



US00D881677S

(12) **United States Design Patent** (10) **Patent No.:** **US D881,677 S**  
**Weiland et al.** (45) **Date of Patent:** **\*\* Apr. 21, 2020**

(54) **ELECTRONIC KEY**

FOREIGN PATENT DOCUMENTS

(71) Applicant: **Knox Associates, Inc.**, Phoenix, AZ  
(US)

DE 3735470 A1 5/1989  
DE 10238134 A1 2/2004

(Continued)

(72) Inventors: **Michael J. Weiland**, Phoenix, AZ  
(US); **James McBride**, Phoenix, AZ  
(US); **Eugen C. Buican**, Phoenix, AZ  
(US); **Mark M. Howse**, Phoenix, AZ  
(US)

*Primary Examiner* — Ian Simmons  
*Assistant Examiner* — Yolanda Robinson

(74) *Attorney, Agent, or Firm* — Knobbe, Martens, Olson  
& Bear, LLP

(73) Assignee: **KNOX ASSOCIATES, INC.**, Phoenix,  
AZ (US)

(57) **CLAIM**

The ornamental design for an electronic key, as shown and described.

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

**DESCRIPTION**

(21) Appl. No.: **29/601,948**

(22) Filed: **Apr. 27, 2017**

(51) **LOC (12) Cl.** ..... **08-07**

(52) **U.S. Cl.**  
USPC ..... **D8/347**

(58) **Field of Classification Search**  
USPC ..... D8/347, 348, 343, 346, 330, 331, 333,  
D8/334; 70/336, 430, 431, 448, 449,  
70/465.6, 57.1, 271, 277, 456 R  
CPC ..... E05B 19/00; E05B 19/02; B60R 25/24;  
B60R 25/21  
See application file for complete search history.

FIG. 1 is a top, front and right side perspective view of a first embodiment of an electronic key embodying our new design;

FIG. 2 is a bottom, rear and right side 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.

FIG. 9 is a top, front and right side perspective view of a second embodiment of an electronic key embodying our new design;

FIG. 10 is a bottom, rear and right side perspective view thereof;

FIG. 11 is a front view thereof;

FIG. 12 is a rear view thereof;

FIG. 13 is a left side view thereof;

FIG. 14 is a right side view thereof;

FIG. 15 is a top view thereof; and,

FIG. 16 is a bottom view thereof.

Broken lines are used to illustrate features of the electronic key that form no part of the claimed design.

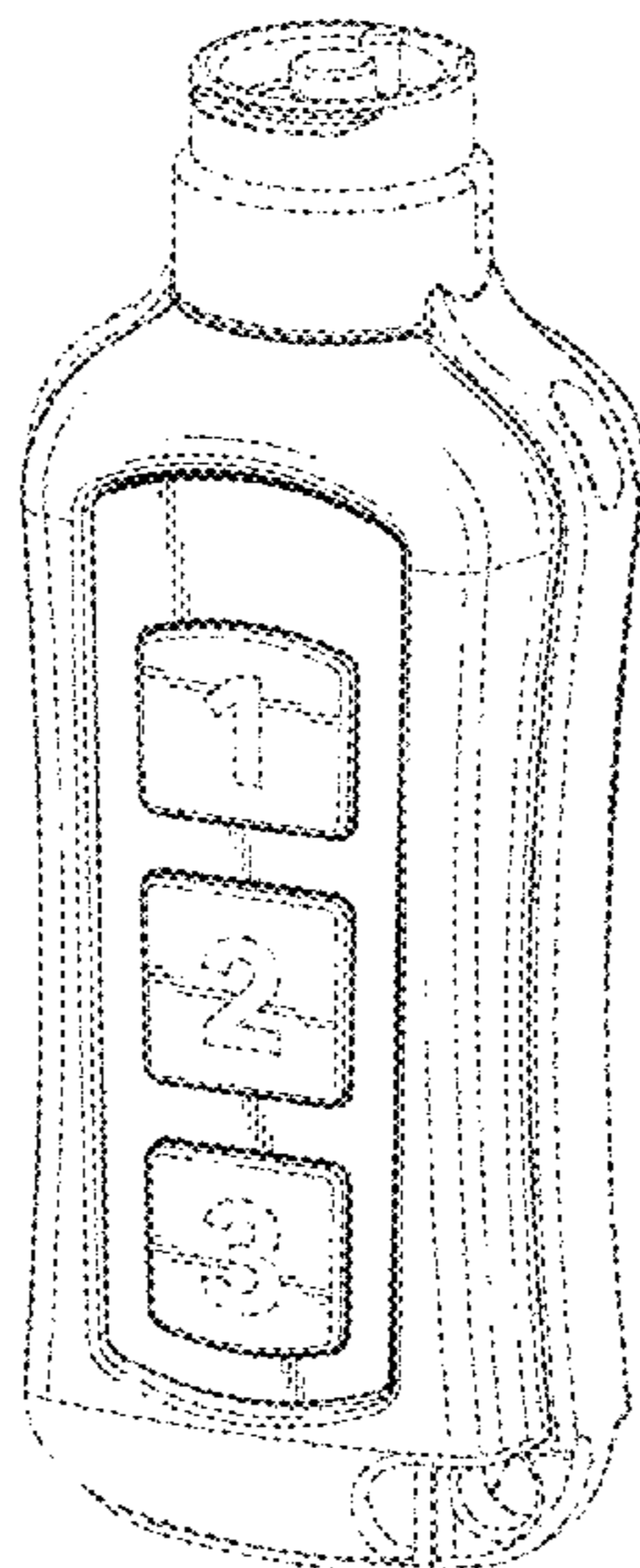
(56) **References Cited**

U.S. PATENT DOCUMENTS

3,732,465 A 5/1973 Palmer  
4,031,434 A 6/1977 Perron  
4,063,435 A 12/1977 Oliver  
4,067,214 A 1/1978 Kiraly  
4,158,952 A 6/1979 Oliver et al.  
RE30,198 E 1/1980 Oliver et al.  
4,180,999 A 1/1980 Hurskainen et al.  
RE30,243 E 4/1980 Oliver

(Continued)

**1 Claim, 12 Drawing Sheets**





(56)

References Cited

U.S. PATENT DOCUMENTS

6,945,082 B2 9/2005 Field et al.  
 7,000,441 B2 2/2006 Sutton et al.  
 7,023,318 B1 4/2006 Geiger et al.  
 7,052,054 B2 5/2006 Luker  
 7,099,474 B1 8/2006 Liden et al.  
 7,158,008 B2 1/2007 Waring et al.  
 7,227,446 B2 6/2007 Kumazaki et al.  
 7,392,675 B2 7/2008 Kito  
 D575,629 S \* 8/2008 Kim ..... D8/347  
 D579,318 S \* 10/2008 Davis ..... D8/347  
 7,640,773 B2 1/2010 Bellamy  
 7,689,318 B2 3/2010 Draper  
 7,690,231 B1 4/2010 Field et al.  
 7,712,342 B2 5/2010 Loughlin et al.  
 7,775,056 B2 8/2010 Lowenstein  
 7,860,605 B2 12/2010 Frankel  
 7,870,769 B2 1/2011 Andersson  
 7,958,758 B2 \* 6/2011 Trempala ..... G07C 9/00309  
 340/5.7  
 8,027,639 B2 9/2011 Hulvey et al.  
 8,108,068 B1 1/2012 Boucher et al.  
 8,276,415 B2 10/2012 Trempala et al.  
 D677,958 S \* 3/2013 Davis ..... D6/559  
 8,803,656 B2 8/2014 Tamezane et al.  
 8,985,448 B2 3/2015 Jonely  
 9,041,510 B2 5/2015 Wolski  
 9,424,701 B2 \* 8/2016 Trempala ..... G07C 9/00182  
 D765,609 S \* 9/2016 Hasegawa ..... D13/168  
 D772,038 S \* 11/2016 Bischoff ..... D8/347  
 D803,792 S \* 11/2017 Houdek ..... D13/168  
 D817,739 S \* 5/2018 Ocklenburg ..... D8/343  
 D817,740 S \* 5/2018 Ocklenburg ..... D8/343  
 D818,347 S \* 5/2018 Kim ..... D8/346  
 2001/0027671 A1 10/2001 Davis  
 2002/0062172 A1 5/2002 Bench et al.  
 2003/0052782 A1 3/2003 Maloney  
 2003/0136162 A1 7/2003 Sutton et al.

