



US00D902410S

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

(10) **Patent No.:** **US D902,410 S**

(45) **Date of Patent:** **** Nov. 17, 2020**

(54) **MATRIX RING**

(71) Applicant: **ULTRADENT PRODUCTS, INC.**,
South Jordan, UT (US)

(72) Inventors: **Kevin R. Hemmert**, South Jordan, UT
(US); **Bruce S. McLean**, South Jordan,
UT (US)

(73) Assignee: **Ultradent Products, Inc.**, South
Jordan, UT (US)

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

(21) Appl. No.: **29/685,308**

(22) Filed: **Mar. 27, 2019**

(30) **Foreign Application Priority Data**

Sep. 28, 2018 (CN) 2018 3 0546914

(51) **LOC (12) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/181; D24/180**

(58) **Field of Classification Search**
USPC D24/152-154, 176-182, 107, 155, 156;
D29/108

CPC .. A61C 5/00; A61C 5/12; A61C 5/122; A61C
5/125; A61C 5/127; A61C 7/00; A61C
7/18; A61C 15/00

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,591,744 A * 4/1952 Tofflemire A61C 5/85
433/39
2,594,367 A * 4/1952 Tofflemire A61C 5/85
433/39
3,145,472 A * 8/1964 Tofflemire A61C 5/85
433/39

3,237,307 A * 3/1966 Tofflemire A61C 5/85
433/155
3,305,928 A * 2/1967 Tofflemire A61C 5/85
433/39
3,482,314 A * 12/1969 Tofflemire A61C 5/85
433/39
3,529,353 A * 9/1970 Schiaroli A61C 7/10
433/7
3,606,685 A * 9/1971 Schwartz A61C 7/12
433/14

(Continued)

OTHER PUBLICATIONS

Composi-Tight Sectional Matrix System, [site visited Jul. 8, 2020].
Available from Internet. URL: <https://www.garrisondental.com/3d-fusion/en/#3d-fusion> (Year: 2017).*

(Continued)

Primary Examiner — T Chase Nelson

Assistant Examiner — Kelly L Gross

(74) *Attorney, Agent, or Firm* — Maschoff Brennan

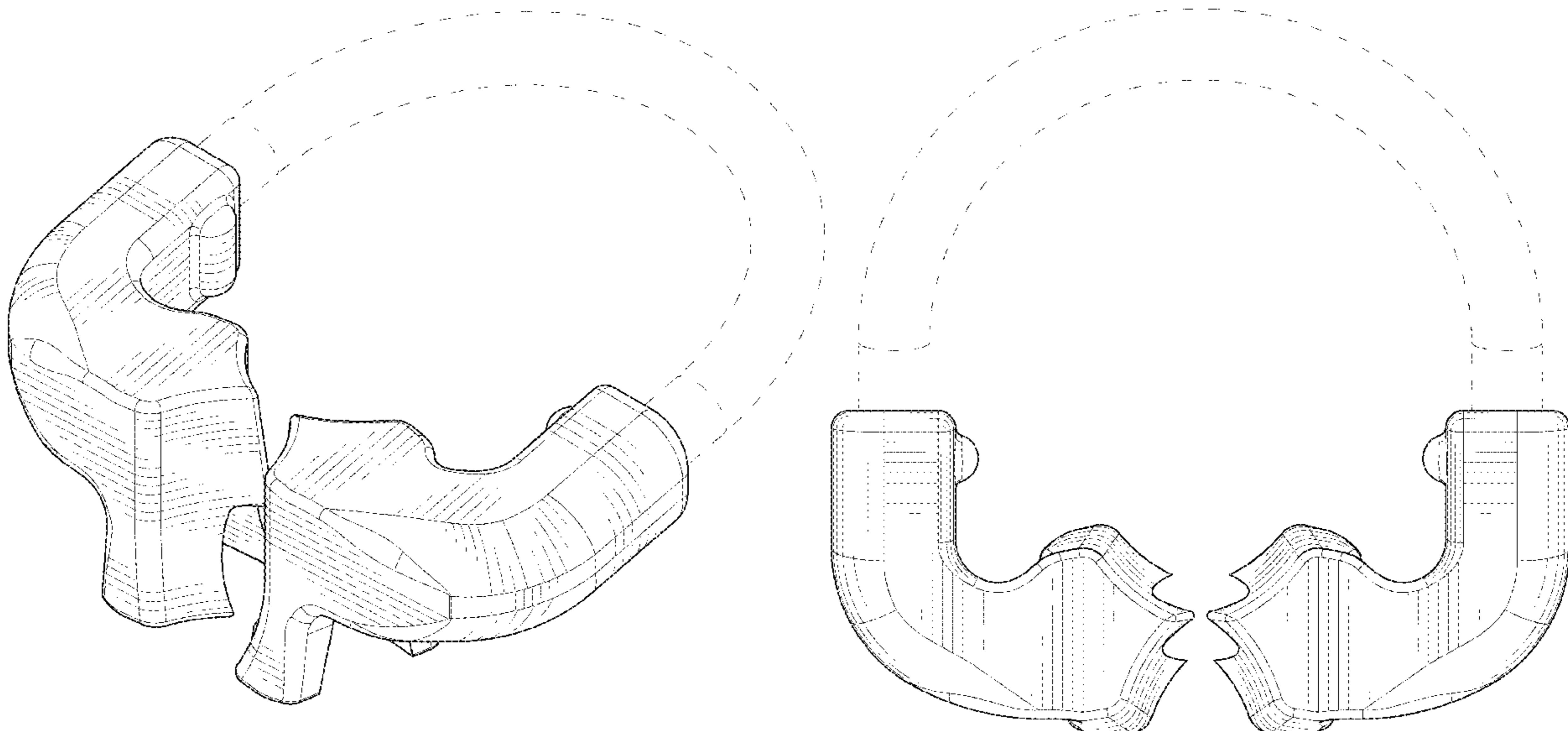
(57) **CLAIM**

The ornamental design for a matrix ring, as shown and
described.

