



US00D762564S

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

(10) **Patent No.:** **US D762,564 S**
(45) **Date of Patent:** **** Aug. 2, 2016**

(54) **BATTERY CELL INCLUDING A CHARGING PORT**

(71) Applicant: **Techtronic Power Tools Technology Limited**, Tortola (VG)

(72) Inventors: **James A. Patton**, Anderson, SC (US);
G. Michael Hornick, Anderson, SC (US)

(73) Assignee: **TECHTRONIC POWER TOOLS TECHNOLOGY LIMITED**, Tortola (VG)

(**) Term: **14 Years**

(21) Appl. No.: **29/480,841**

(22) Filed: **Jan. 30, 2014**

(51) **LOC (10) Cl.** **13-02**

(52) **U.S. Cl.**
USPC **D13/103**; D13/108

(58) **Field of Classification Search**
USPC D13/102–110, 118–119, 184; D14/155,
D14/251, 253, 432, 434, 203.3–203.8, 217,
D14/248, 250, 252, 440, 450, 496;
320/107–115; 429/96–100, 163, 176
CPC Y02E 60/12; Y02E 60/122; Y02E 60/124;
Y02E 60/50; H01M 2/02; H01M 2/022;
H01M 2/0202; H01M 2/0207; H01M 2/0212;
H01M 2/1022; H01M 2/1061; H01M 2/1055;
H01M 2/1066; H01M 2/105; H01M 2/204;
H01M 10/4257; H01M 10/0436; H01M 10/48;
H01M 10/44; H01M 10/46; H01M 10/425;
B60L 11/182; Y02T 90/14; Y02T 90/122;
Y02T 90/128; Y02T 90/163; H02J 7/025;
H02J 7/0042; H02J 7/0044; H02J 7/0045;
H02J 7/0004; H01F 38/14; H01R 13/6675
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,622,507 A 11/1986 Persen
5,204,608 A 4/1993 Koenck

(Continued)

Primary Examiner — Rosemary K Tarcza

Assistant Examiner — Sanjeev Paul

(74) *Attorney, Agent, or Firm* — Michael Best & Friedrich LLP

(57) **CLAIM**

The ornamental design for a battery cell including a charging port, as shown and described.

DESCRIPTION

FIG. 1 is a top perspective view of a first construction of a battery cell including a charging port.

FIG. 2 is a front view of the battery cell of FIG. 1.

FIG. 3 is a rear view of the battery cell of FIG. 1.

FIG. 4 is a left side view of the battery cell of FIG. 1.

FIG. 5 is a right side view of the battery cell of FIG. 1.

FIG. 6 is a top view of the battery cell of FIG. 1.

FIG. 7 is a bottom view of the battery cell of FIG. 1.

FIG. 8 is a top perspective view of a second construction of a battery cell including a charging port.

FIG. 9 is a front view of the battery cell of FIG. 8.

FIG. 10 is a rear view of the battery cell of FIG. 8.

FIG. 11 is a left side view of the battery cell of FIG. 8.

FIG. 12 is a right side view of the battery cell of FIG. 8.

FIG. 13 is a top view of the battery cell of FIG. 8.

FIG. 14 is a bottom view of the battery cell of FIG. 8.

FIG. 15 is a top perspective view of a third construction of a battery cell including a charging port.

FIG. 16 is a front view of the battery cell of FIG. 15.

FIG. 17 is a rear view of the battery cell of FIG. 15.

FIG. 18 is a left side view of the battery cell of FIG. 15.

FIG. 19 is a right side view of the battery cell of FIG. 15.

FIG. 20 is a top view of the battery cell of FIG. 15.

FIG. 21 is a bottom view of the battery cell of FIG. 15.

FIG. 22 is a top perspective view of a fourth construction of a battery cell including a charging port.

FIG. 23 is a front view of the battery cell of FIG. 22.

FIG. 24 is a rear view of the battery cell of FIG. 22.

FIG. 25 is a left side view of the battery cell of FIG. 22.

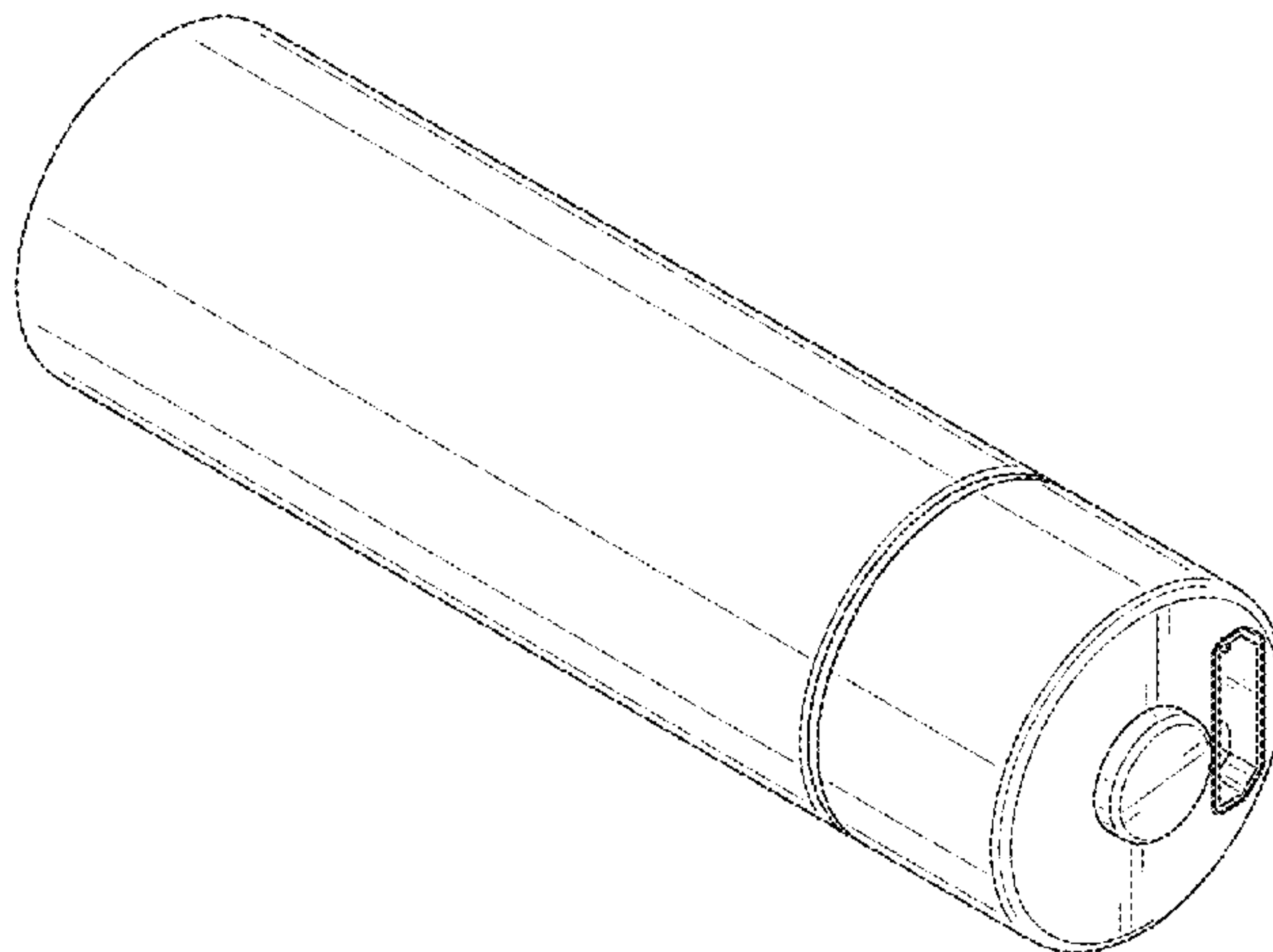
FIG. 26 is a right side view of the battery cell of FIG. 22.

FIG. 27 is a top view of the battery cell of FIG. 22; and,

FIG. 28 is a bottom view of the battery cell of FIG. 22.

The ornamental design which is claimed is shown in solid lines in the drawings.

1 Claim, 16 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

5,538,805 A 7/1996 Aragon
5,645,949 A 7/1997 Young
5,795,664 A 8/1998 Kelly
5,818,198 A 10/1998 Mito et al.
D428,385 S * 7/2000 Luh D13/103
6,118,248 A 9/2000 Garstein et al.
6,163,131 A 12/2000 Garstein et al.
6,271,643 B1 8/2001 Becker et al.
6,483,275 B1 11/2002 Nebrigg et al.
D481,993 S * 11/2003 Searle D13/103
6,805,992 B1 * 10/2004 Hanafusa H01M 2/0207
429/56
6,835,491 B2 12/2004 Garstein et al.
6,979,502 B1 12/2005 Garstein et al.
D539,216 S * 3/2007 Hamaguchi D13/103
D577,333 S * 9/2008 Daniel D13/103
D598,374 S * 8/2009 Sasada D13/108
7,633,261 B2 12/2009 Baron et al.
D607,402 S * 1/2010 Himeda D13/103
D623,589 S * 9/2010 Tarter D13/103
7,960,047 B2 6/2011 Berg
D645,816 S * 9/2011 Sasada D13/108
D645,817 S * 9/2011 Sasada D13/108
8,058,840 B2 11/2011 Daniel et al.
8,067,923 B2 11/2011 Daniel et al.
8,115,454 B2 2/2012 Cintra et al.
D664,092 S * 7/2012 Gea Suarez D13/103
D664,920 S * 8/2012 Huang D13/107
D665,346 S * 8/2012 Kumagai D13/108
8,314,590 B2 11/2012 Chen

8,319,471 B2 11/2012 Adest et al.
D674,746 S * 1/2013 Zhang D13/102
D685,735 S * 7/2013 Wang D13/110
D686,155 S * 7/2013 Nguyen D13/103
8,482,256 B2 7/2013 Zhu et al.
D722,956 S * 2/2015 Alima D13/103
D735,663 S * 8/2015 Miller D13/103
D749,044 S * 2/2016 Huang D13/108
D749,506 S * 2/2016 Morgan D13/108
D750,017 S * 2/2016 Miller D13/108
D750,018 S * 2/2016 Miller D13/108
D750,019 S * 2/2016 Miller D13/108
2004/0048143 A1 3/2004 Stumpf
2004/0115519 A1 6/2004 Lee
2005/0042504 A1 2/2005 Chen
2006/0139003 A1 6/2006 Fischer et al.
2008/0160392 A1 7/2008 Toya et al.
2009/0010462 A1 1/2009 Ekchian et al.
2010/0136374 A1 6/2010 Jang et al.
2012/0009448 A1 1/2012 Lee et al.
2013/0043839 A1 2/2013 Adest et al.
2013/0182421 A1 * 7/2013 Popper H01M 2/30
362/183
2013/0216930 A1 * 8/2013 Yoon H01M 8/243
429/465
2014/0140048 A1 * 5/2014 Miller H02J 7/0027
362/183
2015/0201676 A1 * 7/2015 Shin A24F 47/008
131/329
2015/0221898 A1 * 8/2015 Chi H01M 2/1686
607/5
2016/0056648 A1 * 2/2016 Dowd H02J 7/0047
320/107