2003/0169148 A1 9/2003 Takamura et al.  
 2004/0035160 A1 2/2004 Meekma et al.  
 2005/0088279 A1 4/2005 Denison et al.  
 2005/0280500 A1 12/2005 Miller et al.  
 2006/0071748 A1 4/2006 Victor  
 2007/0023512 A1 2/2007 Miller et al.  
 2007/0139171 A1 6/2007 Fischer  
 2007/0150382 A1 6/2007 Danilewitz  
 2008/0270178 A1 10/2008 McRae et al.  
 2009/0165512 A1 7/2009 Bellamy  
 2009/0281656 A1 11/2009 Draper  
 2009/0308119 A1 12/2009 Harley  
 2010/0073129 A1 3/2010 Pukari  
 2011/0132050 A1 \* 6/2011 McCaffrey ..... E05B 19/0017  
 70/391  
 2011/0239714 A1 \* 10/2011 Trempala ..... G07C 9/00309  
 70/283.1  
 2012/0044054 A1 2/2012 Hussain et al.  
 2012/0130534 A1 5/2012 Wurm  
 2012/0222460 A1 \* 9/2012 Lessels ..... E05B 19/18  
 70/263  
 2014/0298870 A1 10/2014 Munger et al.

FOREIGN PATENT DOCUMENTS

DE 20308813 U1 10/2004  
 EP 0288791 A 11/1988  
 EP 0505084 A 9/1992  
 EP 0688928 A 12/1995  
 FR 2782402 A 2/2000  
 FR 2801334 A 5/2001  
 WO WO 97/30255 A 8/1997  
 WO WO 97/32098 A 9/1997  
 WO WO 97/48867 A1 12/1997  
 WO WO 99/14842 A1 3/1999  
 WO WO 00/09836 2/2000  
 WO WO 2001/055539 8/2001  
 WO WO 2008/114238 9/2008  
 WO WO 2010/107444 A1 9/2010

