



US0D1009269S

(12) **United States Design Patent** (10) **Patent No.:** **US D1,009,269 S**
Blair et al. (45) **Date of Patent:** **** Dec. 26, 2023**

(54) **LOW PROFILE STAPLE**

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

(72) Inventors: **Jeremy Webster Blair**, Atlanta, GA (US); **Courtney Lynne Kline**, Atlanta, GA (US)

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

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

(21) Appl. No.: **29/845,472**

(22) Filed: **Jul. 7, 2022**

4,269,180 A	5/1981	Dall	
D281,814 S	12/1985	Pratt	
4,570,623 A	2/1986	Ellison	
4,983,176 A	1/1991	Cushman	
5,454,814 A *	10/1995	Comte	A61B 17/0642 606/75
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.	

(Continued)

FOREIGN PATENT DOCUMENTS

CA	19966	6/1955
CA	50730	1/1983

(Continued)

Related U.S. Application Data

(60) Division of application No. 29/748,166, filed on Aug. 27, 2020, now Pat. No. Des. 957,636, which is a continuation-in-part of application No. 29/659,375, filed on Aug. 8, 2018, now Pat. No. Des. 895,113, and 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.

(51) **LOC (14) Cl.** **24-03**

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

(58) **Field of Classification Search**
USPC D8/390, 389, 388; D24/145, 155
CPC F16B 15/0007; F16B 15/0015; A61B 2017/0641; A61B 17/064; A61B 17/0642; B21G 7/02; B21D 53/46
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,632,356 A	3/1953	Thiel
D227,976 S	7/1973	Gerald