DESCRIPTION

FIG. 1 is an upper perspective view of a matrix ring;
FIG. 2 is a lower perspective view of the matrix ring of FIG.
1;
FIG. 3 is a front view of the matrix ring of FIG. 1;
FIG. 4 is a rear view of the matrix ring of FIG. 1;
FIG. 5 is a top view of the matrix ring of FIG. 1;
FIG. 6 is a bottom view of the matrix ring of FIG. 1;
FIG. 7 is a left side view of the matrix ring of FIG. 1; and,
FIG. 8 is a right side view of the matrix ring of FIG. 1.
The broken lines show portions of the matrix ring that form
no part of the claimed design.

1 Claim, 6 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

3,842,505 A * 10/1974 Eames A61C 5/85
433/39
D297,362 S * 8/1988 Dragan D24/181
5,035,615 A * 7/1991 Din A61C 5/85
433/215
5,330,353 A * 7/1994 Wavrin A61C 5/85
433/226
D353,200 S * 12/1994 Martin D24/176
5,586,883 A * 12/1996 Nakisher A61C 5/85
433/39
5,730,592 A * 3/1998 Meyer A61C 5/85
433/39
D485,617 S * 1/2004 Bosma D24/152
D485,907 S * 1/2004 Bosma D24/152
D491,663 S * 6/2004 Bat-Genstein D24/176
D556,327 S * 11/2007 Albelda D24/176
D595,414 S * 6/2009 McDonald D24/181
D599,020 S * 8/2009 McDonald D24/181
D599,021 S * 8/2009 McDonald D24/181
D599,022 S * 8/2009 McDonald D24/181
D604,854 S * 11/2009 McDonald D24/181
D605,298 S * 12/2009 McDonald D24/181
D655,007 S * 2/2012 Dillon A61C 19/063
D24/152
D666,722 S * 9/2012 Dragan D24/152
8,272,869 B2 * 9/2012 Galler A61C 5/85
433/39
D675,337 S * 1/2013 Peplow D24/227
D688,832 S * 8/2013 Polk, III D29/108
D690,423 S * 9/2013 Pieroni D24/181
D690,821 S * 10/2013 Slone D24/181
D698,924 S * 2/2014 Pieroni D24/181
D705,938 S * 5/2014 McDonald D24/181
8,882,499 B2 * 11/2014 White A61C 7/00
433/18
D721,812 S * 1/2015 Haraden D24/181
D721,813 S * 1/2015 Haraden D24/181
D725,775 S * 3/2015 Foster D24/143
9,084,649 B2 * 7/2015 Kansal A61C 7/00
9,138,300 B2 * 9/2015 Marteney A61C 5/88
D747,809 S * 1/2016 Anderson D24/181
D756,522 S * 5/2016 Anderson D24/181
9,339,351 B2 * 5/2016 Durandis A61C 7/18
9,358,080 B2 * 6/2016 Clark A61C 5/85
D763,449 S * 8/2016 Andersen D24/181
D764,057 S * 8/2016 Schaffner D24/143
9,414,895 B2 * 8/2016 Clark A61C 5/85
D766,445 S * 9/2016 Brown D24/181
D770,050 S * 10/2016 Anderson D24/181
D773,053 S * 11/2016 Garrison D24/181
D792,594 S * 7/2017 Nicholson D24/176
RE46,553 E * 9/2017 McDonald A61C 5/88

D799,048 S * 10/2017 Wigal D24/180
D800,199 S * 10/2017 Yang D15/199
9,775,686 B2 * 10/2017 Agnew A61C 5/82
D808,020 S * 1/2018 Andersen D24/181
9,883,922 B2 * 2/2018 McDonald A61C 5/88
D819,205 S * 5/2018 Snyder D24/135
D822,213 S * 7/2018 Hull D24/181
D823,473 S * 7/2018 Frymark D24/181
D838,856 S * 1/2019 Frymark D24/181
10,314,672 B2 * 6/2019 Alzain A61B 13/00
D861,172 S * 9/2019 Yang D24/176
10,441,394 B2 * 10/2019 McDonald A61C 5/85
10,517,703 B2 * 12/2019 Pines A61C 15/046
2005/0089814 A1 * 4/2005 Slone A61C 5/85
433/39
2005/0287491 A1 * 12/2005 Slone A61C 5/85
433/39
2007/0154860 A1 * 7/2007 Kerle A61C 5/85
433/39
2008/0176179 A1 * 7/2008 Coffee A61C 5/85
433/7
2009/0081606 A1 * 3/2009 Scarazzo A61C 5/85
433/39
2009/0142725 A1 * 6/2009 Bryant A61C 5/85
433/39
2011/0070555 A1 * 3/2011 Anderson A61C 5/85
433/39
2011/0189629 A1 * 8/2011 Kilcher A61C 5/85
433/39
2012/0129125 A1 * 5/2012 Ibrahim A61C 5/85
433/39
2013/0052608 A1 * 2/2013 Fatiny A61C 5/85
433/39
2013/0216973 A1 * 8/2013 Haraden A61C 5/85
433/39
2014/0051032 A1 * 2/2014 Haraden A61C 5/85
433/39
2015/0150651 A1 * 6/2015 McDonald A61C 5/88
433/149
2015/0182302 A1 * 7/2015 McDonald A61C 5/85
433/39
2015/0216625 A1 * 8/2015 McDonald A61C 5/82
433/155
2017/0231720 A1 * 8/2017 McDonald A61C 5/85
433/29
2018/0014913 A1 * 1/2018 Fatiny A61C 5/85
2019/0350679 A1 * 11/2019 Thai A61C 5/85