* cited by examiner

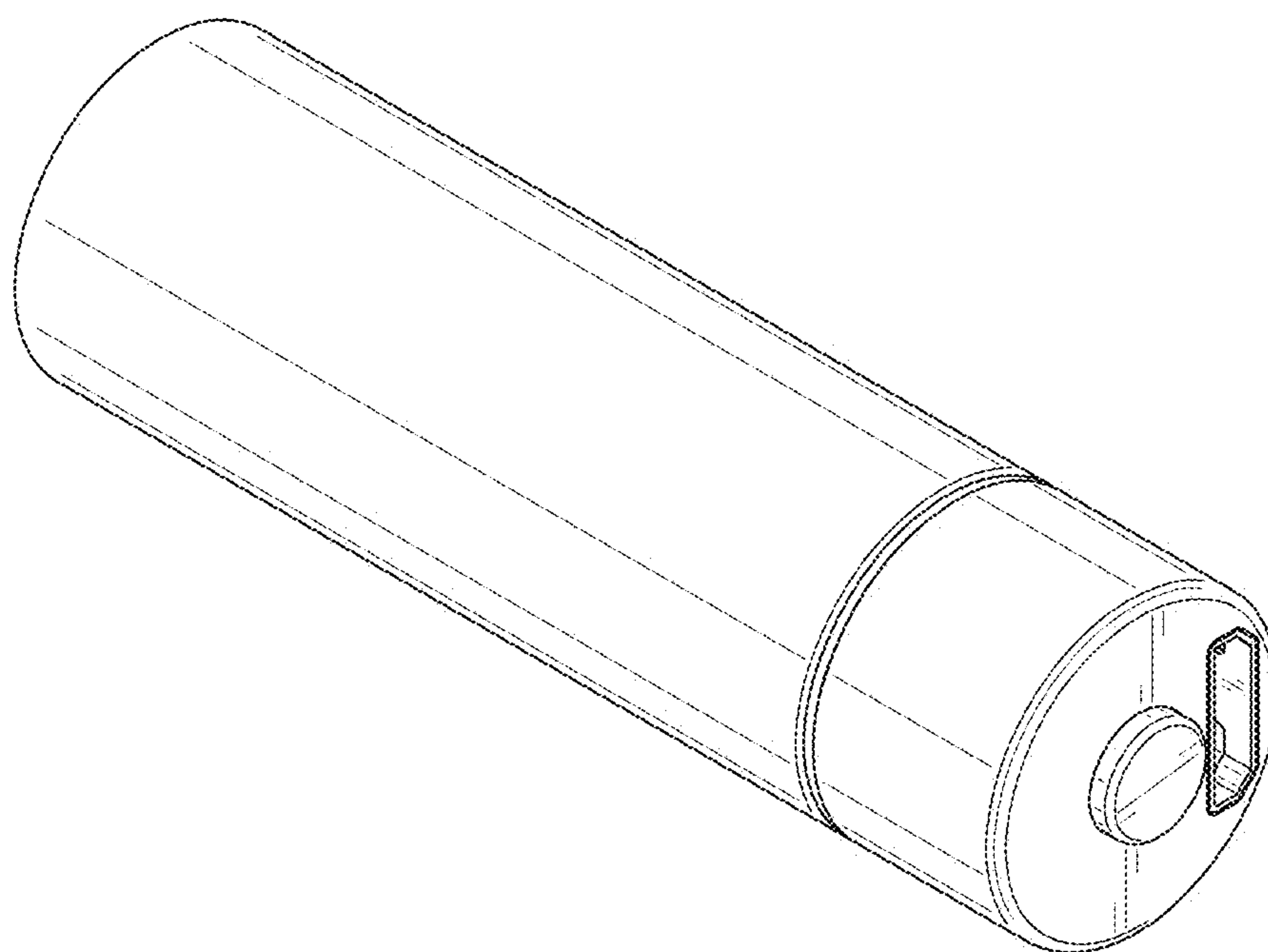


FIG. 1

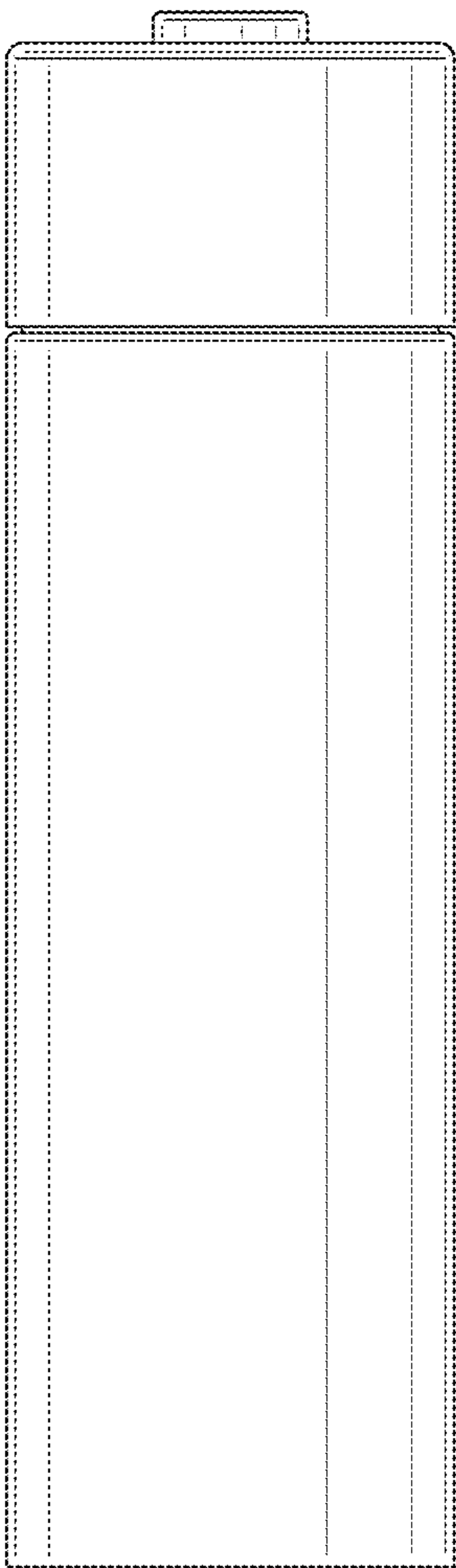


FIG. 2

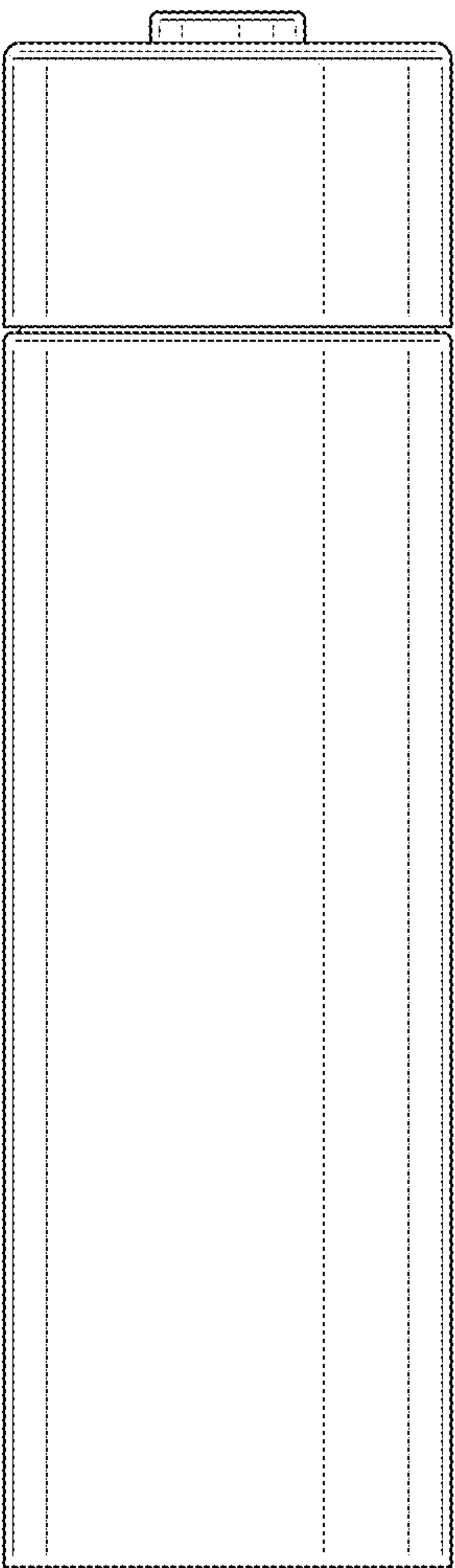


FIG. 3

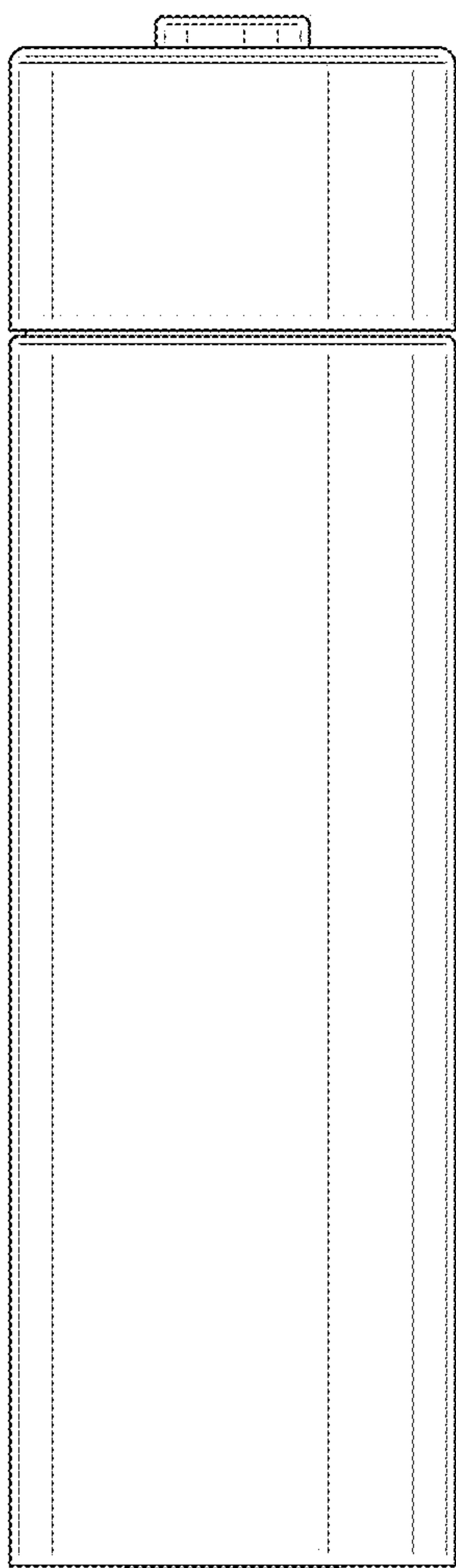