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

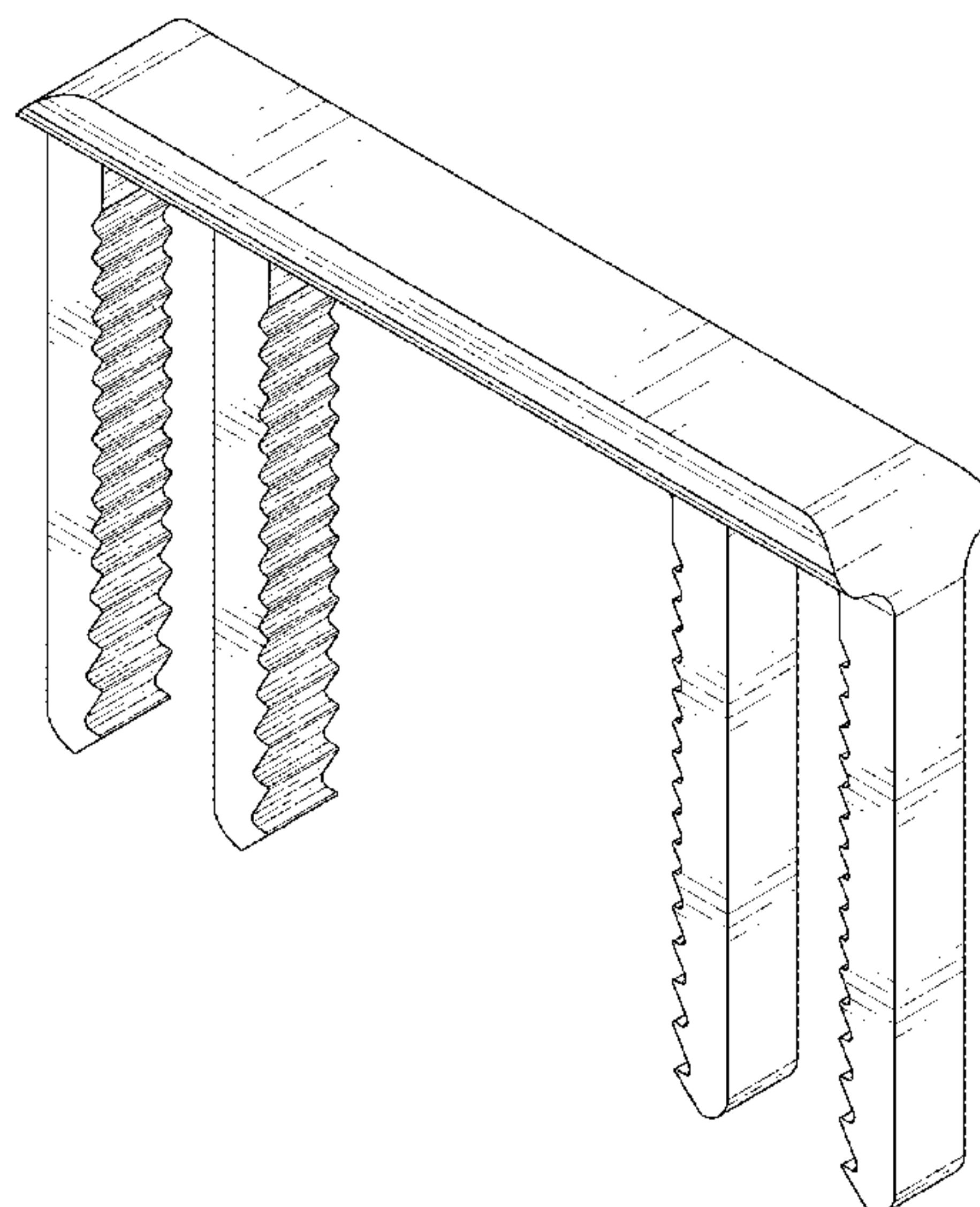
(57) **CLAIM**

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

DESCRIPTION

FIG. 1 is a perspective view of a low profile staple; FIG. 2 is a front view of the low profile staple; FIG. 3 is a back view of the low profile staple; FIG. 4 is a right side view of the low profile staple; FIG. 5 is a left side view of the low profile staple; FIG. 6 is a top view of the low profile staple; and, FIG. 7 is a bottom view of the low profile staple.

1 Claim, 5 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

7,722,610 B2 5/2010 Viola et al.
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 17/068
9,402,624 B1 8/2016 Scott et al.
D773,665 S 12/2016 Cheney et al.
D773,666 S * 12/2016 Cheney D24/155
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
10,117,647 B2 * 11/2018 Cheney A61B 17/064
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.
D891,618 S 7/2020 Cheney
D892,331 S 8/2020 Hollis
D895,113 S 9/2020 Blair
11,020,110 B1 6/2021 Blair
11,116,499 B1 9/2021 Blair
11,179,149 B2 11/2021 Hartegen
D957,636 S * 7/2022 Blair D24/155
D961,081 S * 8/2022 Sayger D24/155
2006/0058802 A1 3/2006 Kofoed
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 Mciff
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
2019/0105040 A1 4/2019 Gordon
2019/0117219 A1 4/2019 Ritz
2019/0150921 A1 5/2019 Fonte
2019/0192140 A1 6/2019 Ducharme
2019/0192160 A1 6/2019 Stamp
2019/0357951 A1 11/2019 Rogers
2020/0000465 A1 1/2020 Maclure
2020/0038076 A1 2/2020 Amis
2020/0197005 A1 6/2020 Daniel
2020/0229813 A1 7/2020 Seykora
2021/0228206 A1 7/2021 Cheney
2021/0298748 A1 9/2021 Campbell
2021/0386422 A1 12/2021 Maclure
2022/0117599 A1 * 4/2022 Fein A61B 17/0642
2022/0338869 A1 * 10/2022 Kobayashi A61B 17/068

FOREIGN PATENT DOCUMENTS

CA 132677 6/2010
CN 303149448 4/2015
FR 2874166 2/2006
FR 3008302 1/2015
GB 1035018 * 9/1986
GB 6014567 6/2017
JP D1132991 * 2/2002
JP D1504138 8/2014
KR 300967753.0000 * 8/2018
WO 2015026357 2/2015
WO 2017207922 12/2017
WO 2018148284 8/2018
WO 2019226248 11/2019

