



US0D1087407S

(12)

United States Design Patent

Blair et al.

(10)

Patent No.:

US D1,087,407 S

(45)

Date of Patent:

** Aug. 5, 2025

(54) LOW PROFILE STAPLE

(71) Applicant: MedShape, Inc., Atlanta, GA (US)

(72) Inventors: Jeremy Webster Blair, Atlanta, GA (US); Jack Cabell Griffis, Vero Beach, FL (US)

(73) Assignee: MEDSHAPE, INC., Atlanta, GA (US)

(**) Term: 15 Years

(21) Appl. No.: 29/937,808

(22) Filed: Apr. 17, 2024

Related U.S. Application Data

(60) Continuation of application No. 29/875,049, filed on Apr. 28, 2023, now Pat. No. Des. 1,024,332, which is (Continued)

(51) LOC (15) Cl. 24-03

(52) U.S. Cl. USPC D24/155; D24/145

(58) Field of Classification Search USPC D8/388, 390; D24/145, 155 (Continued)

(56) References Cited

U.S. PATENT DOCUMENTS

262,635 A 8/1882 Adams

2,632,356 A 3/1953 Thiel

(Continued)

FOREIGN PATENT DOCUMENTS

CA 19966 6/1955

CA 50730 1/1983

(Continued)

OTHER PUBLICATIONS

Depuy Synthes, BME Elite Continuous Compression Implant Product Overview. DePuy Synthes, 2017. Pamphlet.

(Continued)

Primary Examiner — Sheryl Lane

Assistant Examiner — Ieisha N Price

(74) Attorney, Agent, or Firm — Husch Blackwell LLP; Bryan D. Stewart

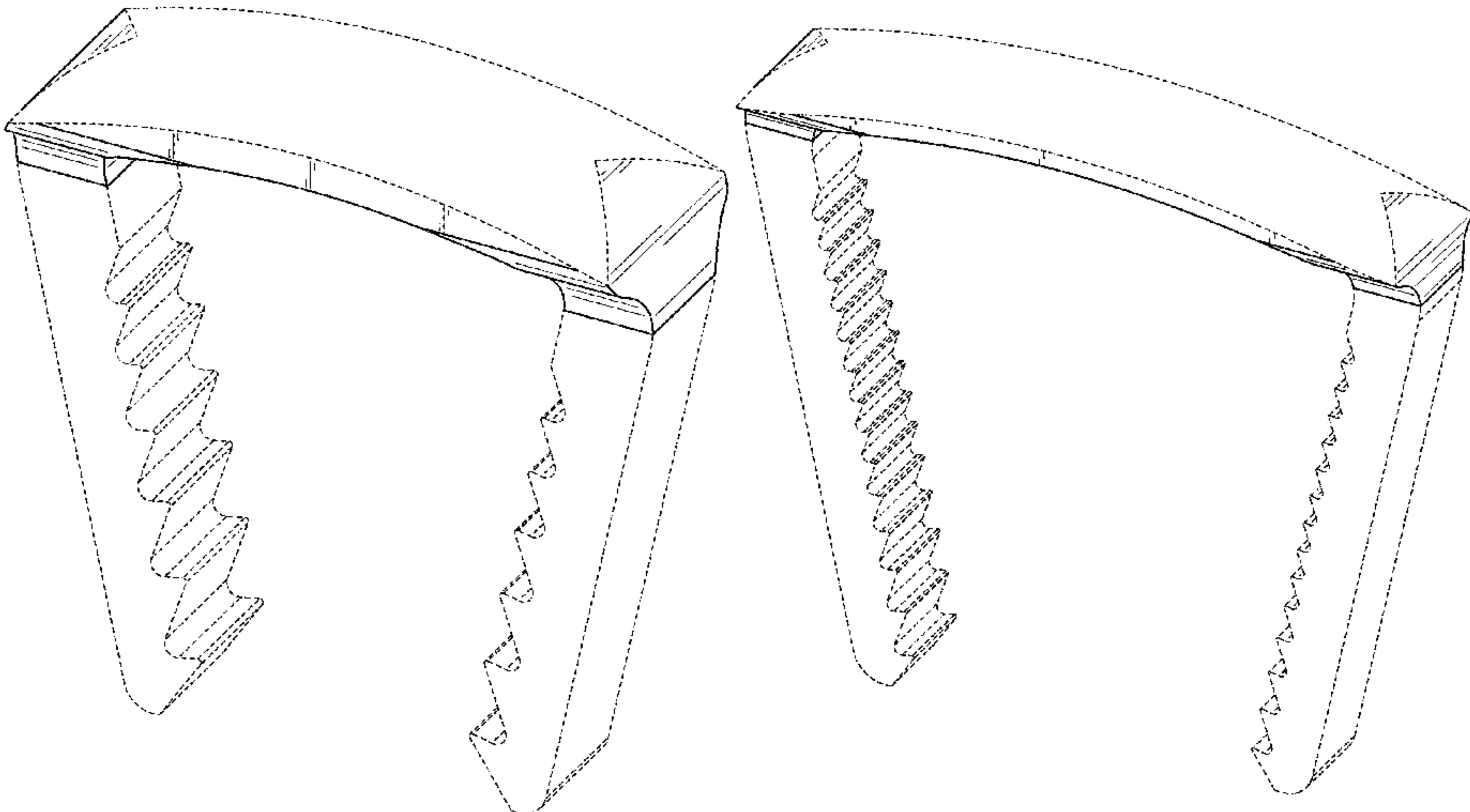
(57) CLAIM

The ornamental design for a low profile staple as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a low profile staple, according to the first embodiment of the present disclosure; FIG. 2 is a front side view of a low profile staple, according to the first embodiment of the present disclosure; FIG. 3 is a rear side view of a low profile staple, according to the first embodiment of the present disclosure; FIG. 4 is a rear side view of a low profile staple, according to the first embodiment of the present disclosure; FIG. 5 is a left side view of a low profile staple, according to the first embodiment of the present disclosure; FIG. 6 is a top view of a low profile staple, according to the first embodiment of the present disclosure; FIG. 7 is a bottom view of a low profile staple, according to the first embodiment of the present disclosure; FIG. 8 is a perspective view of a low profile staple, according to the second embodiment of the present disclosure; FIG. 9 is a front side view of a low profile staple, according to the second embodiment of the present disclosure; FIG. 10 is a rear side view of a low profile staple, according to the second embodiment of the present disclosure; FIG. 11 is a right side view of a low profile staple, according to the second embodiment of the present disclosure; FIG. 12 is a left side view of a low profile staple, according to the second embodiment of the present disclosure; FIG. 13 is a top view of a low profile staple, according to the second embodiment of the present disclosure; and, FIG. 14 is a bottom view of a low profile staple, according to the second embodiment of the present disclosure. The broken lines in the drawings illustrate portions of the low profile staple and form no part of the claimed design.

