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(12) **United States Design Patent**
Karibe

(10) **Patent No.:** **US D825,718 S**

(45) **Date of Patent:** **** Aug. 14, 2018**

(54) **SOLENOID VALVE**

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(73) Assignee: **SMC CORPORATION**, Tokyo (JP)

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

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(22) Filed: **Apr. 7, 2017**

(30) **Foreign Application Priority Data**

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(51) **LOC (11) Cl.** **23-01**

(52) **U.S. Cl.**
USPC **D23/233**

(58) **Field of Classification Search**
USPC D10/49; D23/233-237, 244-249
CPC .. F02M 51/0685; F02M 61/168; F16K 31/02;
F16K 31/048; F16K 31/0631; F16K
31/0675; F16K 31/082; F16K 27/029;
F16K 11/24
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- 6,425,416 B1 * 7/2002 Narita F15B 13/0825
137/625.27
- D609,307 S * 2/2010 Moriyama D23/233
- D615,618 S 5/2010 Someya
- D639,392 S * 6/2011 Yamada D23/233
- D667,930 S * 9/2012 Yamada D23/233
- D686,696 S * 7/2013 Lai D23/233
- D695,380 S * 12/2013 Tamura D23/233
- D719,241 S 12/2014 Enzaki
- D724,697 S * 3/2015 Johnson D23/233
- D738,463 S * 9/2015 Yoshida D23/233
- D738,464 S 9/2015 Yoshida et al.

- D738,465 S 9/2015 Yoshida et al.
- D738,466 S 9/2015 Yoshida et al.
- D753,268 S * 4/2016 Nishimura D23/233
(Continued)

FOREIGN PATENT DOCUMENTS

- JP 1094553 S 12/2000
- JP 1094554 S 12/2000

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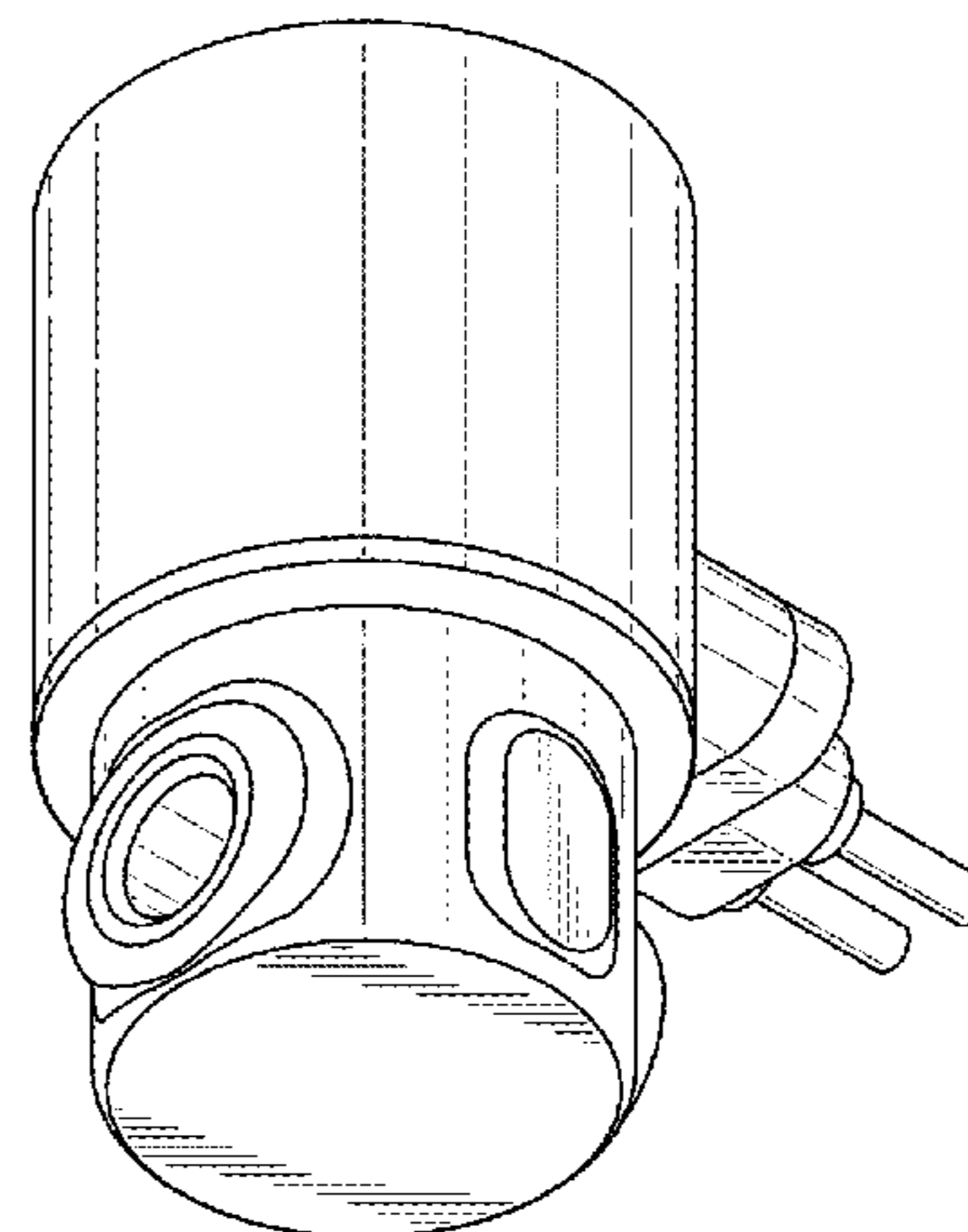
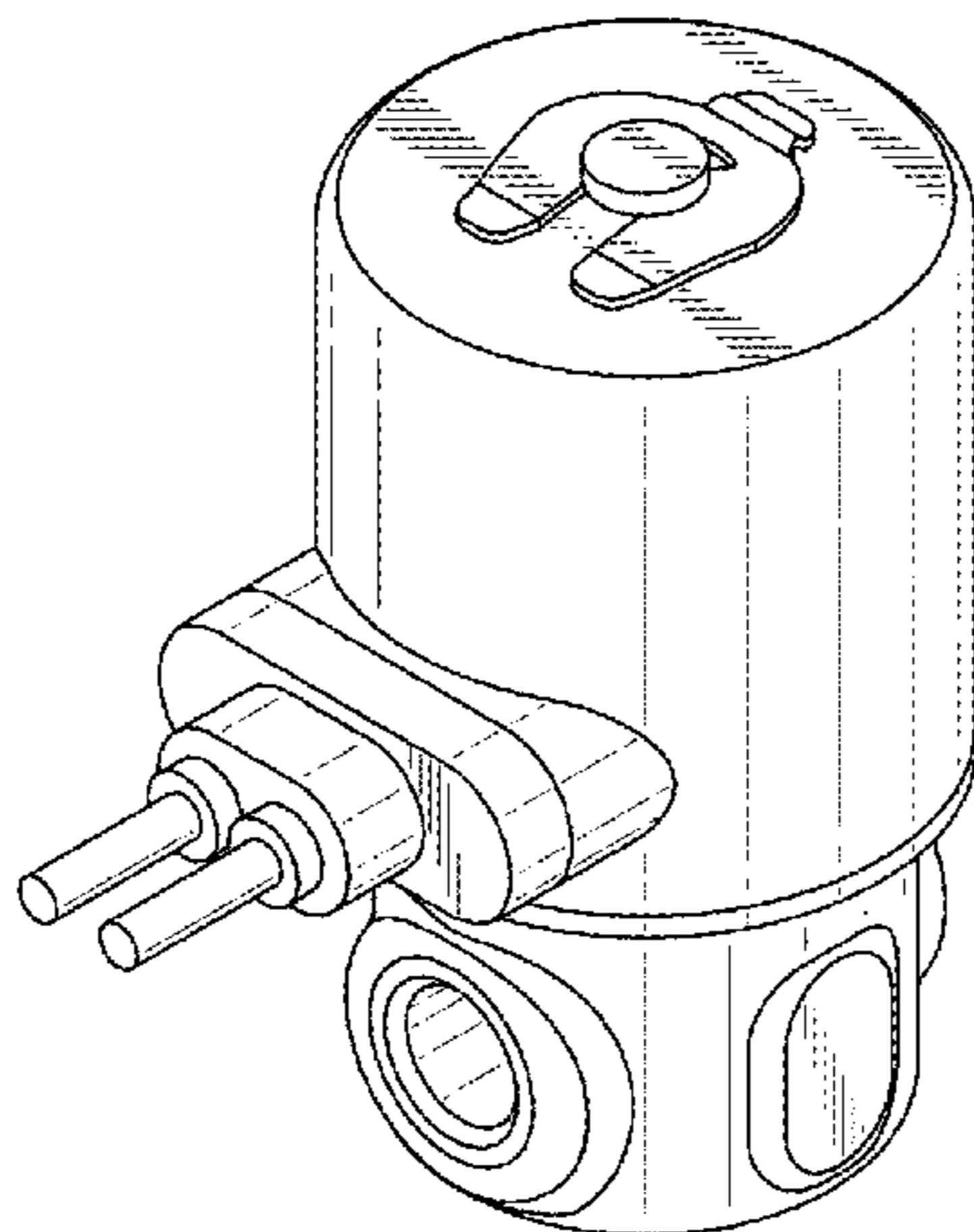
(57) **CLAIM**

