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

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(54) **BATTERY VENT ADAPTER**
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3,457,381 A * 7/1969 McMorris H01R 11/28 200/50.3
D250,531 S 12/1978 Demetreon
4,286,028 A 8/1981 Heiser et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CN 202339945 7/2012
EP 0496539 B1 5/1996
(Continued)

OTHER PUBLICATIONS

Concord Battery Company; Elbow, vent adapter, 3/8"x1/2"; <http://www.concordebattery.com/pdfs/8003.pdf>; (unknown date); 1 pg.
(Continued)

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

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(51) **LOC (12) Cl.** **13-02**

(52) **U.S. Cl.**
USPC **D13/110**

(58) **Field of Classification Search**
USPC D13/101, 110, 119, 120, 184, 199;
D15/199; D23/262, 263
CPC H01R 11/00; H01R 11/28; H01R 11/32;
H01R 11/281; H01R 11/284; H01R 11/286;
H01R 11/287; H01R 13/68; H01R 13/115; H01R 31/02
See application file for complete search history.

(57) **CLAIM**

The ornamental design for a battery vent adapter, as shown and described herein.

DESCRIPTION

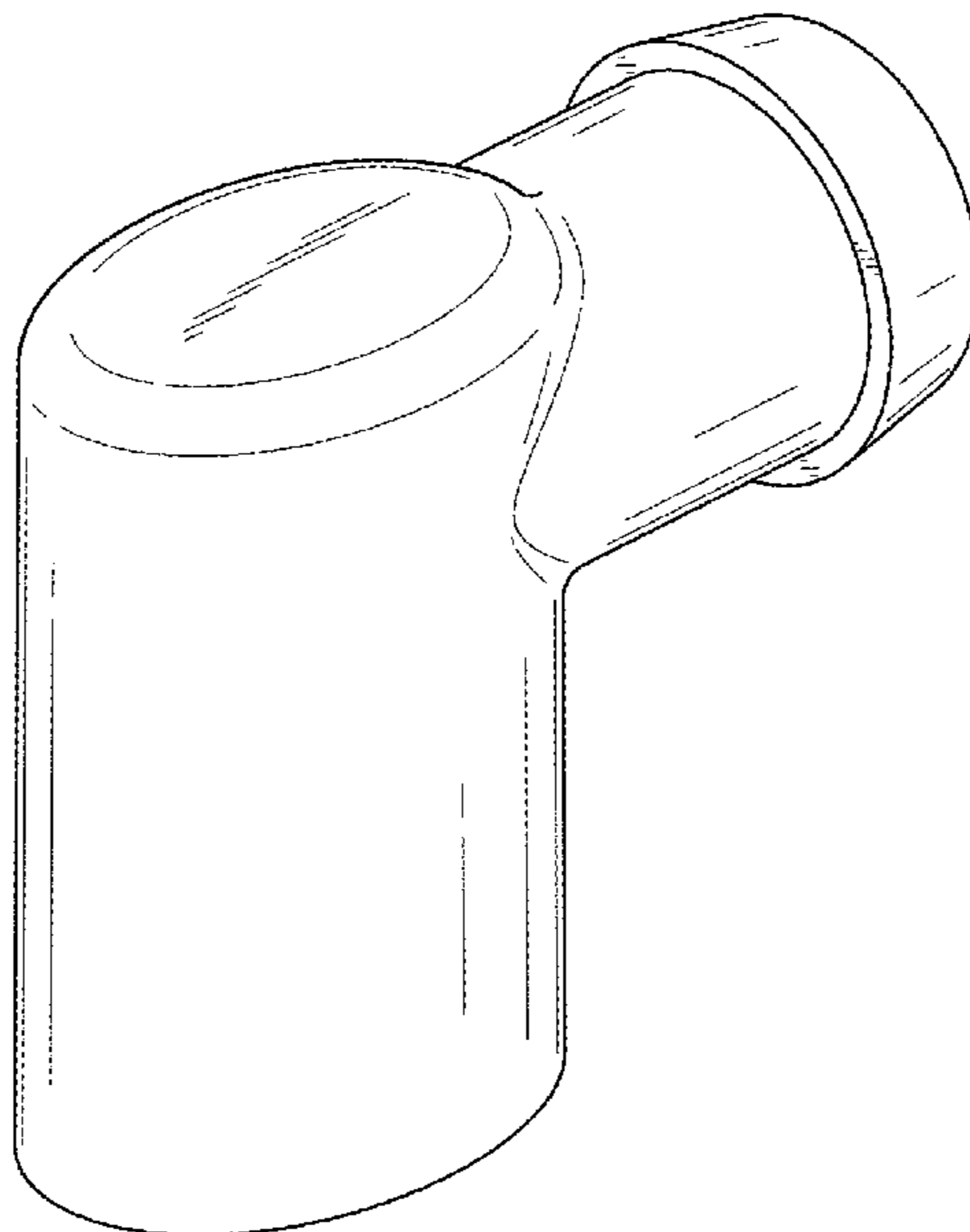
FIG. 1 is an overhead perspective view of the battery vent adapter showing our new design;
FIG. 2 is a bottom perspective view thereof;
FIG. 3 is a top view thereof;
FIG. 4 is a bottom view thereof;
FIG. 5 is a front elevation view thereof;
FIG. 6 is a back elevation view thereof;
FIG. 7 is a right side elevation view thereof; and,
FIG. 8 is a left side elevation view thereof.
The broken lines immediately adjacent to the shaded areas that circumscribe and define unshaded regions represent the bounds of the claimed design and form no part of the claimed design. The unshaded area within the boundary forms no part of the claimed design.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,330,669 A 9/1943 Biles
2,925,579 A * 2/1960 Osborn H01R 11/281 439/388
3,040,116 A 6/1962 Gauvin
3,255,837 A 6/1966 Wolf