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

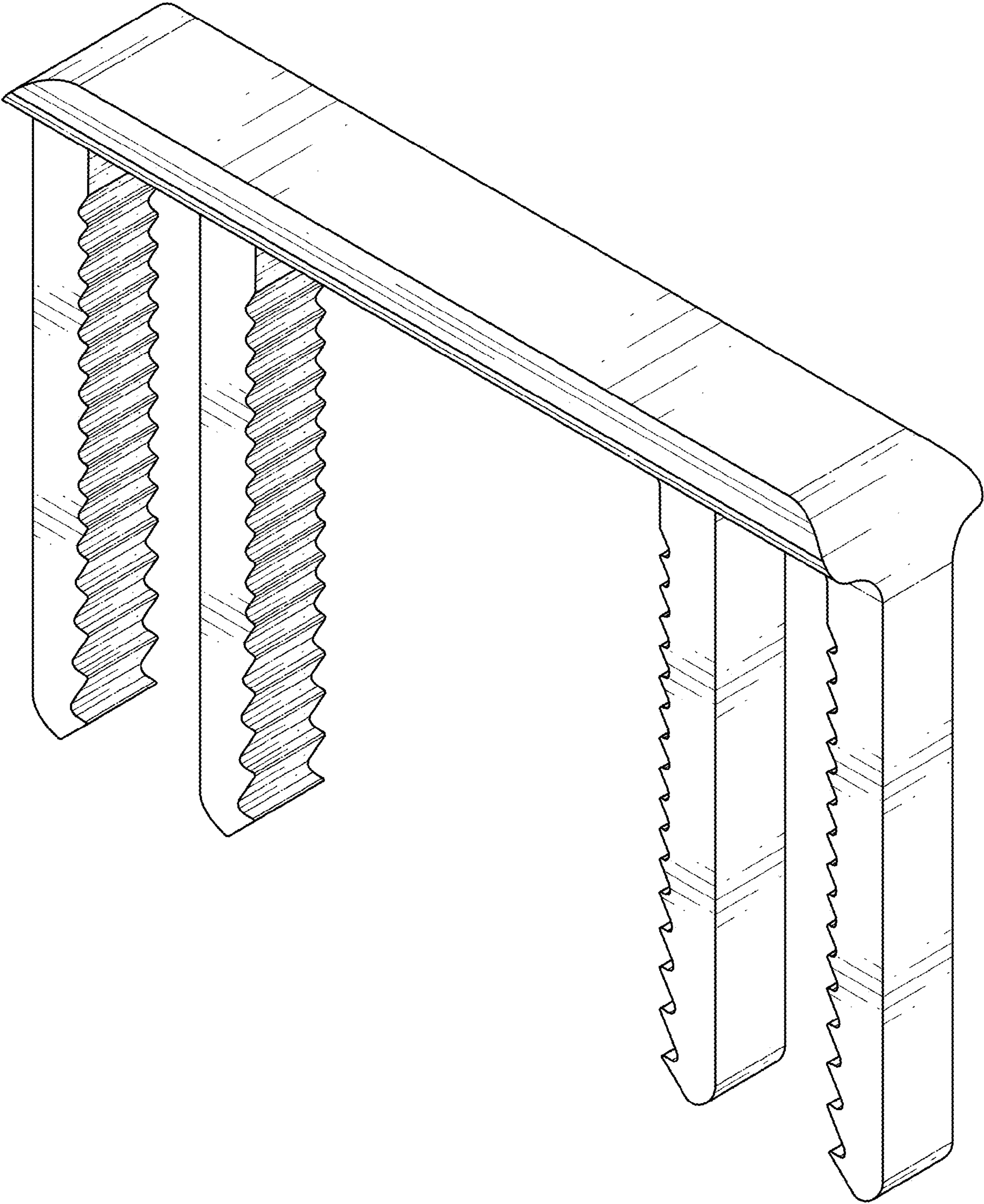


