

US00D972401S

(12) **United States Design Patent** (10) **Patent No.:** **US D972,401 S**
Bastian et al. (45) **Date of Patent:** **** Dec. 13, 2022**

(54) **CAM LOCK FASTENER**
 (71) Applicant: **MCS Industries, Inc.**, Easton, PA (US)
 (72) Inventors: **Geoffrey William Bastian**, Easton, PA (US); **Robert Terry Coyle, Jr.**, Palmer, PA (US); **Matthew Scott Kressin**, Allentown, PA (US)

4,728,215 A 3/1988 Martincic et al.
 4,804,161 A 2/1989 Wallo
 4,899,974 A 2/1990 Wear et al.
 5,222,611 A 6/1993 Wood et al.
 5,392,934 A 2/1995 Fox
 D370,624 S * 6/1996 DiBiagio F16B 5/07
 D8/382

(Continued)

(73) Assignee: **MCS Industries, Inc.**

FOREIGN PATENT DOCUMENTS

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

DE 202010013164 3/2011

(21) Appl. No.: **29/733,521**

OTHER PUBLICATIONS

(22) Filed: **May 4, 2020**

Supplementary Partial European Search Report for European Appln. No. 18708321 dated Nov. 18, 2019, pp. 1-10.

(51) **LOC (13) Cl.** **08-08**

(Continued)

(52) **U.S. Cl.**

USPC **D8/382**

(58) **Field of Classification Search**

USPC D8/343, 382, 394, 336

CPC F16B 13/00; F16B 13/001; F16B 2/00;

F16B 12/2009; F16B 12/12; F16B

2012/103; F16B 2012/2072; F16B

2012/209; F16B 21/02; F16B 23/0007;

F16B 25/00; F16B 25/0015; F16B

25/0031; Y10T 29/4994; Y10T 29/49948;

Y10T 403/67; Y10T 403/68

See application file for complete search history.

Primary Examiner — Doris Clark

(74) *Attorney, Agent, or Firm* — Belles Katz LLC

(57) **CLAIM**

The ornamental design for a cam lock fastener, as shown and described.

DESCRIPTION

FIG. 1 is a bottom front perspective view of a cam lock fastener according to our new design;

FIG. 2 is a top rear perspective view thereof;

FIG. 3 is a front view thereof;

FIG. 4 is a rear view thereof;

FIG. 5 is a left side view thereof;

FIG. 6 is a right side view thereof;

FIG. 7 is a top view thereof; and,

FIG. 8 is a bottom view thereof.

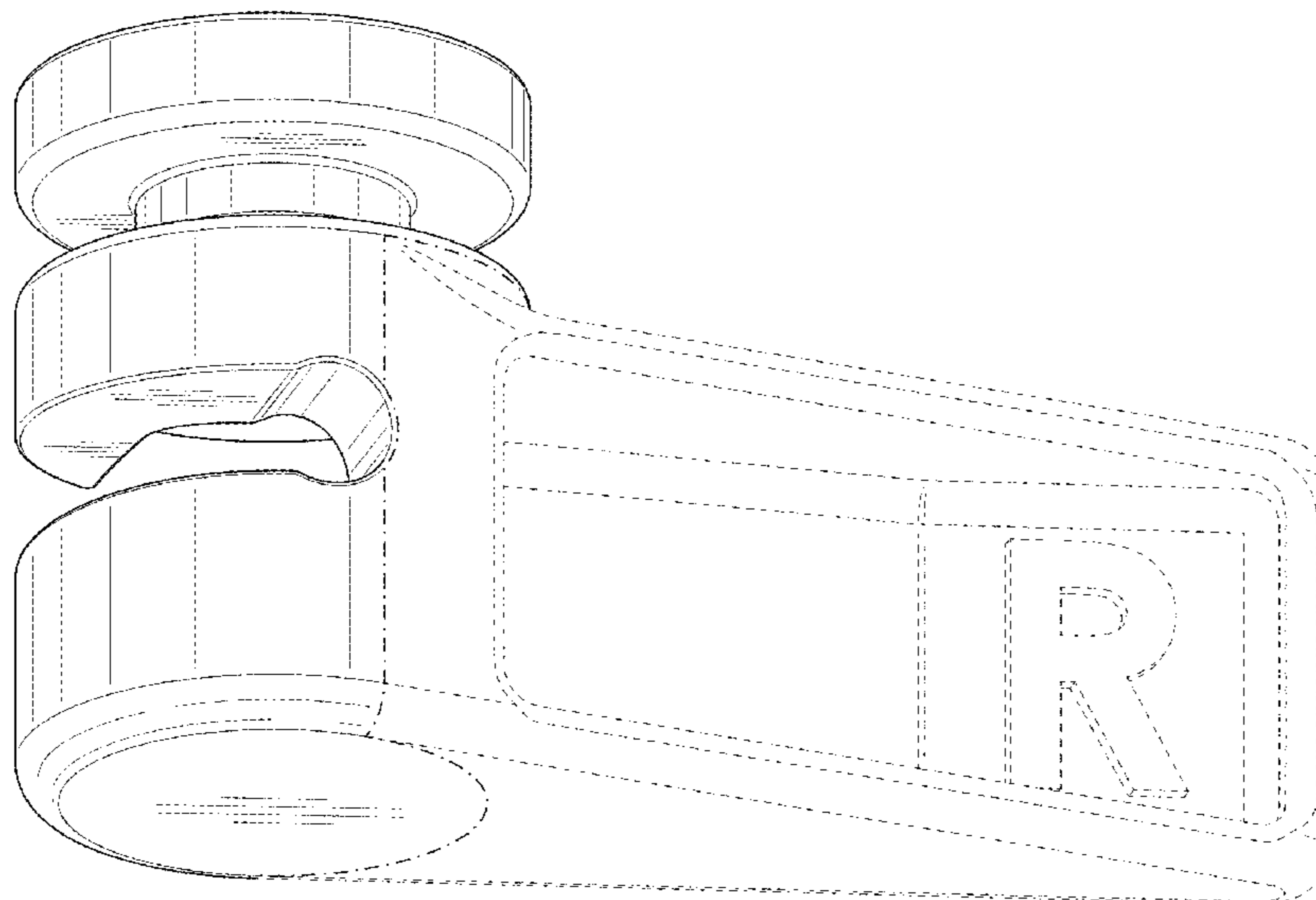
The broken lines illustrating portions of the cam lock fastener form no part of the claimed design. The dot-dash broken lines define the bounds of the claimed design and form no part thereof.