\* cited by examiner

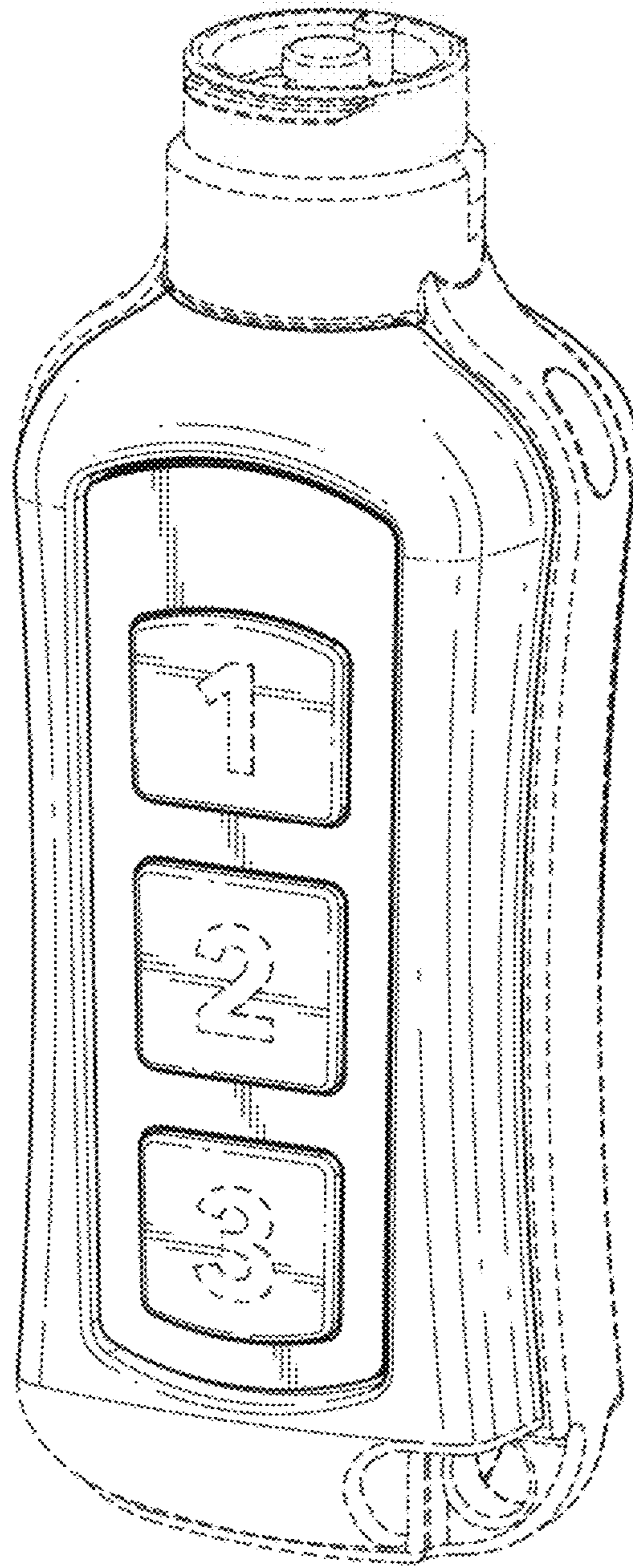


FIG. 1

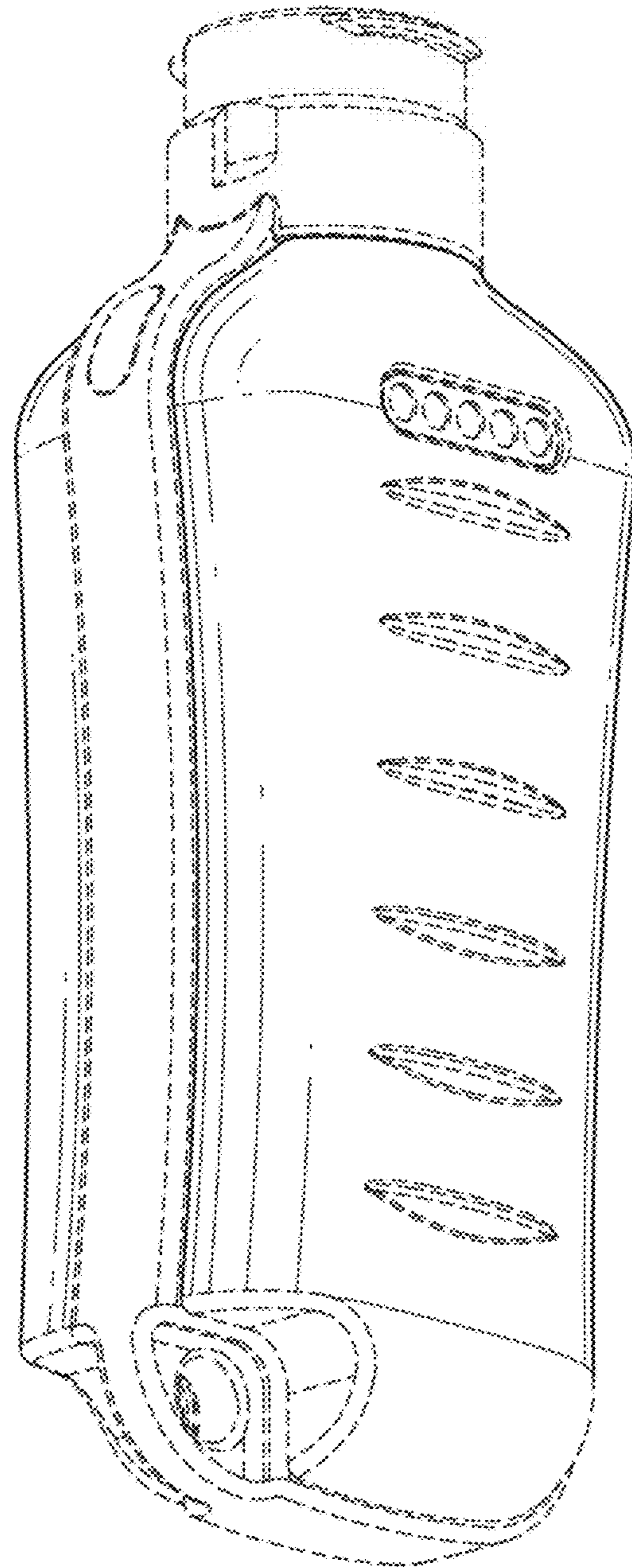


FIG. 2