1 Claim, 14 Drawing Sheets



Related U.S. Application Data

a continuation of application No. 29/845,472, filed on Jul. 7, 2022, now Pat. No. Des. 1,009,269, and a continuation-in-part of application No. 17/472,956, filed on Sep. 13, 2021, now Pat. No. 11,911,026, which is a continuation of application No. 17/004,789, filed on Aug. 27, 2020, now Pat. No. 11,116,499, said application No. 29/845,472 is a division of application No. 29/748,166, filed on Aug. 27, 2020, now Pat. No. Des. 957,636, said application No. 17/004,789 is a continuation-in-part of application No. 16/393,489, filed on Apr. 24, 2019, now Pat. No. 11,020,110, said application No. 29/748,166 is a continuation-in-part of application No. 16/393,489, filed on Apr. 24, 2019, now Pat. No. 11,020,110, which is a continuation of application No. 16/058,638, filed on Aug. 8, 2018, now Pat. No. 10,307,156, said application No. 17/004,789 is a continuation-in-part of application No. 29/659,375, filed on Aug. 8, 2018, now Pat. No. Des. 895,113, said application No. 29/748,166 is a continuation-in-part of application No. 29/659,375, filed on Aug. 8, 2018, now Pat. No. Des. 895,113.

(52) U.S. Cl.

CPC *A61B 17/0642* (2013.01); *A61B 17/0644*(2013.01); *A61B 2017/00867* (2013.01); *A61B2017/0645* (2013.01)

(58) Field of Classification Search

CPC A61B 17/0642; A61B 17/0644; A61B 2017/00867; A61B 2017/0645; F16B 15/0007; F16B 15/0015; B21G 7/02; B21D 53/46

See application file for complete search history.

(56) References Cited**U.S. PATENT DOCUMENTS**

2,867,807 A	1/1959	Anstett
D193,140 S	7/1962	Brown
3,499,359 A	3/1970	Yrjanainen
3,611,708 A	10/1971	Moore
D227,976 S	7/1973	Gerald
3,969,975 A	7/1976	Krol
4,269,180 A	5/1981	Dall
4,402,445 A	9/1983	Green
4,454,875 A	6/1984	Pratt
D281,814 S	12/1985	Pratt
4,570,623 A	2/1986	Ellison
D286,442 S	10/1986	Korthoff
4,983,176 A	1/1991	Cushman
5,366,479 A	11/1994	McGarry
5,454,814 A	10/1995	Comte
5,662,655 A	9/1997	Laboureau et al.
6,187,009 B1	2/2001	Herzog et al.
D574,956 S	8/2008	Grim
D586,915 S	2/2009	Grim et al.
7,722,610 B2	5/2010	Mola et al.
D625,417 S	10/2010	Fox
D625,591 S	10/2010	MacDonald et al.
D691,720 S	10/2013	Cheney
D705,930 S	5/2014	Cheney
D706,927 S	6/2014	Cheney
D707,357 S	6/2014	Cheney
D717,951 S	11/2014	Cheney
9,095,338 B2 *	8/2015	Taylor A61B 17/0682
9,402,624 B1	8/2016	Scott et al.
D773,665 S	12/2016	Cheney et al.
D773,666 S	12/2016	Cheney
D775,336 S	12/2016	Shelton

D777,329 S	1/2017	Montoya
D780,311 S	2/2017	Cheney
D782,674 S	3/2017	Nering
9,675,395 B2	6/2017	Averous et al.
D804,666 S	12/2017	Guo et al.
10,085,743 B2	10/2018	Roedl
10,105,134 B2 *	10/2018	Biedermann A61B 17/083
10,117,647 B2	11/2018	Cheney
10,307,156 B1	6/2019	Blair et al.
D857,199 S	8/2019	Cheney et al.
10,383,625 B1	8/2019	Pirela-Cruz
D870,284 S	12/2019	Hollis et al.
10,568,627 B2	2/2020	Guo et al.
10,610,218 B2	4/2020	Palmer et al.
D883,482 S	5/2020	Majors
D886,299 S	6/2020	Cundiff
D891,618 S	7/2020	Cheney
D892,331 S	8/2020	Hollis et al.
D895,113 S	9/2020	Blair
10,779,816 B2 *	9/2020	Goldstein A61B 17/8095
11,020,110 B1 *	6/2021	Blair A61B 17/0642
11,116,499 B1	9/2021	Blair et al.
11,179,149 B2	11/2021	Hartegen
11,317,951 B2	5/2022	Hollis
D957,636 S	7/2022	Blair
D960,371 S	8/2022	Hollis
D961,081 S	8/2022	Sayger
D988,856 S	6/2023	D'Ascanio
D1,009,269 S *	12/2023	Blair D24/155
D1,017,038 S *	3/2024	Bushko D24/155
D1,024,332 S *	4/2024	Blair A61B 17/0644
		D24/155
D1,034,989 S *	7/2024	Chevrel D24/155
D1,050,432 S *	11/2024	Niver D24/155
D1,050,433 S *	11/2024	Reed D24/155
2003/0021655 A1 *	1/2003	Correll F24D 3/143
		411/473
2006/0058802 A1	3/2006	Kofoed
2006/0233628 A1	10/2006	Lee
2007/0270906 A1	11/2007	Molz
2008/0161808 A1	7/2008	Fox
2008/0167666 A1	7/2008	Fiere
2008/0319443 A1	12/2008	Focht et al.
2009/0062800 A1	3/2009	Shano
2010/0063506 A1	3/2010	Fox et al.
2011/0118842 A1	5/2011	Bernard
2013/0030437 A1	1/2013	Fox
2013/0123863 A1	5/2013	Hollis et al.
2013/0184768 A1	7/2013	McCliff
2013/0231667 A1	9/2013	Taylor et al.
2013/0267956 A1	10/2013	Terrill et al.
2014/0018809 A1	1/2014	Allen
2014/0097228 A1	4/2014	Taylor
2014/0276830 A1	9/2014	Cheney
2014/0277516 A1	9/2014	Miller
2014/0309639 A1	10/2014	Averous
2014/0358187 A1	12/2014	Taber
2015/0133940 A1	5/2015	Palmer et al.
2015/0282819 A1	10/2015	Austin
2015/0313592 A1	11/2015	Coillard-Lavirotte et al.
2016/0000434 A1	1/2016	Cocaign et al.
2016/0030039 A1	2/2016	Seavey et al.
2016/0066907 A1	3/2016	Cheney et al.
2016/0135808 A1	5/2016	Anderson
2016/0199060 A1	7/2016	Morgan et al.
2016/0235460 A1	8/2016	Wahl
2016/0338697 A1	11/2016	Biedermann
2017/0065275 A1	3/2017	Cheney
2017/0181779 A1	6/2017	Leither
2017/0202552 A1	7/2017	Coleman
2017/0252036 A1	9/2017	Palmer
2017/0311948 A1	11/2017	Morgan
2018/0008263 A1	1/2018	Goldstein
2018/0153551 A1	6/2018	Jianxin
2018/0271521 A1	9/2018	Wahl
2018/0353172 A1	12/2018	Hartdegen
2019/0000451 A1	1/2019	Majors
2019/0046182 A1	2/2019	Krumme
2019/0046183 A1	2/2019	Hartdegen