1 Claim, 4 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

4,294,505 A * 10/1981 Gaffney H01R 11/281
439/625
4,390,232 A * 6/1983 Jamgotchian H01R 11/287
439/38
D290,597 S 6/1987 Sherman
D291,481 S * 8/1987 Vassallo D23/263
4,740,178 A 4/1988 Badenhorst et al.
D316,398 S 4/1991 Hill
5,390,636 A 2/1995 Baylor et al.
5,399,103 A * 3/1995 Kuboshima H01M 2/206
439/504

5,620,338 A 4/1997 Stephens et al.
D380,730 S 7/1997 Green
5,660,587 A 8/1997 Baer
5,890,960 A 4/1999 Cronan et al.
6,025,086 A 2/2000 Ching
6,164,309 A 12/2000 Brecht
6,225,006 B1 5/2001 Kump
6,350,150 B2 * 2/2002 DeLadurantaye, III
H01R 31/02
439/502

D485,235 S 1/2004 Liang
6,932,650 B1 8/2005 Freitag
7,094,496 B2 8/2006 Rodriguez et al.
7,228,859 B2 6/2007 Loescher
7,573,229 B2 8/2009 Arakelian
D634,709 S * 3/2011 Ichio D13/119
D636,334 S * 4/2011 Kato D13/119
D676,941 S * 2/2013 Kluss D23/262
8,394,519 B2 3/2013 Naganuma
8,399,114 B2 3/2013 Kishii et al.
D700,143 S * 2/2014 Ichio D13/120
8,652,666 B2 2/2014 Kim
8,679,662 B2 3/2014 Maguire et al.
8,748,021 B2 6/2014 Lim
8,945,741 B2 2/2015 Minami et al.
D726,105 S * 4/2015 Williams D13/101
9,067,486 B2 6/2015 Janarthanam et al.
9,159,970 B2 10/2015 Watanabe et al.
9,203,068 B2 12/2015 Utley et al.
9,231,237 B2 1/2016 Shimizu et al.
9,257,758 B2 * 2/2016 Kellman H01R 13/72
9,312,622 B2 * 4/2016 Windenberger H01R 4/4863
9,343,819 B2 * 5/2016 McGann H01R 4/183
D760,650 S * 7/2016 Juds D13/110
D776,797 S * 1/2017 Bednarz D23/263
9,537,130 B2 1/2017 Yoon
D807,291 S * 1/2018 Juds D13/110
D807,936 S * 1/2018 He D15/199
D832,328 S * 10/2018 Baek D15/199
D851,269 S * 6/2019 McGregor D24/206
D857,856 S * 8/2019 Lee D23/263
D858,720 S * 9/2019 Lee D23/263
10,462,416 B2 * 10/2019 Kvachev H04N 7/10
2004/0074538 A1 4/2004 Ortenzi et al.
2005/0166993 A1 8/2005 Viken
2007/0218351 A1 9/2007 Boerner et al.
2010/0173181 A1 7/2010 Okada
2010/0241470 A1 9/2010 Smith
2012/0045672 A1 2/2012 Kruger
2012/0121949 A1 5/2012 Eberhard et al.

2013/0040174 A1 2/2013 Takasaki et al.
2013/0266826 A1 10/2013 Cowperthwaite
2014/0329142 A1 11/2014 Dickinson
2015/0093607 A1 4/2015 Kuriyama et al.
2015/0093982 A1 4/2015 Bailey
2015/0125720 A1 5/2015 Fujii et al.
2015/0162578 A1 6/2015 Kim et al.
2015/0162582 A1 6/2015 Metz et al.
2015/0207186 A1 7/2015 Schmidt et al.
2015/0214525 A1 7/2015 Lim
2015/0236325 A1 8/2015 Miller et al.
2015/0246650 A1 9/2015 Nakajima et al.
2015/0030892 A1 10/2015 Malhotra
2016/0020447 A1 1/2016 Janarthanam et al.
2016/0218338 A1 7/2016 Iqbal et al.
2016/0308179 A1 10/2016 Lohr et al.