FIG. 4

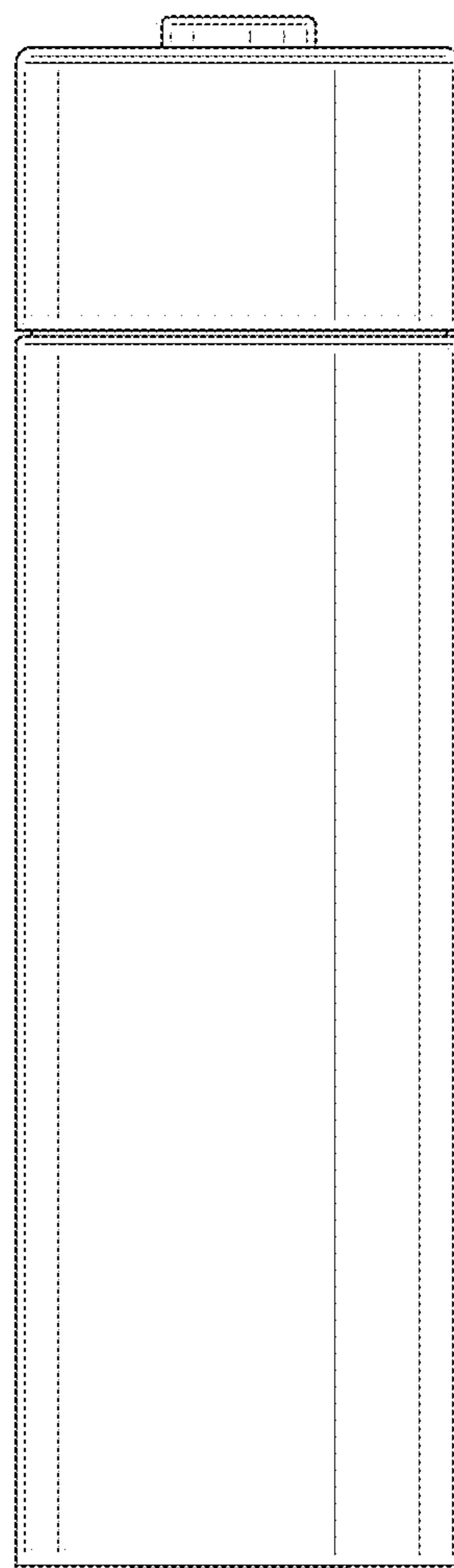


FIG. 5

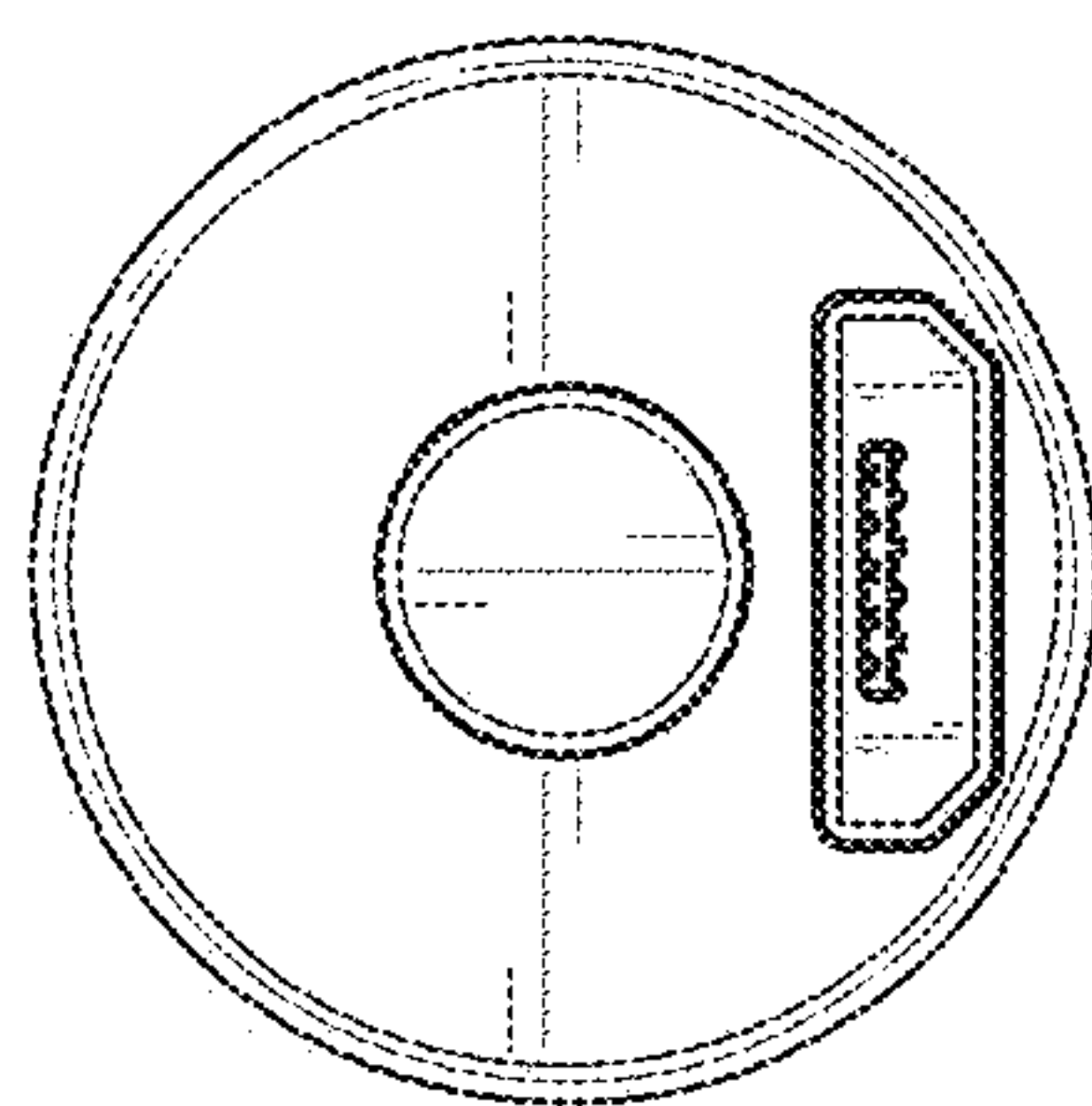


FIG. 6

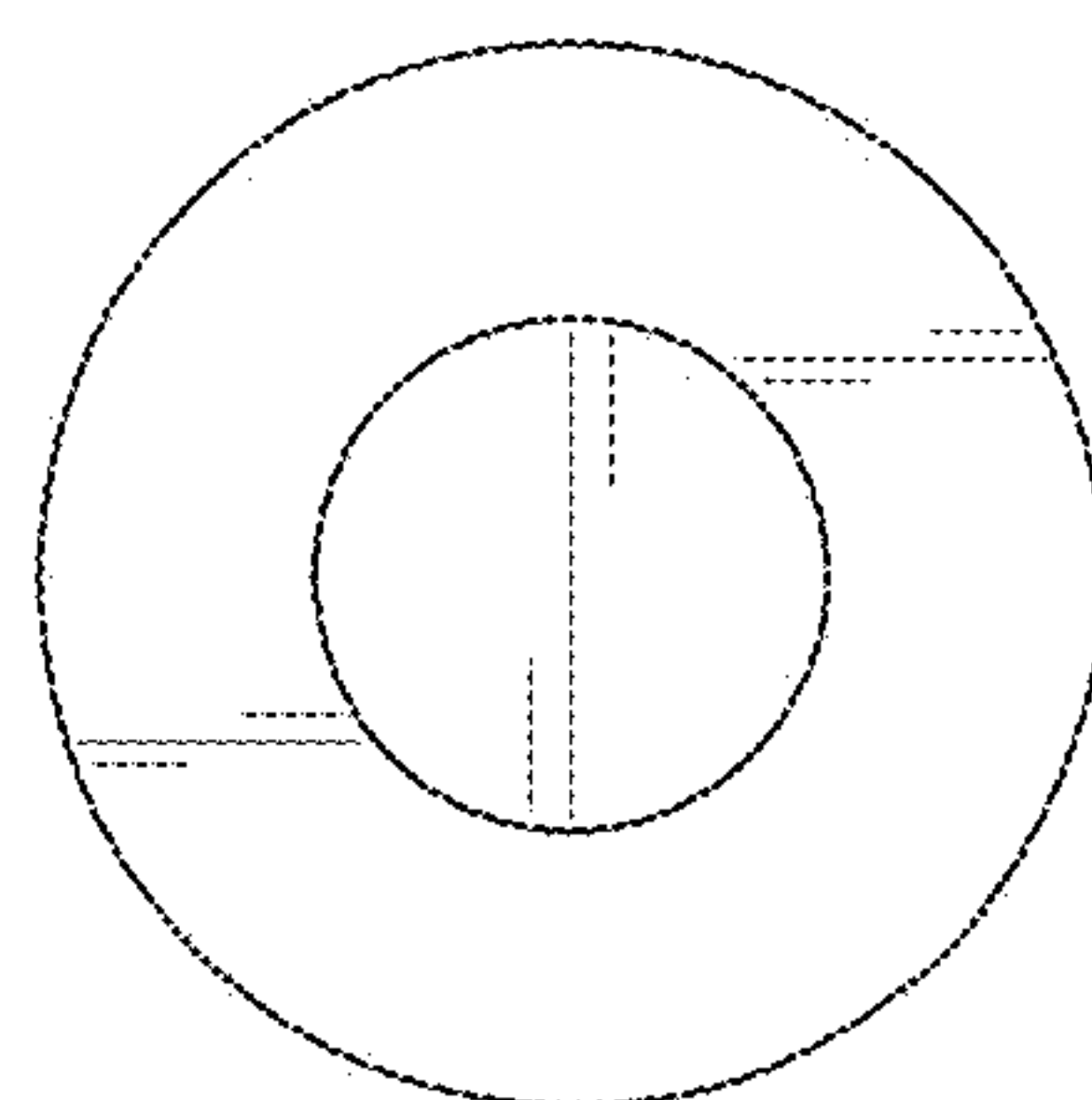


FIG. 7

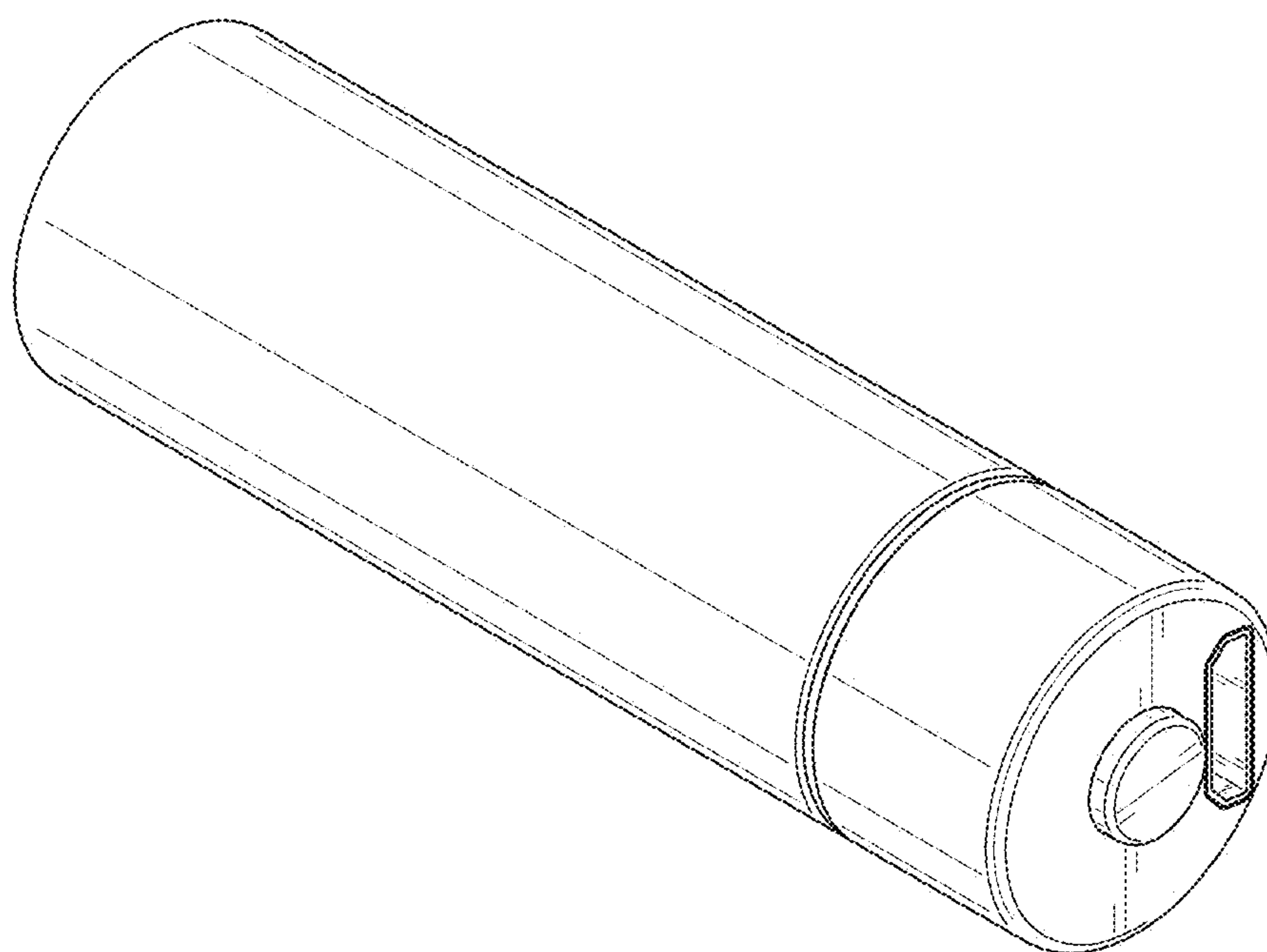