The ornamental design for a solenoid valve, as shown.

DESCRIPTION

FIG. 1 is a front, top and left side perspective view of a solenoid valve showing a first embodiment of my new design;
 FIG. 2 is a rear, bottom and right side perspective view thereof;
 FIG. 3 is a front view thereof;
 FIG. 4 is a rear view thereof;
 FIG. 5 is a top plan view thereof;
 FIG. 6 is a bottom plan view thereof;
 FIG. 7 is a left side view thereof;
 FIG. 8 is a right side view thereof;
 FIG. 9 is a front, top and left side perspective view of a solenoid valve showing a second embodiment of my new design;
 FIG. 10 is a rear, bottom and right side perspective view of FIG. 9;
 FIG. 11 is a front view of FIG. 9;
 FIG. 12 is a rear view of FIG. 9;
 FIG. 13 is a top plan view of FIG. 9;
 FIG. 14 is a bottom plan view of FIG. 9;
 FIG. 15 is a left side view of FIG. 9; and,
 FIG. 16 is a right side view of FIG. 9.

1 Claim, 16 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D754,292 S * 4/2016 Mangold D23/233
D760,352 S * 6/2016 Mangold D23/233
2004/0227119 A1* 11/2004 Mills F16K 31/0631
251/129.14
2006/0284131 A1* 12/2006 Cripps F16K 31/06
251/129.15
2015/0108382 A1* 4/2015 Svensson F16K 31/02
251/129.19
2017/0356395 A1* 12/2017 Lee F02M 25/0836