FIG. 1

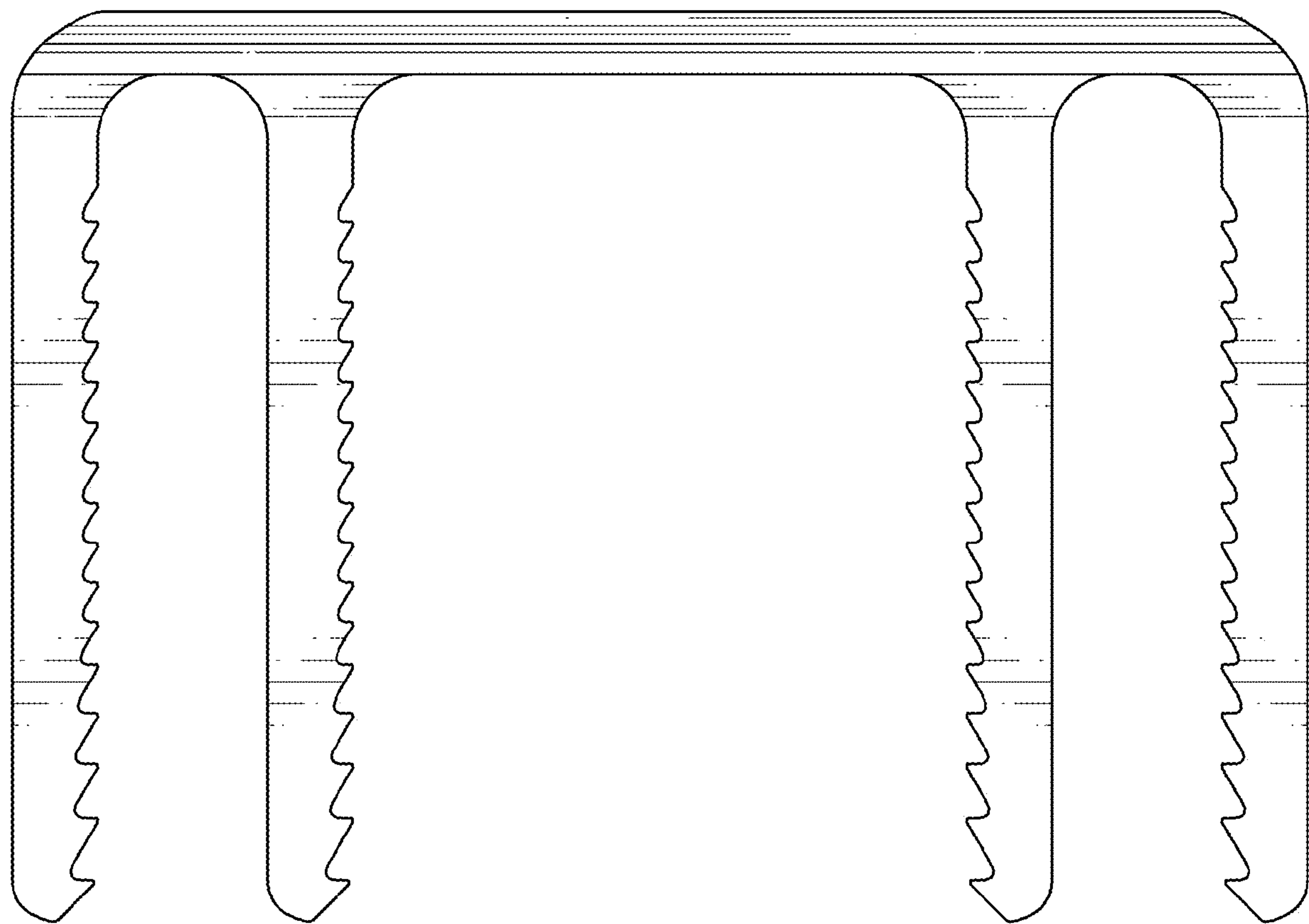


FIG. 2