FOREIGN PATENT DOCUMENTS

KR 19960006034 7/1996
KR 100748737 B1 8/2007
WO 2000057502 A1 9/2000
WO 2003050907 A1 6/2003
WO 2010072058 A1 7/2010
WO 2013110359 A1 8/2013

OTHER PUBLICATIONS

Concord Battery Company; Elbow barbed coupling assy, ¼ to ½;
<http://www.concordebattery.com/pdfs/5-0349.pdf>; (unknown date);
1 pg.
Boxster Batteries; “Dead Battery and Can’t Get in to Charge it?”;
<https://sites.google.com/site/mikefocke2/batteries>; (unknown date);
16 pgs.
Porsche 996 DIY: Battery Replacement; <http://www.euroaddiction.net/forum/996-997-turbo-diy-how-section/6180-porsche-996-diy-battery-replacement.html>; Apr. 27, 2011; 10 pgs.
East Penn Manufacturing Co. Inc., “Valve-Regulated Lead-Acid (VRLA) Gelled Electrolyte (Gel) and Absorbed Glass Mat (AGM) Batteries”; (2012); 8 pgs.
Battery Council International; “Batter Replacement Data Book—2013 Edition”; 105 pgs.
International Search Report & Written Opinion for International Application No. PCT/US2014/048044 dated Dec. 3, 2014.
KR Patent Application No. 10-2016-7001603 Preliminary Rejection dated May 22, 2017.
CN 201480052561.4 Office Action dated Jun. 16, 2017.
<http://www.batteryweb.com/bci.cfm>. “BCI Group Numbers, Dimensional Specifications, Polarity & Terminals”, pp. 1-3.
Porsche 996 DIY: Battery Replacement; <http://www.euroaddiction.net/forum/996-997-turbo-diy-how-section/6180-porsche-996-diy-battery-replacement.html>; Apr. 27, 2011; 12 pgs.
Boxster Batteries; “Dead Battery and Can’t Get in to Charge it?”;
<https://sites.google.com/site/mikefocke2/batteries>; (unknown date);
15 pgs.
Battery Council International; “Batter Replacement Data Book—2013 Edition”; 21 pgs.
East Penn Manufacturing Co. Inc., “Valve-Regulated Lead-Acid (VRLA) Gelled Electrolyte (Gel) and Absorbed Glass Mat (AGM) Batteries”; (2012); 7 pgs.

