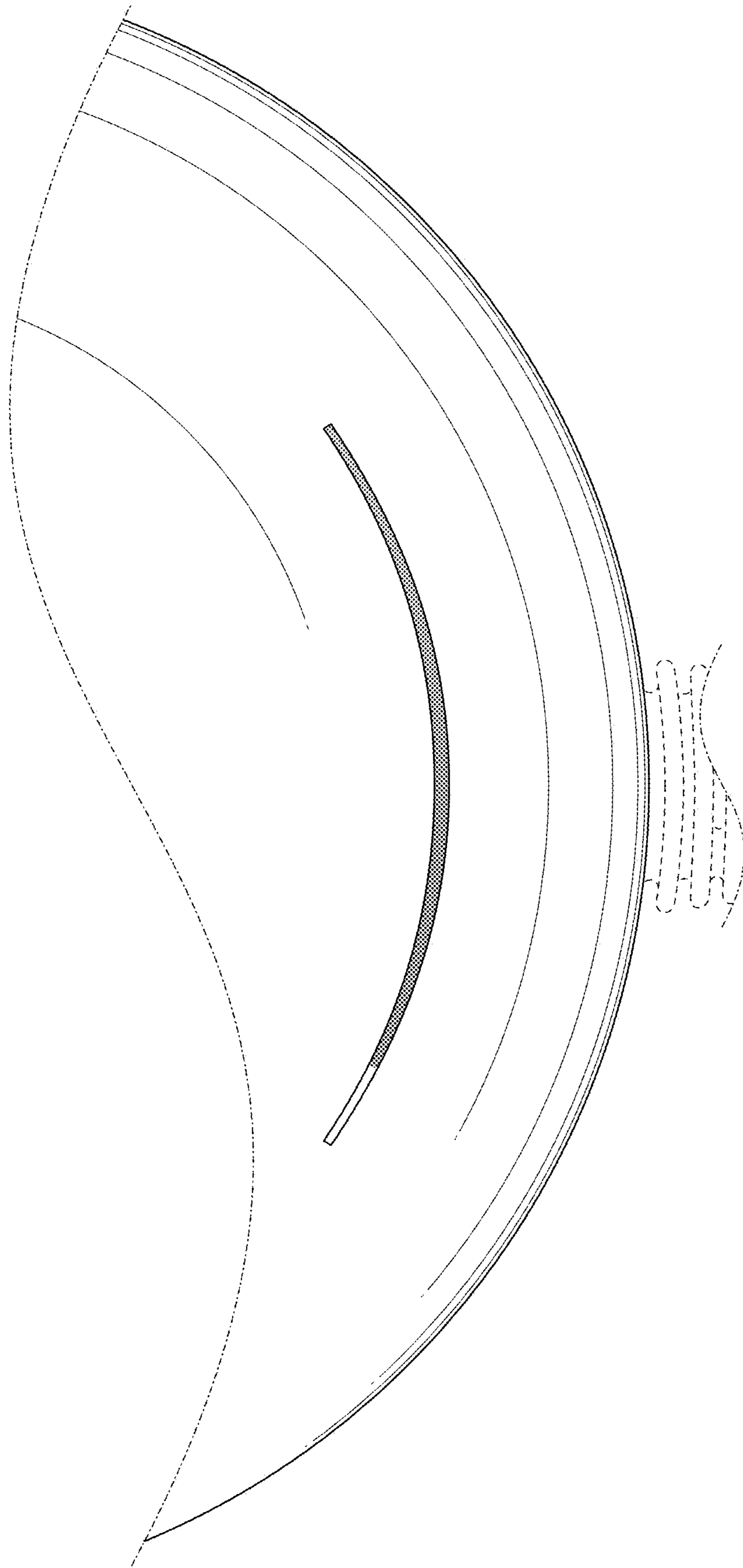


FIG. 8