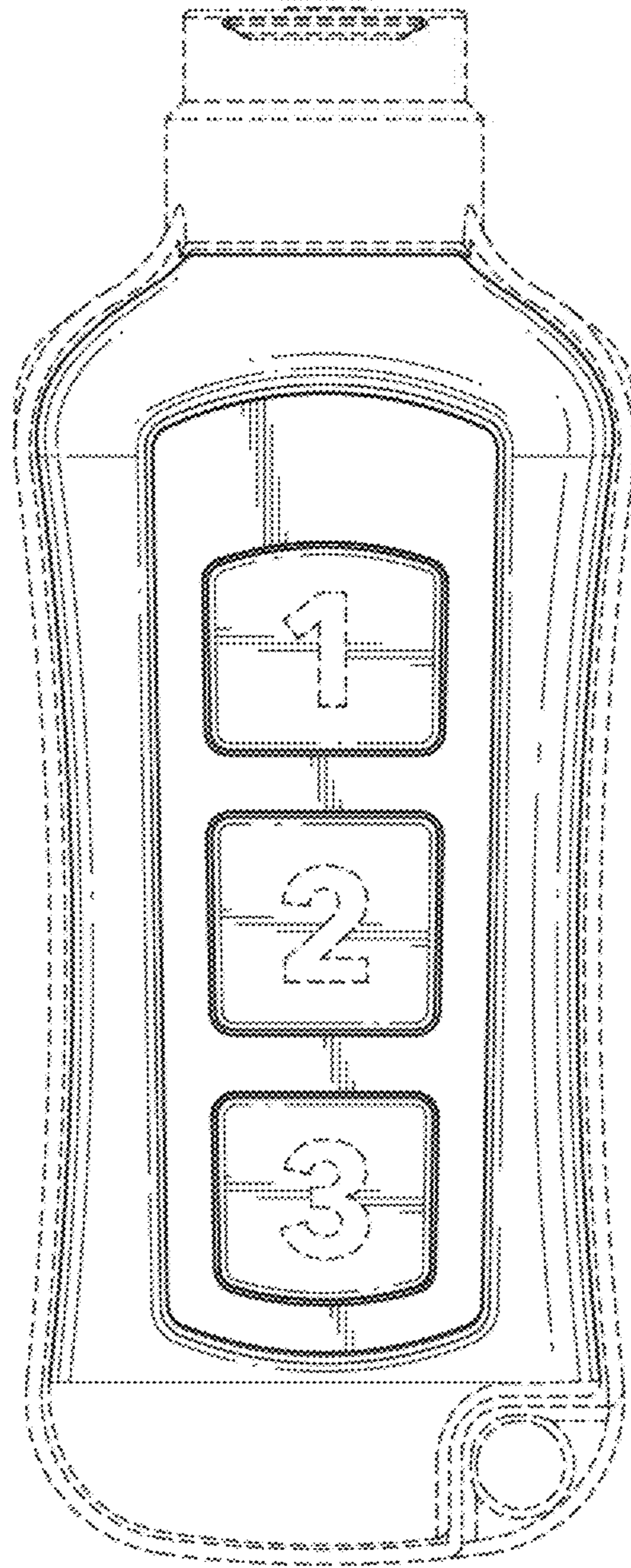


FIG. 3

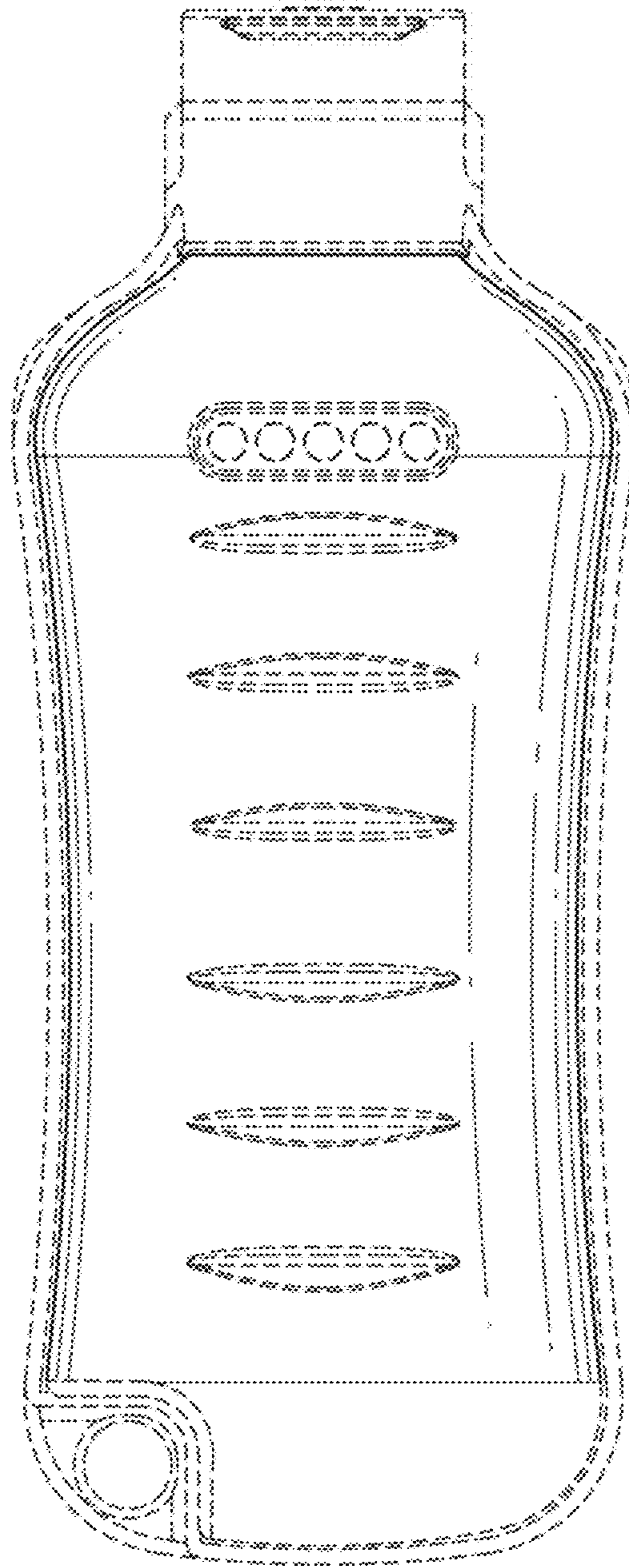


FIG. 4

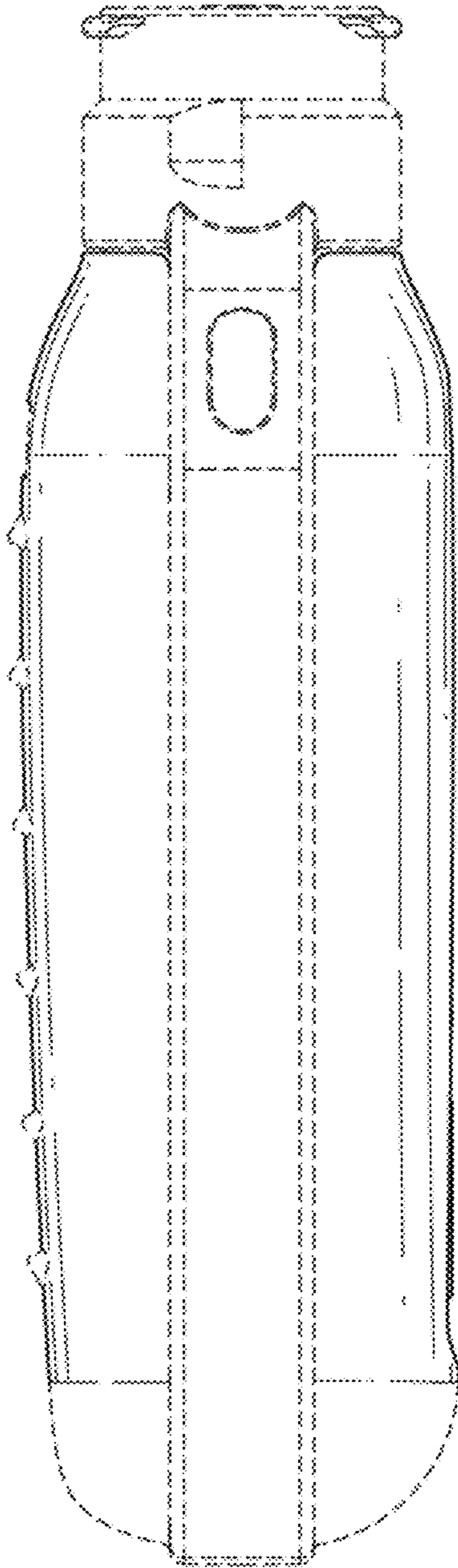


FIG. 5