* cited by examiner

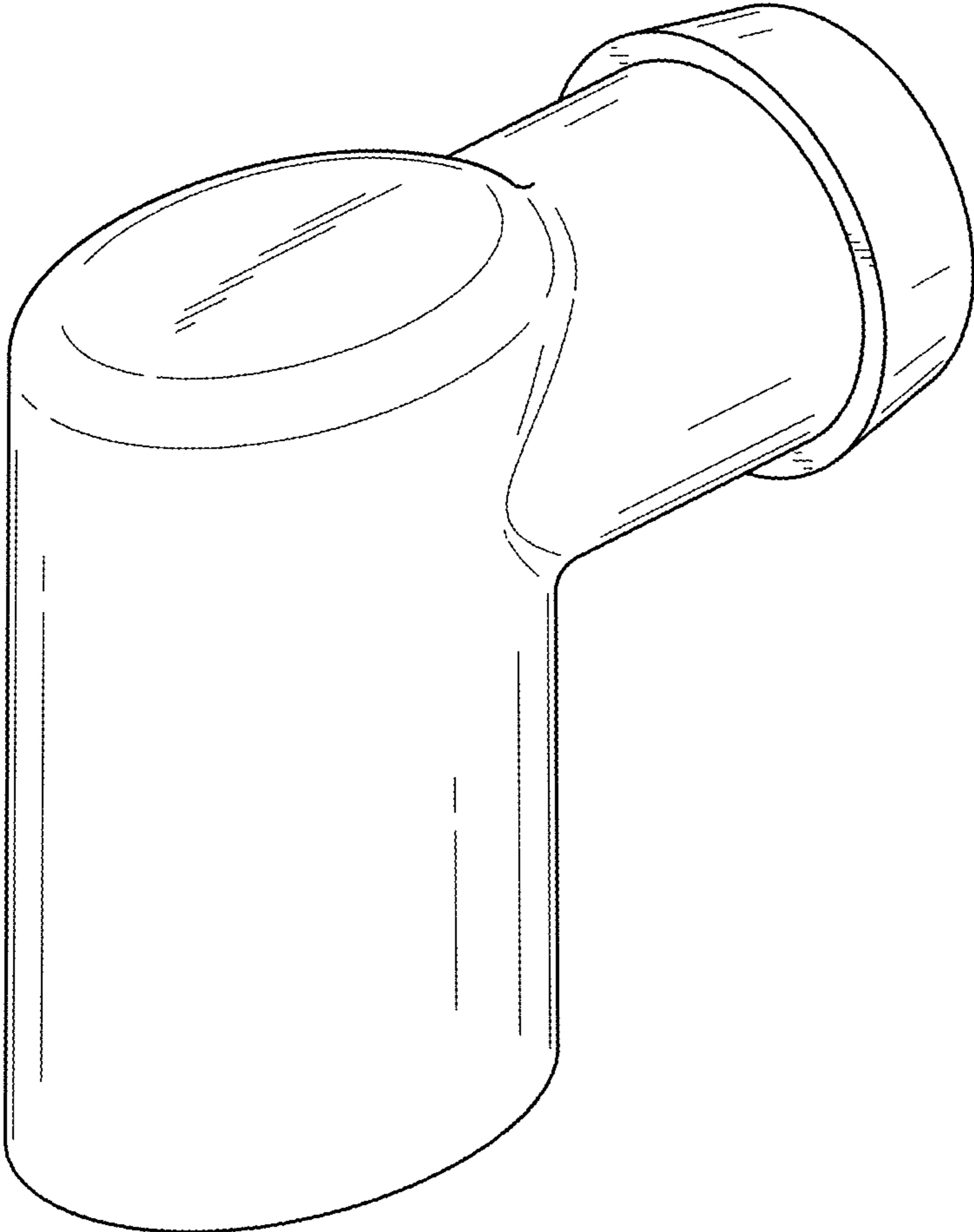


FIG. 1