* cited by examiner

FIG. 1

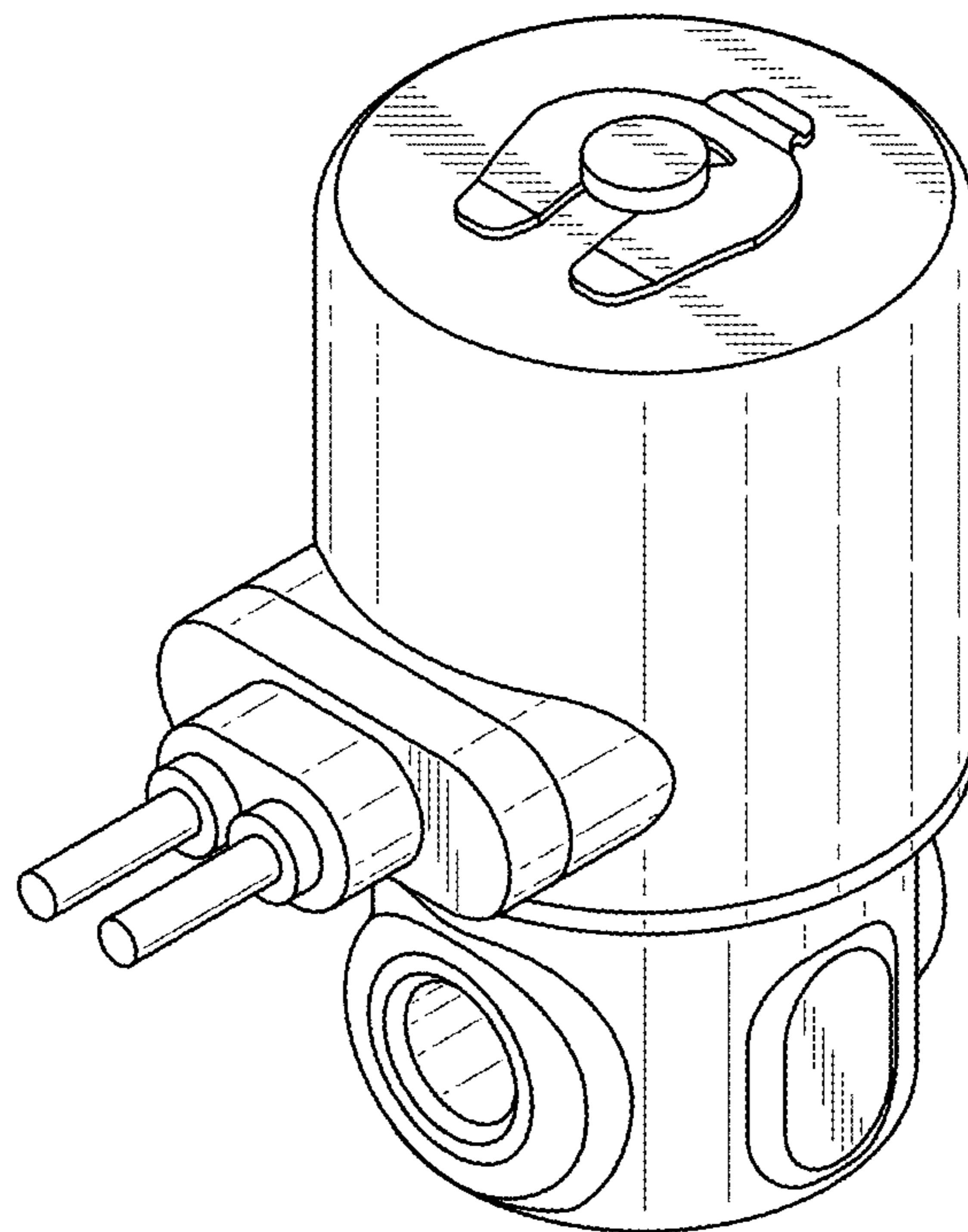


FIG. 2

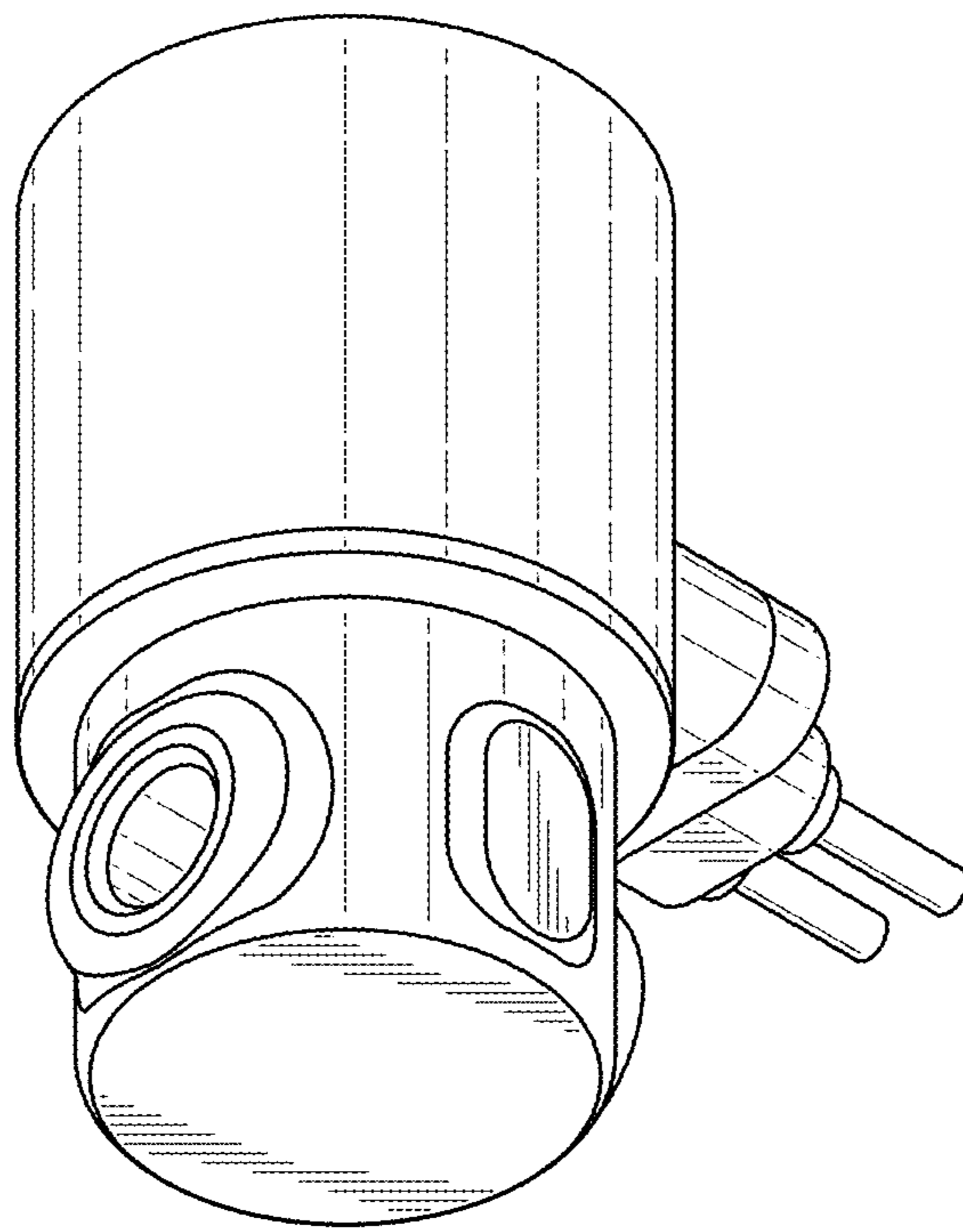


