

US00D896662S

(12) **United States Design Patent** (10) **Patent No.:** **US D896,662 S**  
**Chapman et al.** (45) **Date of Patent:** **\*\* Sep. 22, 2020**

(54) **SENSOR HOUSING** 21/30; F21W 2131/10; G08B 13/19;  
G08B 13/193; G08B 13/1645; G08B  
17/12; G08B

(71) Applicant: **Topcon Positioning Systems, Inc.**,  
Livermore, CA (US)

(Continued)

(72) Inventors: **Angus Chapman**, Brisbane (AU);  
**Reilly Edwards**, Brisbane (AU)

(56)

**References Cited**

U.S. PATENT DOCUMENTS

(73) Assignee: **Topcon Positioning Systems, Inc.**,  
Livermore, CA (US)

4,315,594 A 2/1982 Niederöst  
D316,713 S 5/1991 Sun

(Continued)

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

FOREIGN PATENT DOCUMENTS

(21) Appl. No.: **29/675,178**

EP 0014251 A1 8/1980  
EP 2840559 A1 2/2015  
EP 3270117 A1 1/2018

(22) Filed: **Dec. 28, 2018**

(51) **LOC (12) Cl.** ..... **10-04**

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

USPC ..... **D10/65**

(58) **Field of Classification Search**

USPC ..... D10/46, 65, 70

CPC ..... G08G 1/096883; G08G 1/096872; G08G

1/096775; G08G 1/0969; G08G 9/00;

G08G 5/04; G08G 5/0013; G01V 8/20;

G01J 5/02; G01J 5/023; G01J 5/24; G01J

5/10; G01J 5/20; G01J 5/0235; G01J

5/08; G01J 5/0853; G01J 5/33; G01J

5/34; G01J 5/0022; G01J 5/22; G01J

5/0295; G01J 5/12; G01J 2005/068; G01J

2005/345; G01N 21/3504; G01N 21/35;

G01S 3/043; G01S 15/04; G01S 5/025;

G01S 1/70; G01S 1/08; G01S 13/74;

G01S 19/42; G01S 13/79; G01S 13/9303;

G01S 13/781; G01S 13/782; Y10S

250/01; H01L 37/00; H01L 37/02; H04N

5/33; G01P 3/50; G01P 15/18; G01C

21/3664; G01C 21/26; G01C 21/16;

G01C 21/3688; G01C 21/30; G01C

17/00; G01C 21/00-21/3697; G01C

22/00-22/025; G01C 23/00-23/005; G06F

3/0482; G06F 2203/04801; G06F

19/3481; G06F 3/00; G06F 3/027; F21S

8/033; F21V 17/02; F21V 23/0442; F21V

OTHER PUBLICATIONS

Non-Final Office Action dated Mar. 6, 2020, in connection with U.S.  
Appl. No. 16/235,622, filed Dec. 28, 2018, 16 pgs.

(Continued)

*Primary Examiner* — Antoine Duval Davis

(74) *Attorney, Agent, or Firm* — Chiesa Shahinian &  
Giantomasi PC

(57)

**CLAIM**

The ornamental design for a sensor housing, as shown and  
described.

**DESCRIPTION**

FIG. 1 is a front perspective view of a sensor housing  
according to our design;

FIG. 2 is a front view thereof;

FIG. 3 is a rear view thereof;