(56)

References Cited

U.S. PATENT DOCUMENTS

2019/0105040 A14/2019Gordon

2019/0117219 A14/2019Ritz

2019/0150921 A15/2019Fonte

2019/0154070 A15/2019Kargenian

2019/0192140 A16/2019Ducharme

2019/0192160 A16/2019Stamp

2019/0357951 A111/2019Rogers

2020/0000465 A11/2020Maclure

2020/0038076 A12/2020Amis

2020/0197005 A16/2020Daniel

2020/0229813 A17/2020Seykora

2021/0228206 A17/2021Cheney

2021/0298748 A19/2021Campbell

2021/0386422 A112/2021Maclure

2022/0117599 A14/2022Fein

2022/0338869 A110/2022Kobayashi

2023/0255623 A18/2023Ritz

2023/0258214 A18/2023Wang

2023/0270435 A18/2023Fox

2024/0099715 A1*3/2024Blair A61B 17/0642

2024/0315696 A1*9/2024Hannah A61B 17/0682

FOREIGN PATENT DOCUMENTS

CA1326776/2010

CN3031494484/2015

CN30490719911/2018

FR28741662/2006

FR30083021/2015

GB1035018*12/1986

GB60145676/2017

GB6352633*3/2024

GB6352634*3/2024

GB6352635*3/2024

IN256120*6/2014

JPD11329912/2002

JPD1504138*8/2014

KR300967753.00008/2018

WO20150263572/2015

WO201720792212/2017

WO20181482848/2018

WO201922624811/2019

OTHER PUBLICATIONS

Stryker, EasyClip Osteosynthesis Compression Staples. Stryker GMBH, Switzerland, 2015. Pamphlet.

Wright, Fuseforce Fixation System Surgical Technique. Wright Medical Group N.V., Oct. 25, 2018. Pamphlet.