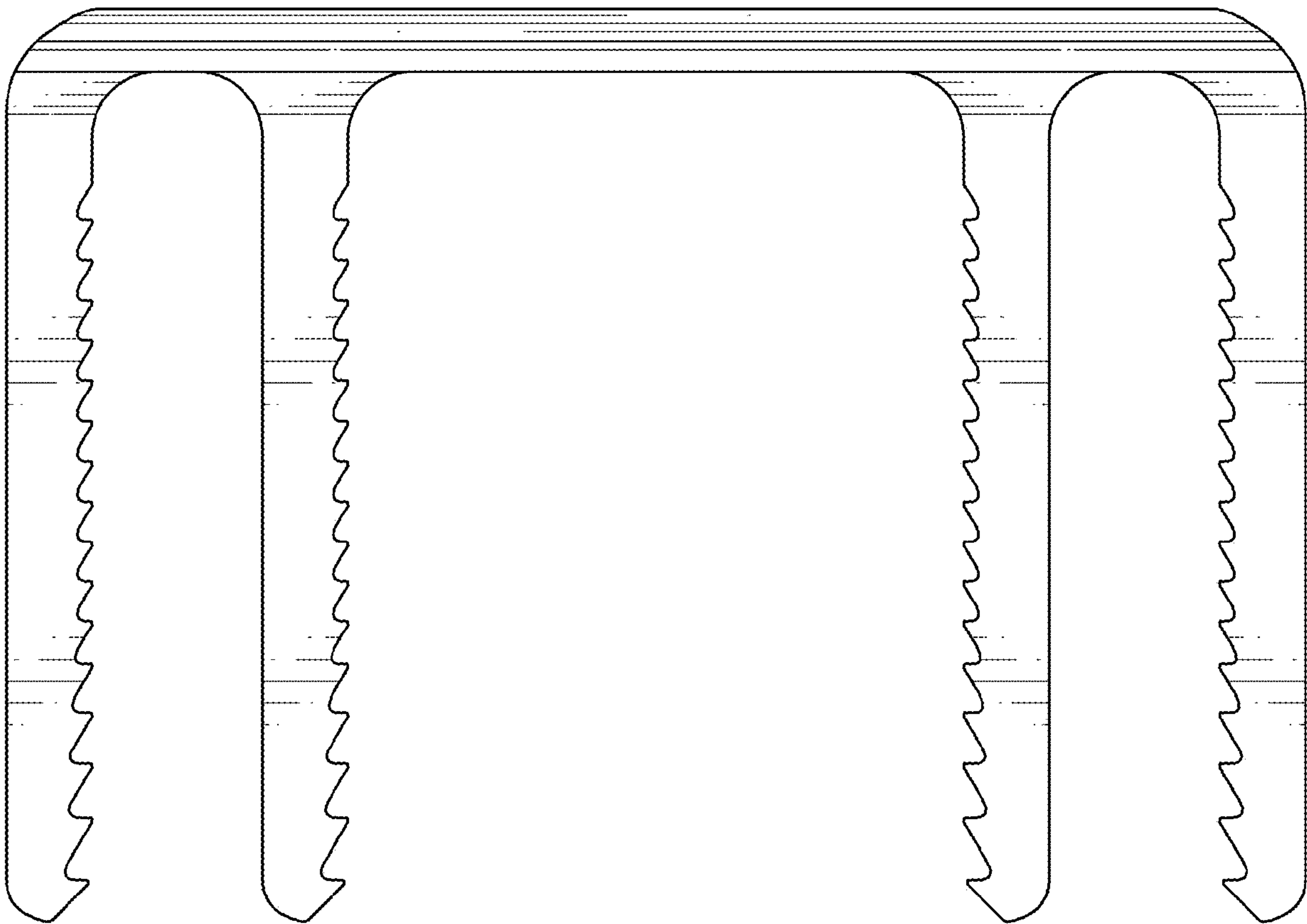


FIG. 3

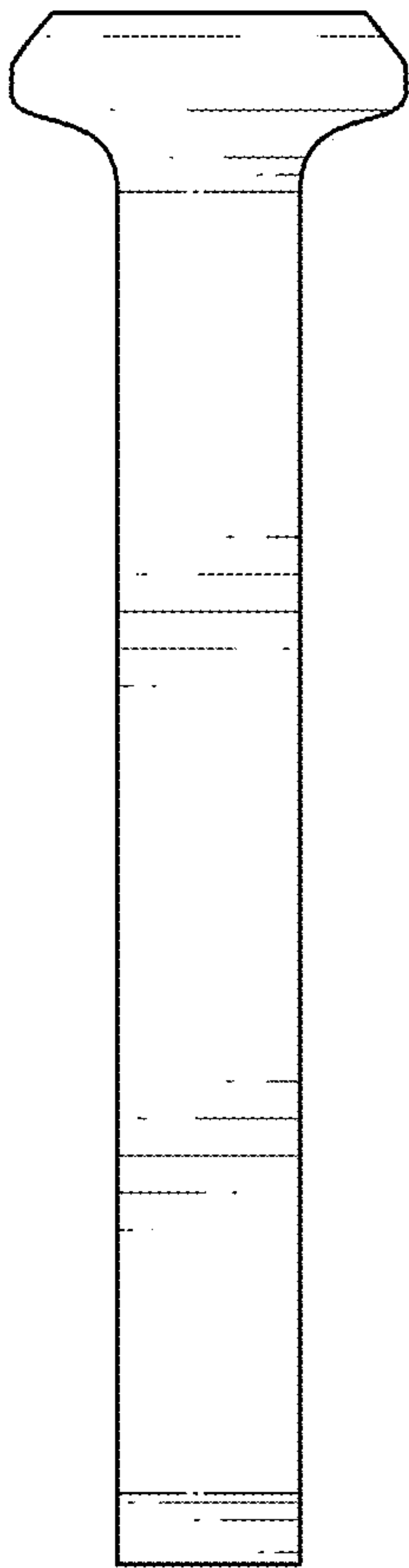