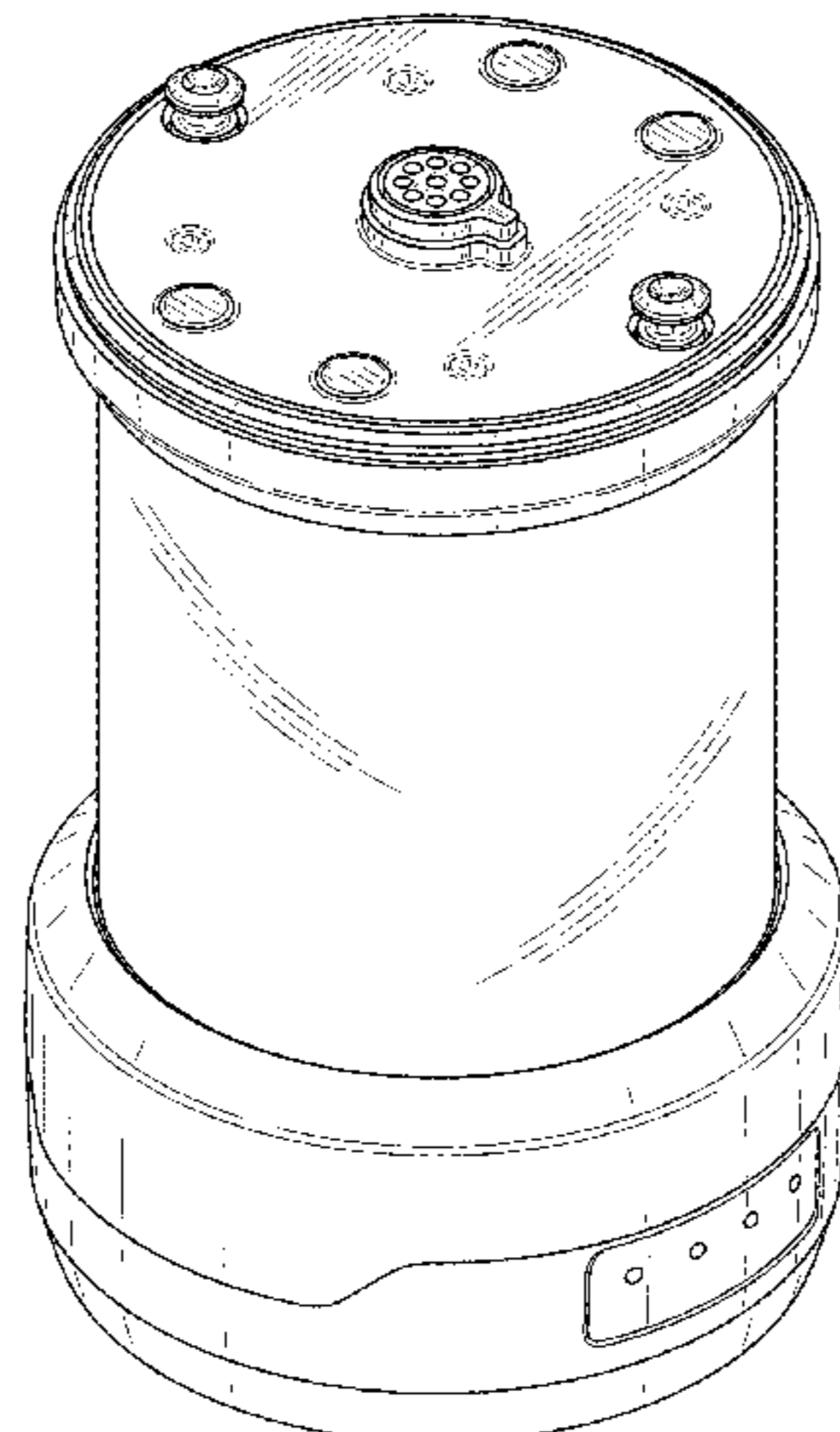
FIG. 4 is a left side view thereof;

FIG. 5 is a right side view thereof;

FIG. 6 is a top view thereof; and,

FIG. 7 is a bottom view thereof.

(Continued)



The broken lines shown in the drawings depict environment that forms no part of the claimed design.

**1 Claim, 6 Drawing Sheets**

**(58) Field of Classification Search**

CPC ..... 13/00–13/26; G08B 29/00–29/28; B64D 45/00; B64D 25/00; H04L 69/08; H04B 1/59; H04Q 11/00

See application file for complete search history.

**(56) References Cited**

U.S. PATENT DOCUMENTS

D363,930 S	11/1995	Bailey et al.	
6,598,835 B2	7/2003	Minnick	
7,114,388 B1	10/2006	French et al.	
D568,183 S *	5/2008	Ishii .....	D10/65
D594,399 S	6/2009	Johnson	
D598,480 S	8/2009	Kanemitsu	
D623,500 S	9/2010	Langner et al.	
D661,980 S	6/2012	Rocquet	
D673,029 S	12/2012	Apesteguia et al.	
D695,591 S	12/2013	Ackerman et al.	
D697,438 S *	1/2014	Rector, III .....	D10/65
D716,640 S	11/2014	Martinson	
D732,926 S	6/2015	Booth et al.	
D744,316 S	12/2015	Nook et al.	
D745,369 S	12/2015	Tungesvick	
D755,705 S	5/2016	Shin	
D757,520 S	5/2016	Pratt	
9,354,158 B1	5/2016	Van Dijk et al.	

D766,069 S	9/2016	Miller	
D767,218 S	9/2016	Hickling	
D772,737 S *	11/2016	Robinson .....	D10/65
D779,921 S	2/2017	Del Rossa	
D779,922 S	2/2017	Del Rossa	
D801,834 S *	11/2017	Briheim .....	D10/65
D803,908 S	11/2017	Yamaguchi et al.	
D822,081 S	7/2018	Yamaguchi et al.	
D831,467 S	10/2018	Crichton et al.	
D834,922 S	12/2018	Russo	
D838,581 S	1/2019	Huang et al.	
D859,968 S	9/2019	West	
D860,765 S	9/2019	Tsay	
D863,936 S	10/2019	Pratt et al.	
D871,894 S	1/2020	Brett	
2003/0056868 A1	3/2003	Gentry	
2003/0137658 A1	7/2003	Ohtomo et al.	
2016/0180999 A1	6/2016	Rattner et al.	
2018/0017414 A1	1/2018	Binder et al.	