FIG. 8

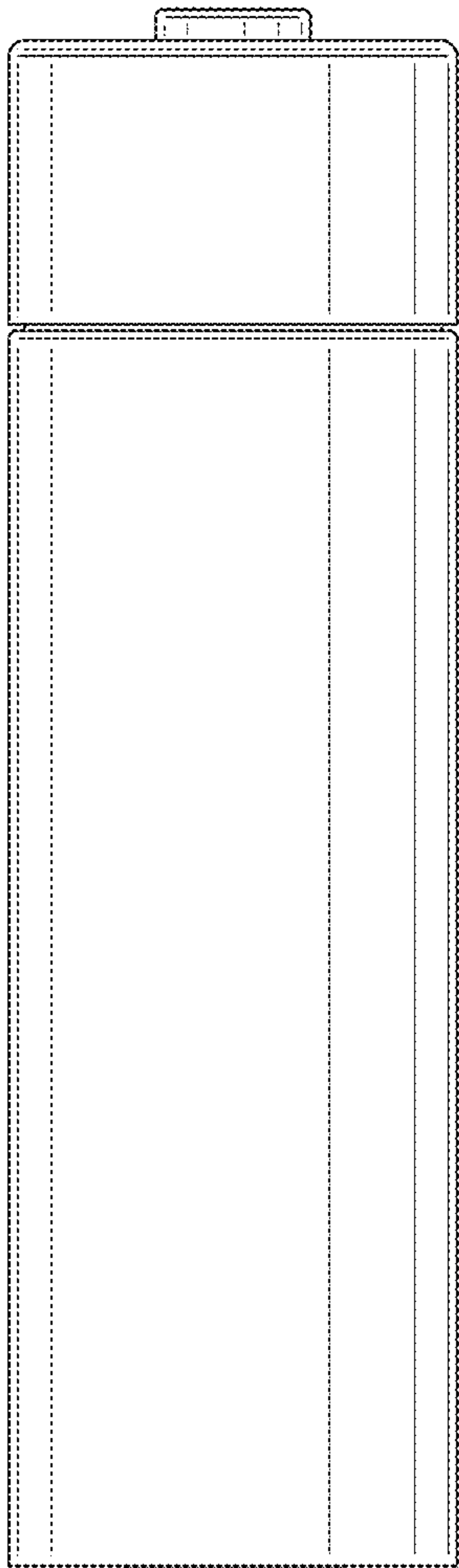


FIG. 9

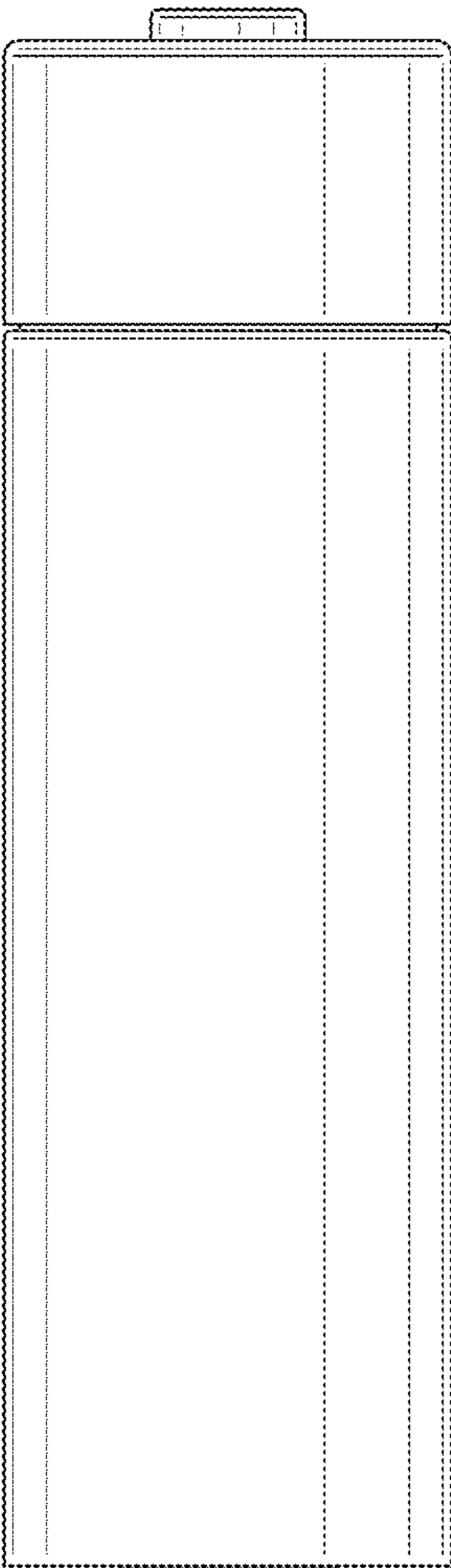


FIG. 10

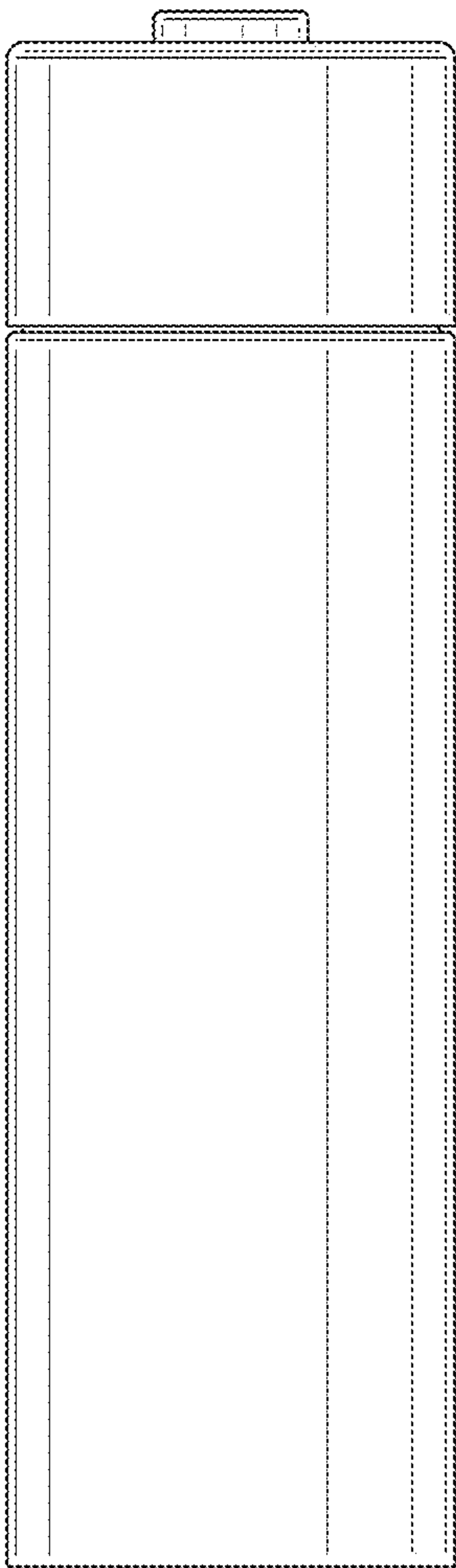


FIG. 11

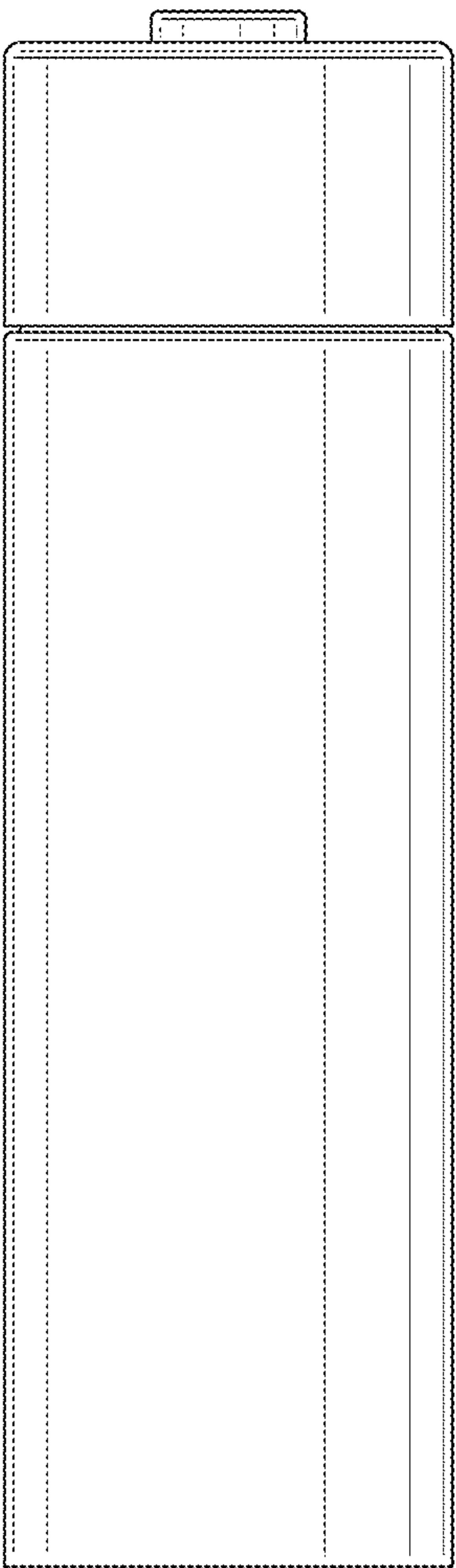