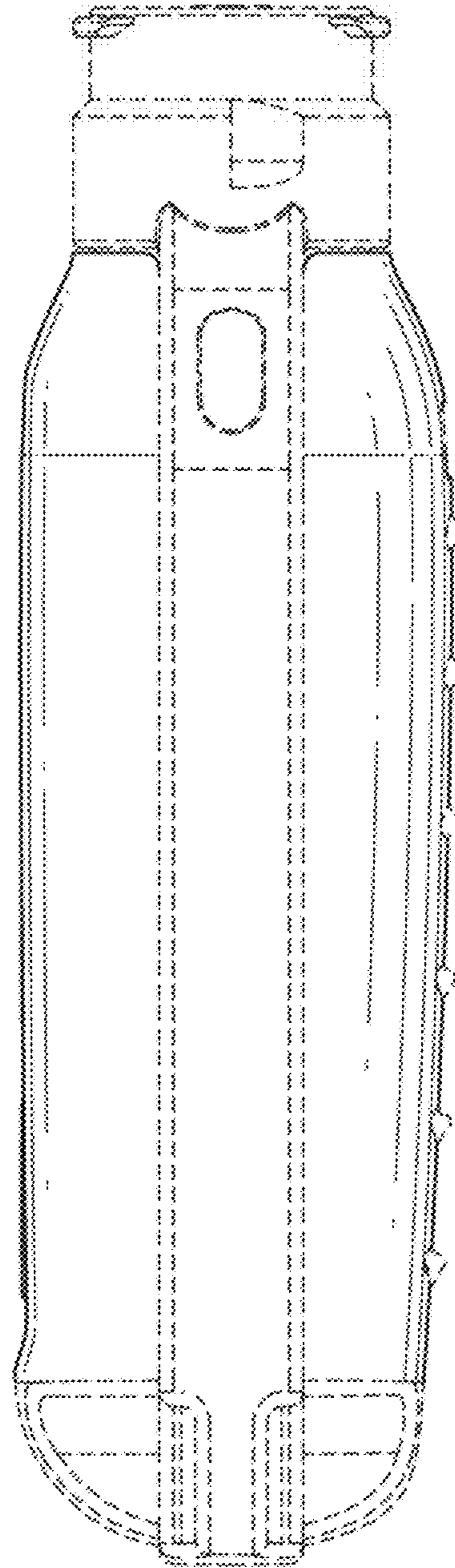


FIG. 6



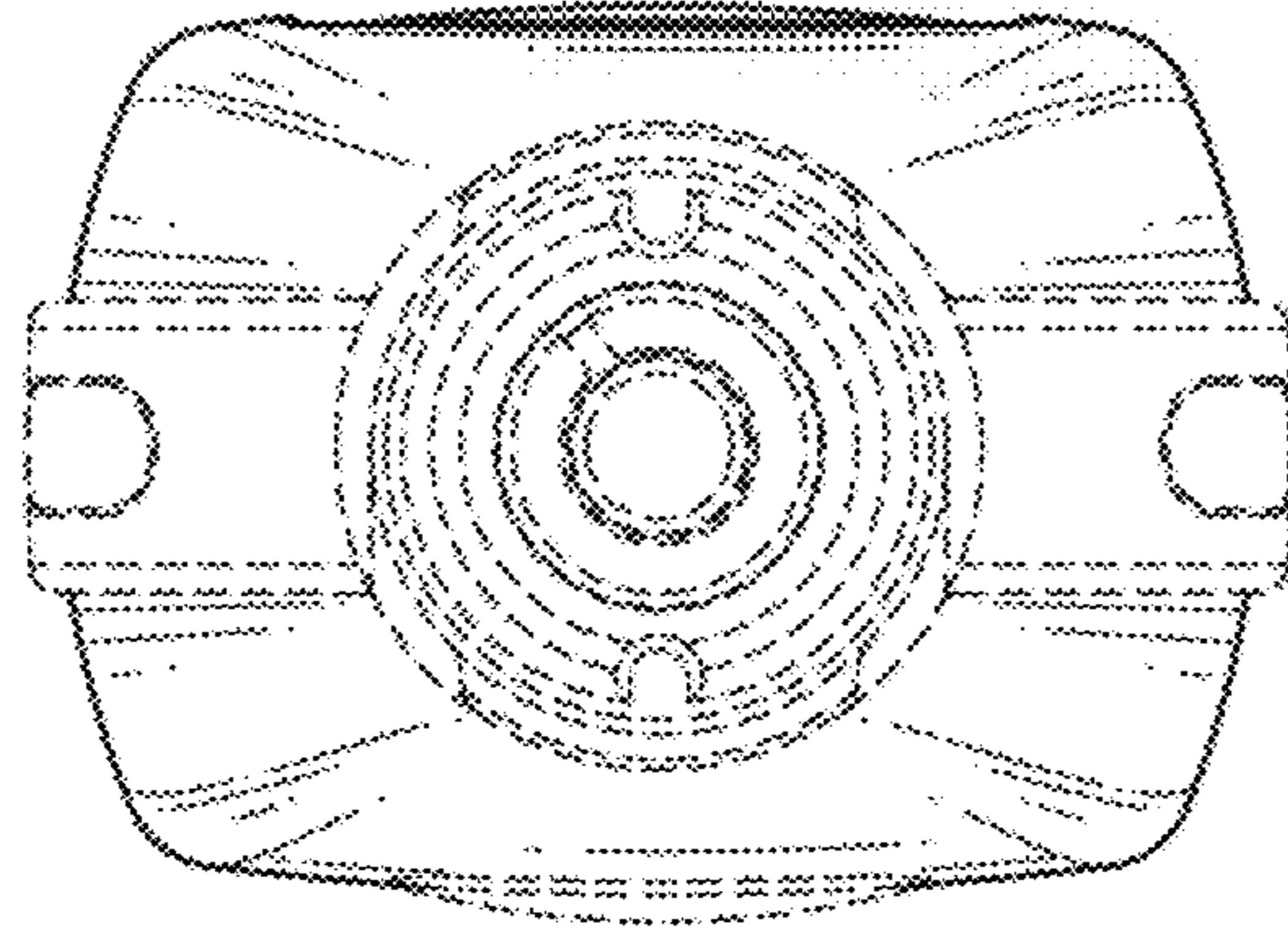


FIG. 7

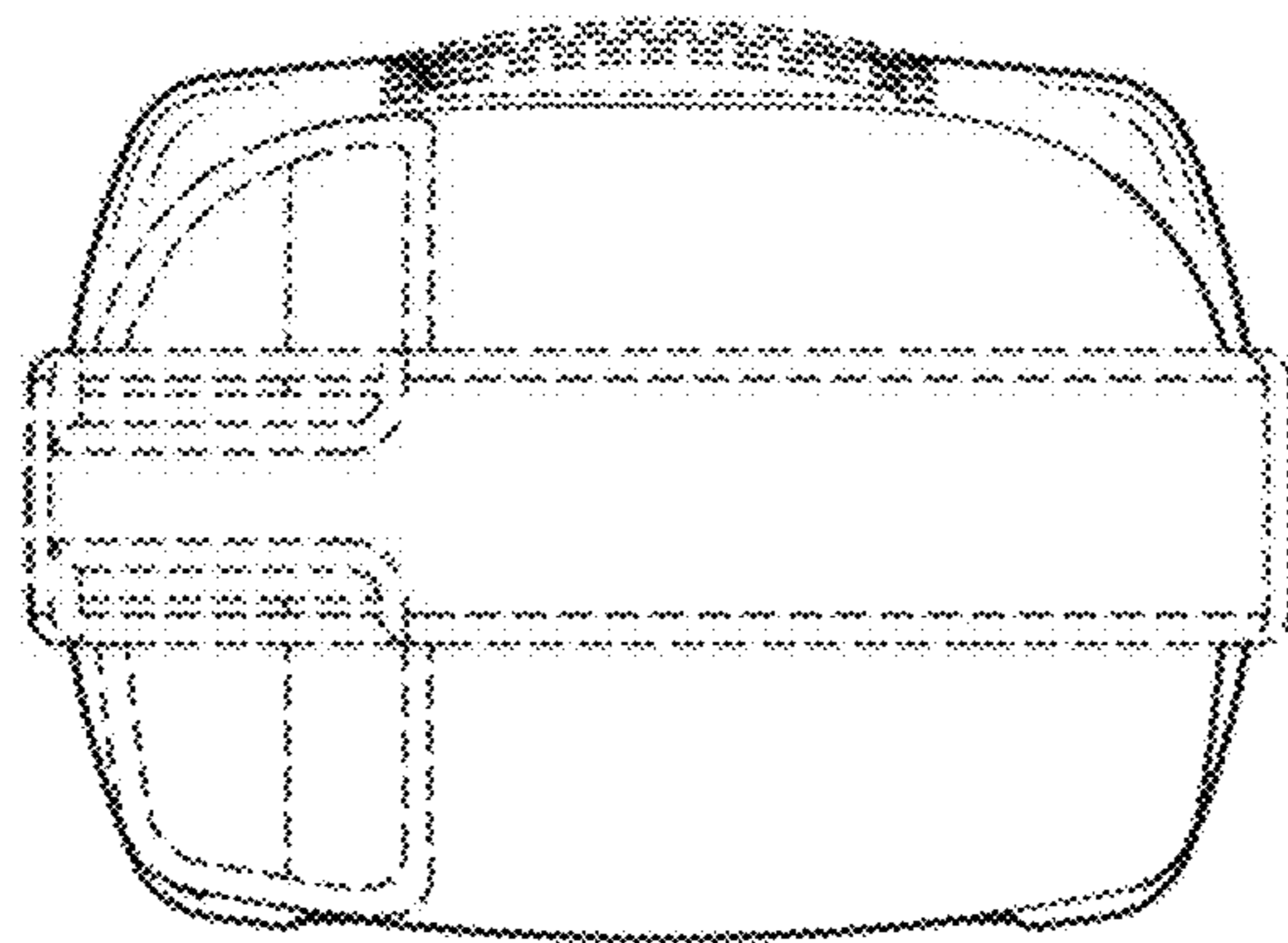