OTHER PUBLICATIONS

Temrex Sectional Matrix System, [site visited Jul. 8, 2020]. Available from Internet. URL: <https://www.net32.com/ec/temrex-sectional-matrix-system-clinical-includes-contact-d-156358> (Year: 2020).*

* cited by examiner

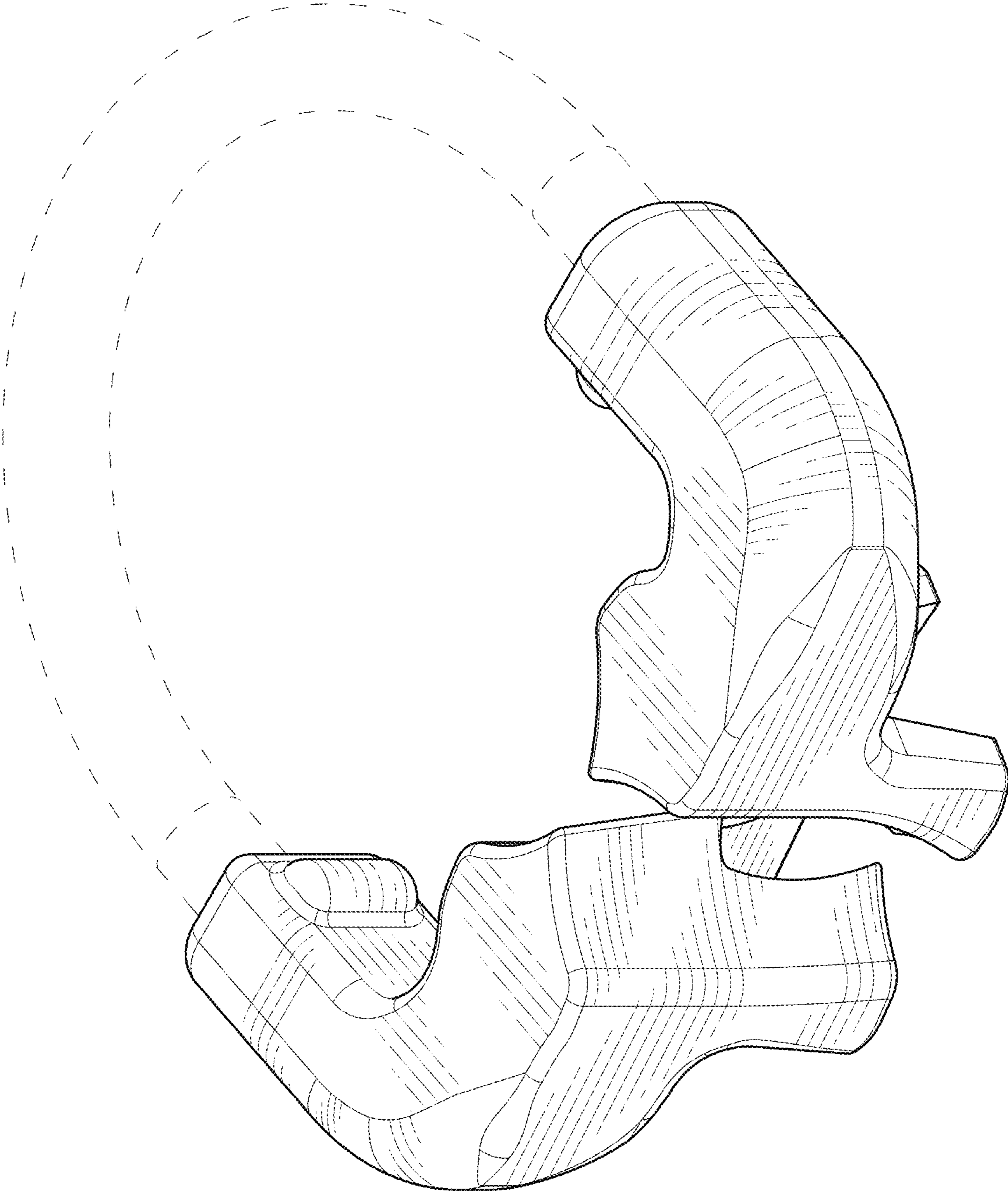


FIG. 1

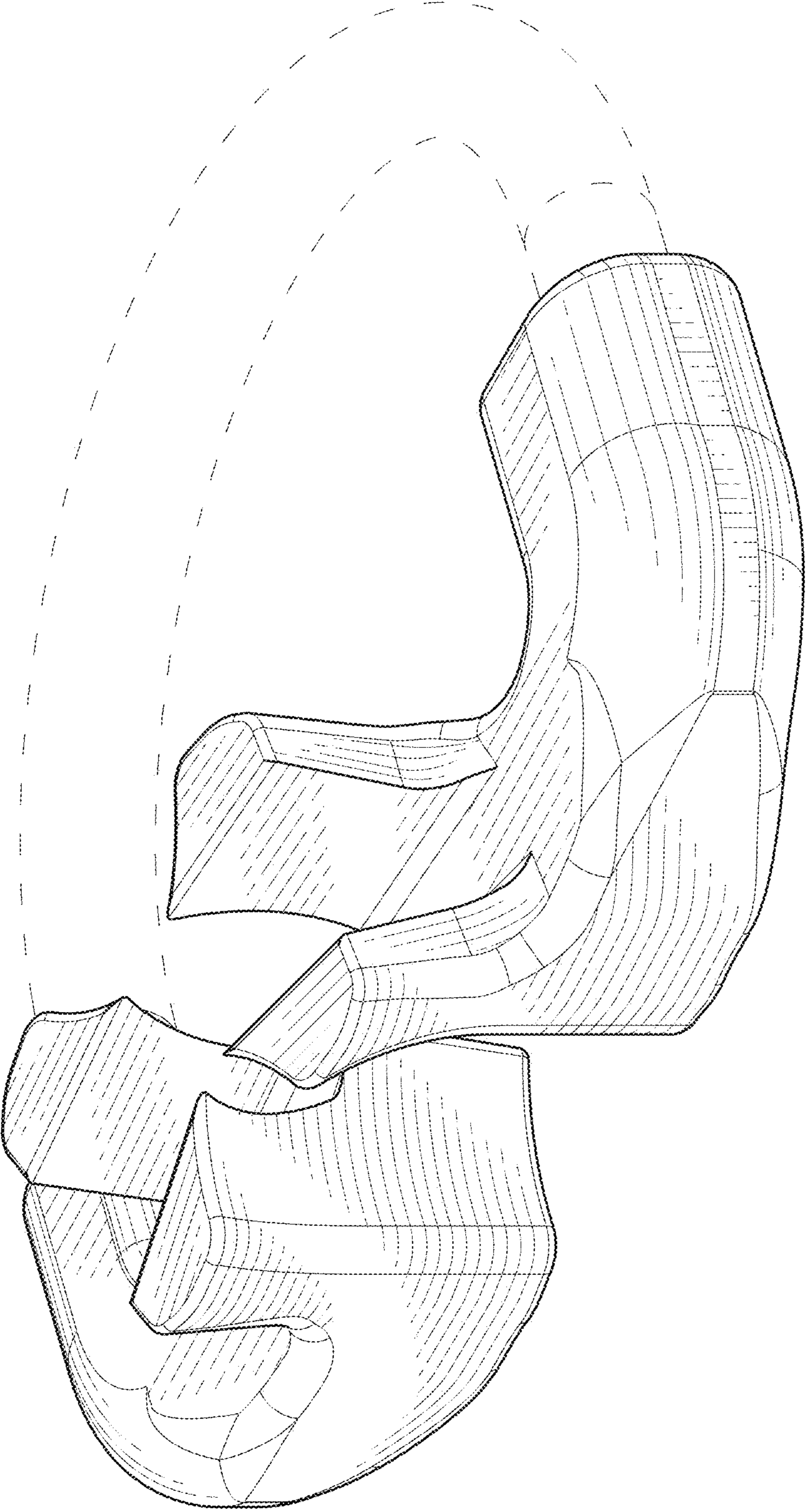