FIG. 3

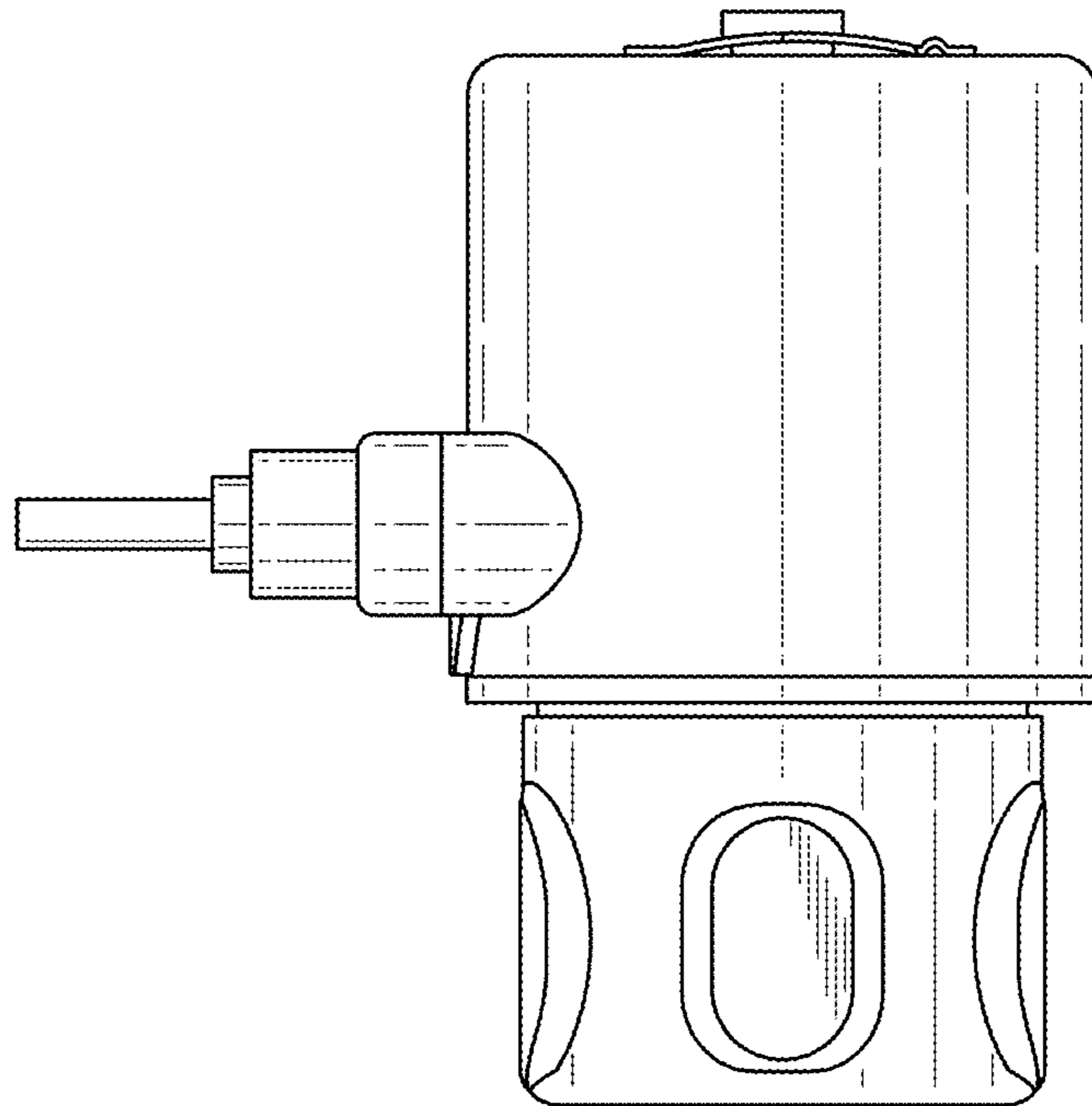


FIG. 4

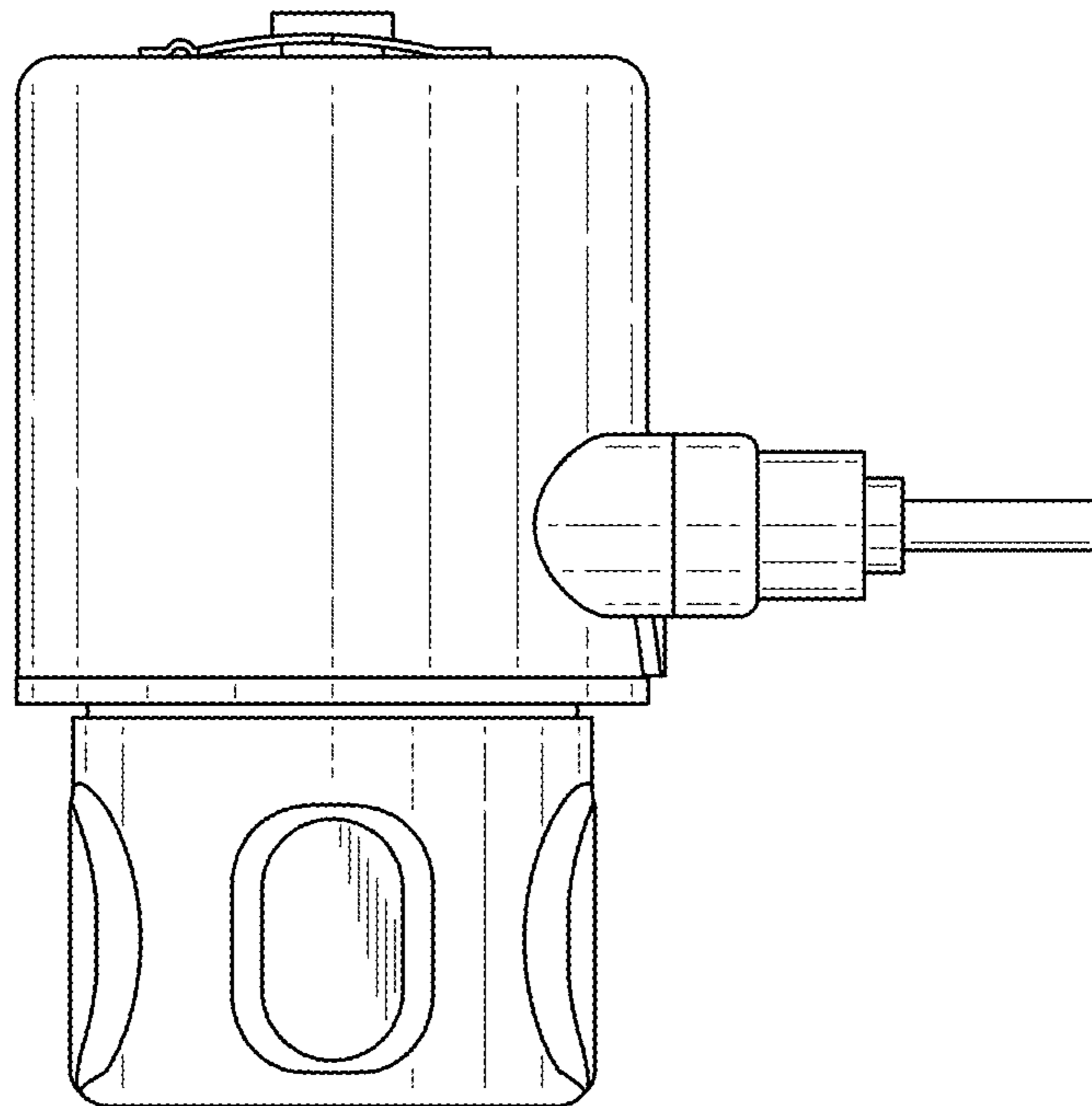


FIG. 5