FIG. 8

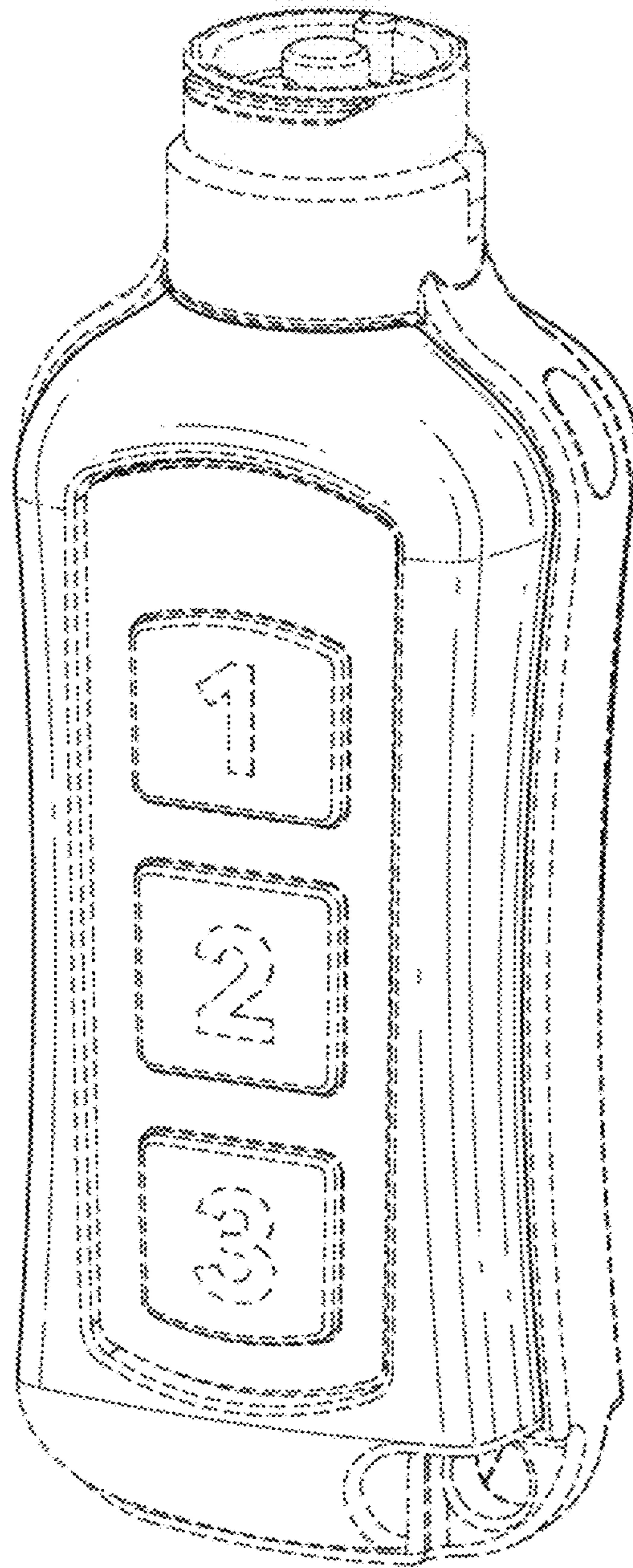


FIG. 9

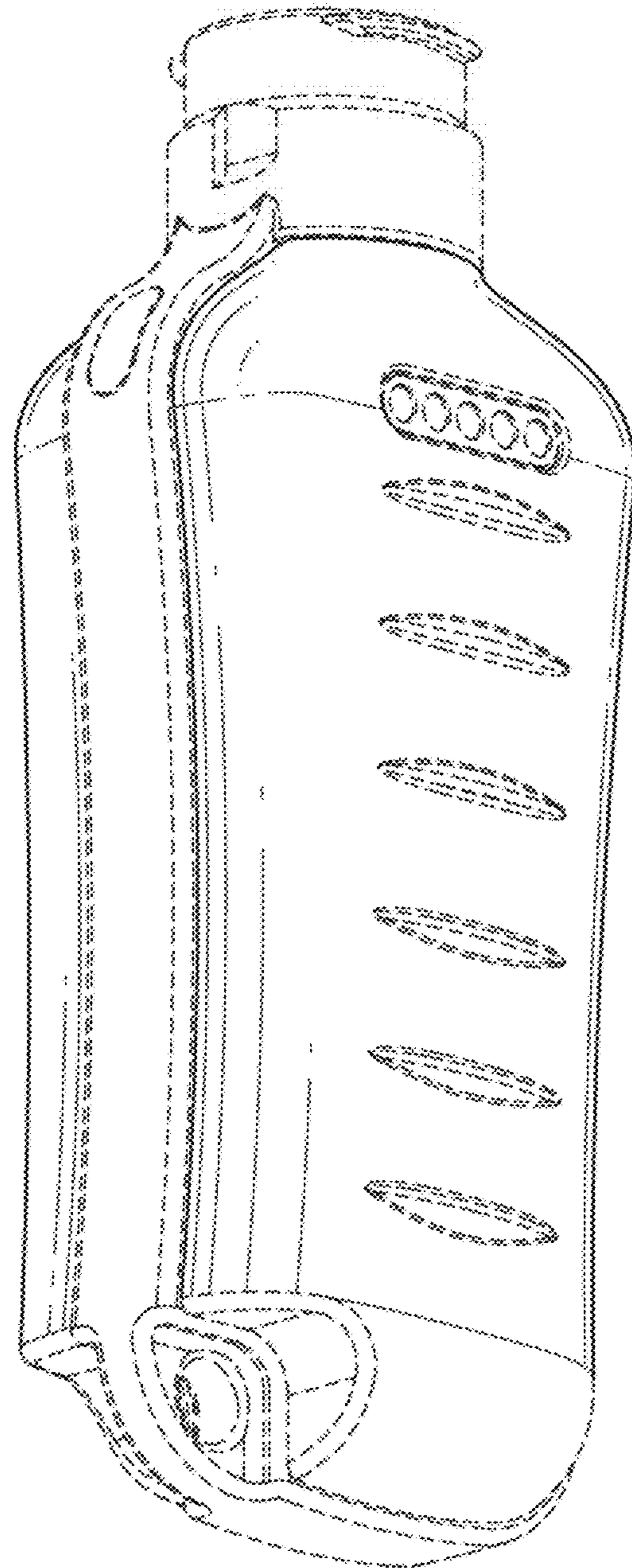


FIG. 10

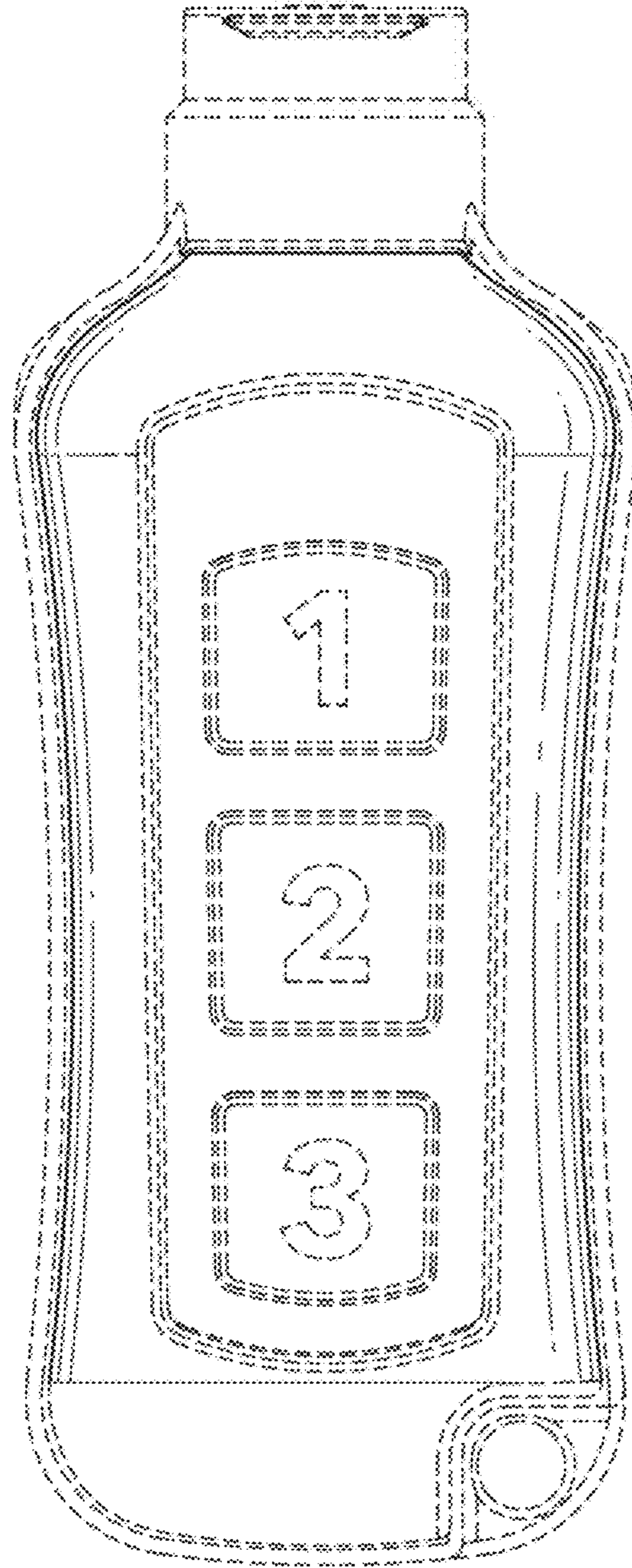