FIG. 2

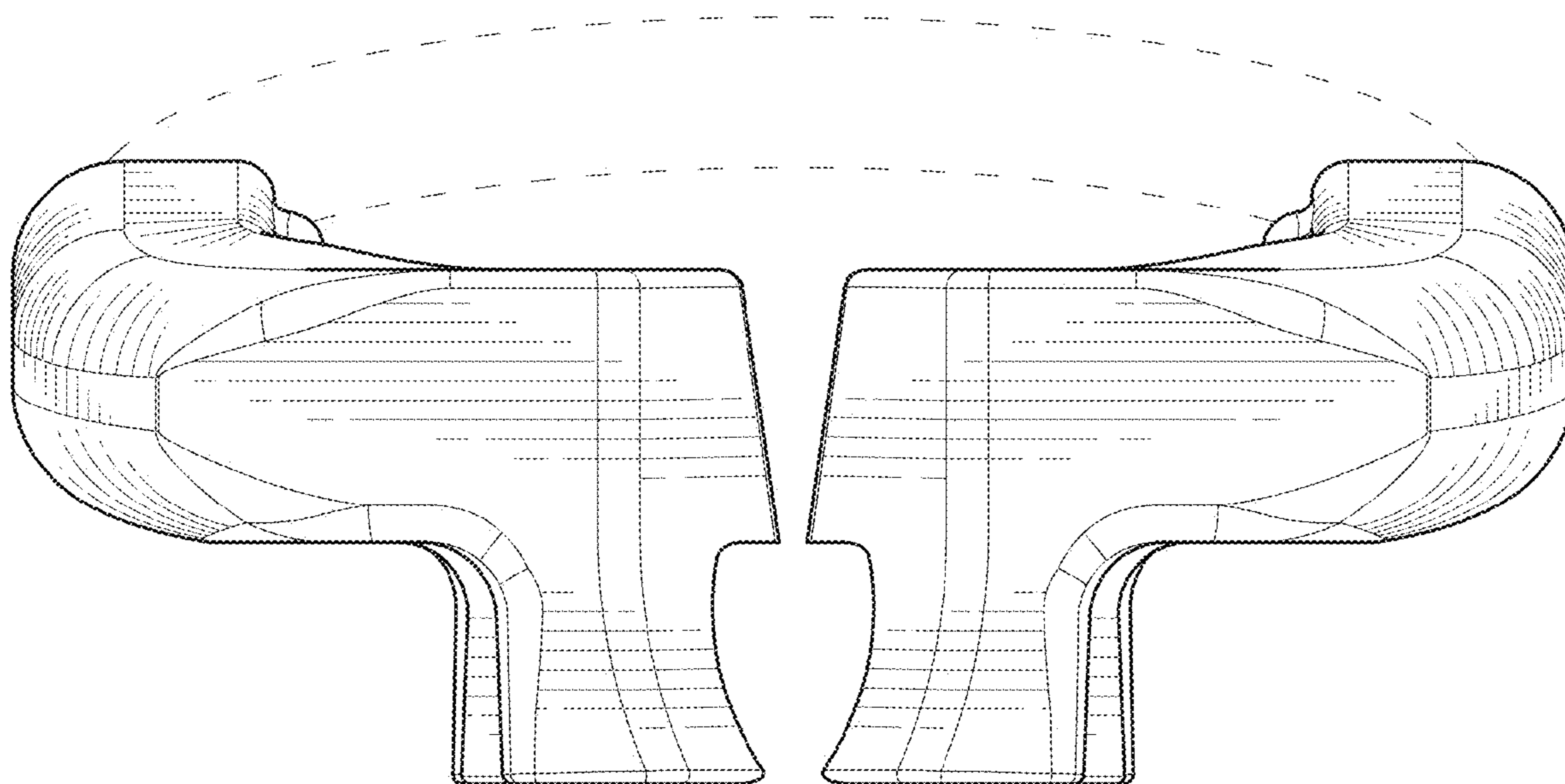


FIG. 3

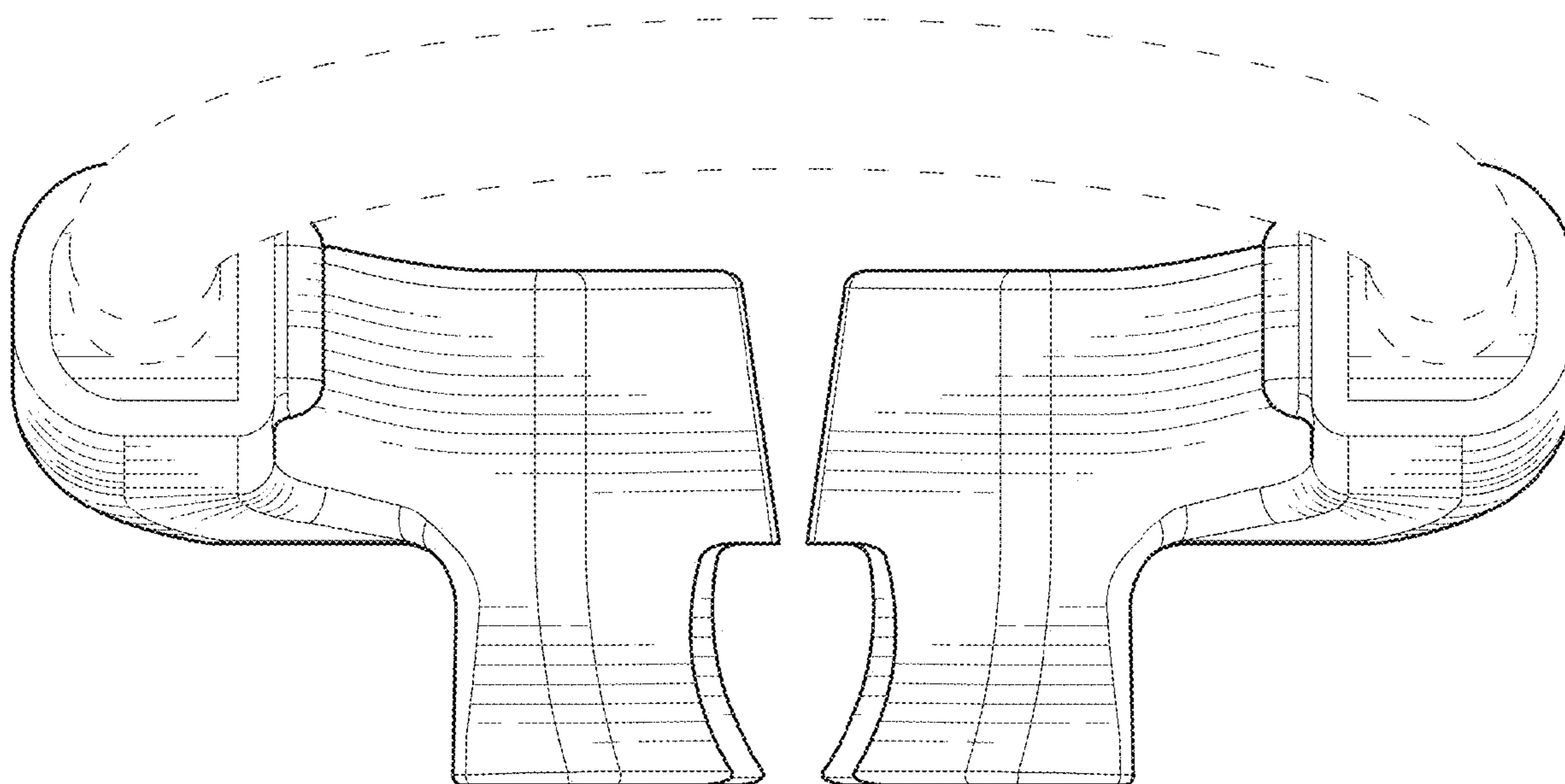