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,796,502 A 3/1931 Raymond
 2,708,147 A 5/1955 Duggan et al.
 3,791,709 A 2/1974 Cross
 3,879,096 A 4/1975 Blodee
 3,914,892 A 10/1975 Mohr
 D241,008 S 8/1976 Di Loreto
 4,131,376 A 12/1978 Busse
 D264,680 S 6/1982 Widen
 D272,718 S 2/1984 Knudson
 4,599,011 A 7/1986 Tashiro et al.

1 Claim, 8 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

5,537,793 A * 7/1996 Murasaki F16B 5/07
 D372,419 S * 8/1996 Ikegami D8/382
 5,590,975 A 1/1997 Homtvedt
 5,624,168 A 8/1997 Licciardello, Sr.
 5,667,327 A 9/1997 Salice
 D391,844 S 3/1998 Ropponen et al.
 5,762,442 A 6/1998 Salice
 5,788,395 A 8/1998 Grieser et al.
 5,927,671 A 7/1999 Pynenburg
 D422,200 S 4/2000 Maruyama
 6,478,518 B1 11/2002 Hwang
 6,848,855 B2 2/2005 Hasler
 6,945,414 B1 9/2005 Stevens et al.
 D573,453 S 7/2008 Buckley
 D583,224 S 12/2008 Holdsworth
 D593,848 S * 6/2009 Balemi D8/382
 7,624,479 B1 12/2009 Lin
 D622,582 S 8/2010 Lottner et al.
 D627,490 S 11/2010 Janish
 7,886,496 B1 2/2011 Spransy
 D633,782 S 3/2011 Tompkins
 7,954,914 B2 6/2011 Kendall et al.
 8,434,835 B2 5/2013 Hardy et al.
 D701,451 S * 3/2014 Momiyama D8/382
 8,840,080 B1 9/2014 Gordon
 D719,820 S 12/2014 McGrath
 D721,266 S 1/2015 Sun
 8,955,266 B2 2/2015 Zhang
 D727,138 S 4/2015 Cross
 9,010,033 B2 4/2015 Woods et al.
 D730,717 S 6/2015 Moreau et al.
 D746,461 S 12/2015 Butler
 9,211,004 B2 12/2015 Diemel, Jr. et al.
 9,511,334 B2 12/2016 Kral et al.
 9,668,576 B2 6/2017 Trunkle
 D793,840 S 8/2017 Richardson
 D799,949 S 10/2017 Stevenson et al.
 D805,367 S 12/2017 Winslow
 9,944,217 B2 4/2018 Schroeder et al.
 D818,806 S 5/2018 Copeland
 D832,094 S 10/2018 Omori
 D835,978 S 12/2018 Ikeda
 D843,197 S 3/2019 Dempsey et al.
 D844,421 S 4/2019 McClure
 D859,134 S 9/2019 Iacono

D864,702 S 10/2019 Hagspiel
 D866,309 S 11/2019 McGrath
 D867,117 S 11/2019 McGrath
 D874,257 S 2/2020 Cheng
 D875,517 S 2/2020 Cheng
 D883,769 S 5/2020 Siegel
 D885,880 S 6/2020 Li
 10,704,587 B2 * 7/2020 Khamithar F16B 5/0208
 10,724,560 B2 * 7/2020 Lepper F16B 5/04
 11,261,903 B2 * 3/2022 Rice F16B 39/24
 2004/0016080 A1 1/2004 DeOliveira
 2008/0069631 A1 3/2008 Zillmann
 2008/0084143 A1 4/2008 Ho
 2010/0004693 A1 1/2010 Miller et al.
 2010/0322740 A1 12/2010 Vestergaard-Jensen
 2013/0020920 A1 1/2013 Weber
 2013/0096618 A1 4/2013 Chandanson et al.
 2013/0131734 A1 5/2013 Longtain et al.
 2013/0180202 A1 7/2013 Woods et al.
 2013/0345754 A1 12/2013 Doubler et al.
 2014/0140758 A1 5/2014 Liu et al.
 2015/0112390 A1 4/2015 Fang
 2015/0230829 A1 8/2015 Harris et al.
 2016/0245321 A1 8/2016 Yu et al.
 2017/0023042 A1 1/2017 Grabher et al.
 2018/0135677 A1 5/2018 Catteneo
 2018/0235366 A1 8/2018 Pyle et al.
 2018/0238366 A1 8/2018 Catteneo
 2019/0142175 A1 5/2019 Cantrell