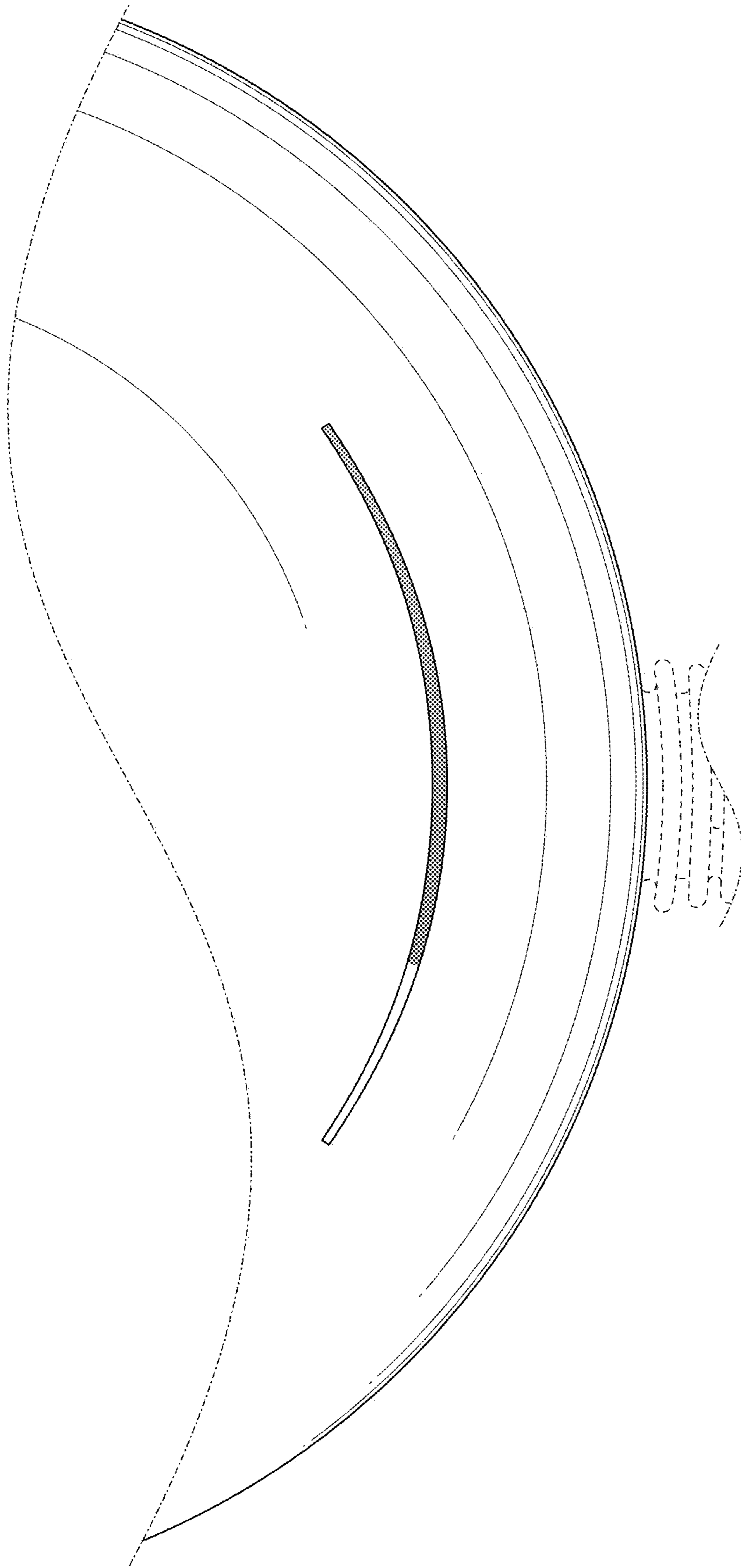


FIG. 9

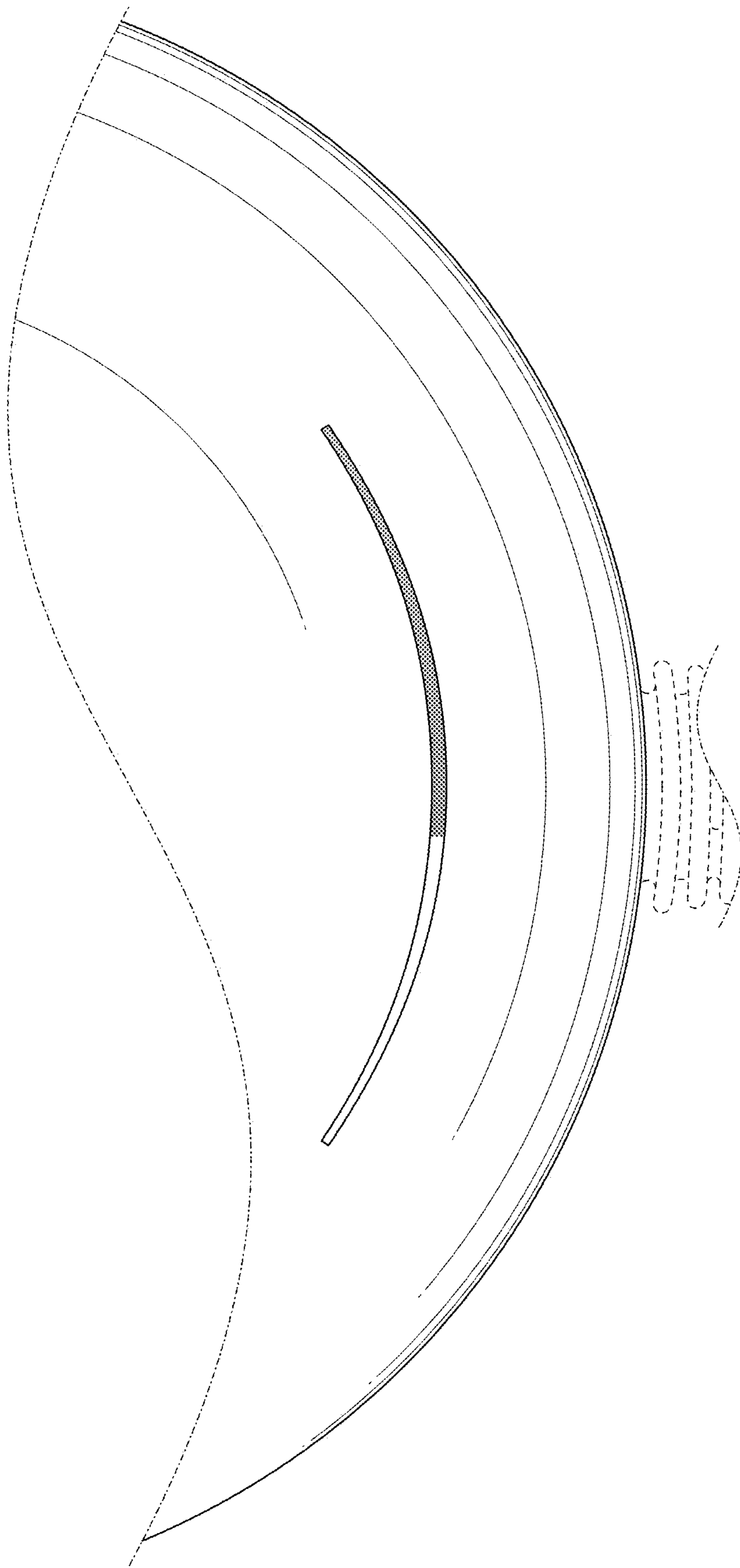