FIG. 12

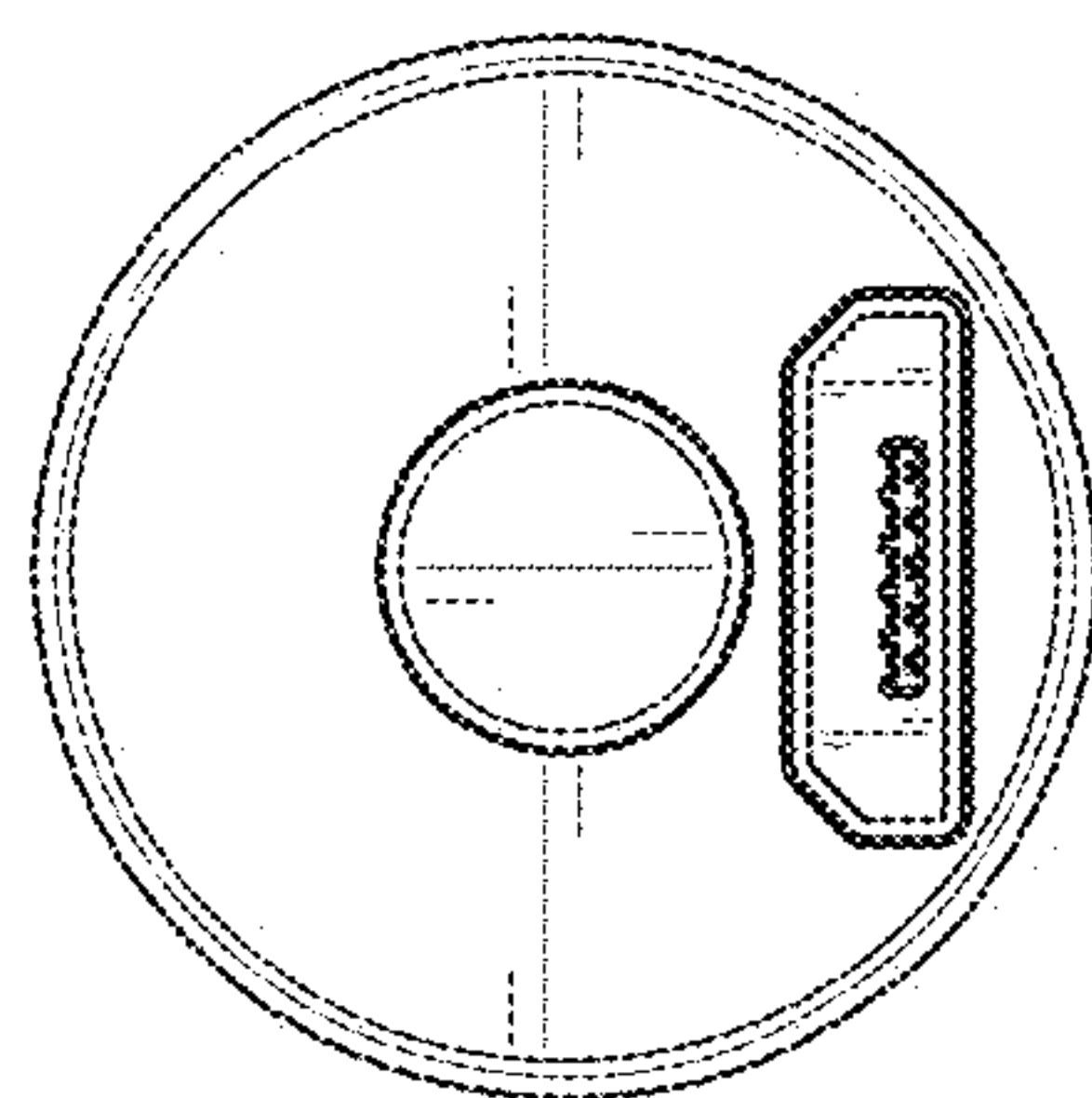


FIG. 13

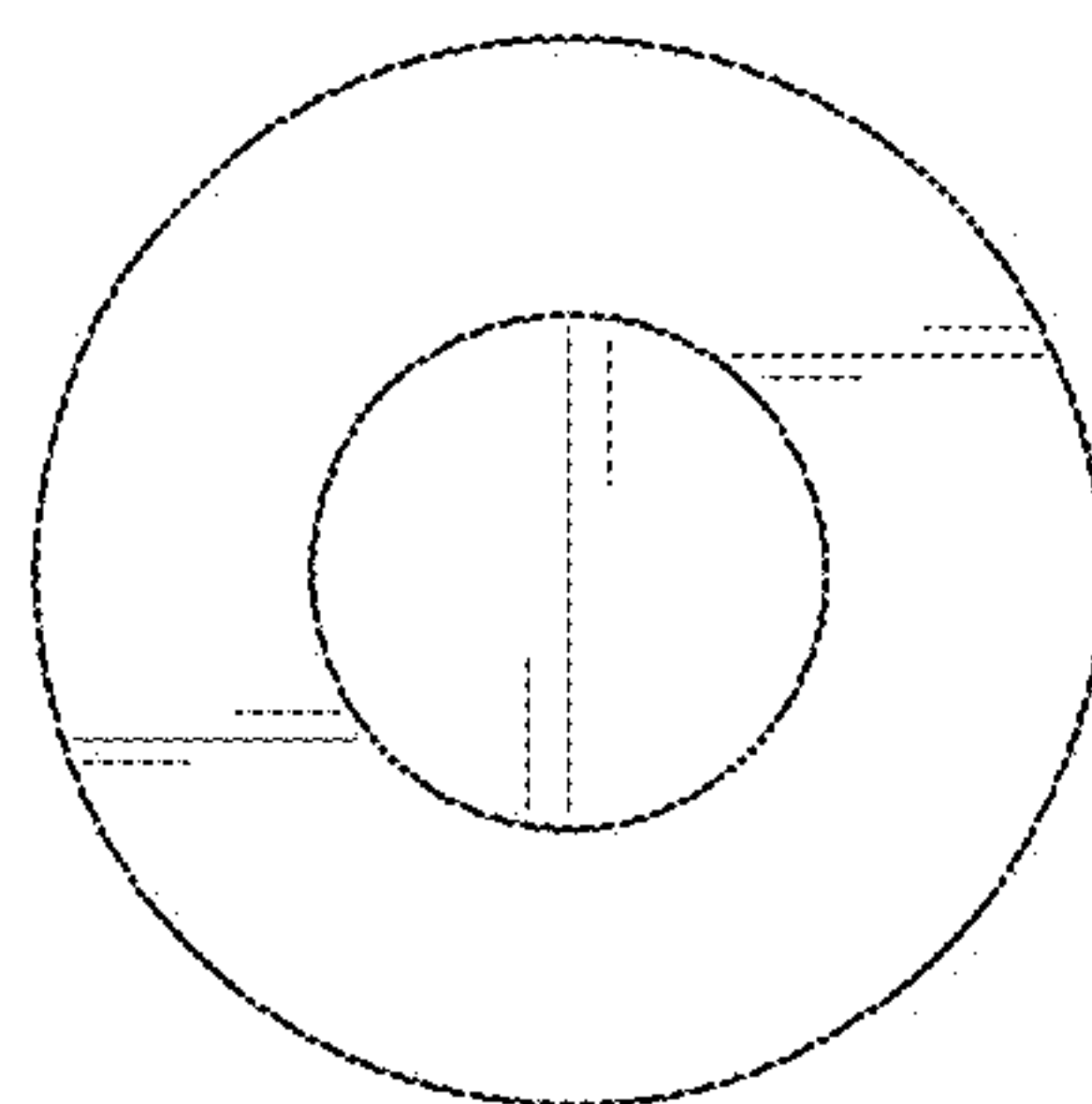


FIG. 14

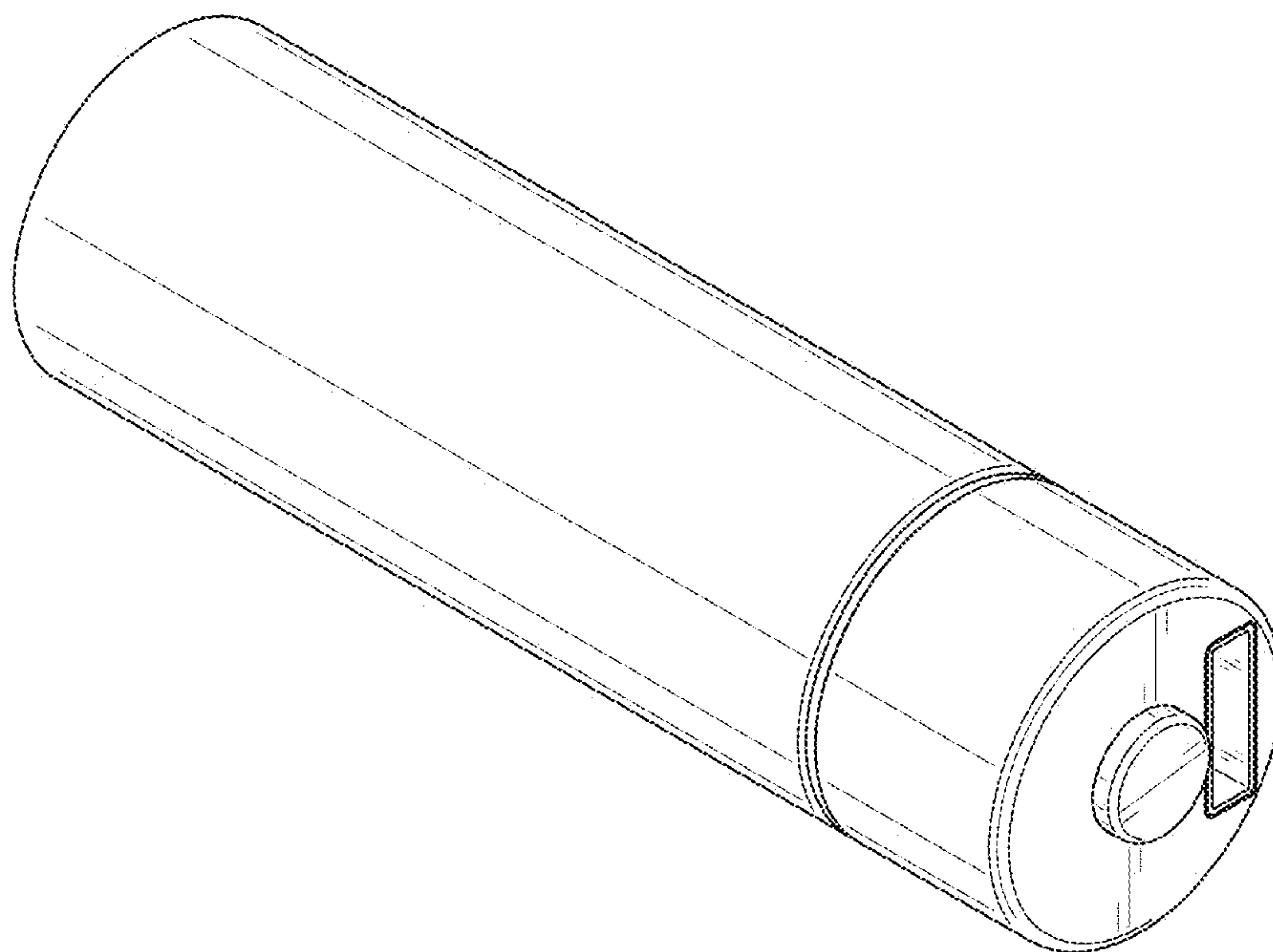


FIG. 15

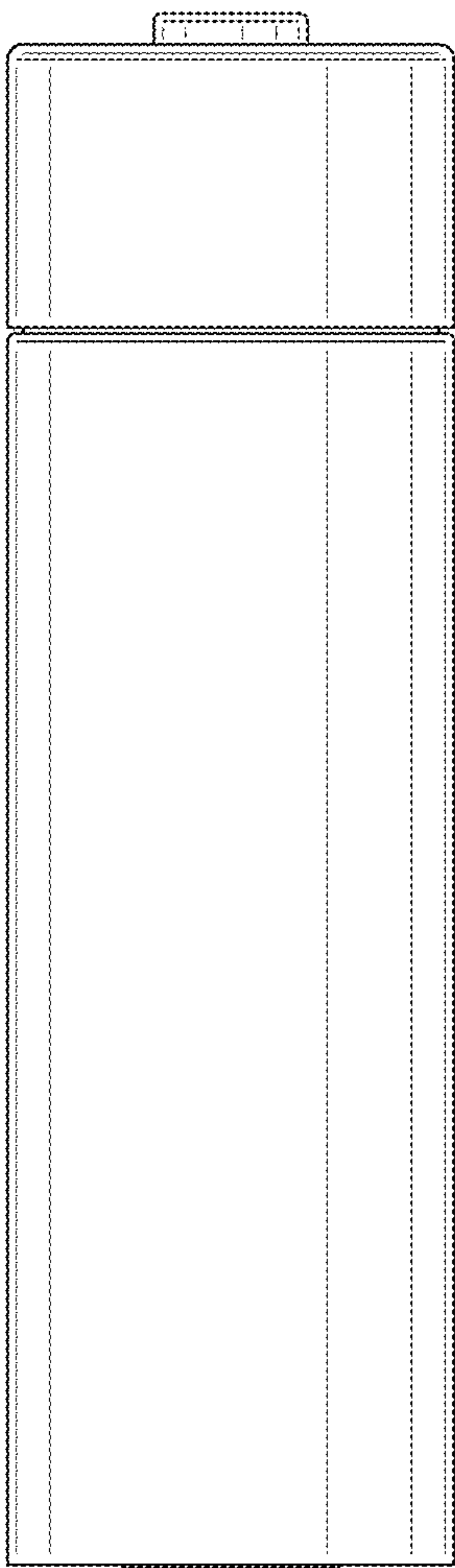