* cited by examiner

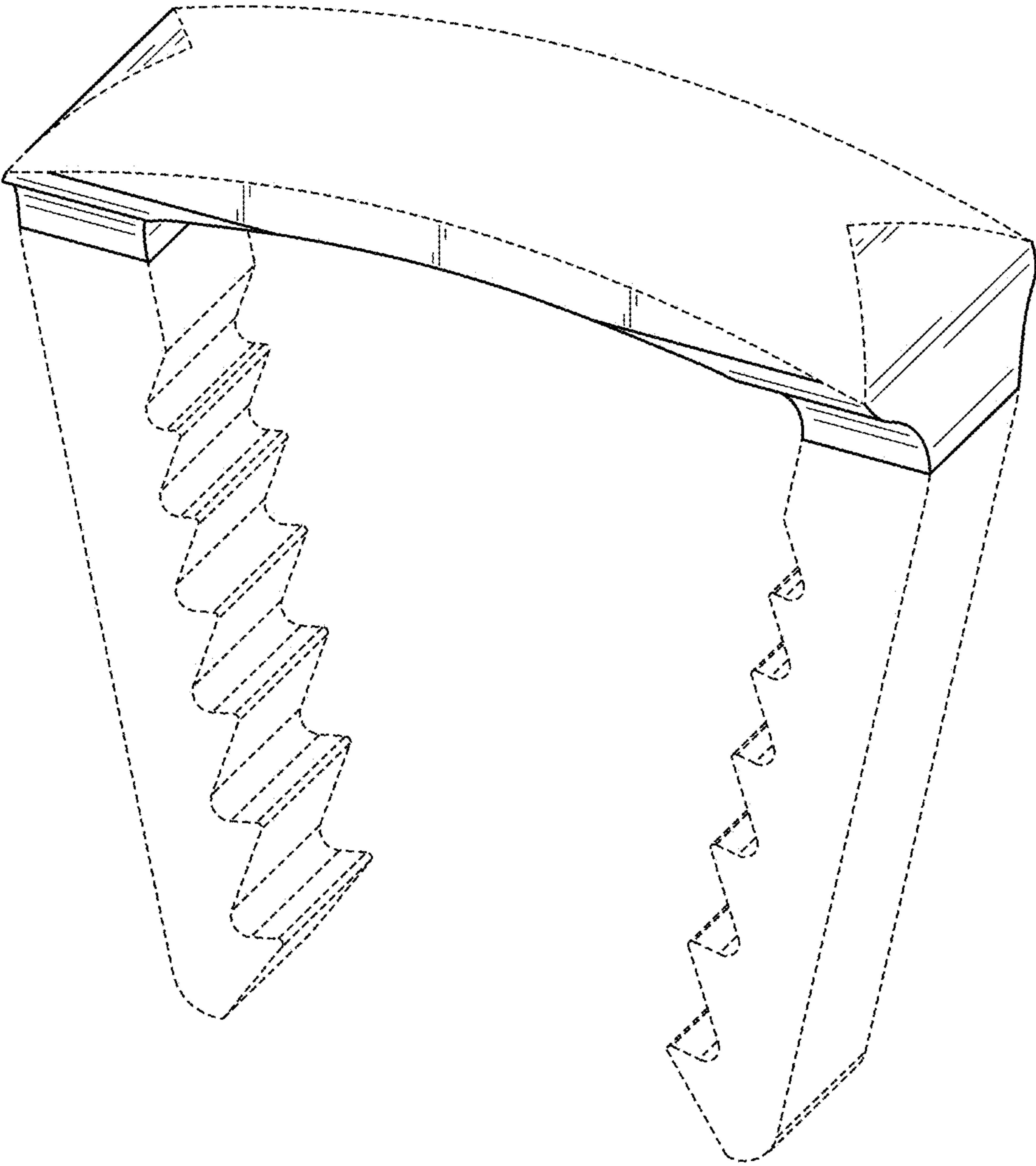


FIG. 1

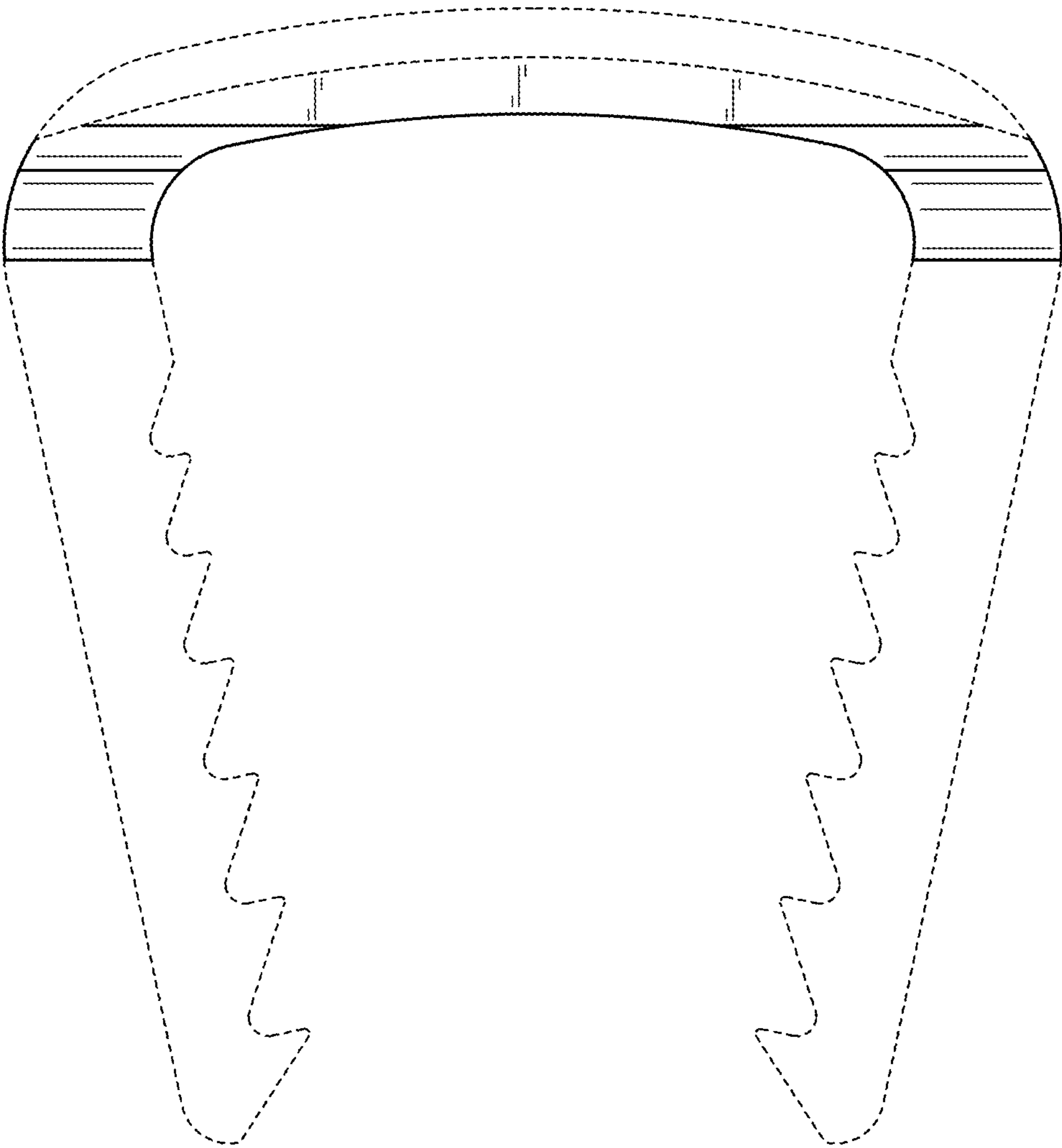


FIG. 2