FIG. 4

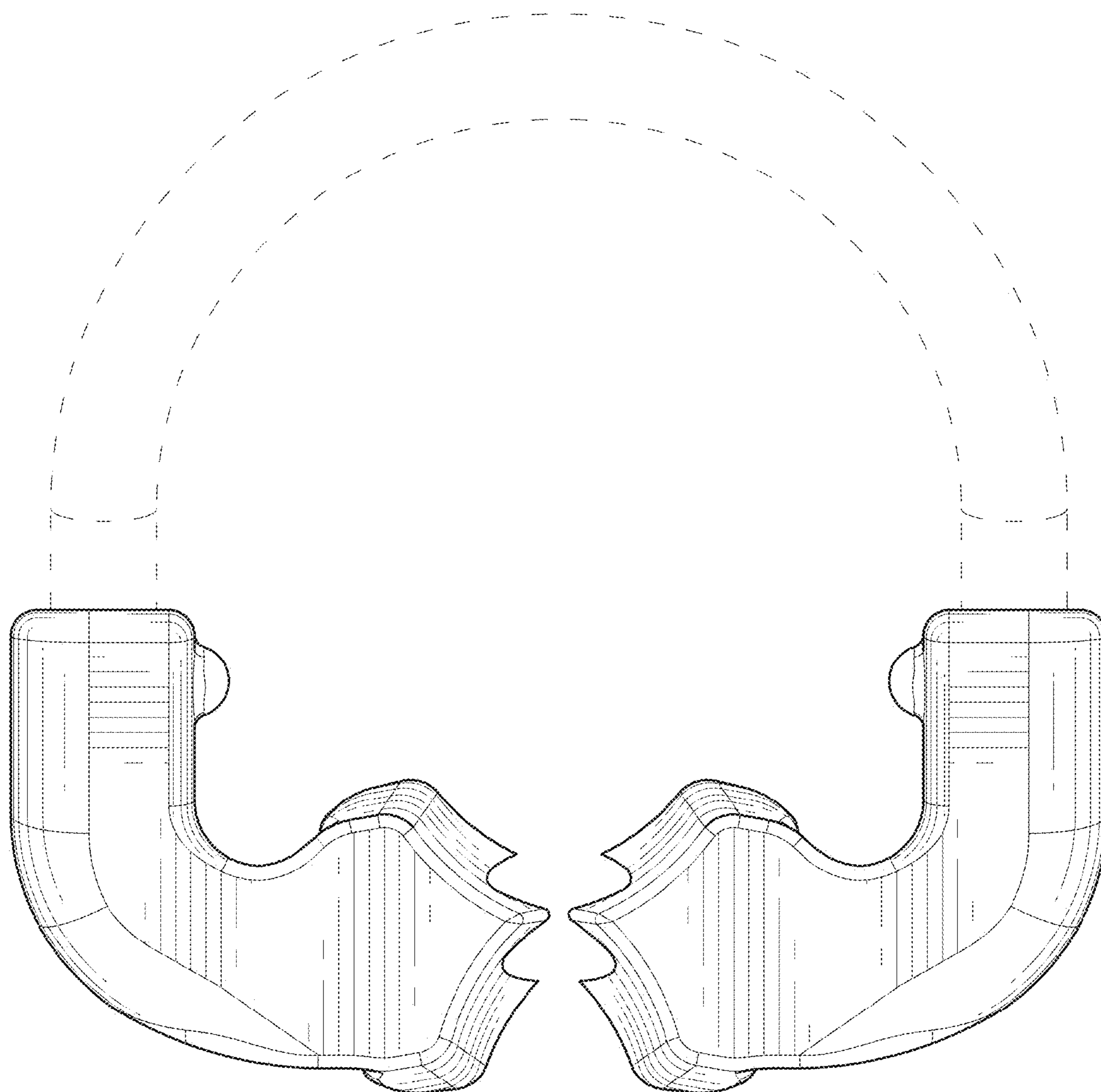


FIG. 5

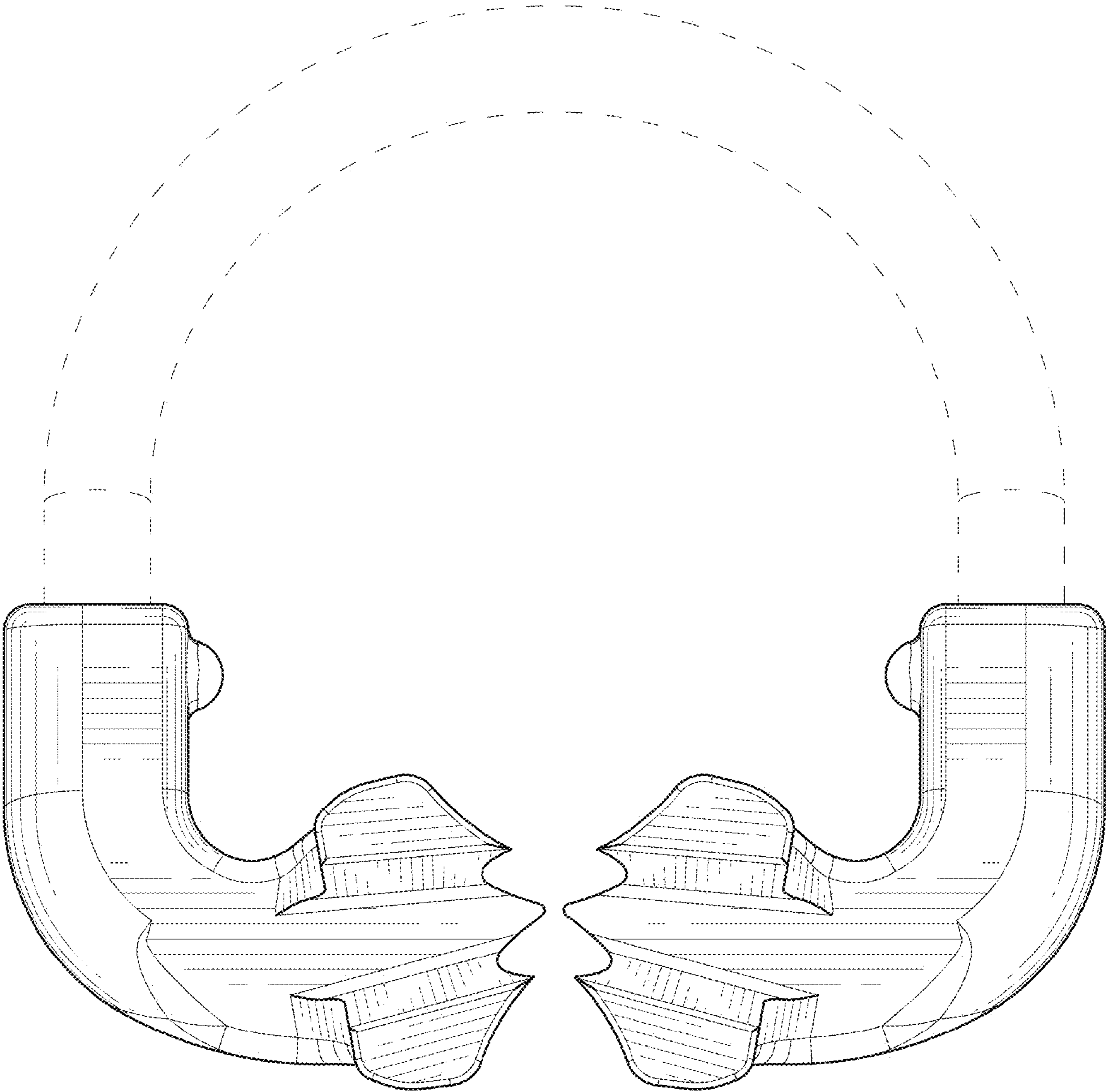