FIG. 10

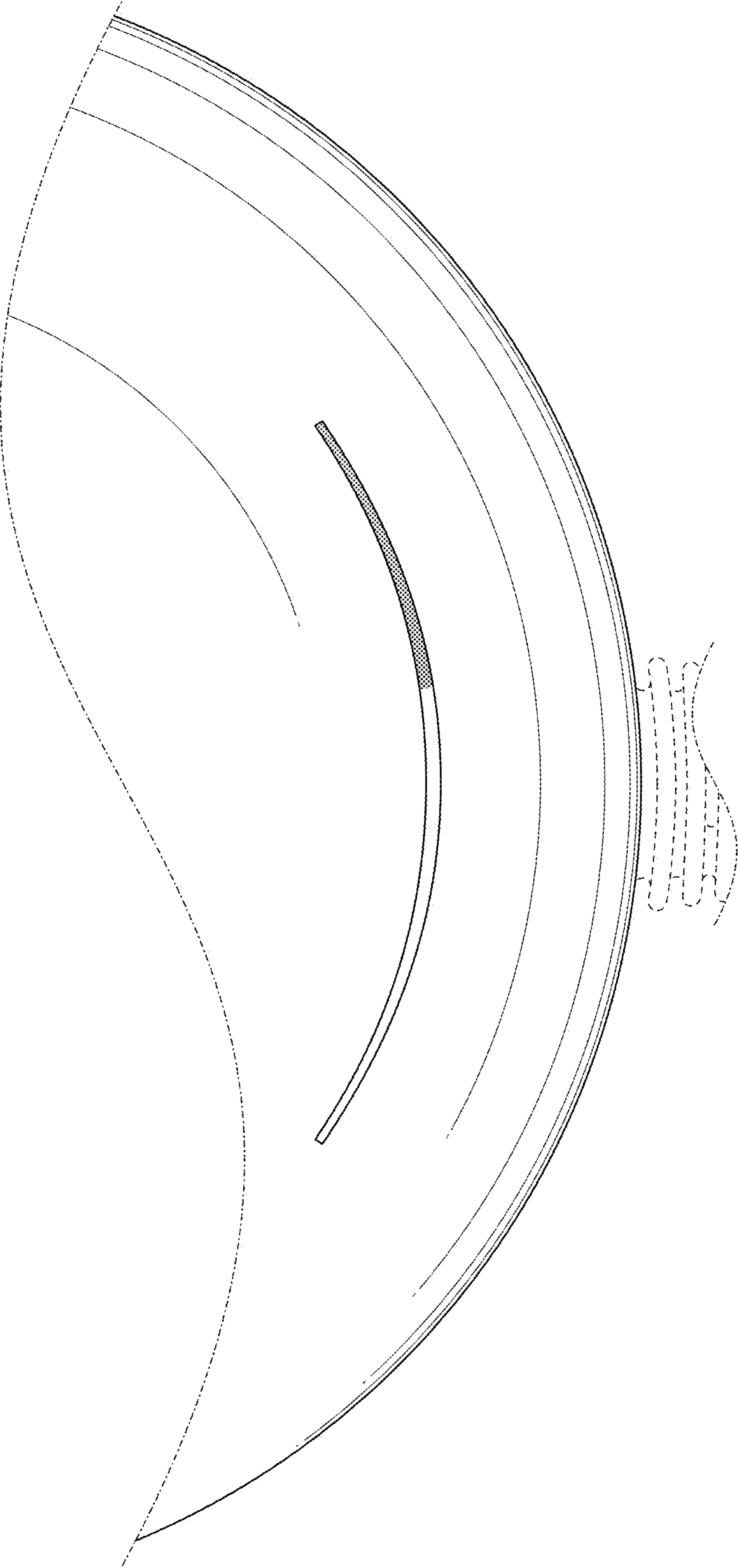