FIG. 4

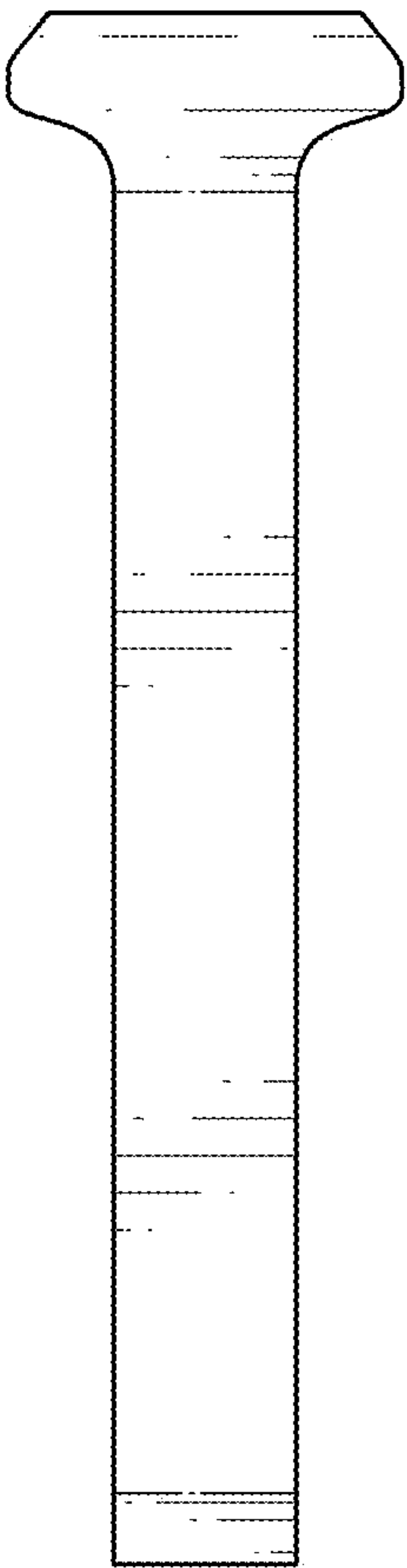


FIG. 5