FIG. 16

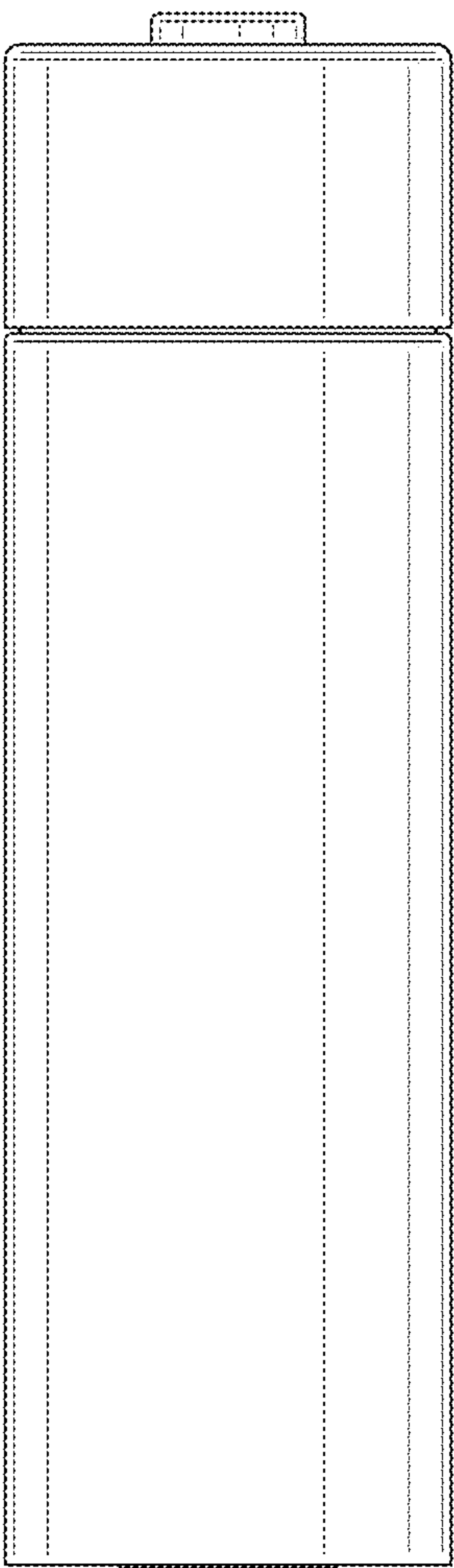


FIG. 17

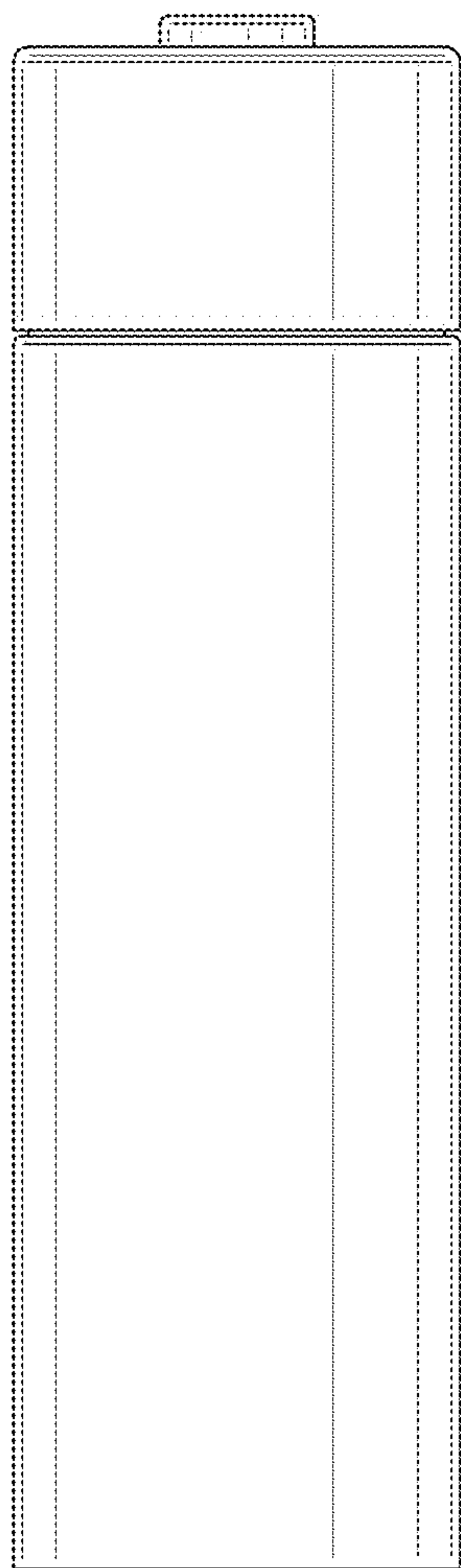


FIG. 18

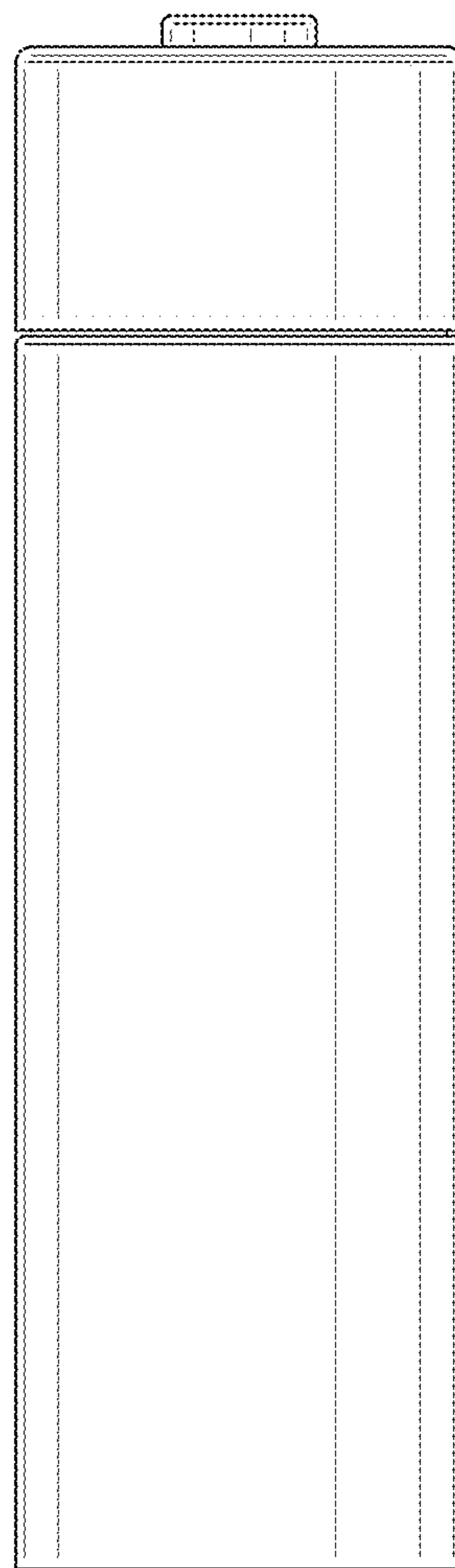


FIG. 19

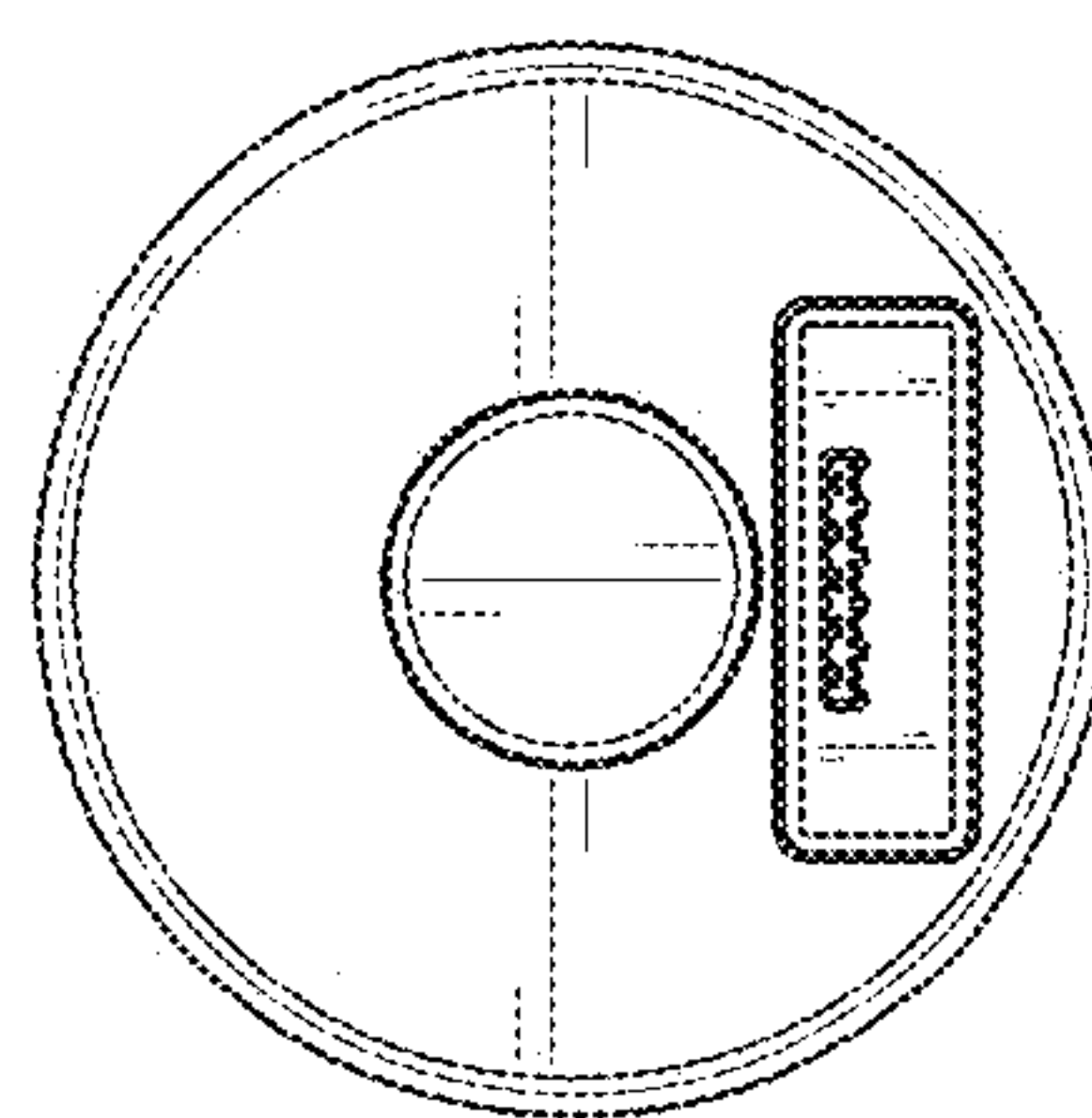