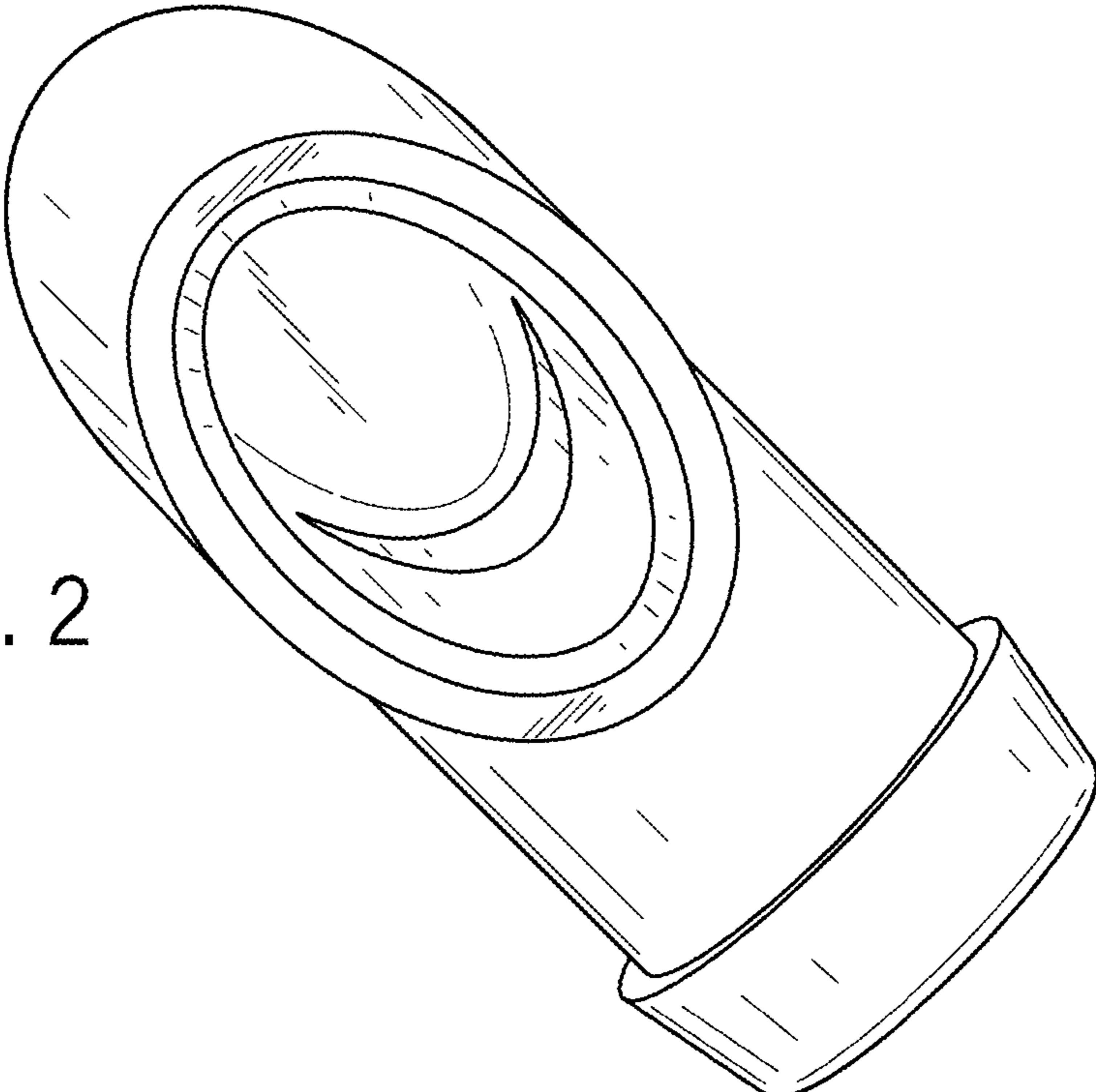


FIG. 2

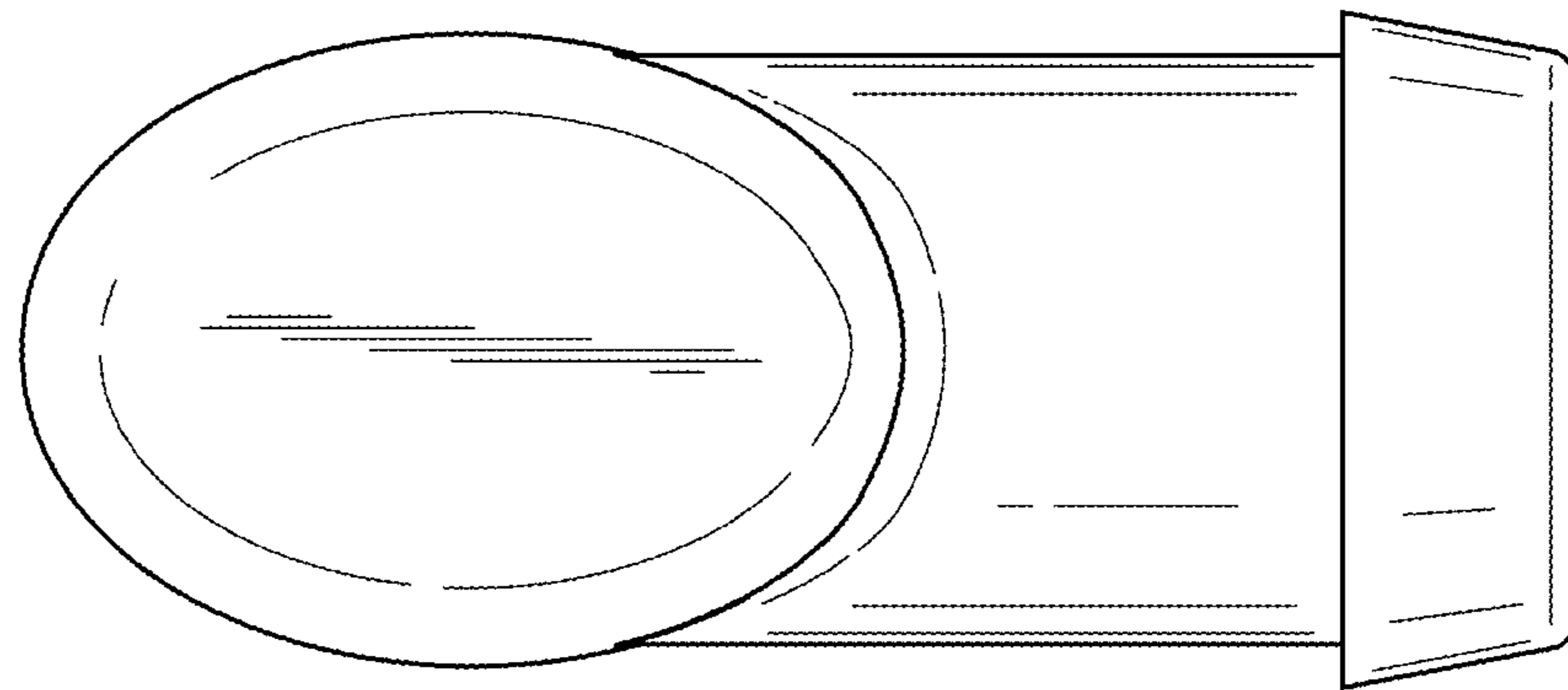