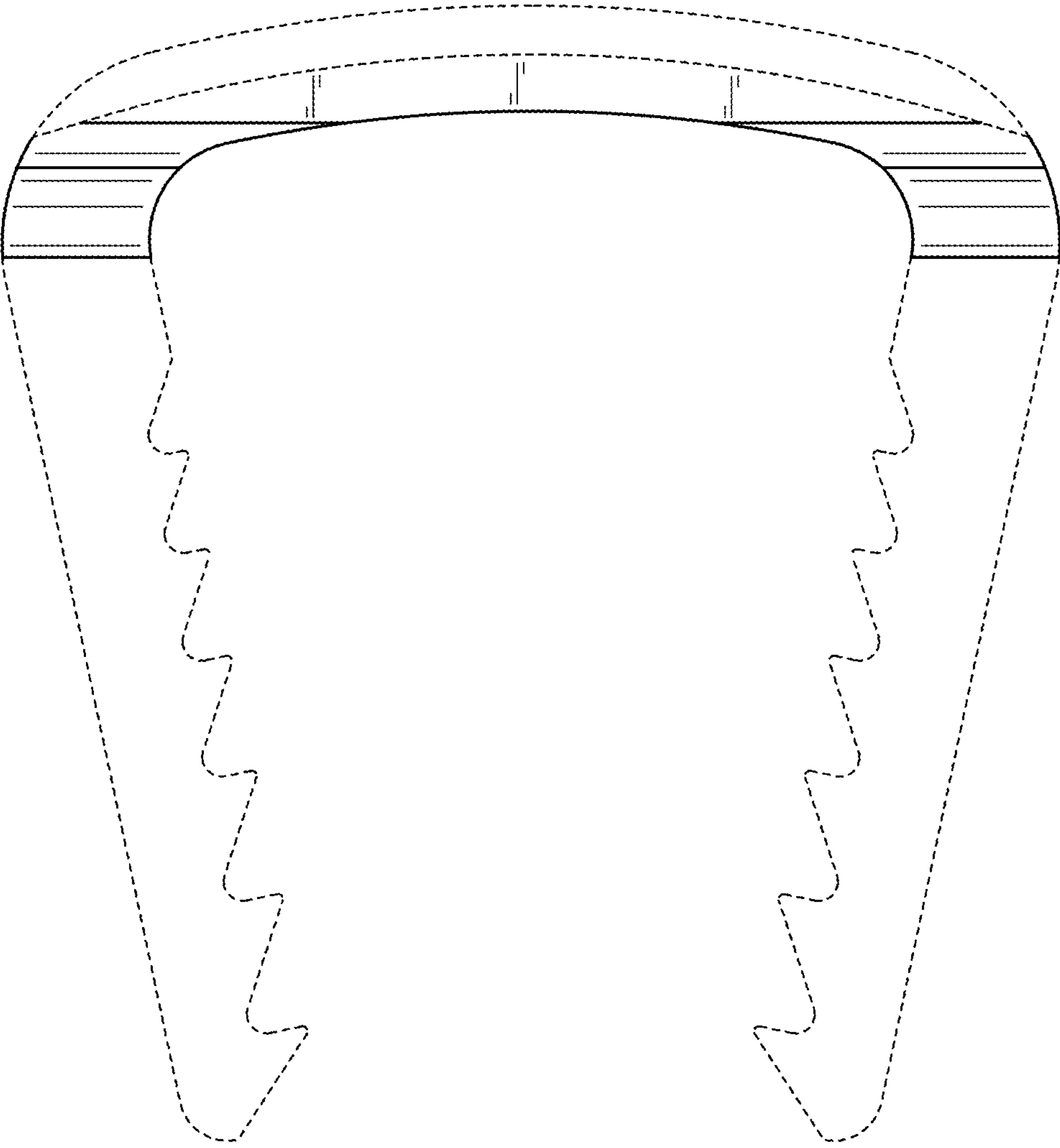


FIG. 3

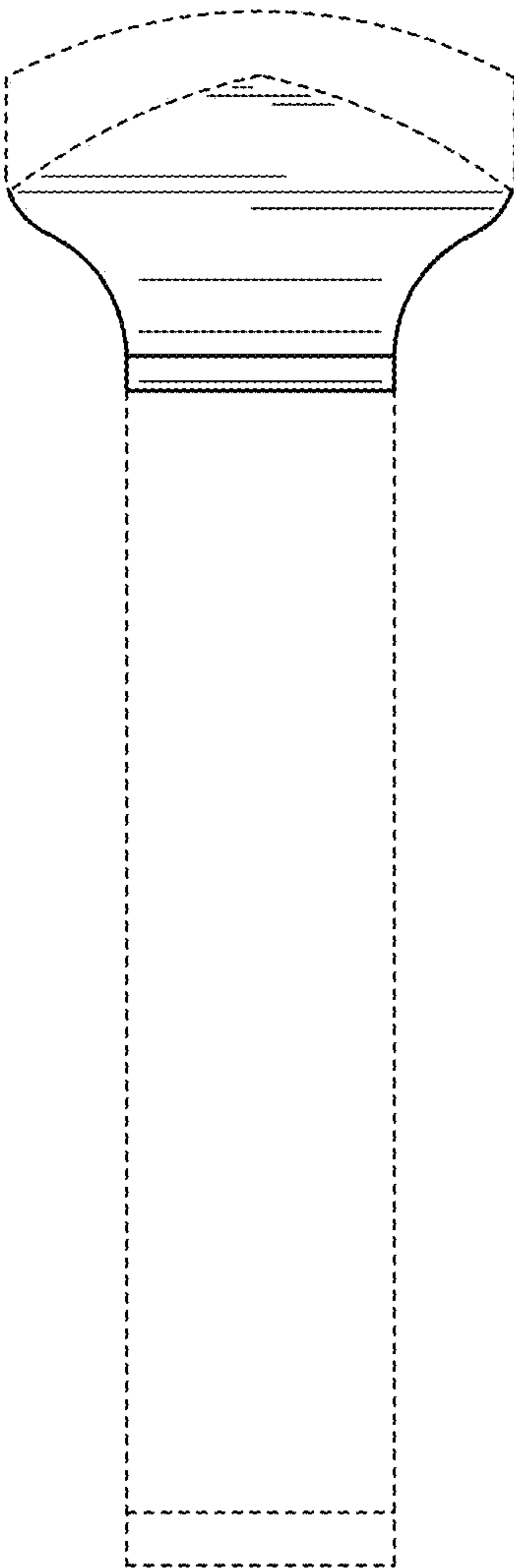


FIG. 4

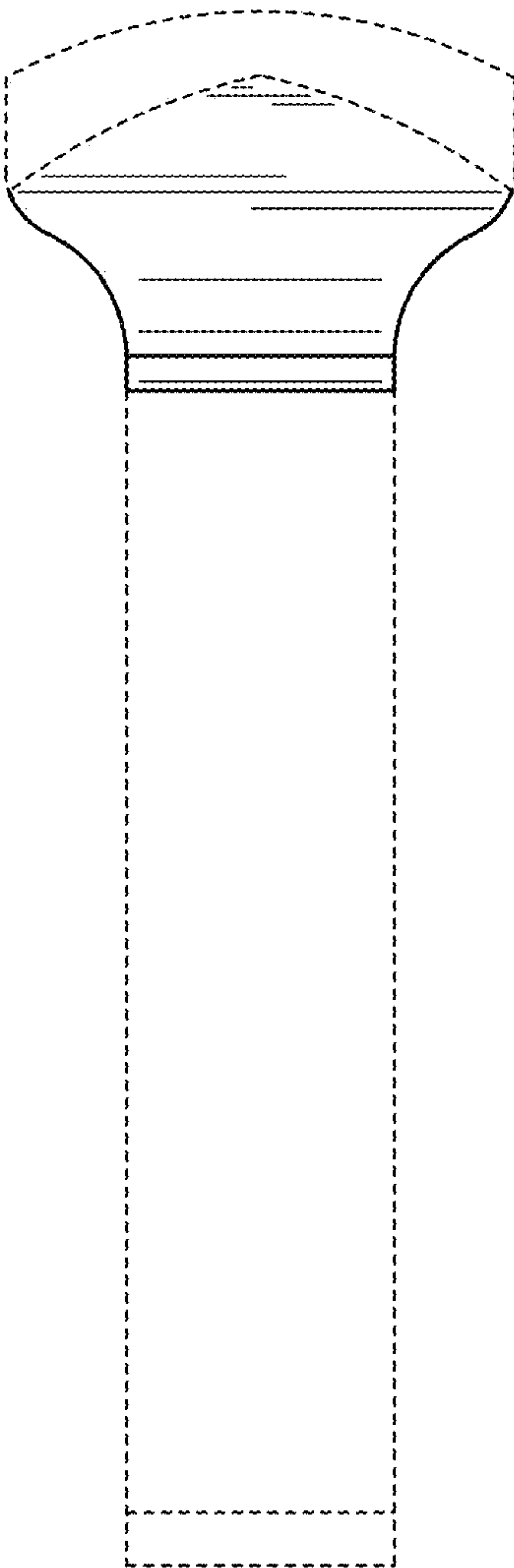