FIG. 11

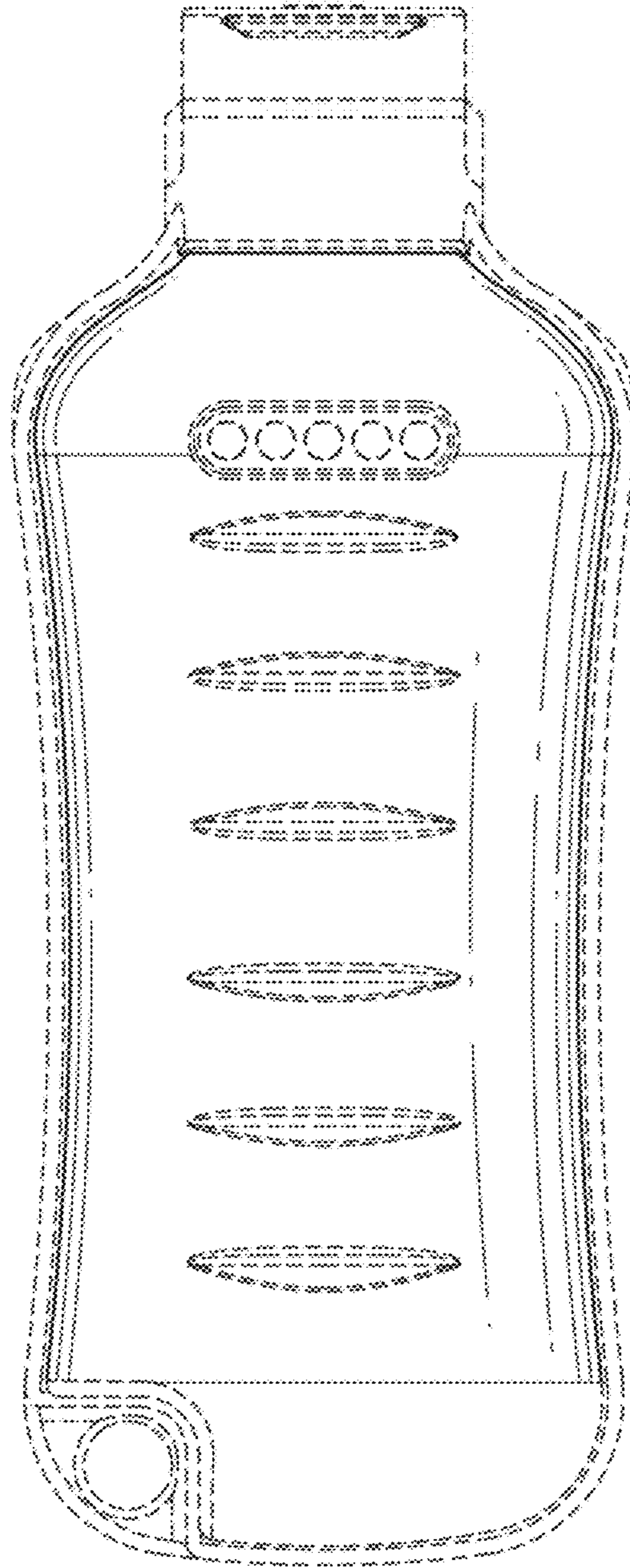


FIG. 12

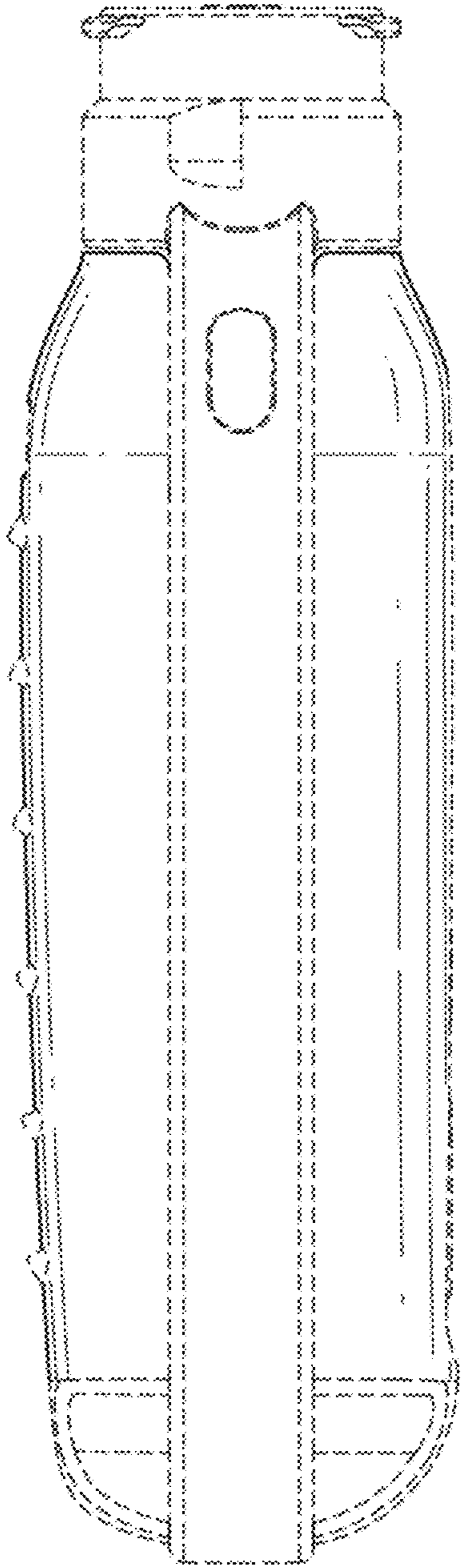


FIG. 13