FIG. 3

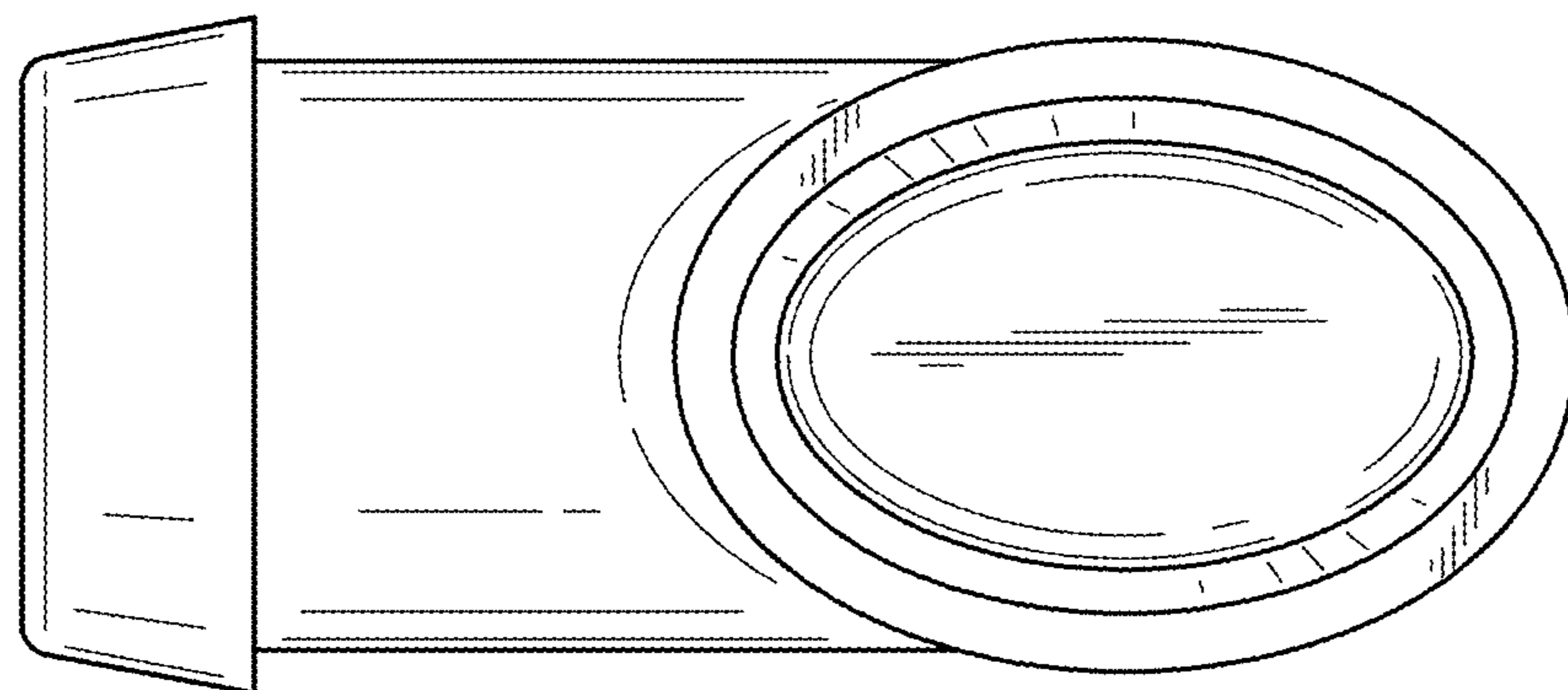


FIG. 4