FIG. 5



FIG. 6

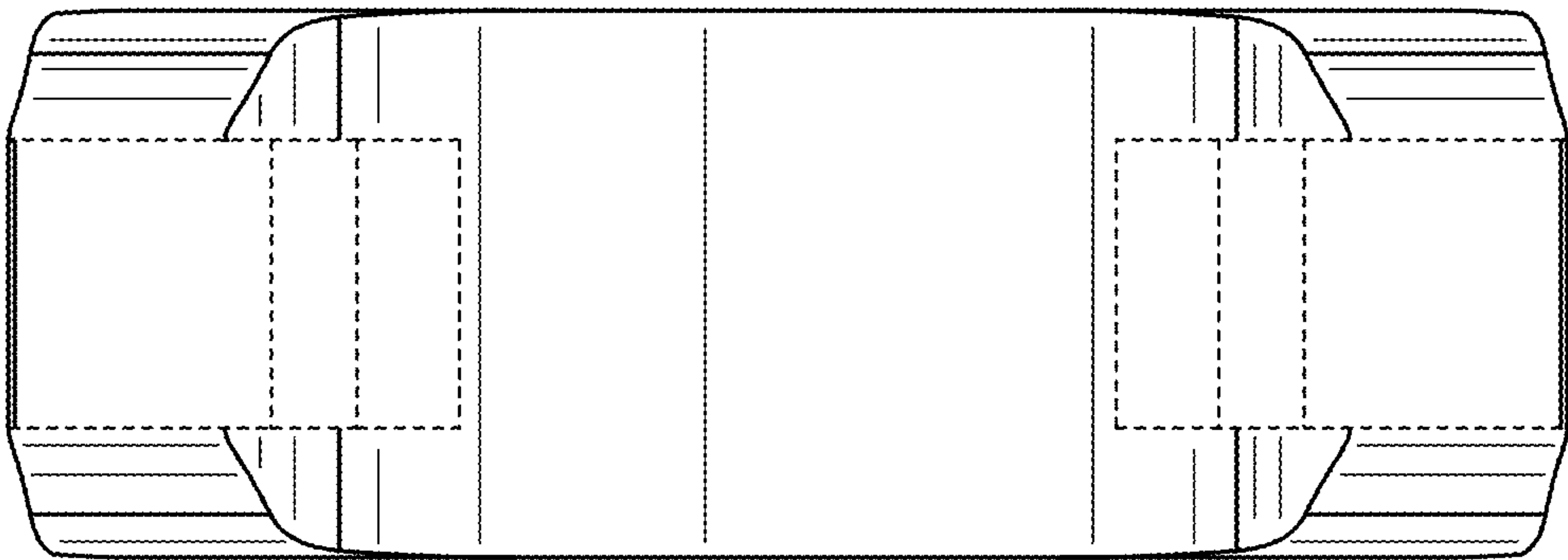


FIG. 7

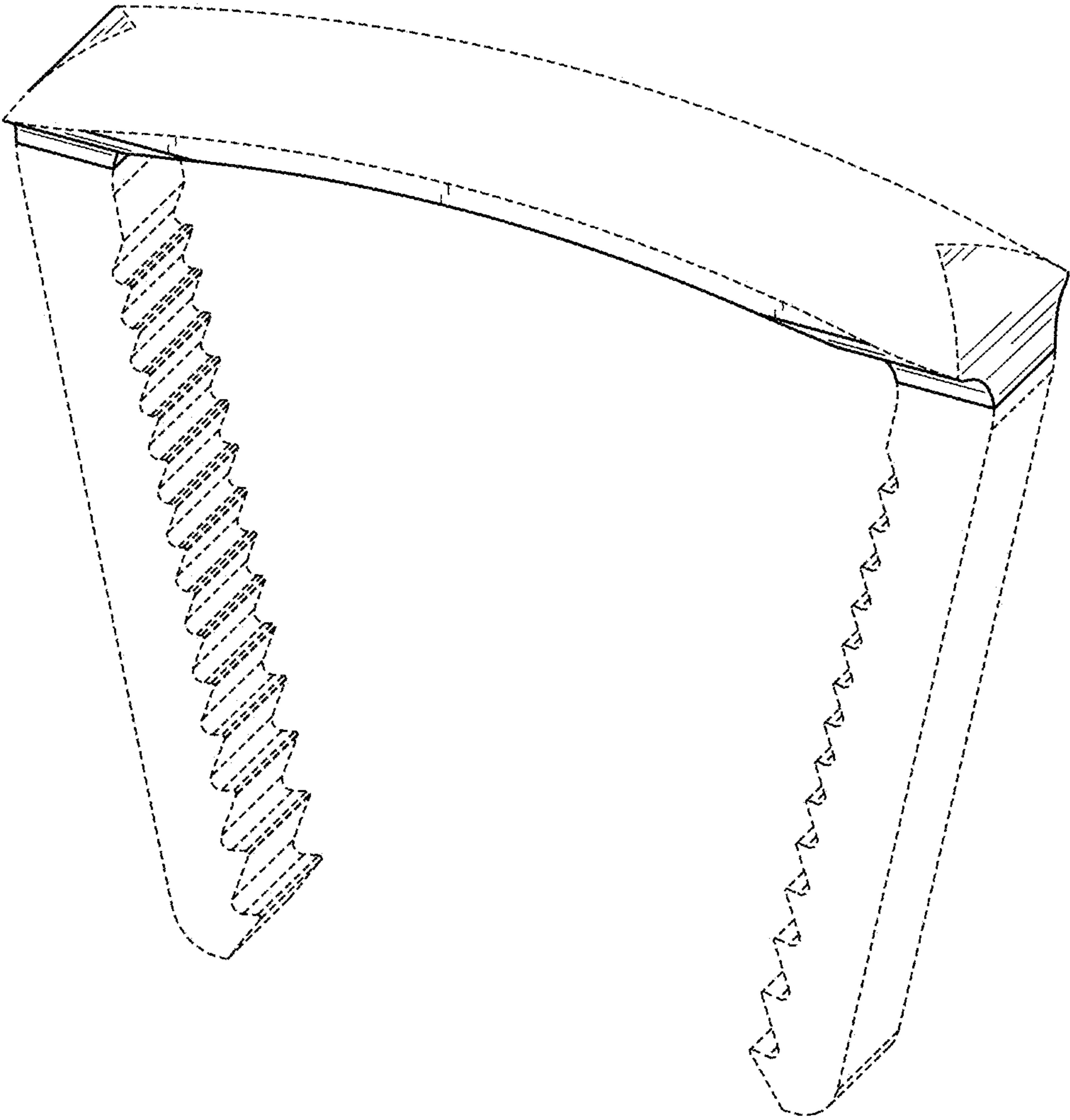


FIG. 8