FIG. 6

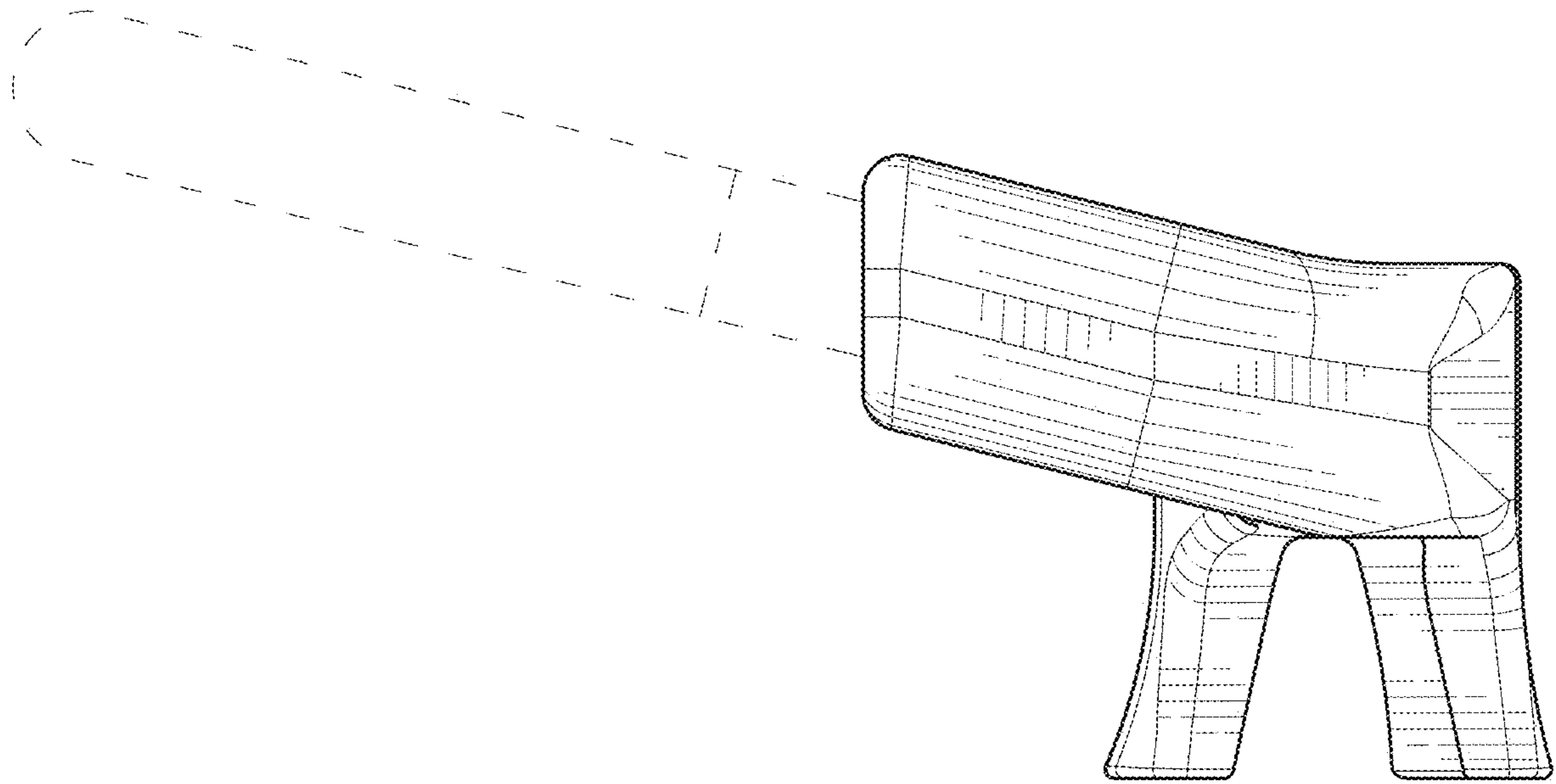


FIG. 7

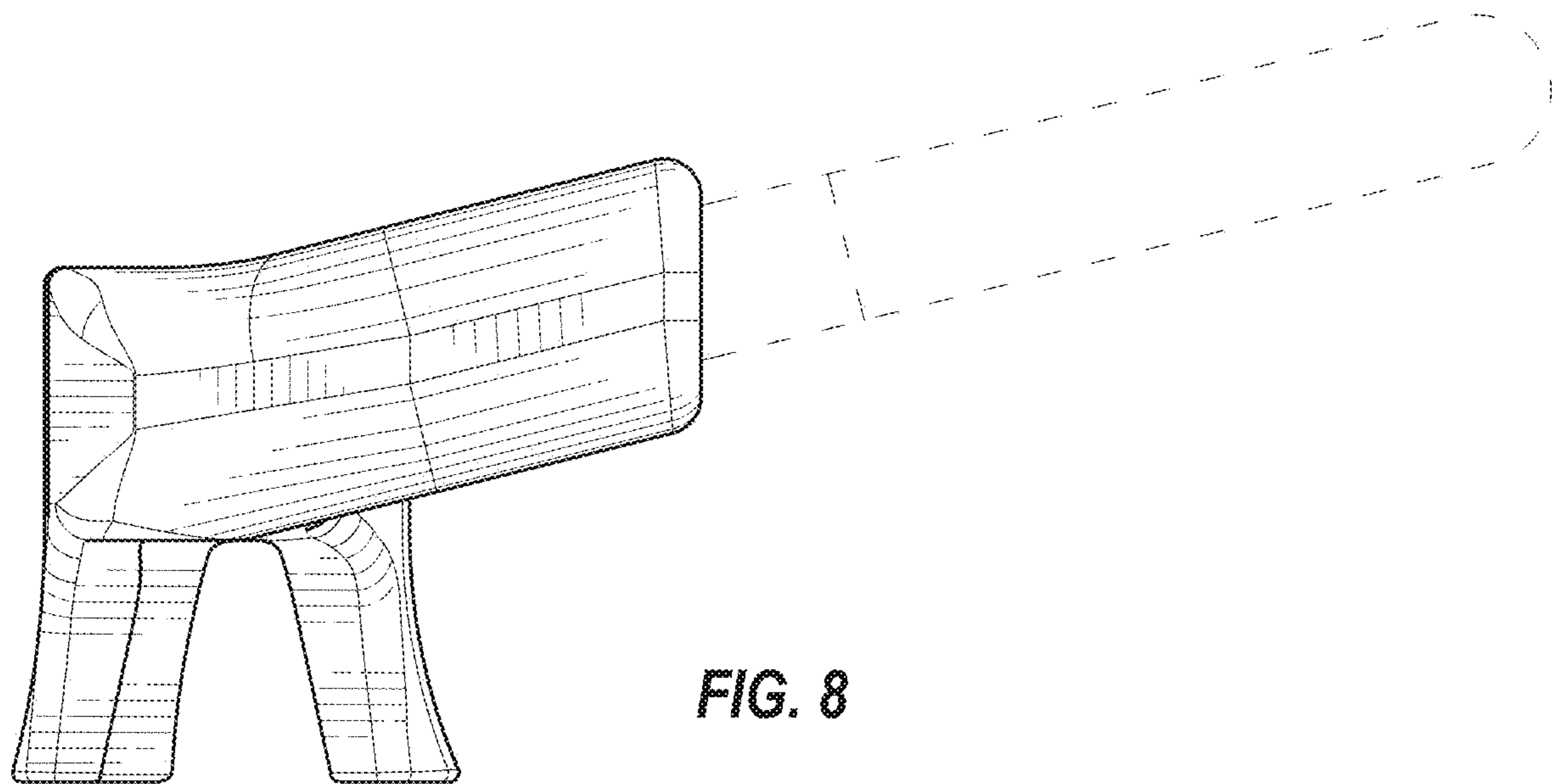


FIG. 8