FIG. 20

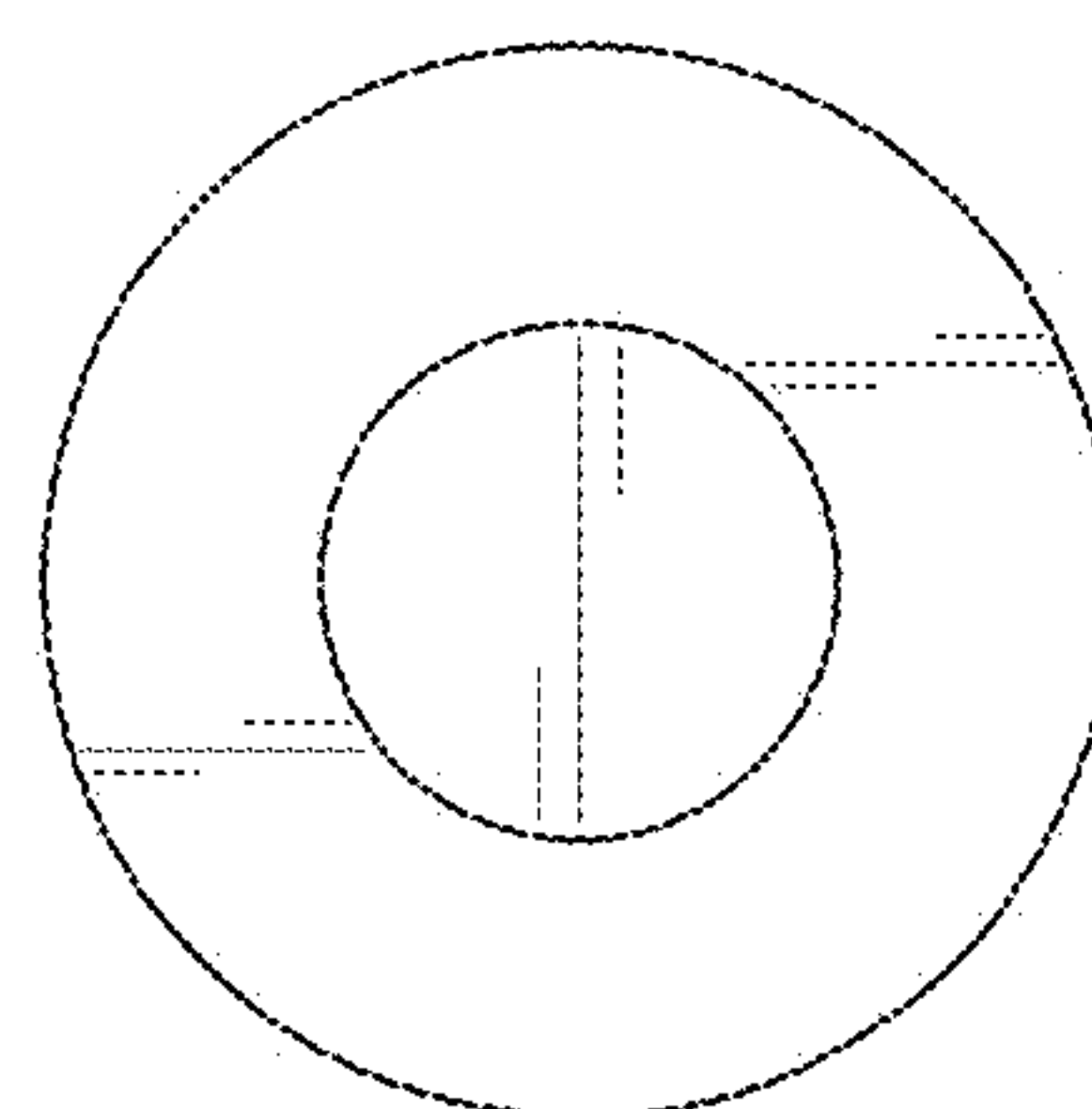


FIG. 21

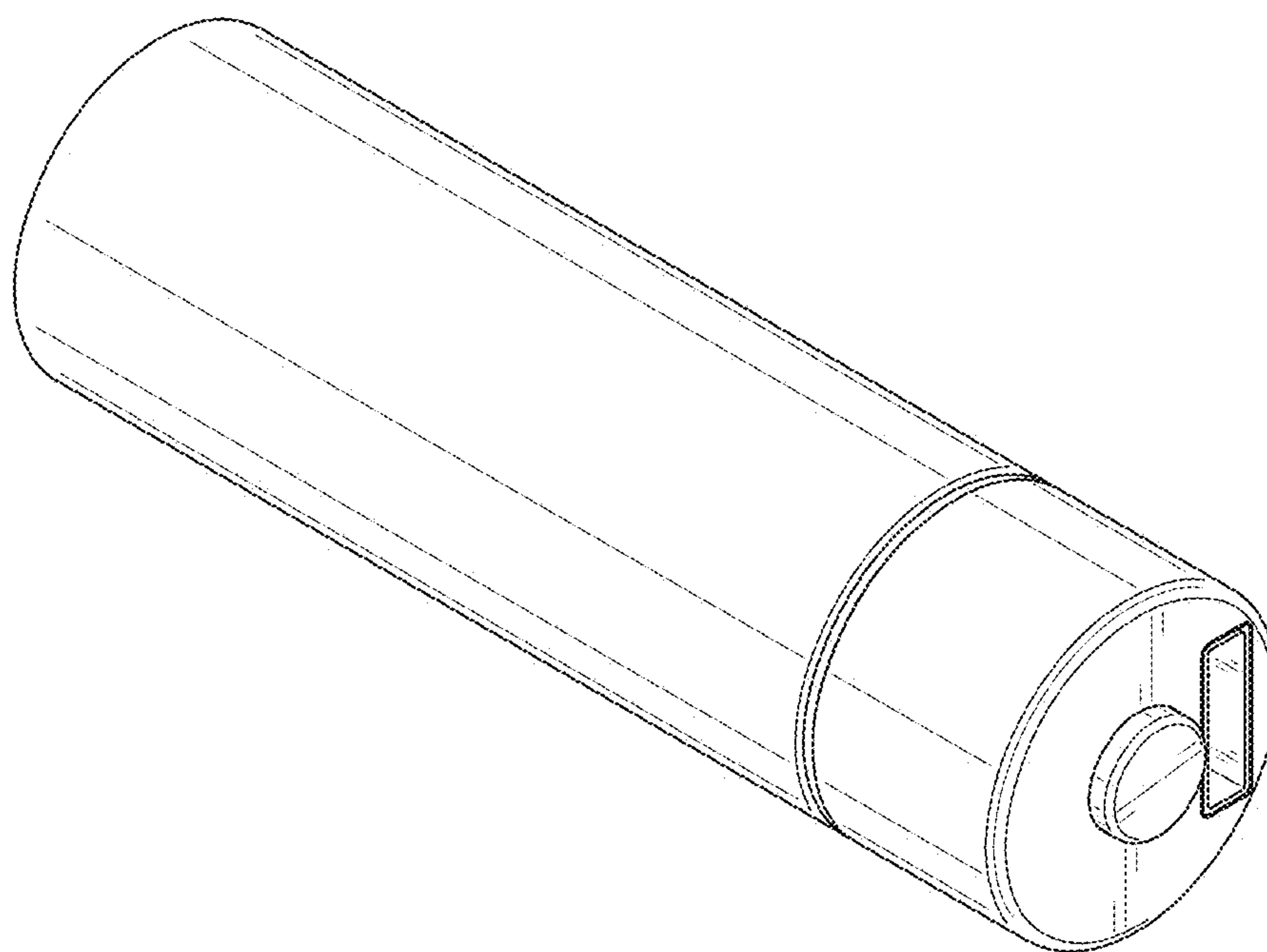


FIG. 22

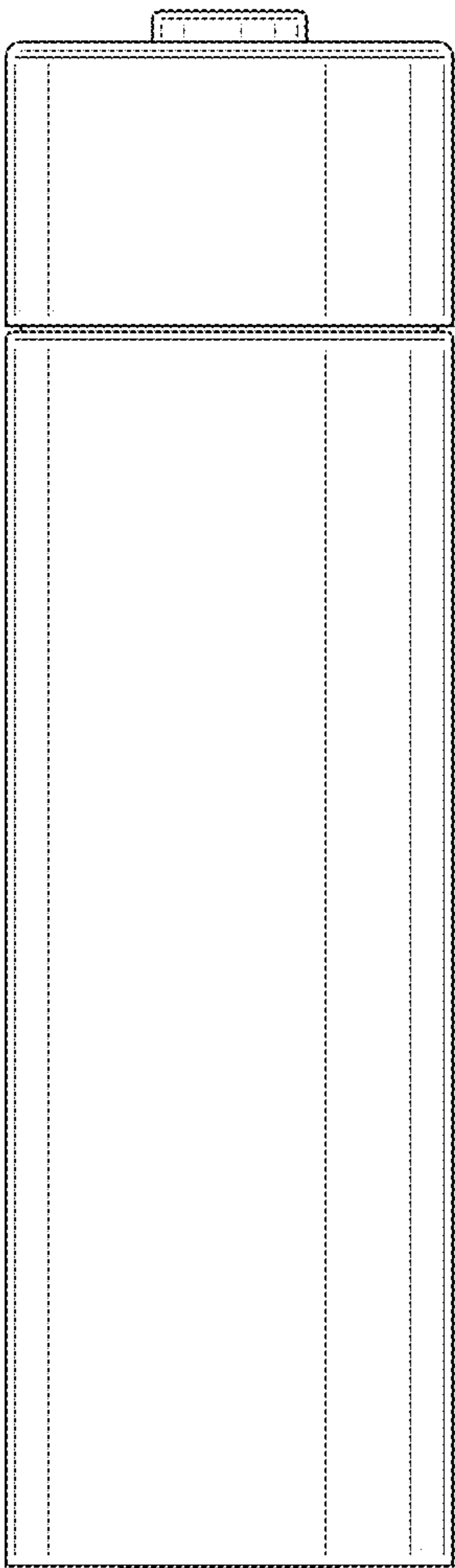


FIG. 23

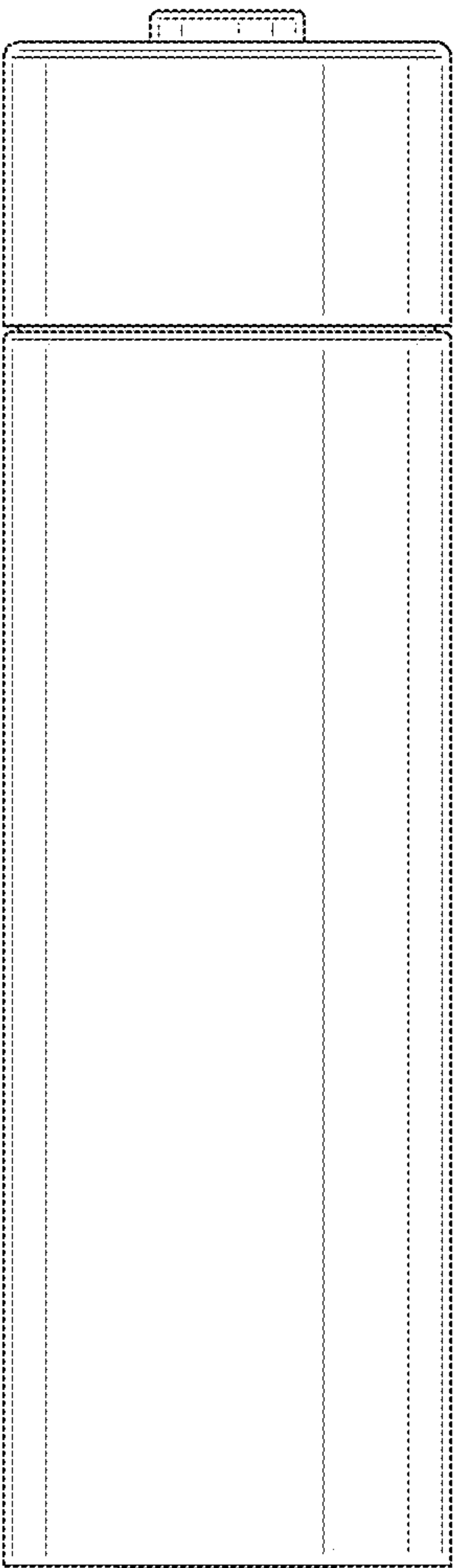


FIG. 24