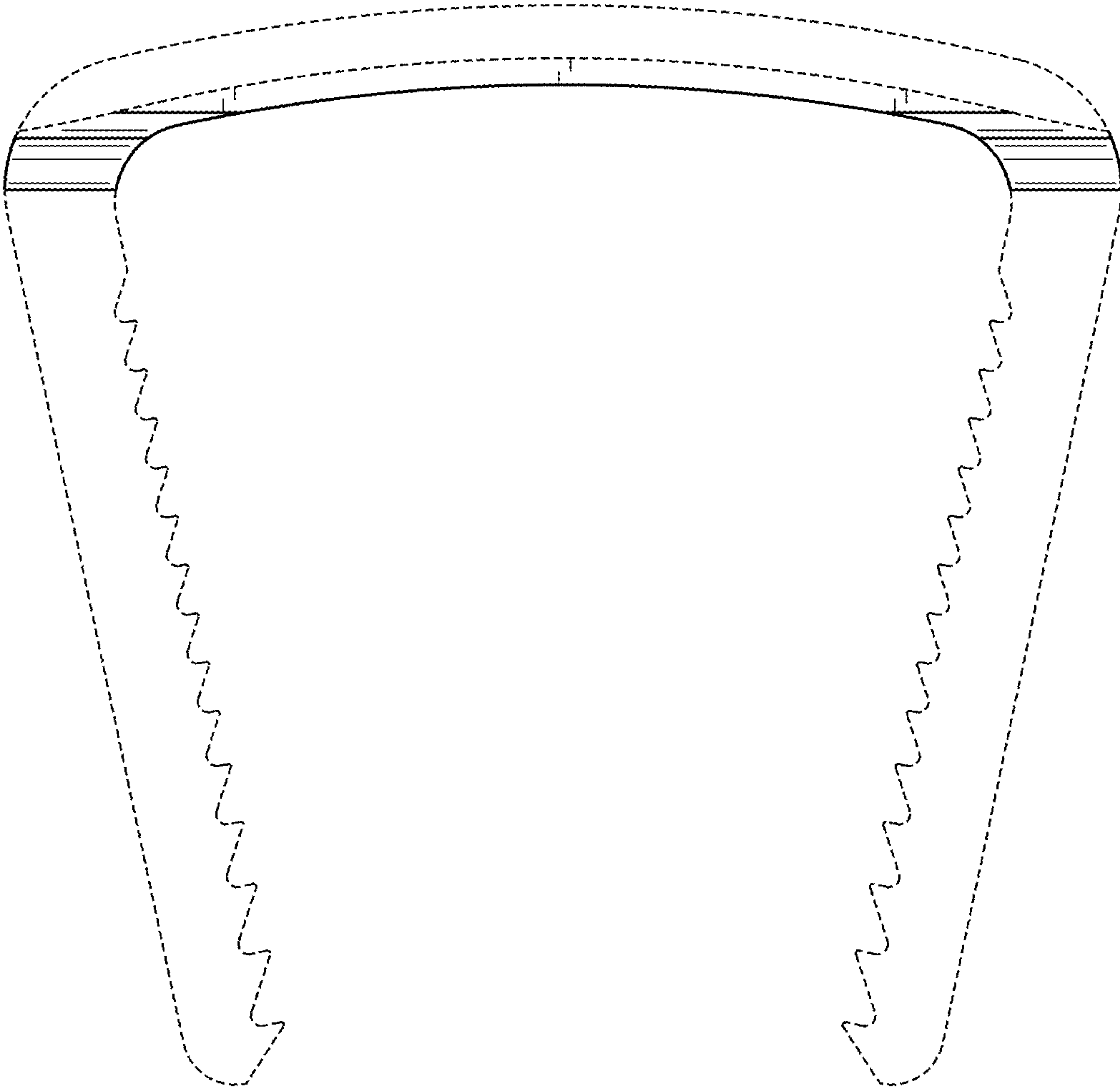


FIG. 9

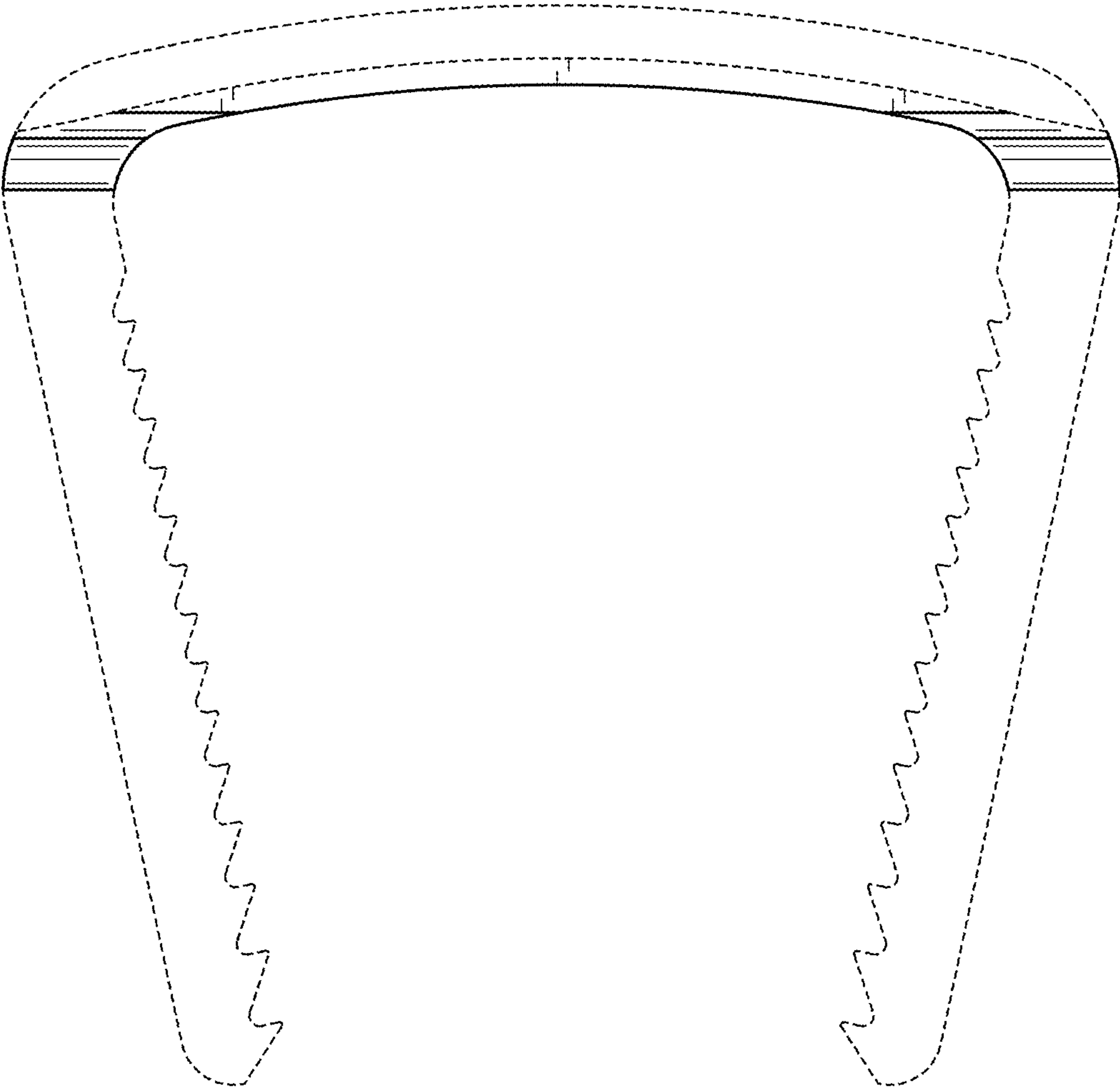


FIG. 10

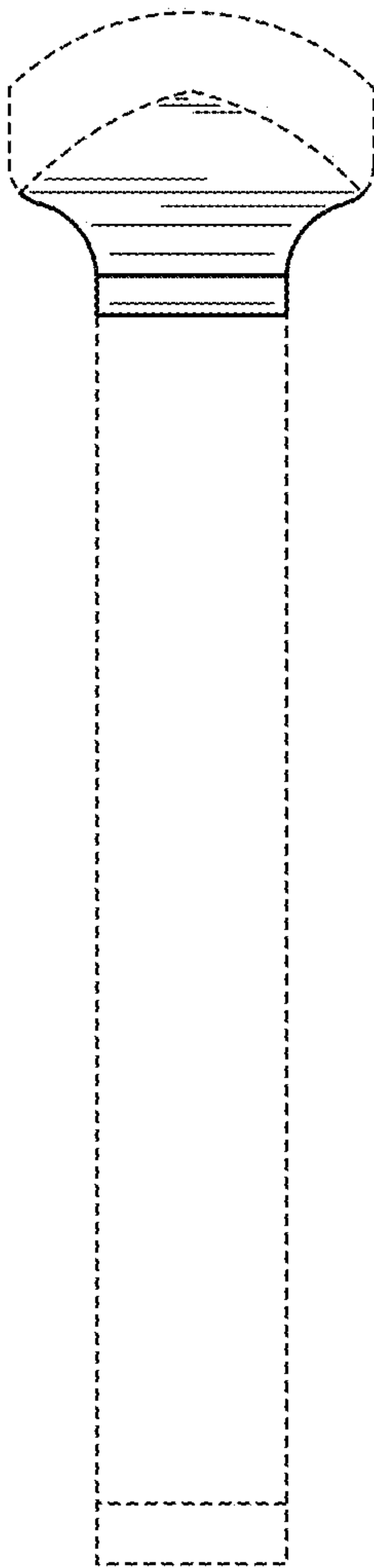