OTHER PUBLICATIONS

International Search Report dated Mar. 16, 2020, in connection with International Patent Application No. PCT/US2019/062319, filed Nov. 20, 2019, 18 pgs.  
 Notice of Allowance dated Feb. 5, 2020, in connection with U.S. Appl. No. 29/675,183, filed Dec. 28, 2018, 9 pgs.  
 Notice of Allowance dated Feb. 6, 2020, in connection with U.S. Appl. No. 29/675,179, filed Dec. 28, 2018, 9 pgs.  
 Topcon Positioning Systems, Inc., “PZS-i3 Positioning Zone Sensor,” Technical Data Sheet, Feb. 2020, P/N: 1037637-01 Rev. A, 2 pgs.

\* cited by examiner

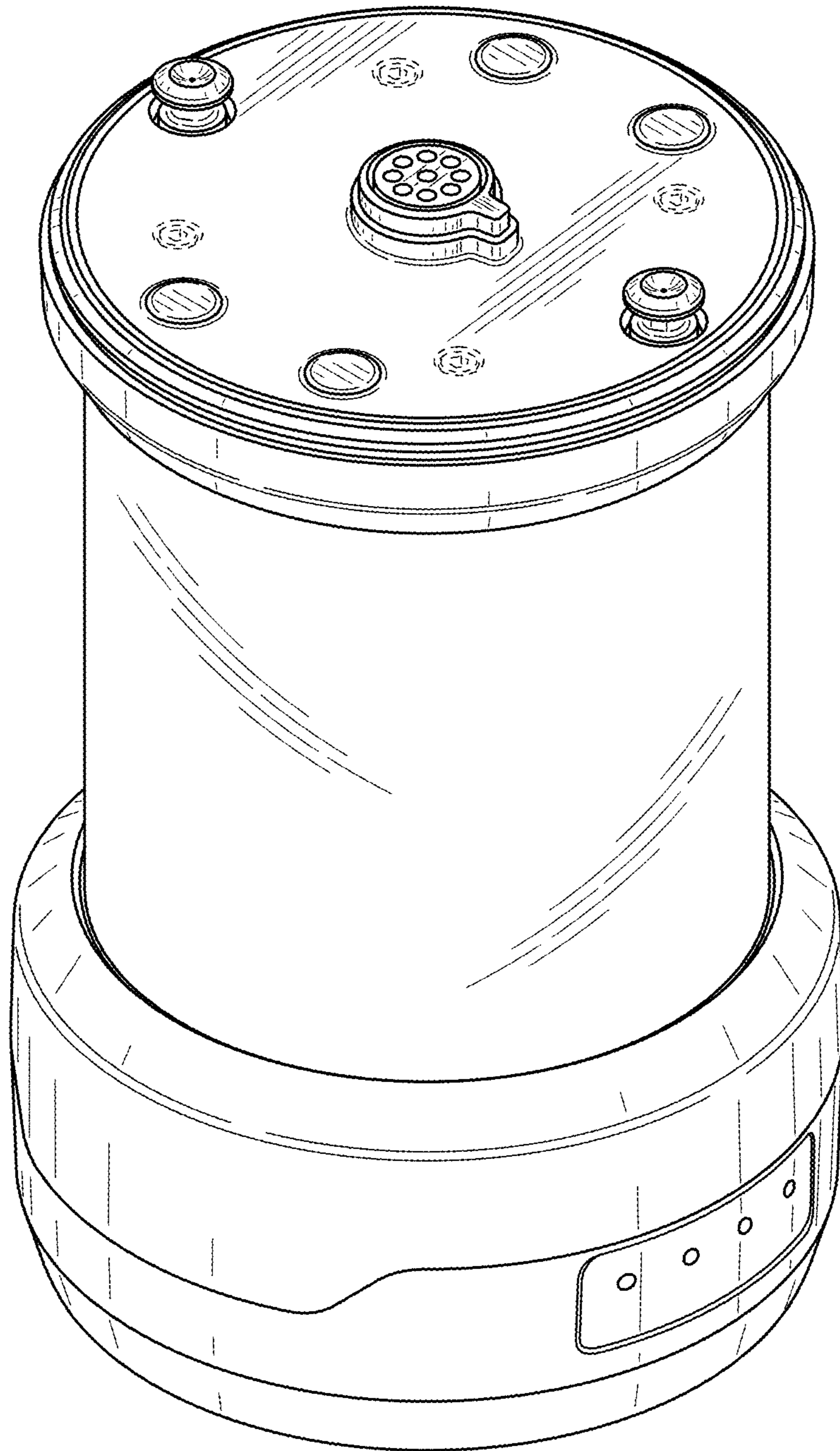


FIG. 1