OTHER PUBLICATIONS

Home-Dzine. What are Cam or Locking Screws? Sep. 13, 2016. (May 29, 2018). Retrieved from internet: <URL: <https://www.home-dzine.co.za/diy/diy-camscrews.htm>>, pp. 1-3.
 Search Report for Corresponding International Application No. PCT/US2018/019336, dated Jun. 22, 2018, pp. 1-5.
 Ikea CAM, https://www.ebay.co.uk/itm/Ikea-CAM-LOCK-BOLT-Screw-Nut-Flat-Pack-Furniture-Connector-Pax-Billy-Cupboard/223345655604?_trkparms=aid%3D1110006%26algo%3DHOMESPLICE.SIM%26ao%3D1%26asc%3D225114%26meid%3Deb89a8f86e504b52b093fd26f27c8f3f%26pid%3D100623%26rk%304%26rkt%3D5%26mehot%3Dpp%26sd%30223 (Year: 2020).
 Hafele Cam Lock, <https://www.screwfix.ie/c/screws-nails-fixings/cam-dowels-locks/cat7280104> (Year: 2020).

* cited by examiner

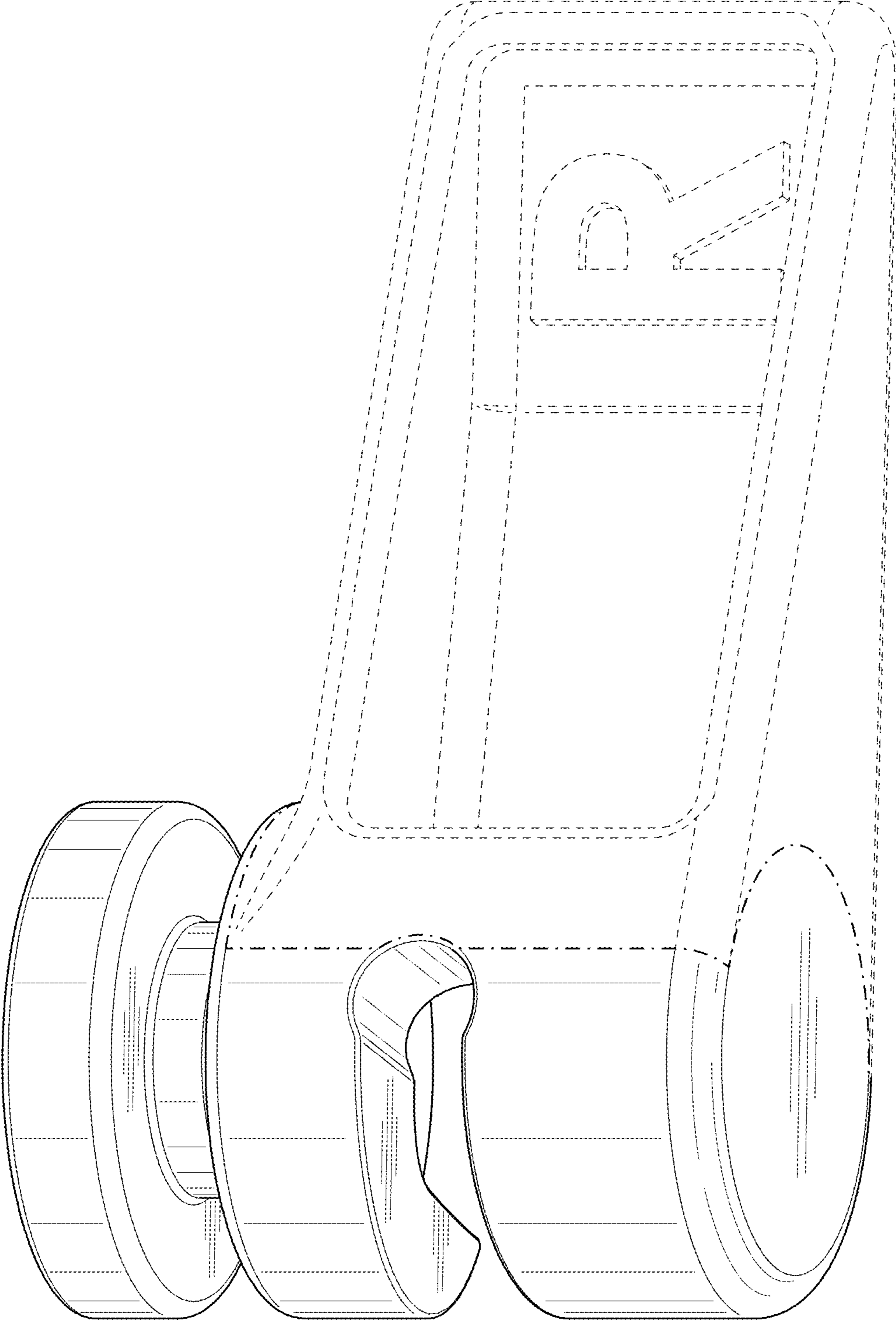


FIG. 1

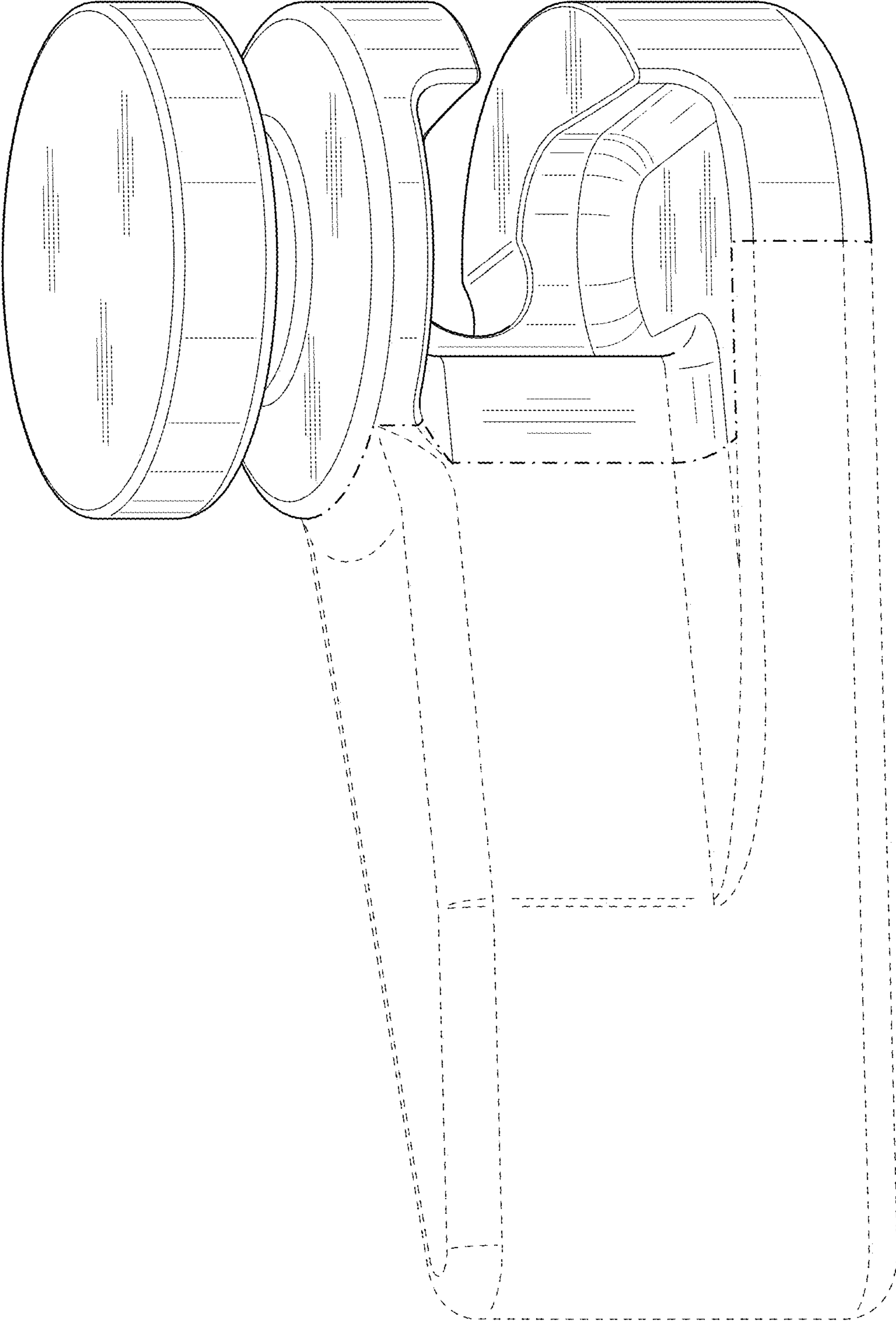


FIG. 2

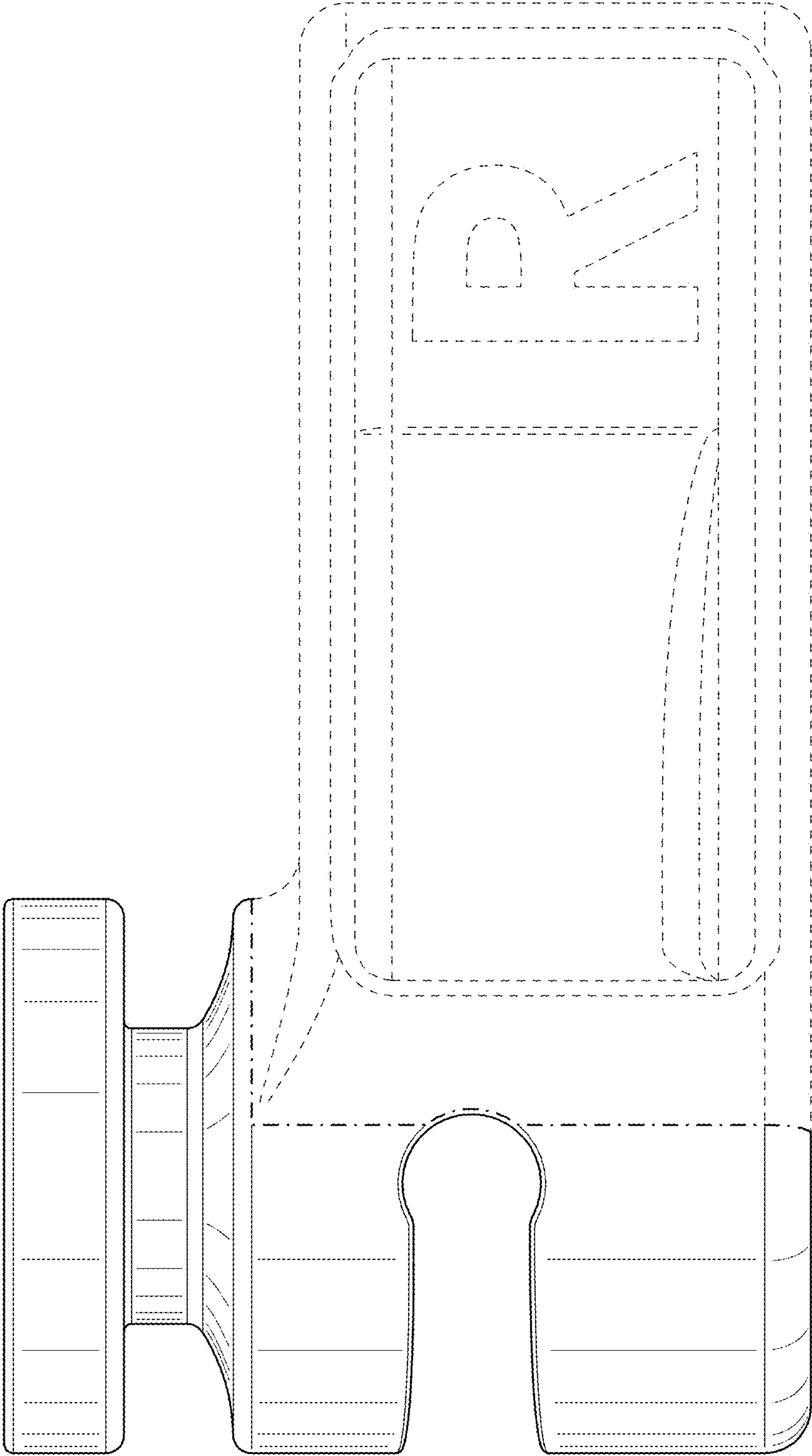


FIG. 3

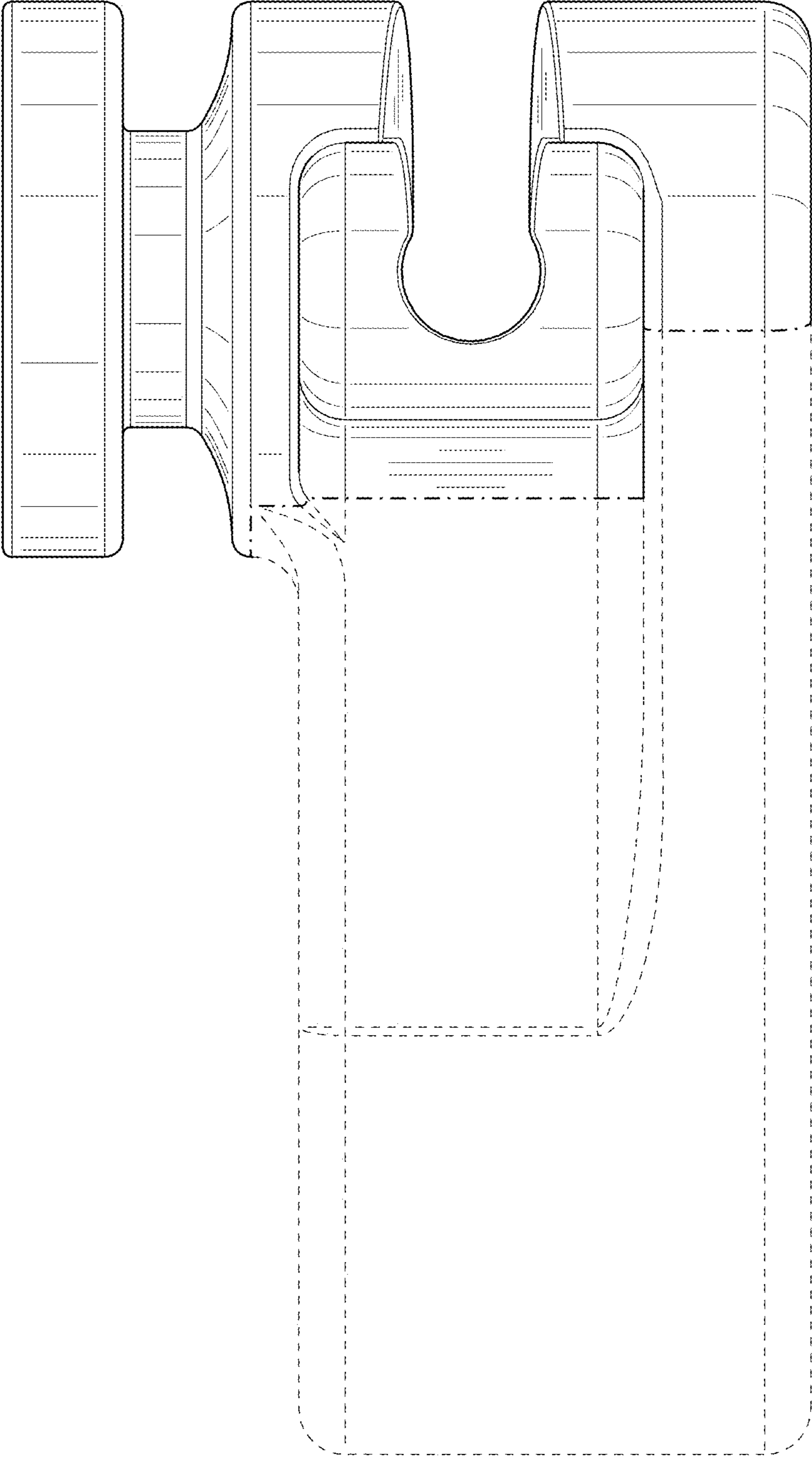


FIG. 4