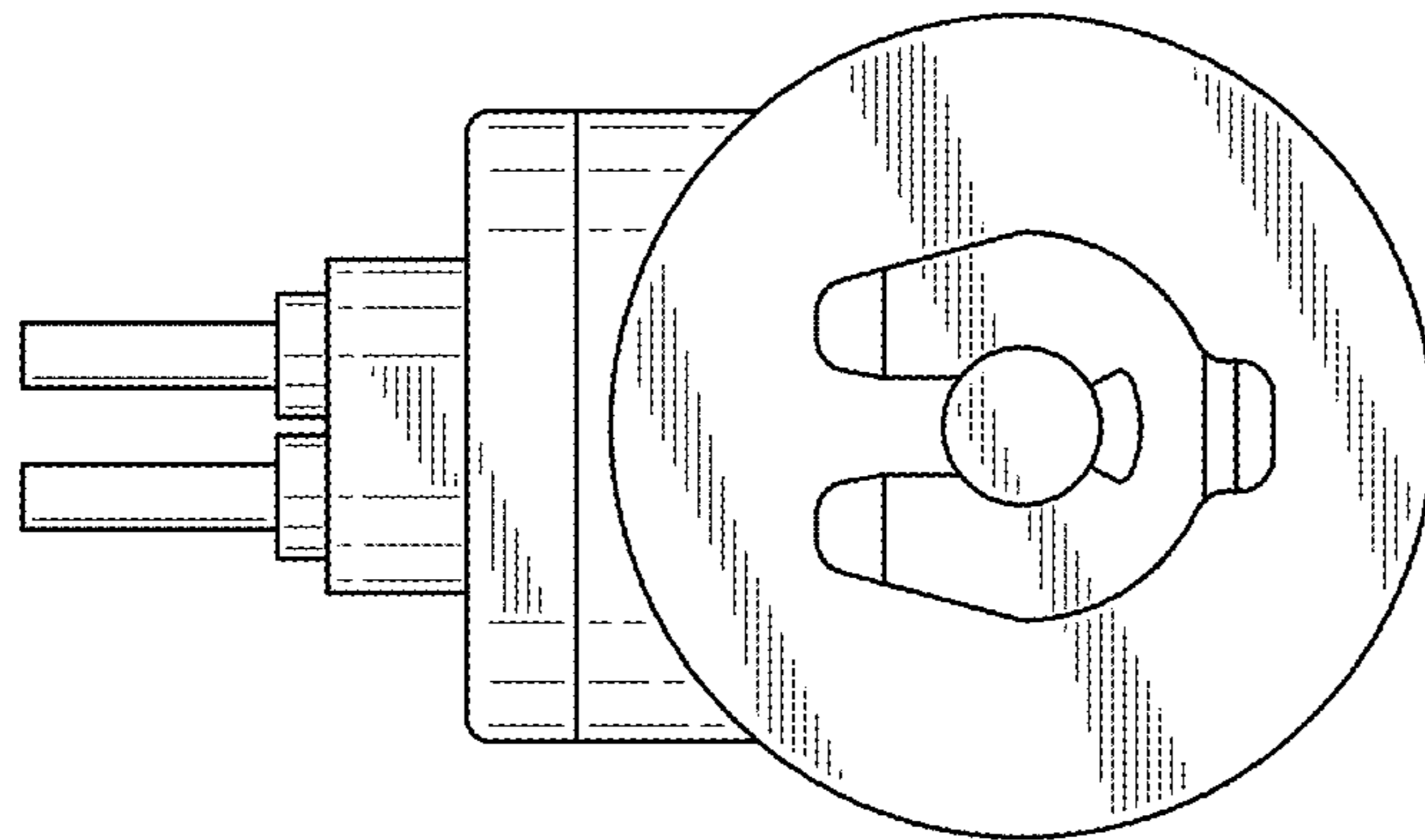


FIG. 6

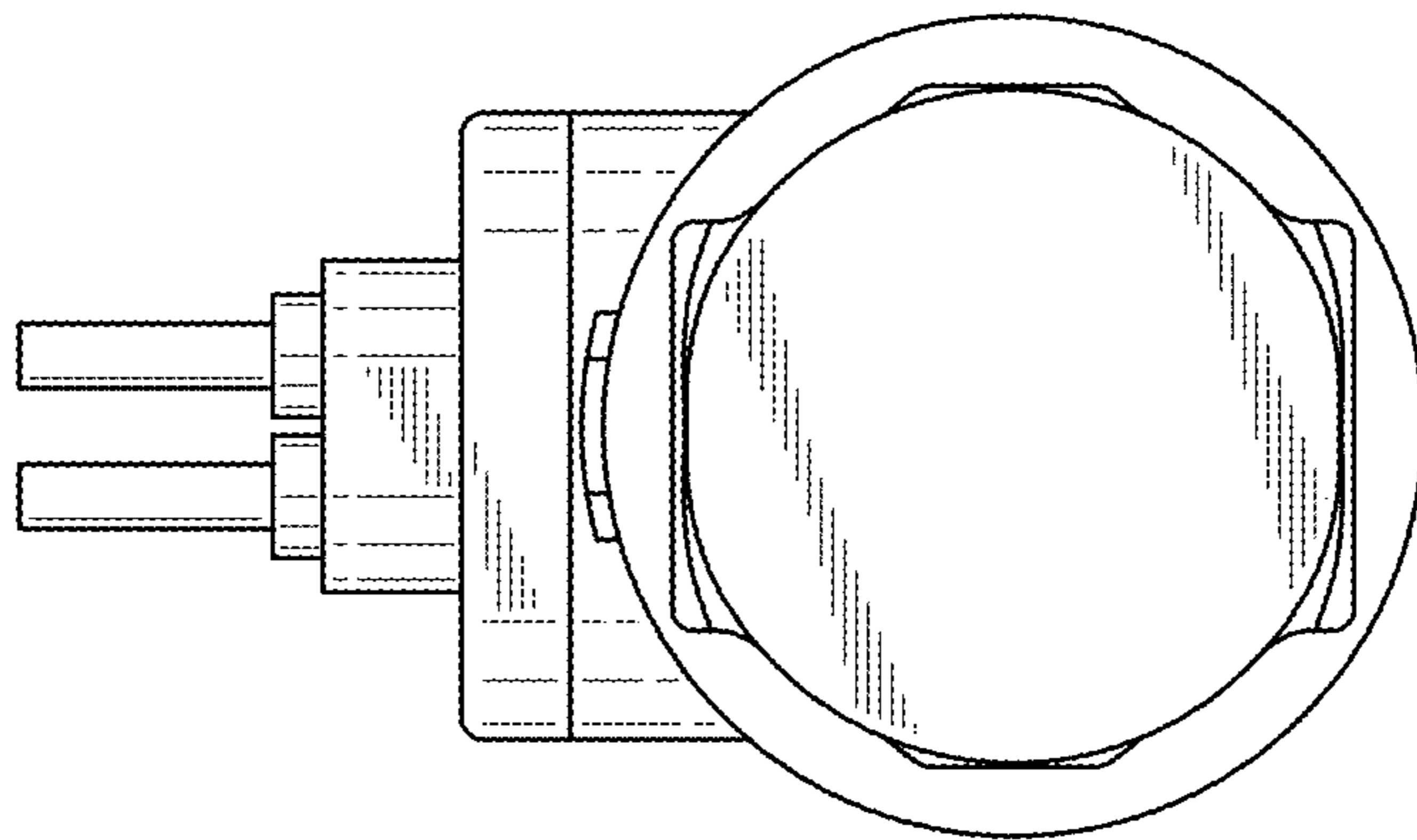


FIG. 7