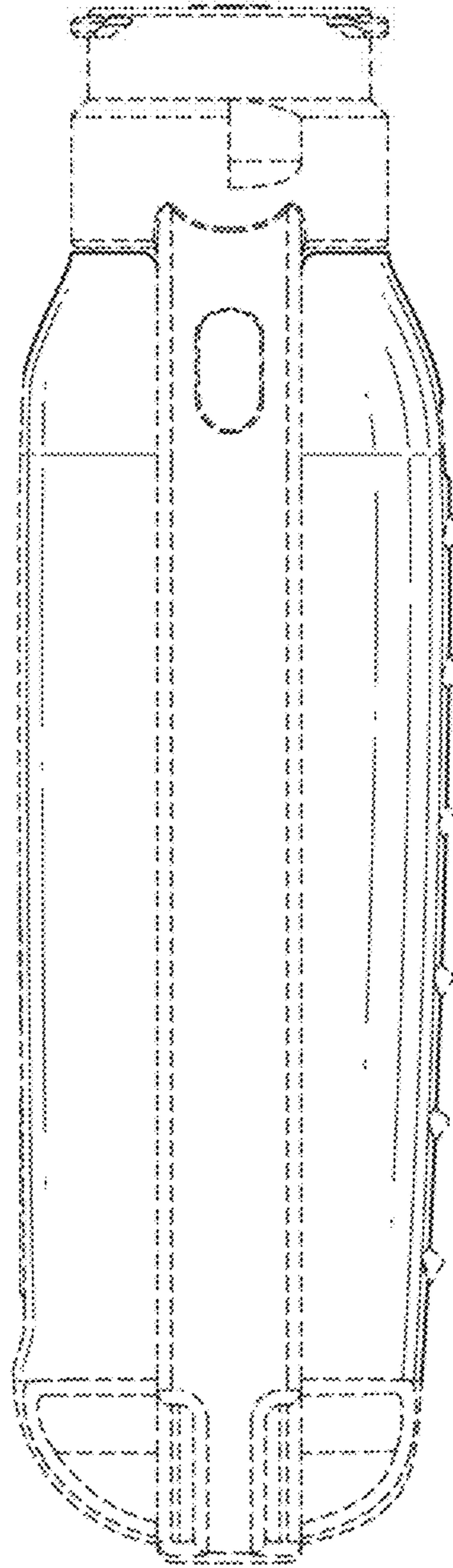


FIG. 14

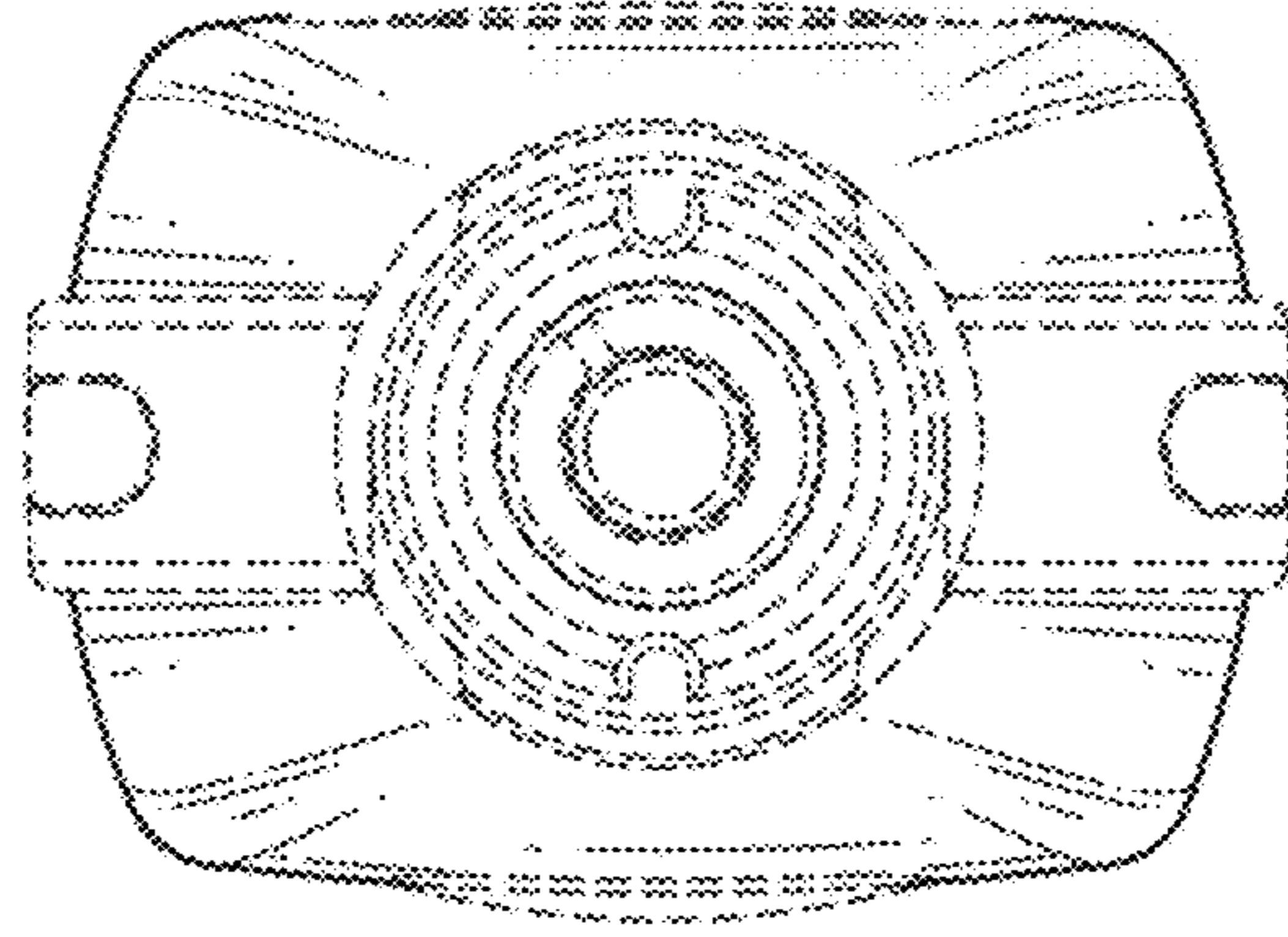


FIG. 15

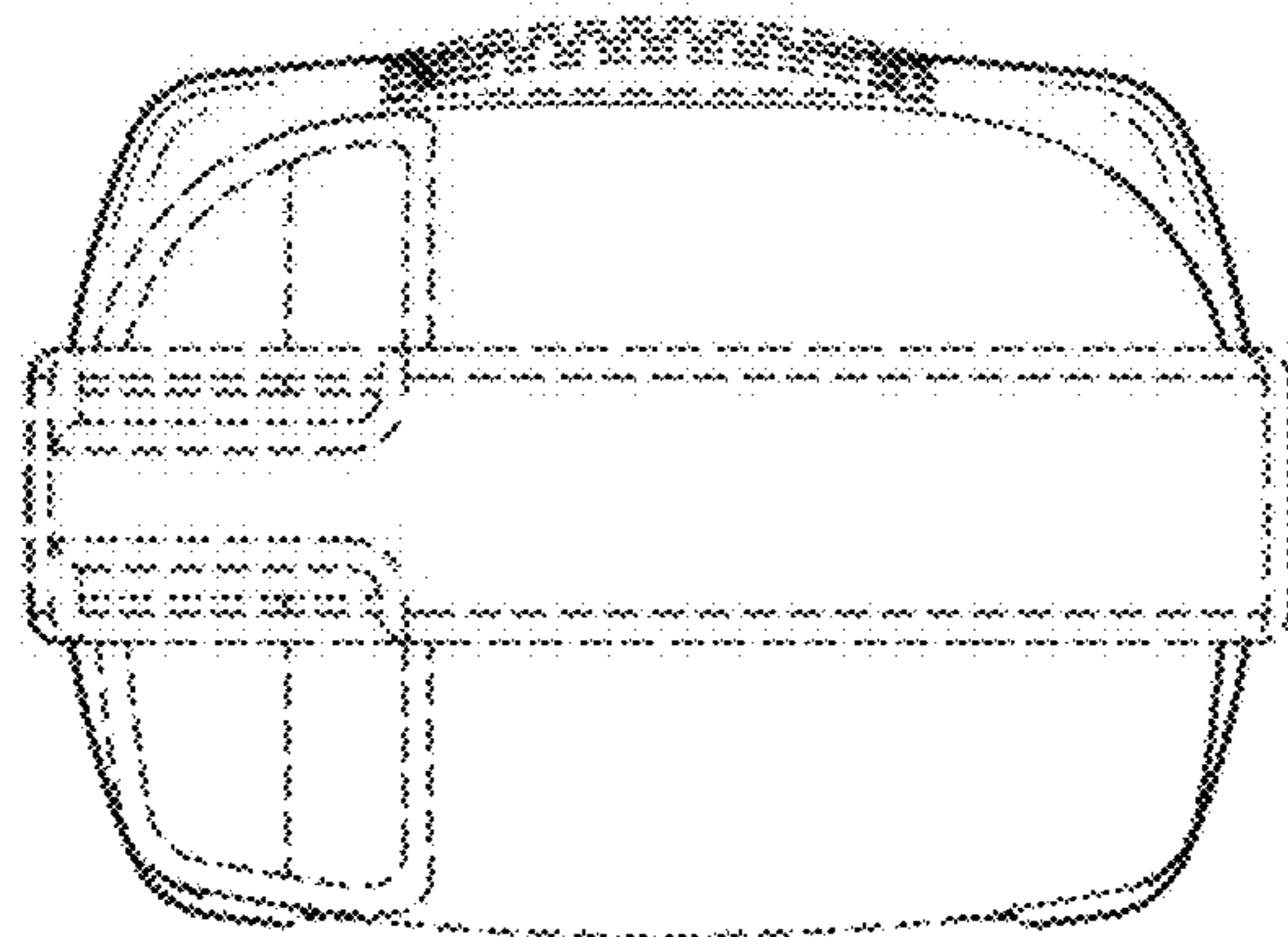


FIG. 16