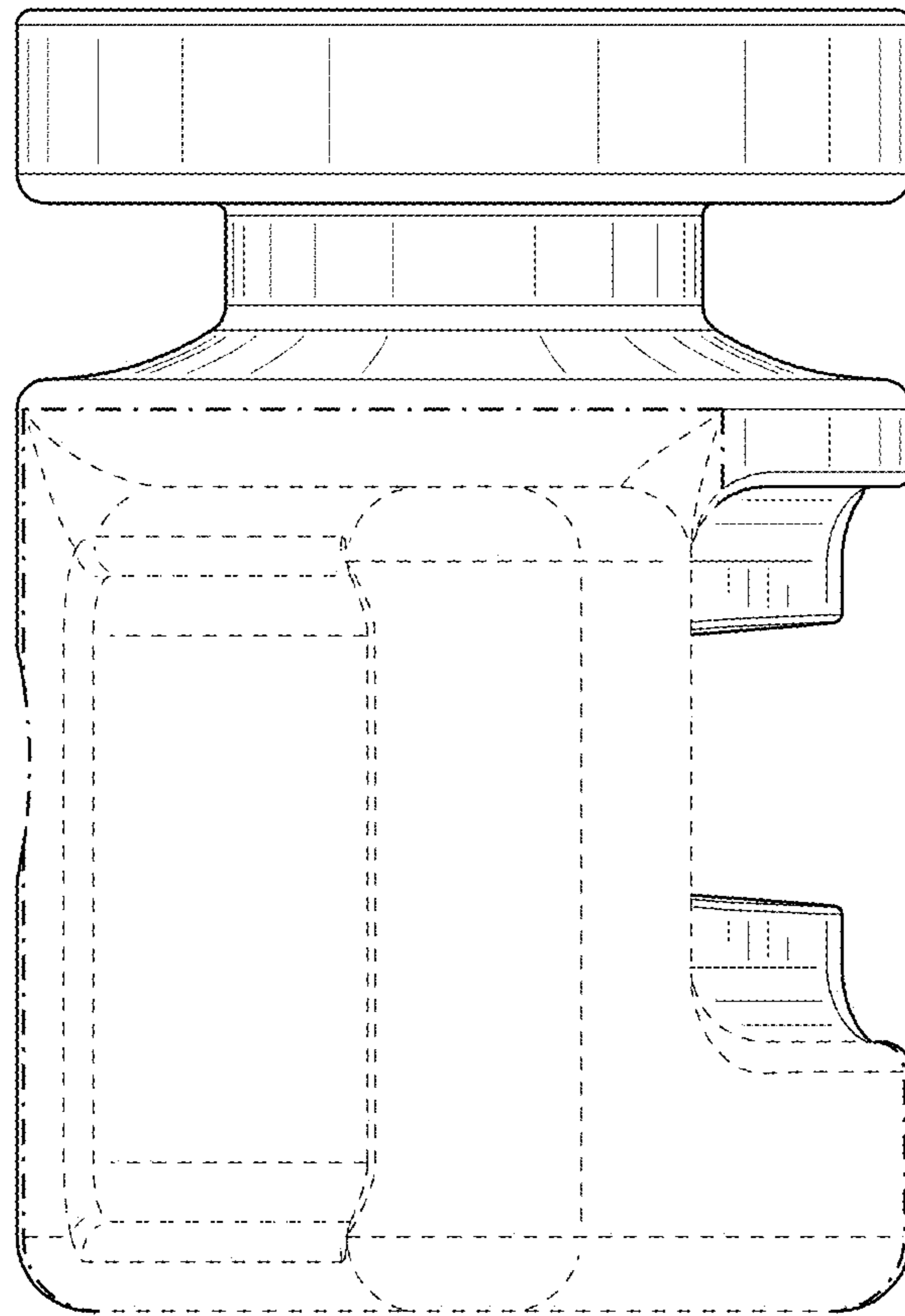


FIG. 5

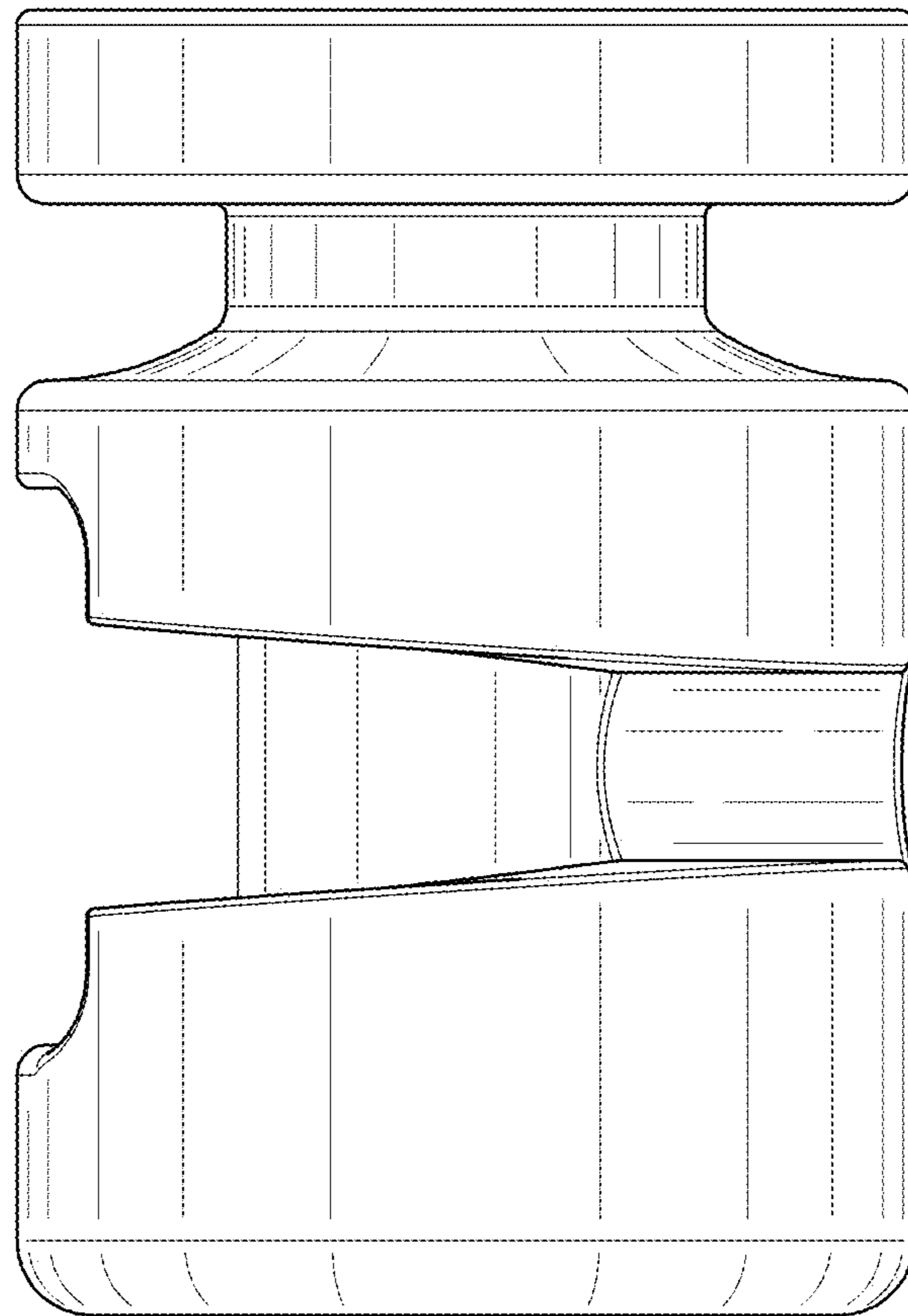


FIG. 6

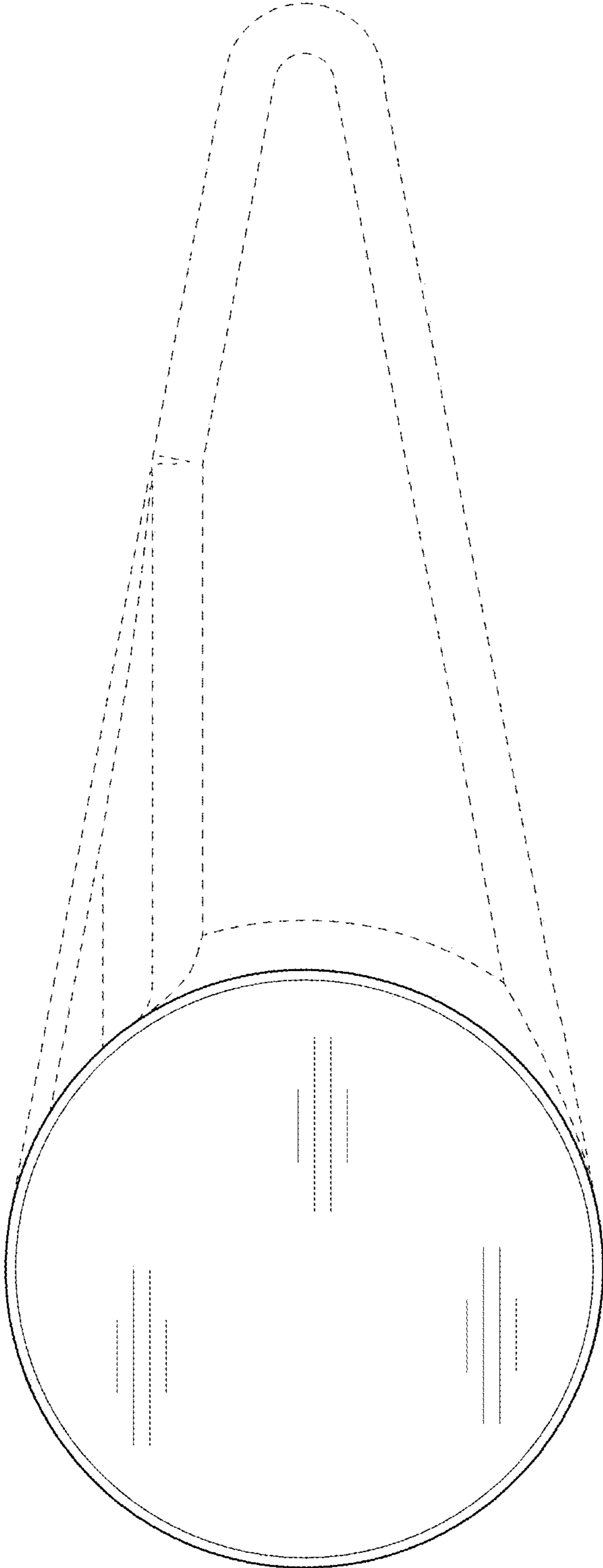


FIG. 7

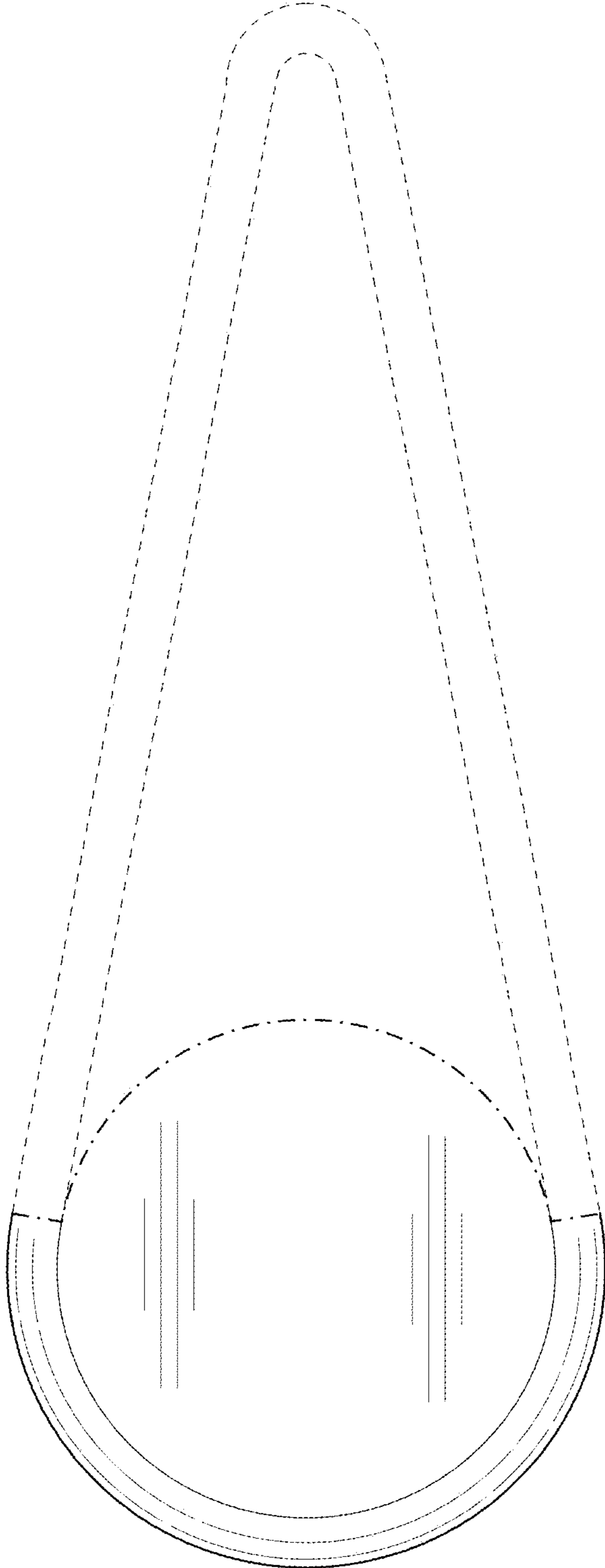


FIG. 8