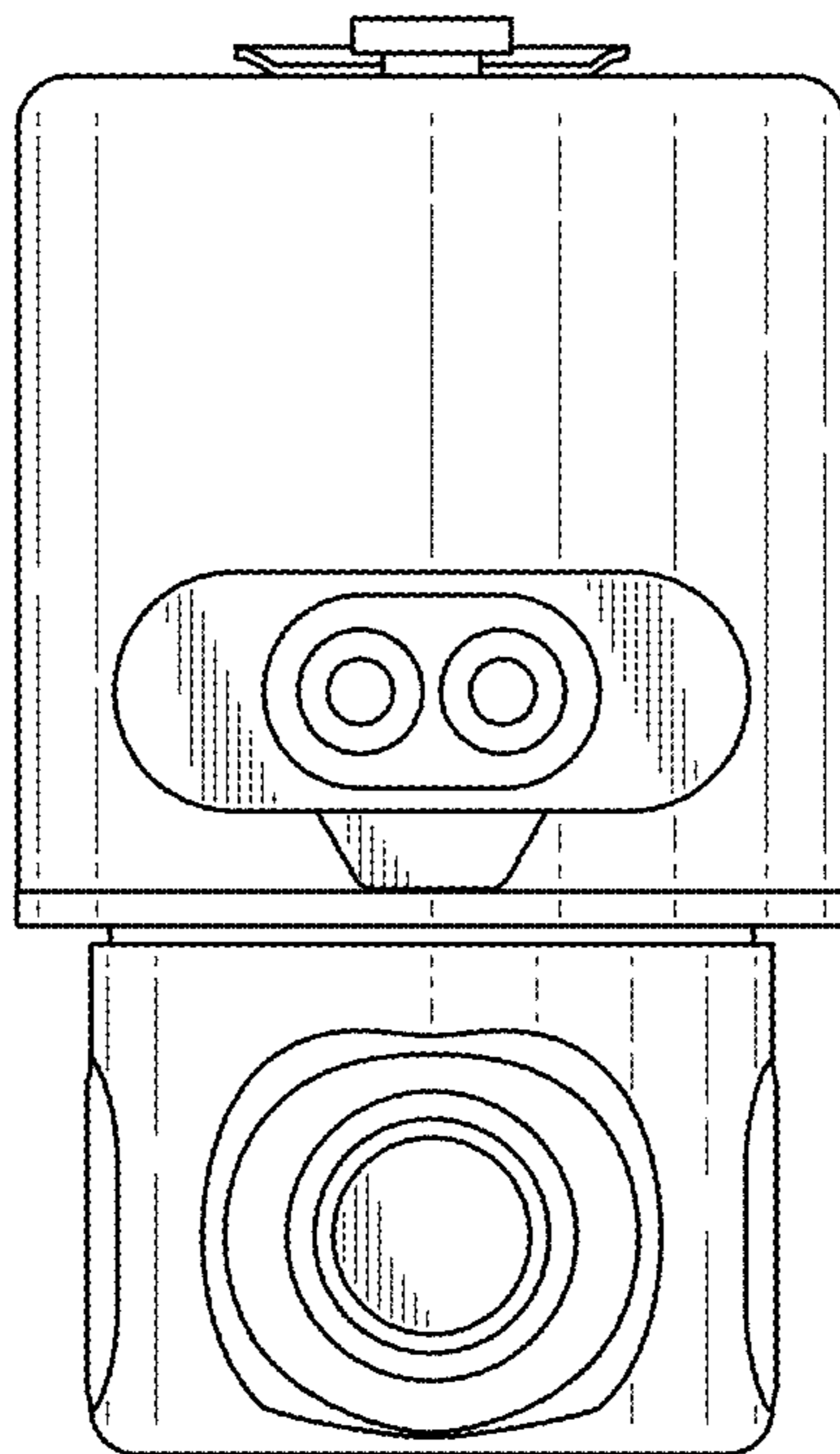


FIG. 8

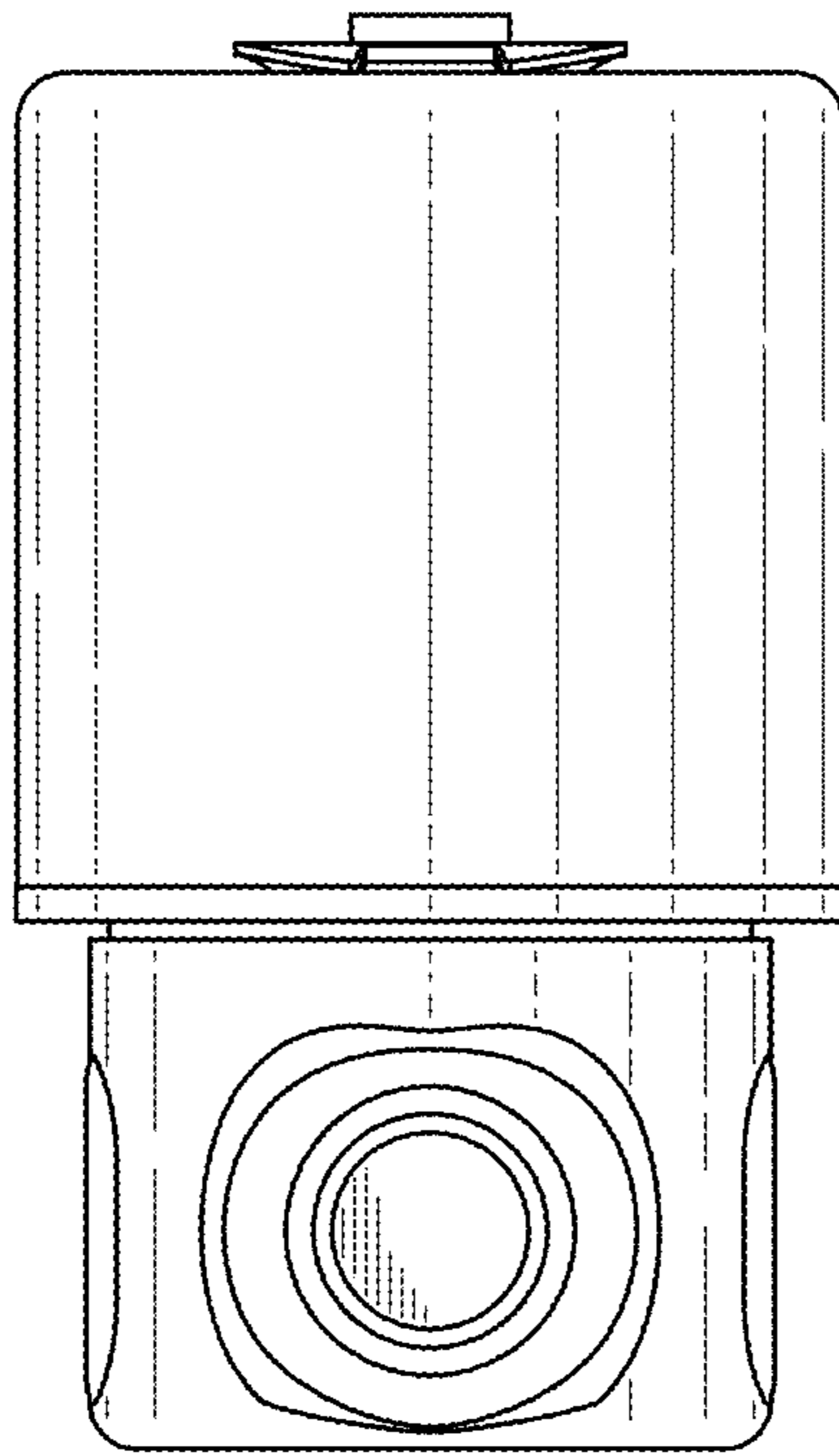


FIG. 9

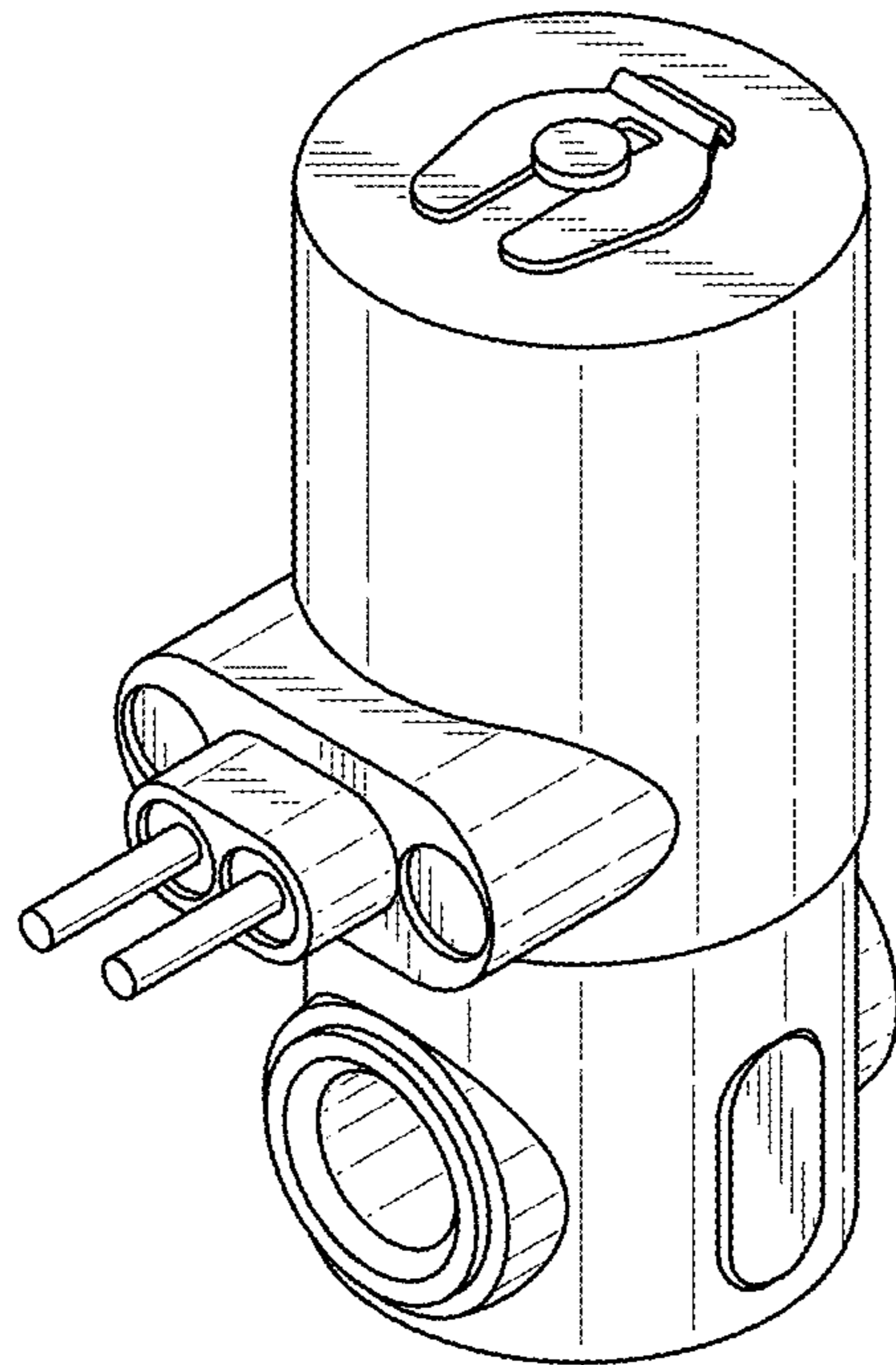