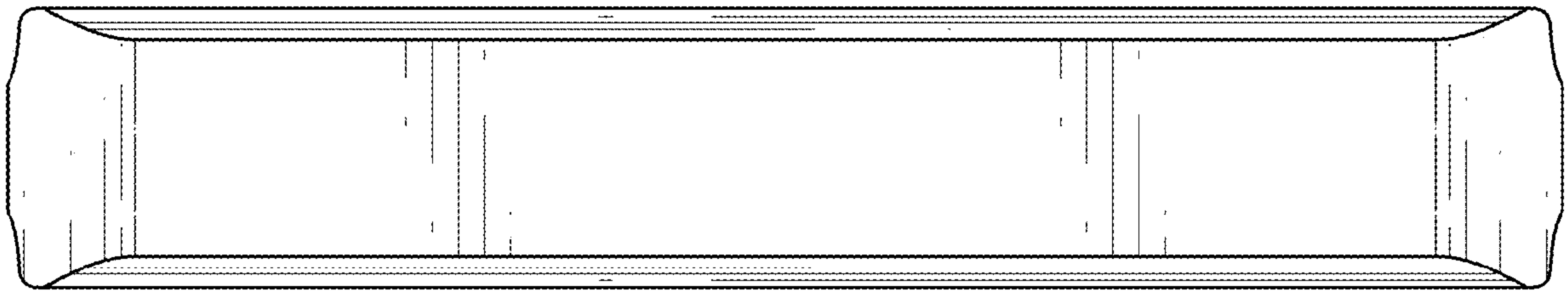


FIG. 6

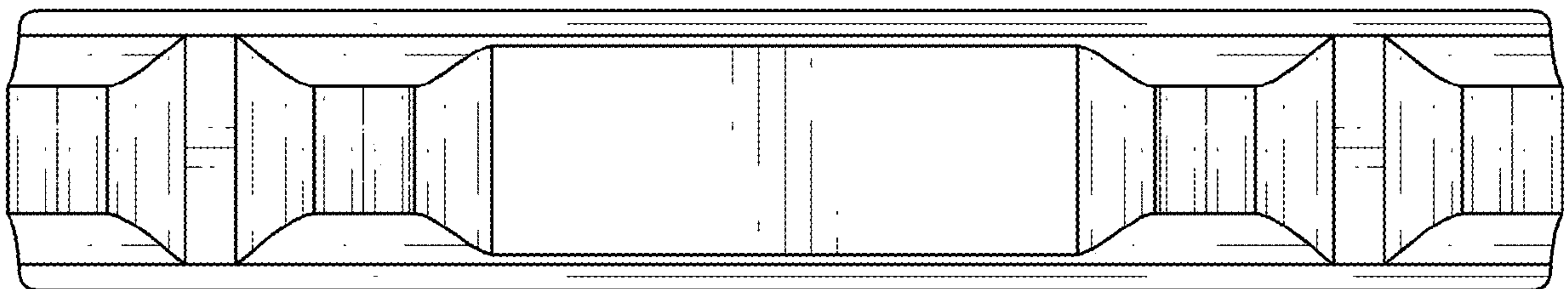


FIG. 7