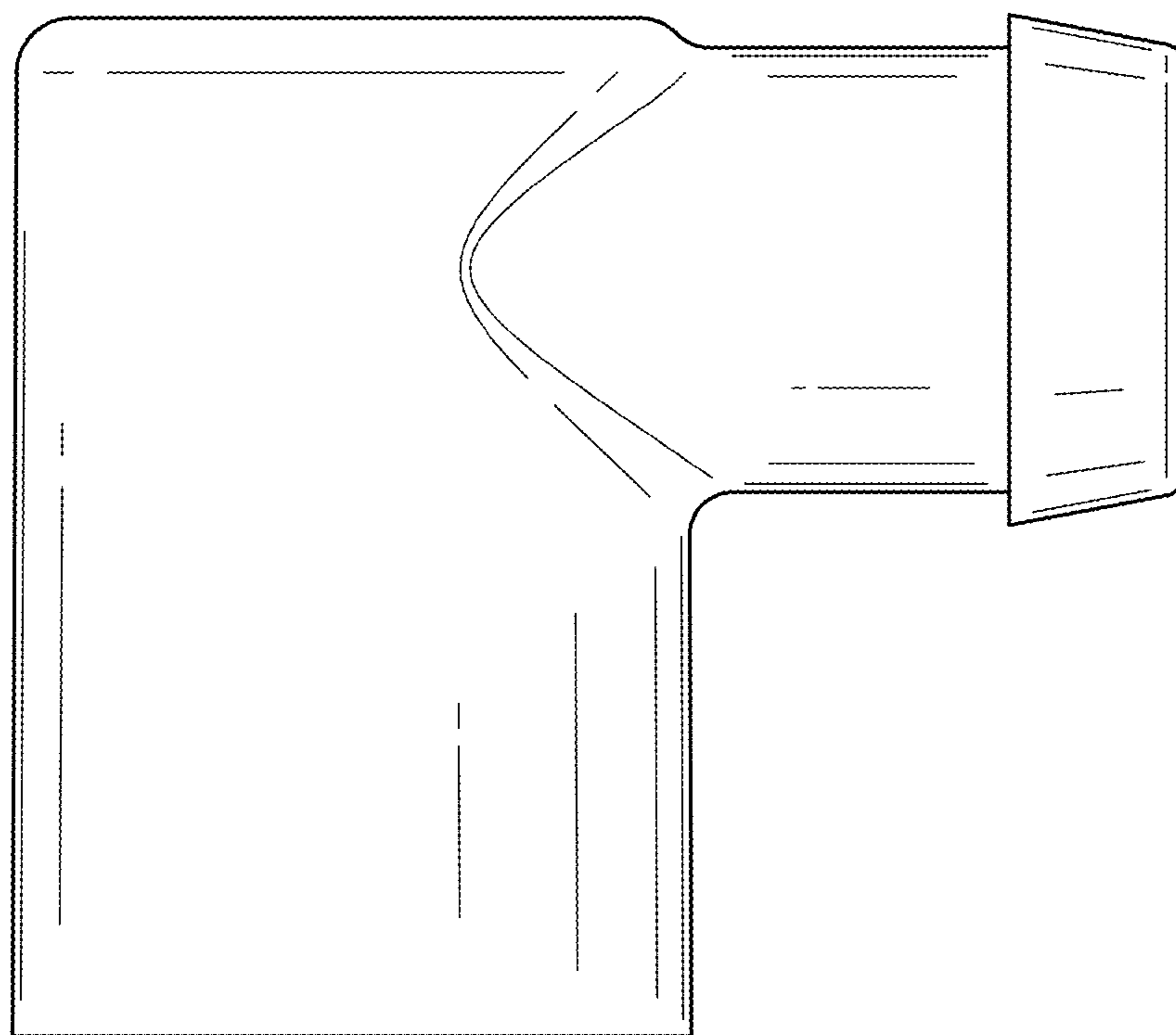


FIG. 5

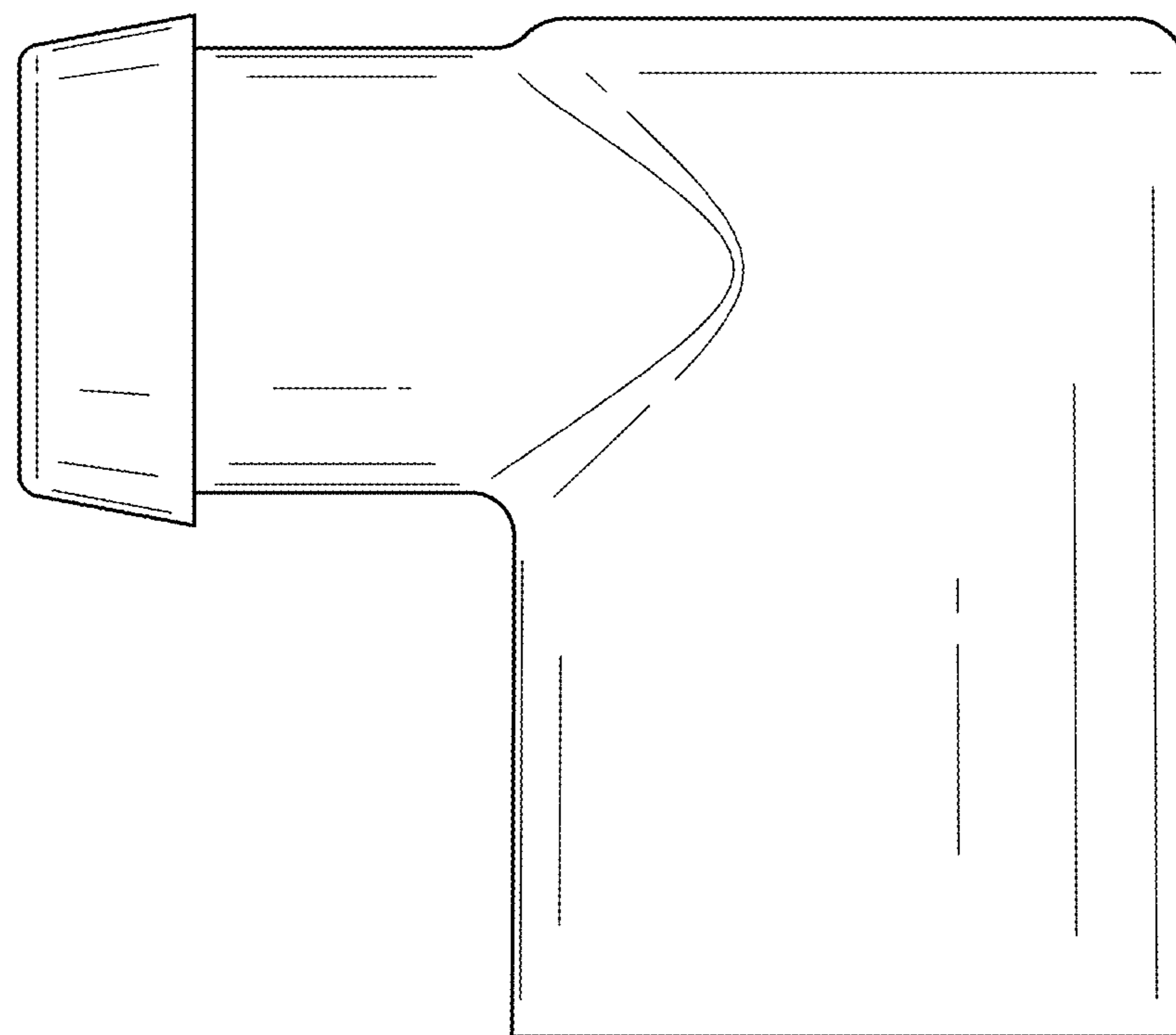