FIG. 10

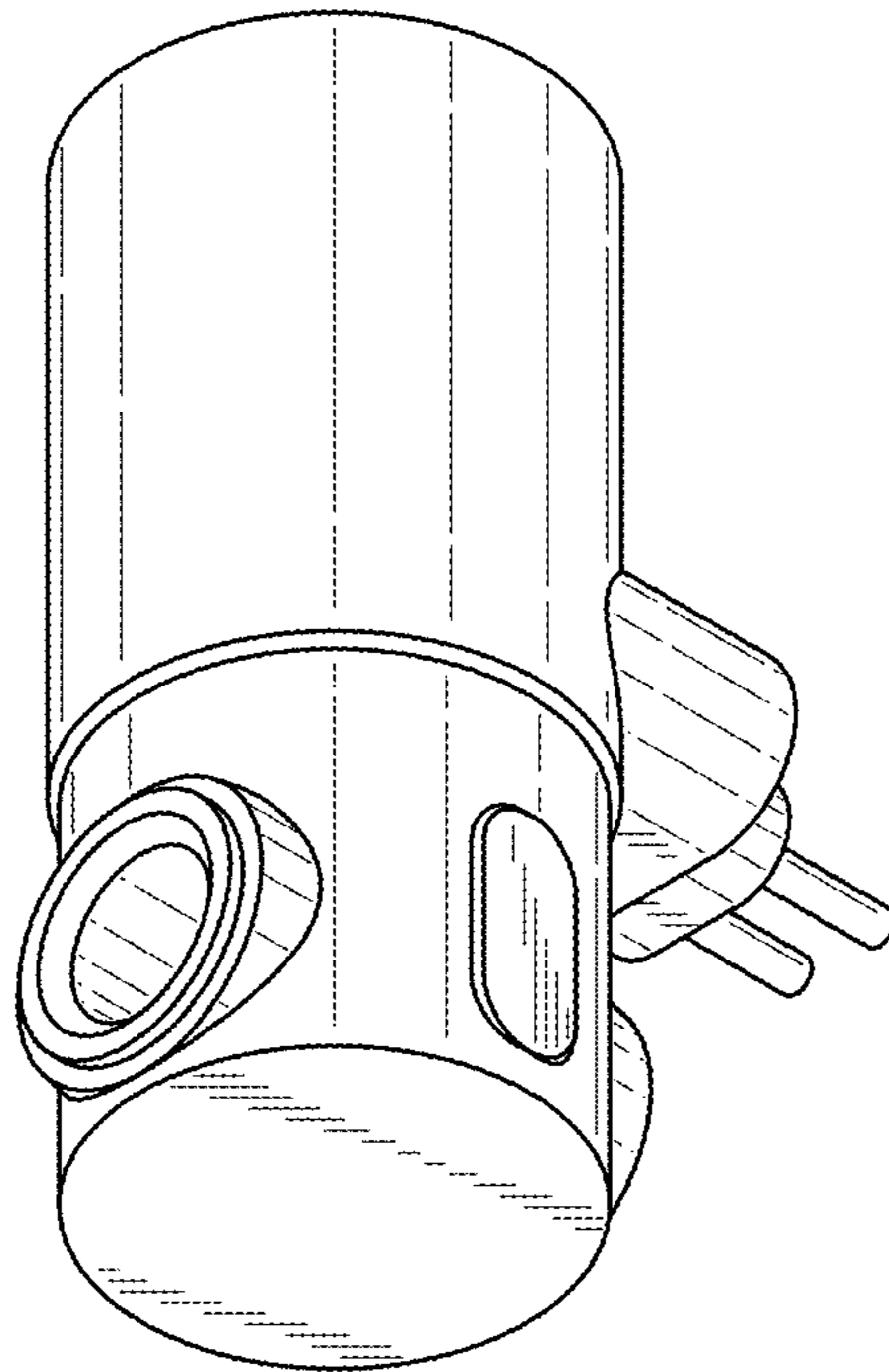


FIG. 11

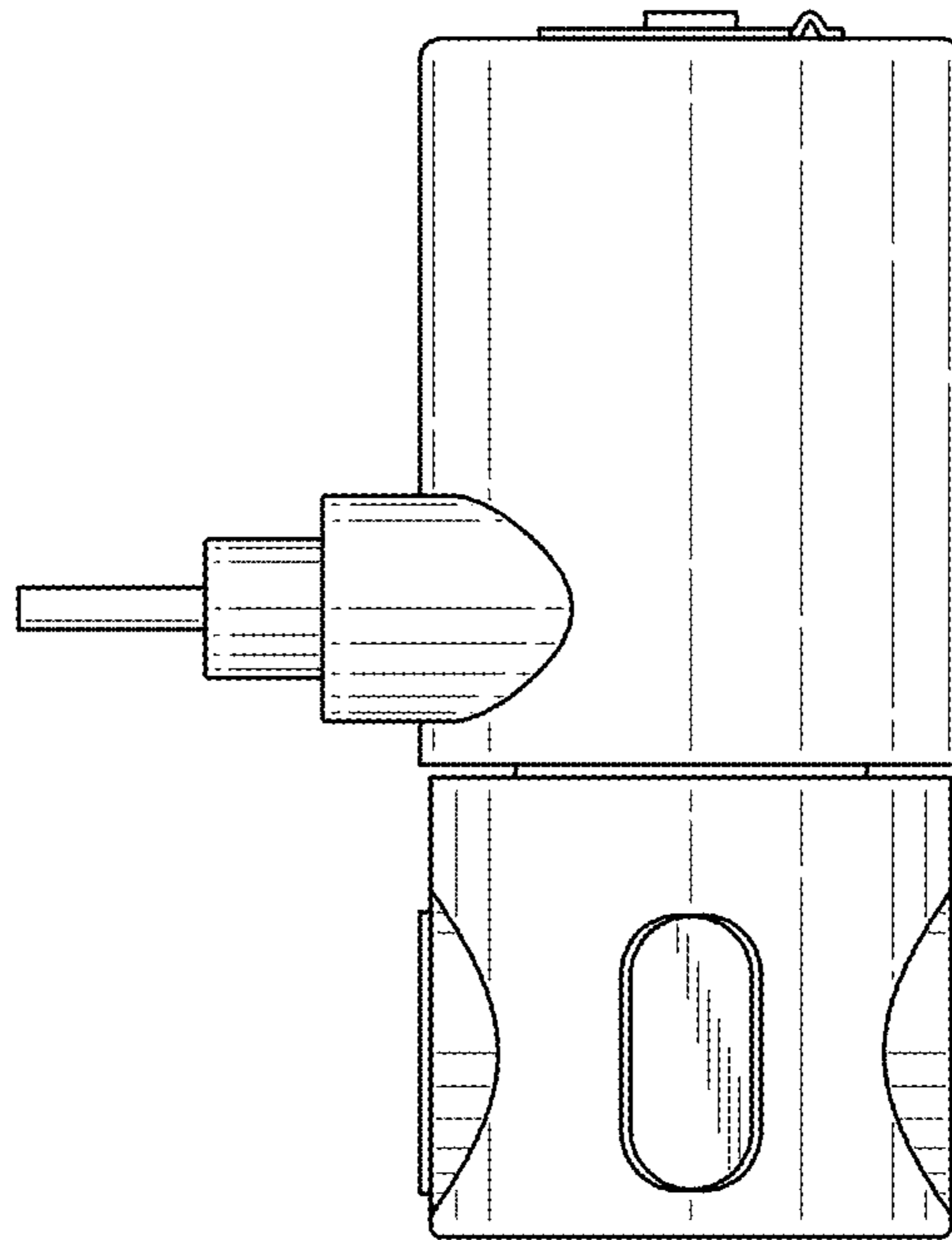