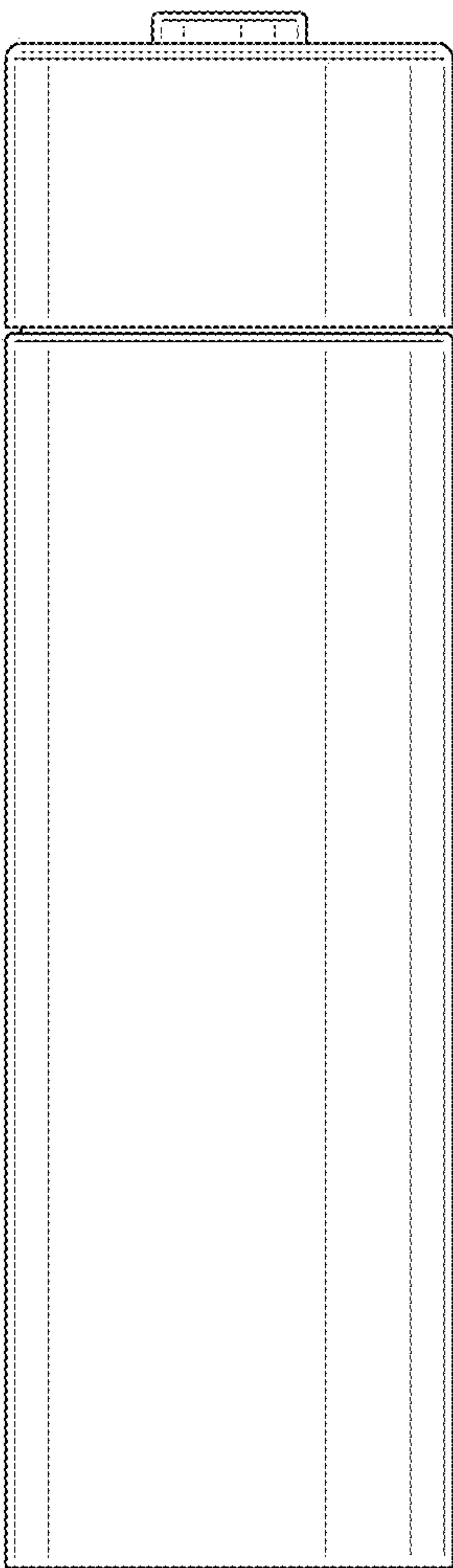


FIG. 25

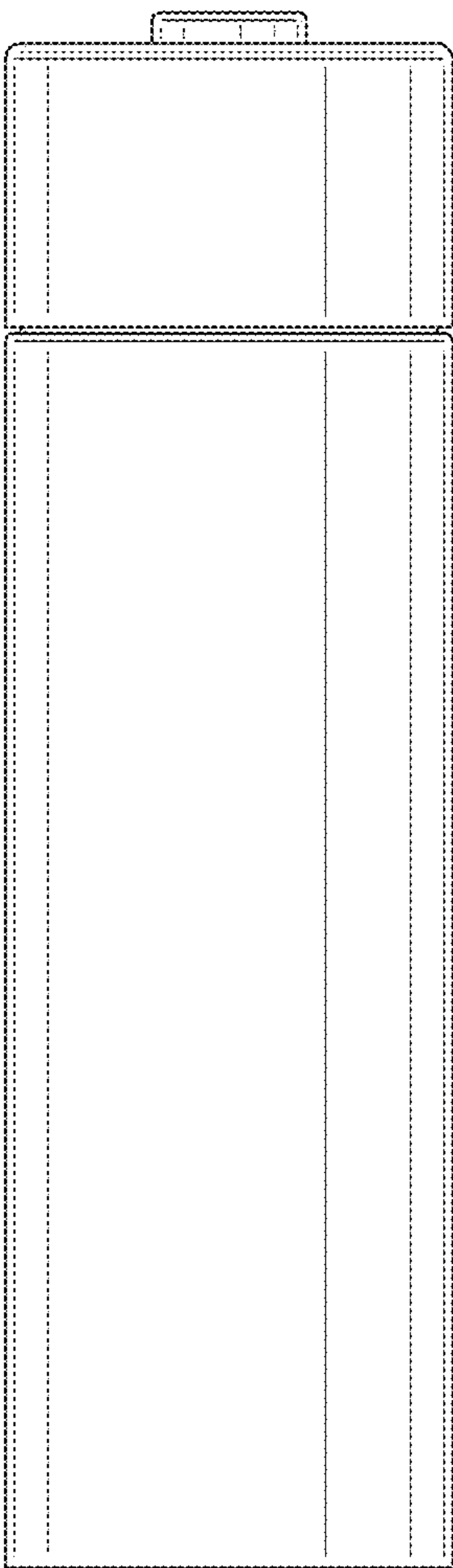


FIG. 26

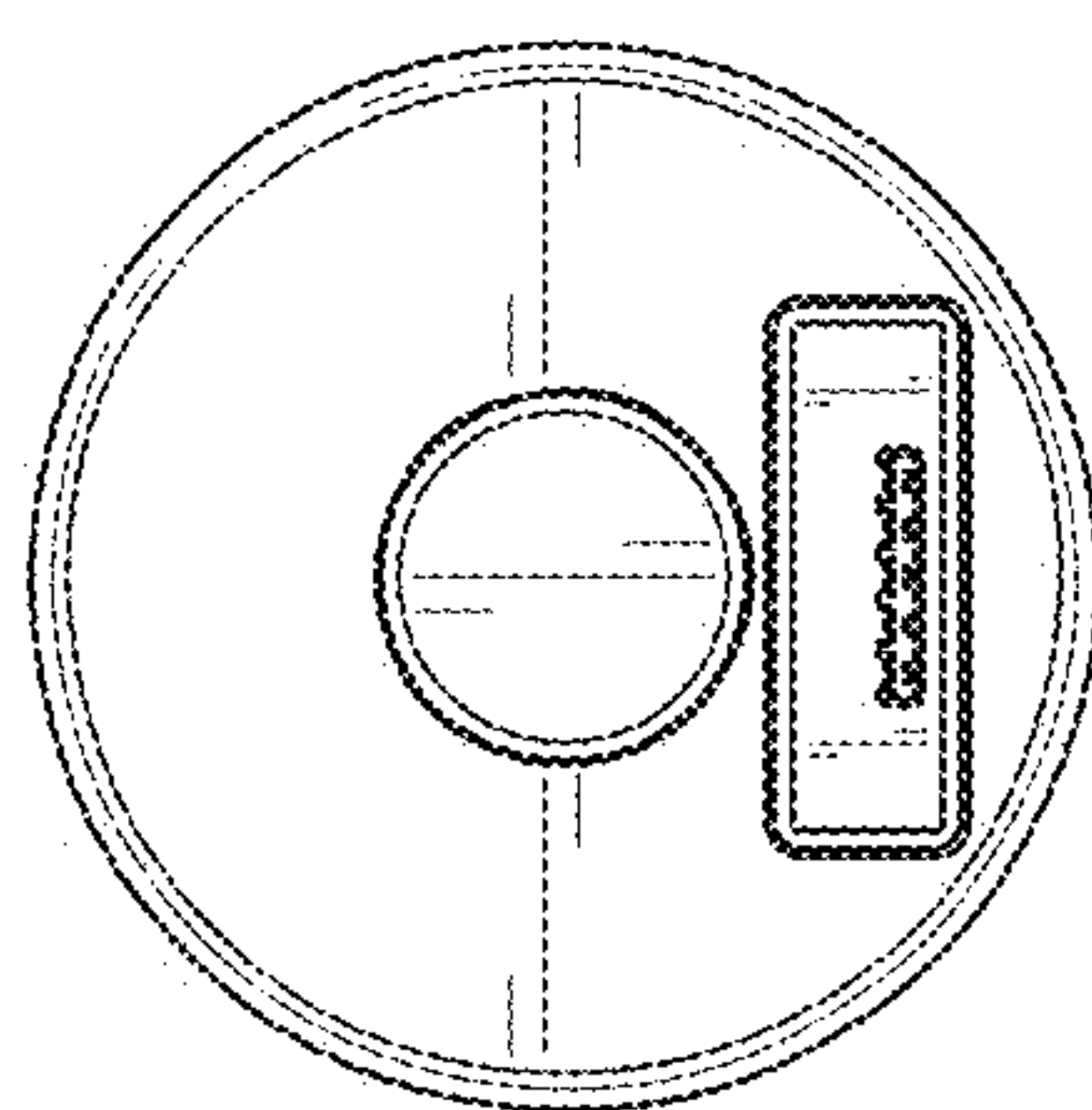


FIG. 27

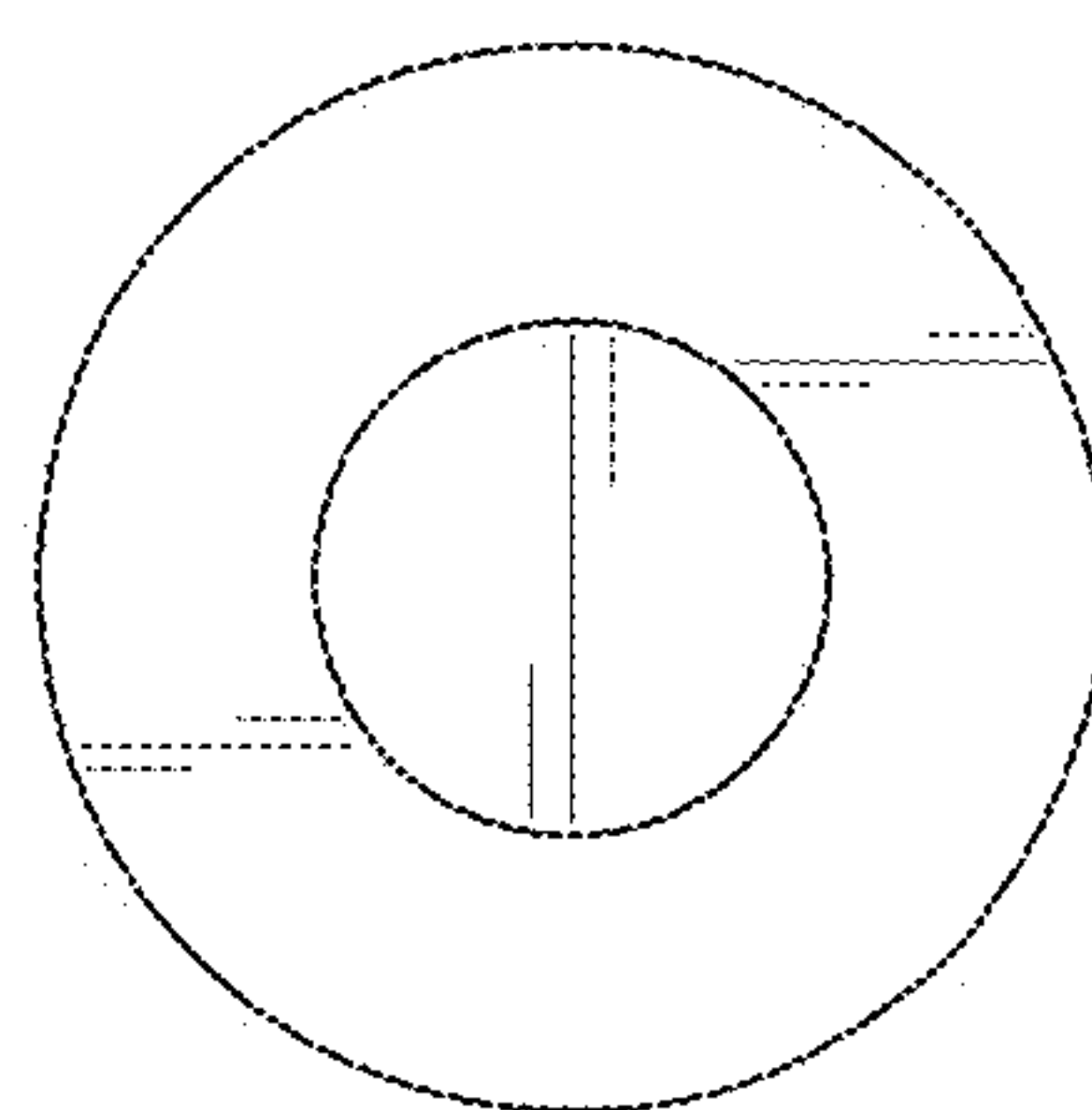


FIG. 28