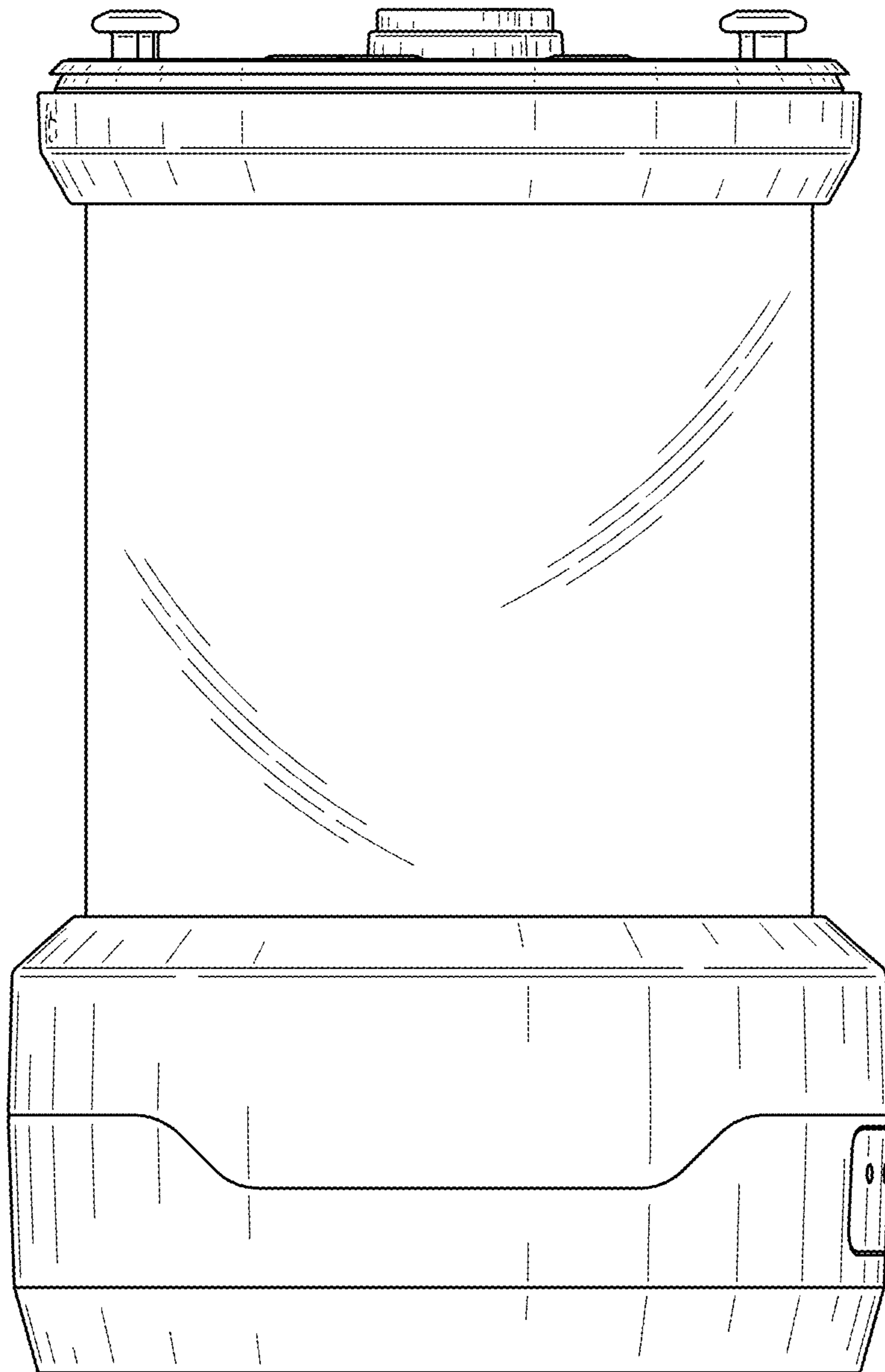


FIG. 2



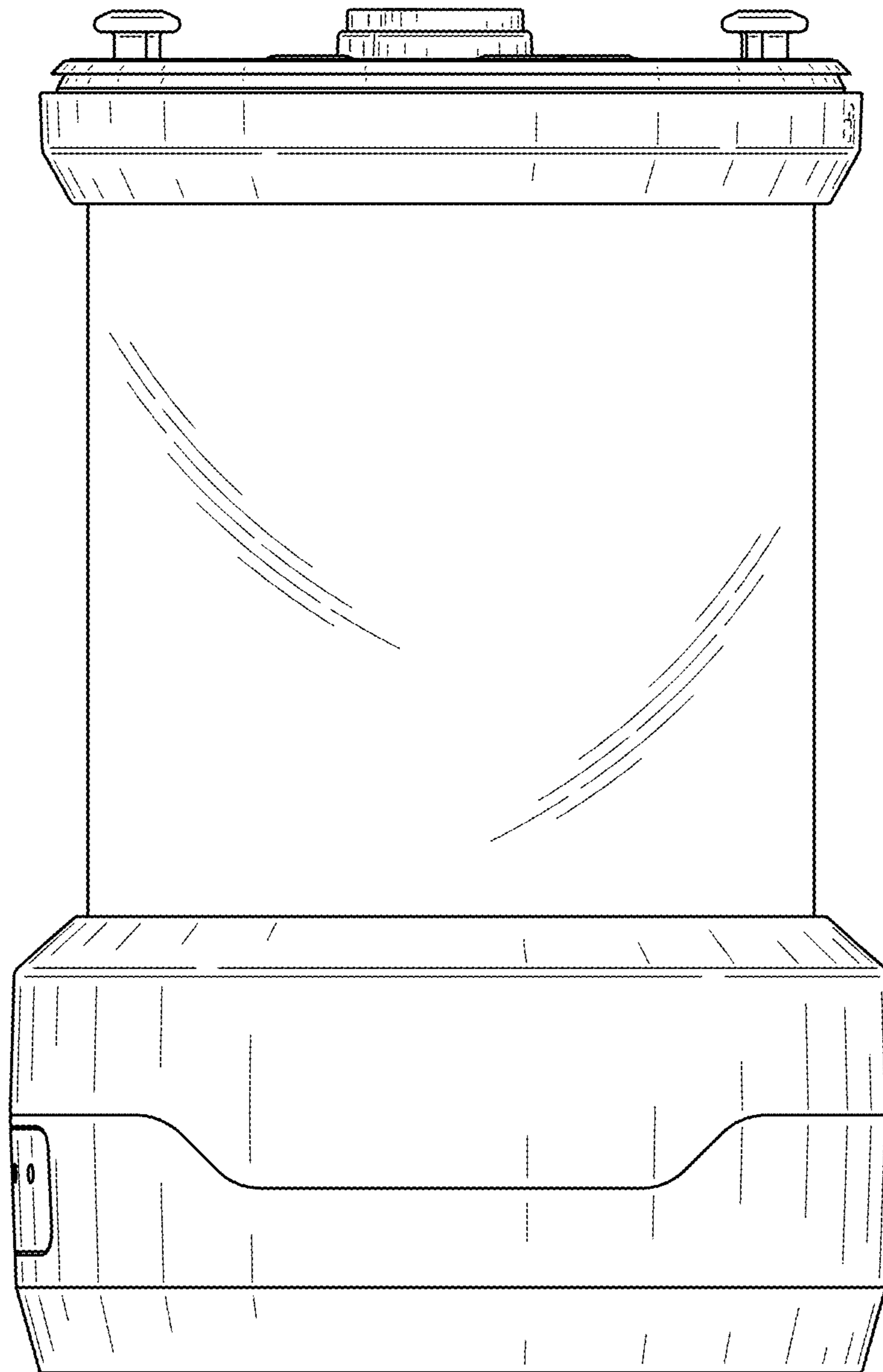


FIG. 3

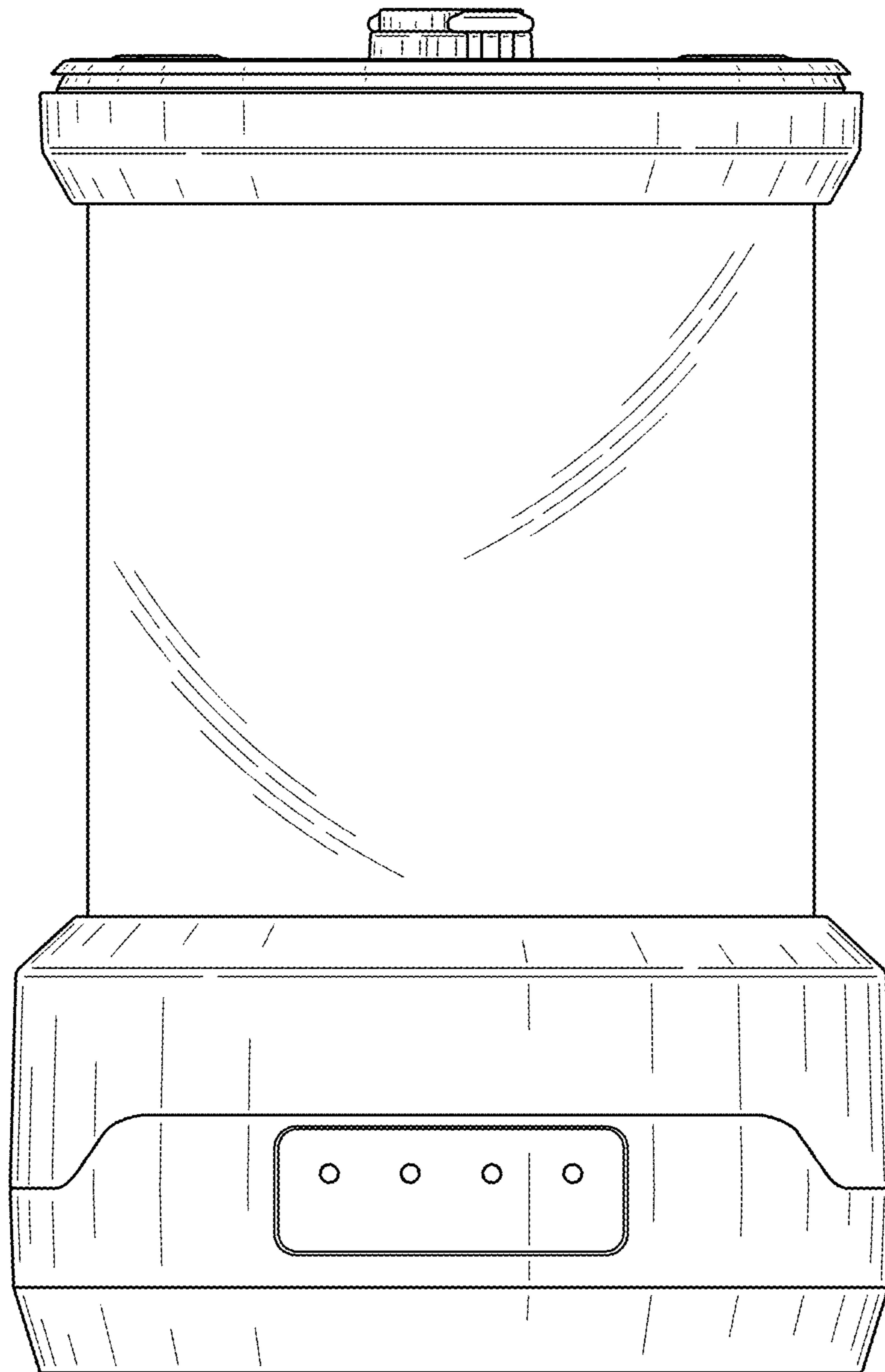


FIG. 4