FIG. 6

FIG. 7

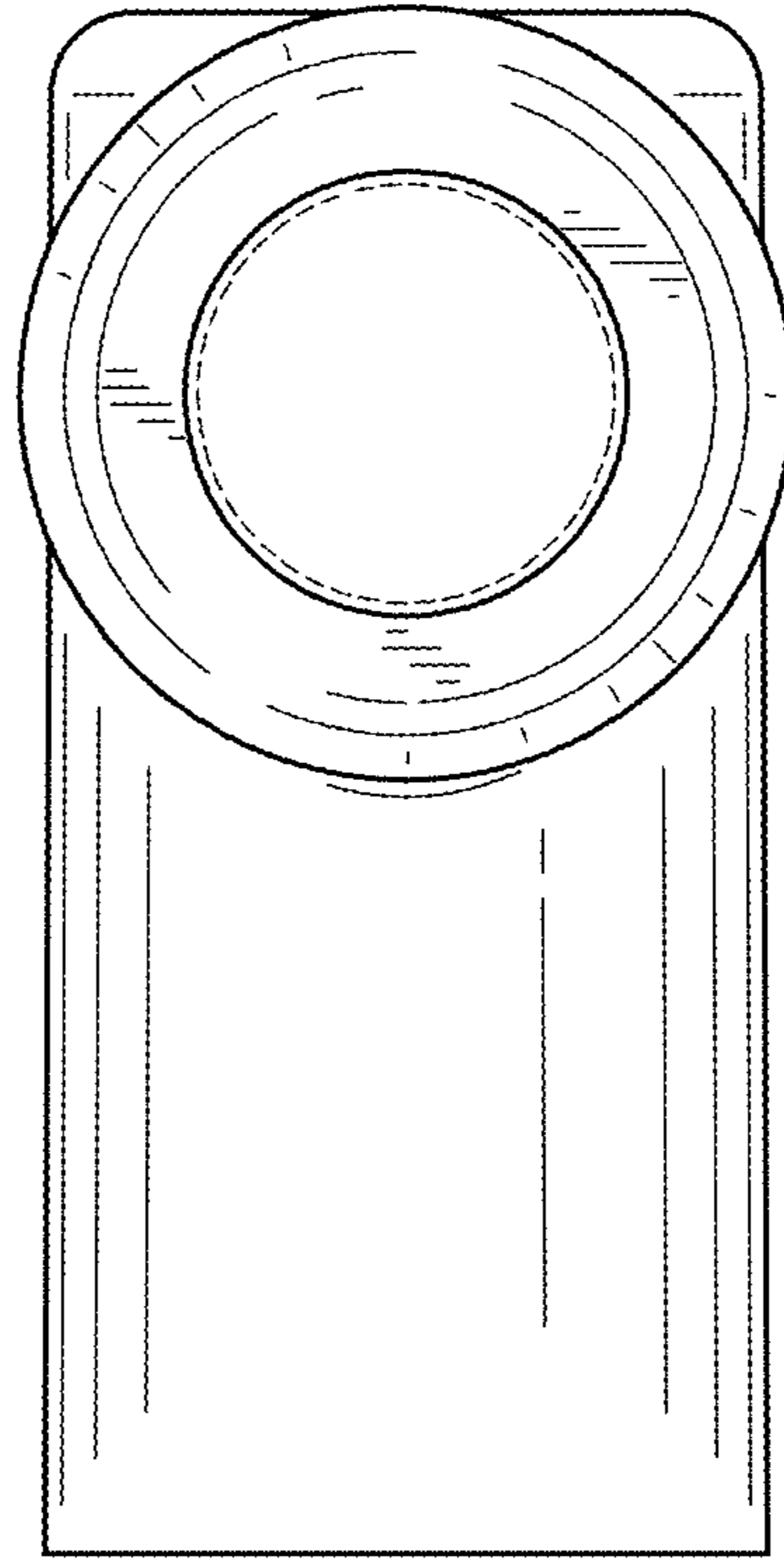


FIG. 8