FIG. 11

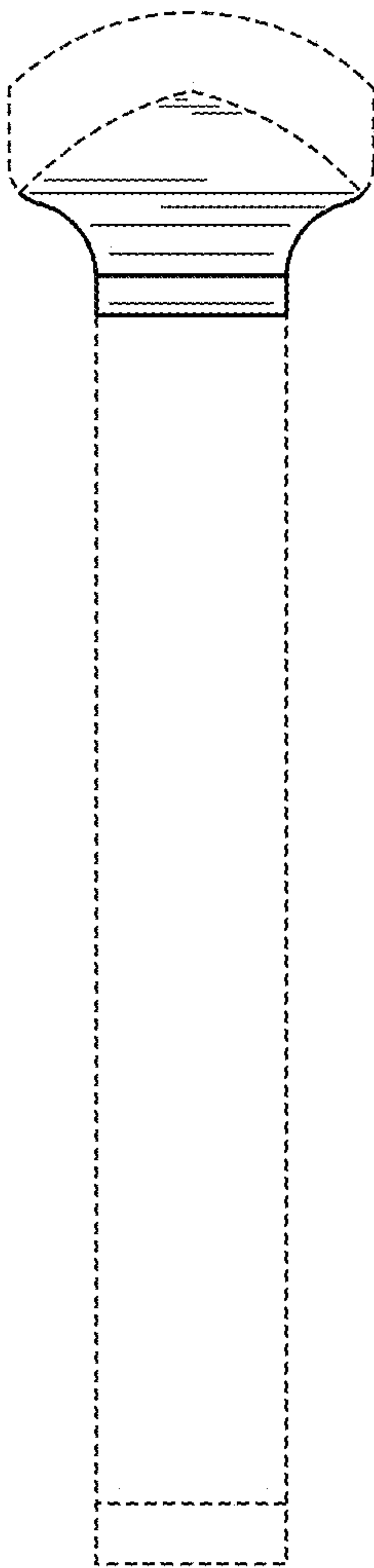


FIG. 12



FIG. 13

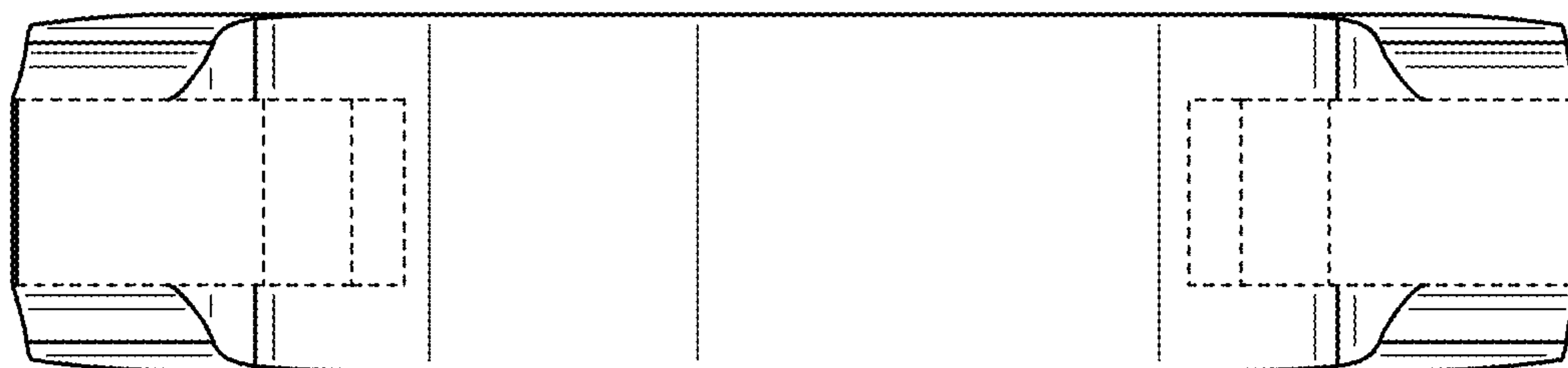


FIG. 14