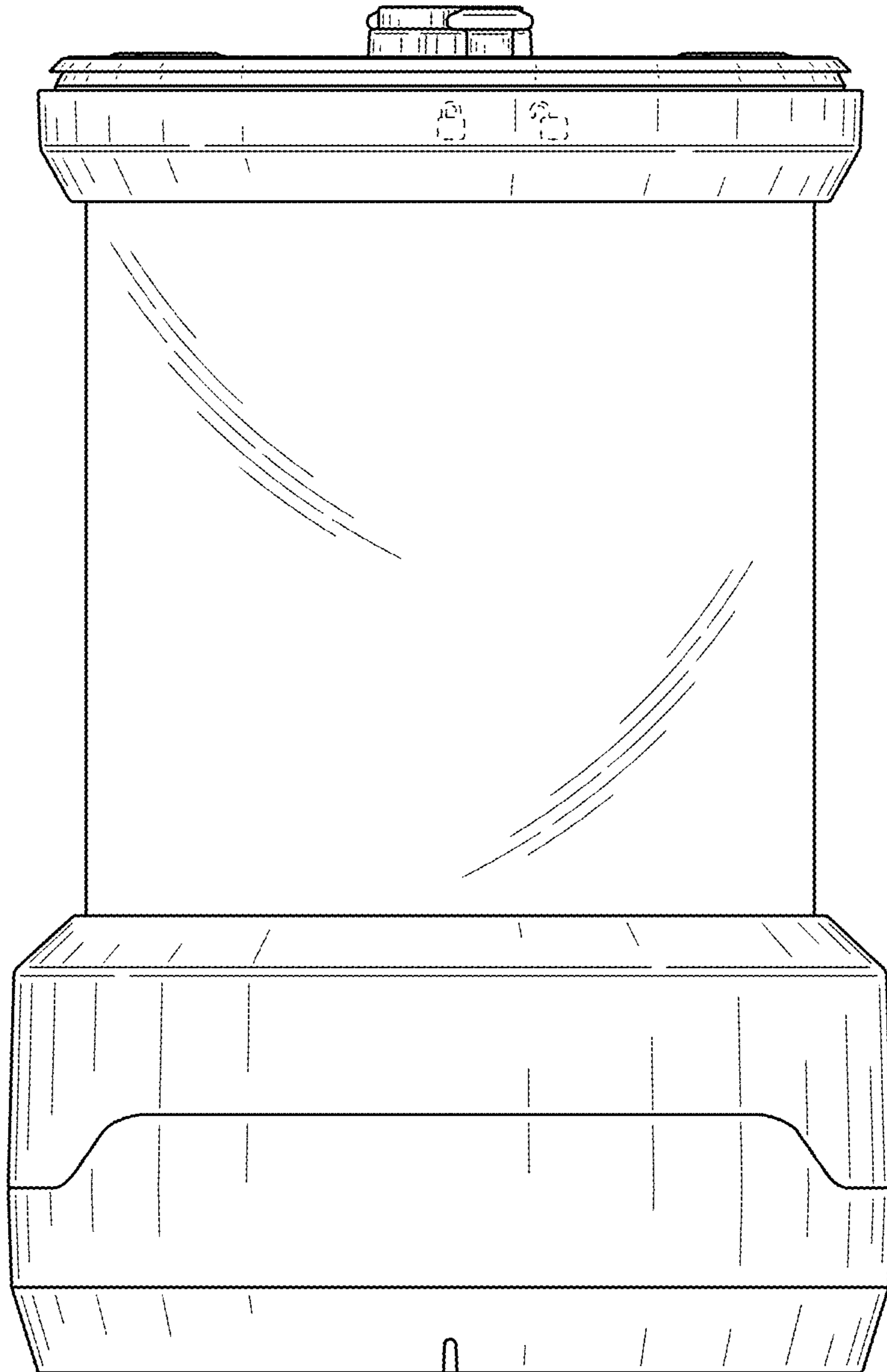


FIG. 5

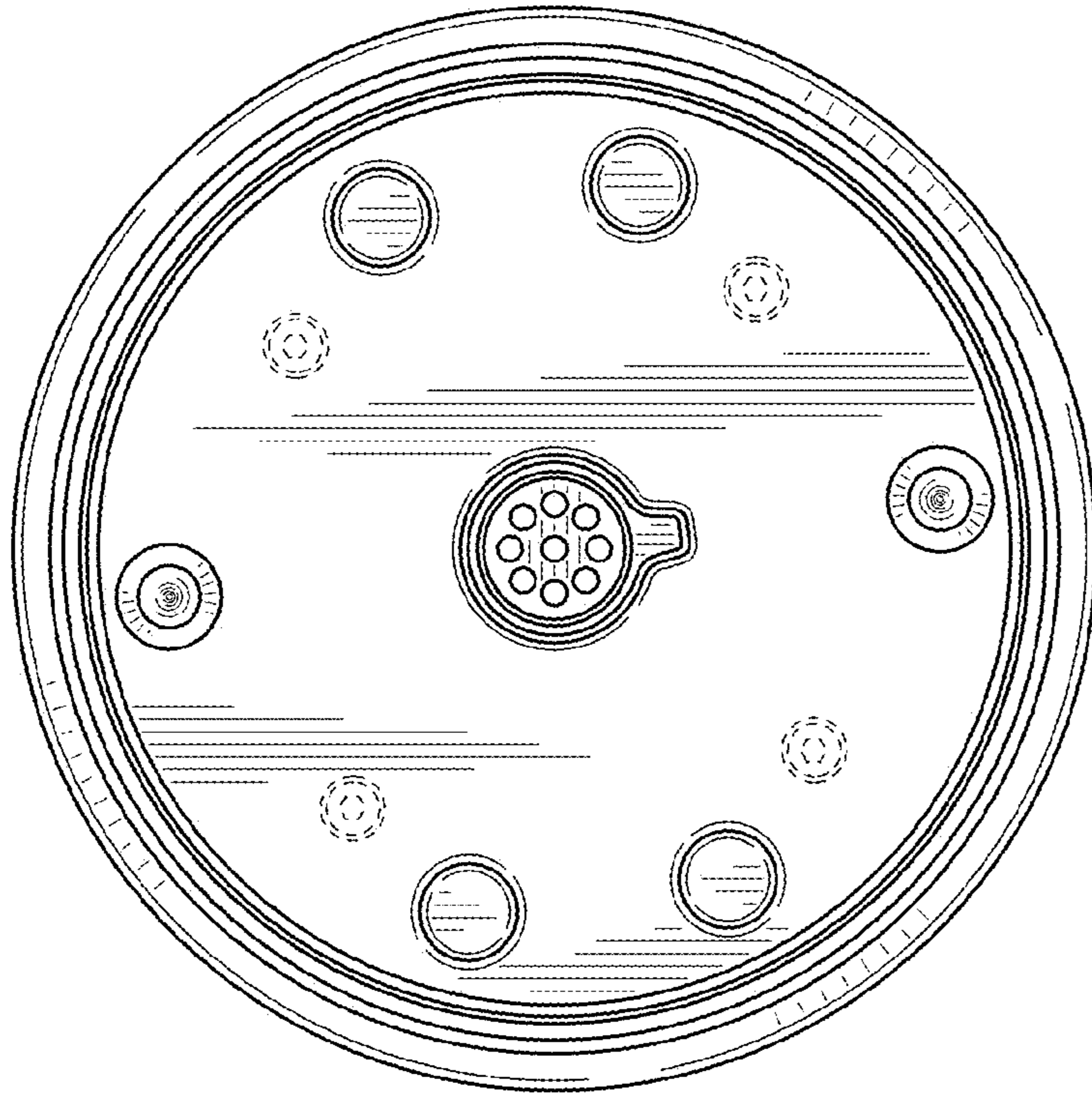


FIG. 6

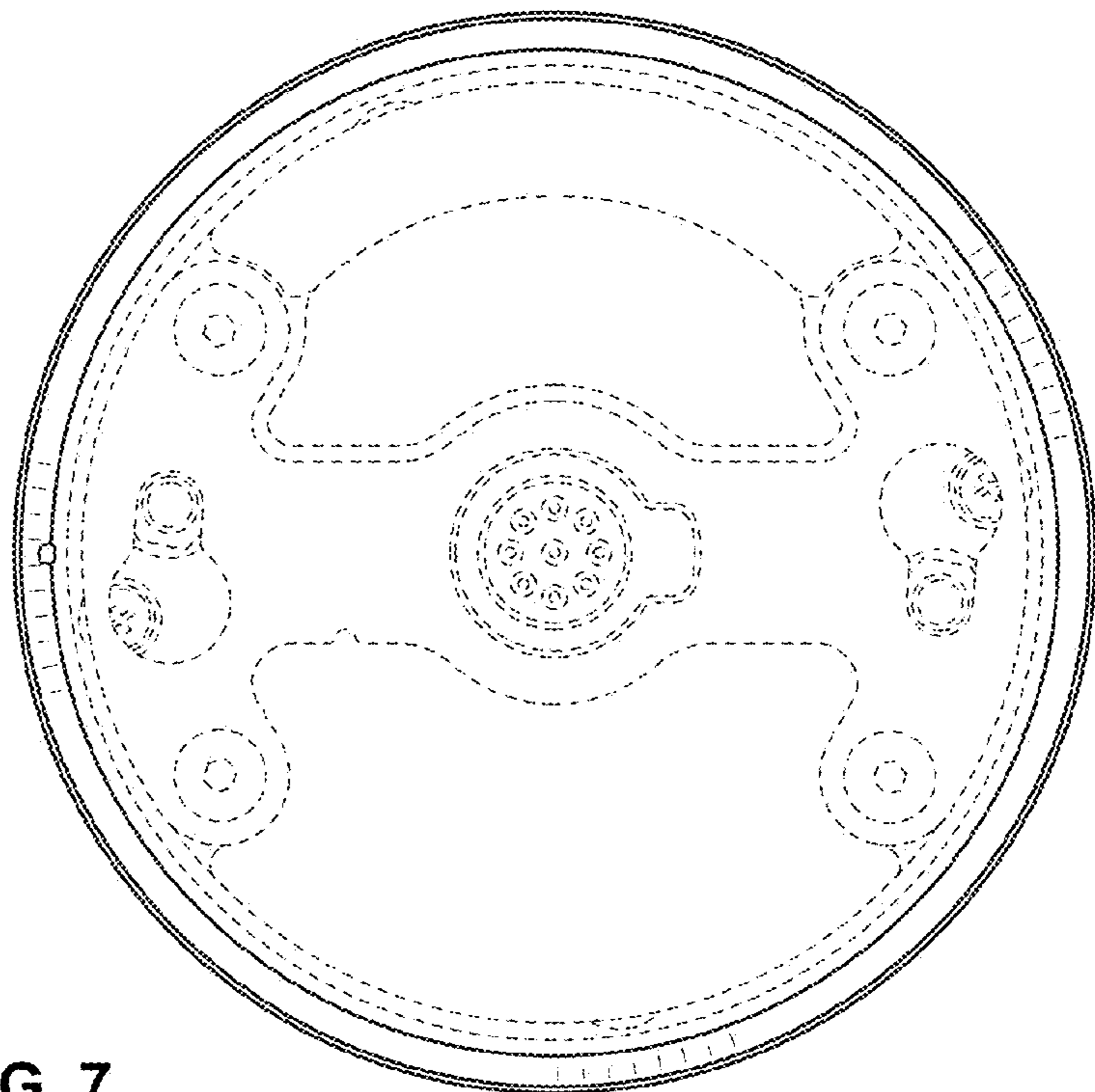


FIG. 7