FIG. 11

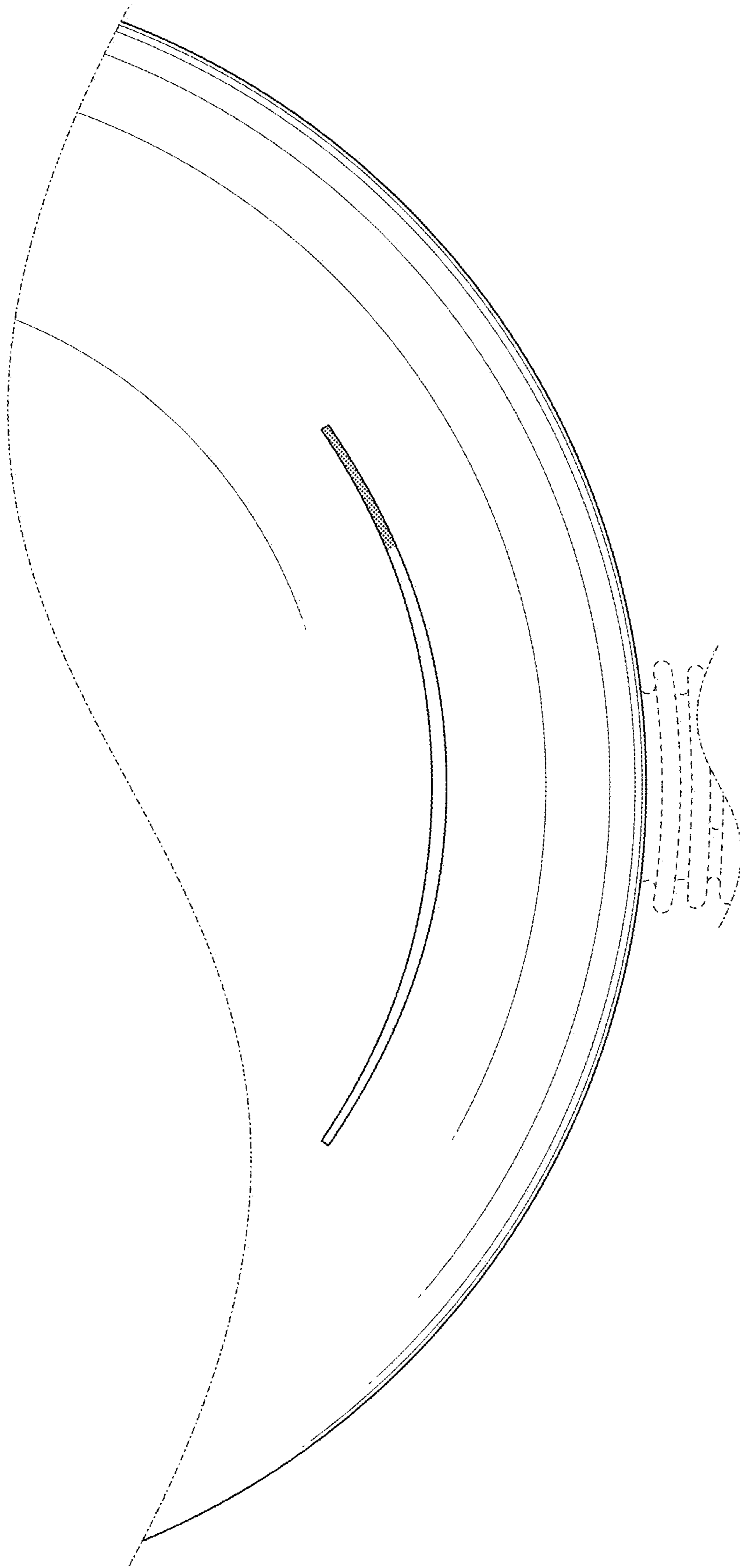


FIG. 12