FIG. 12

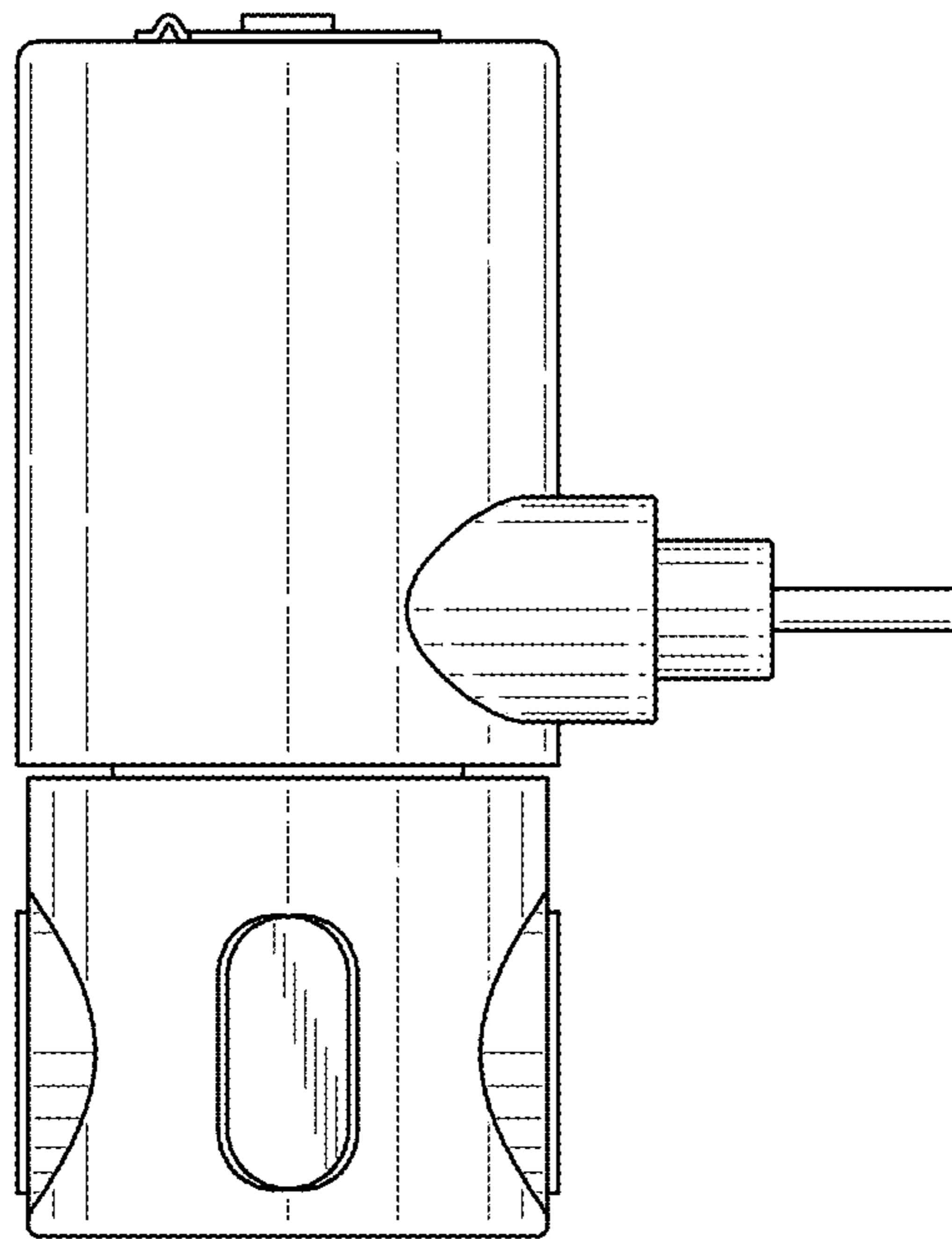


FIG. 13

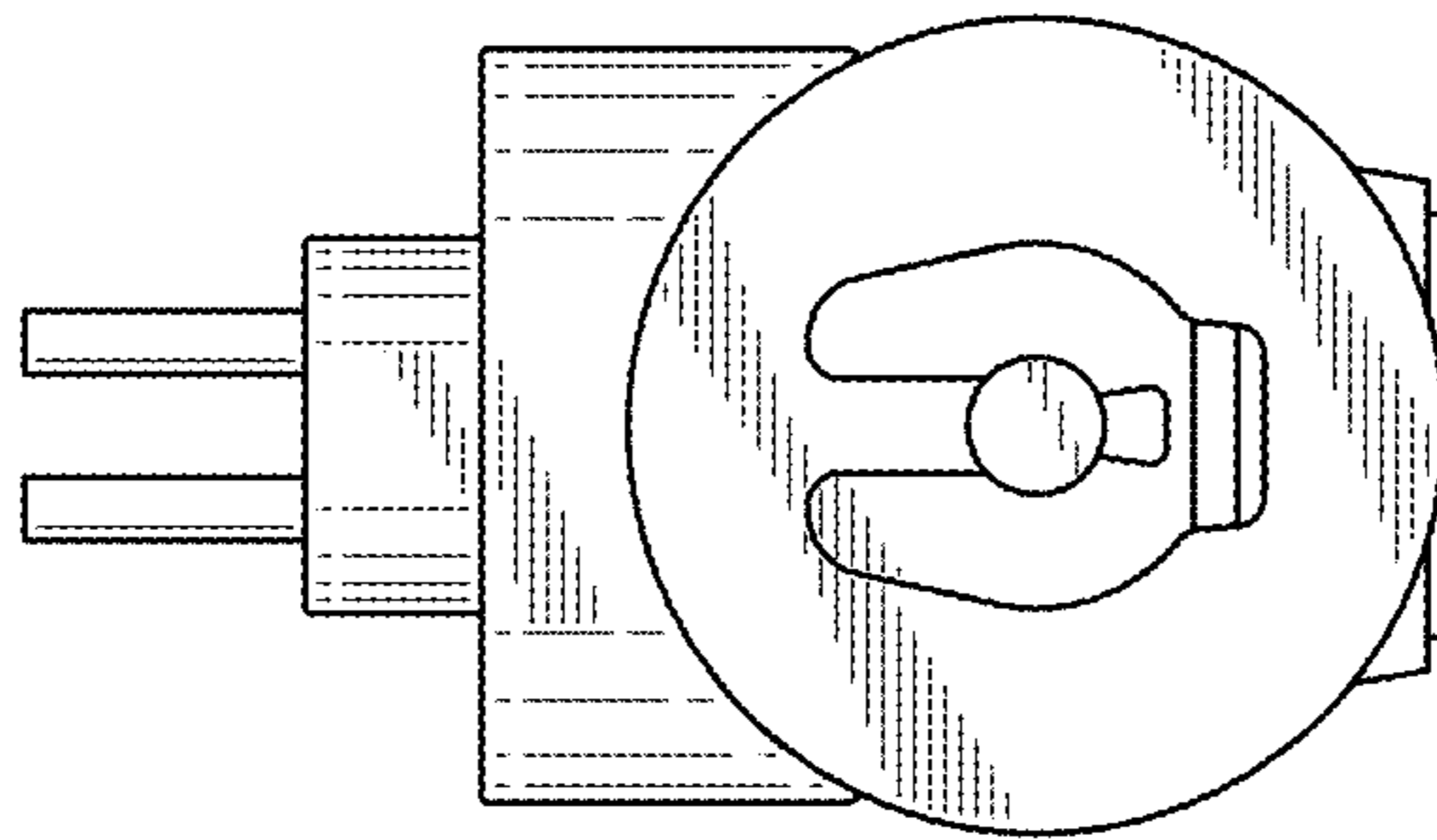


FIG. 14

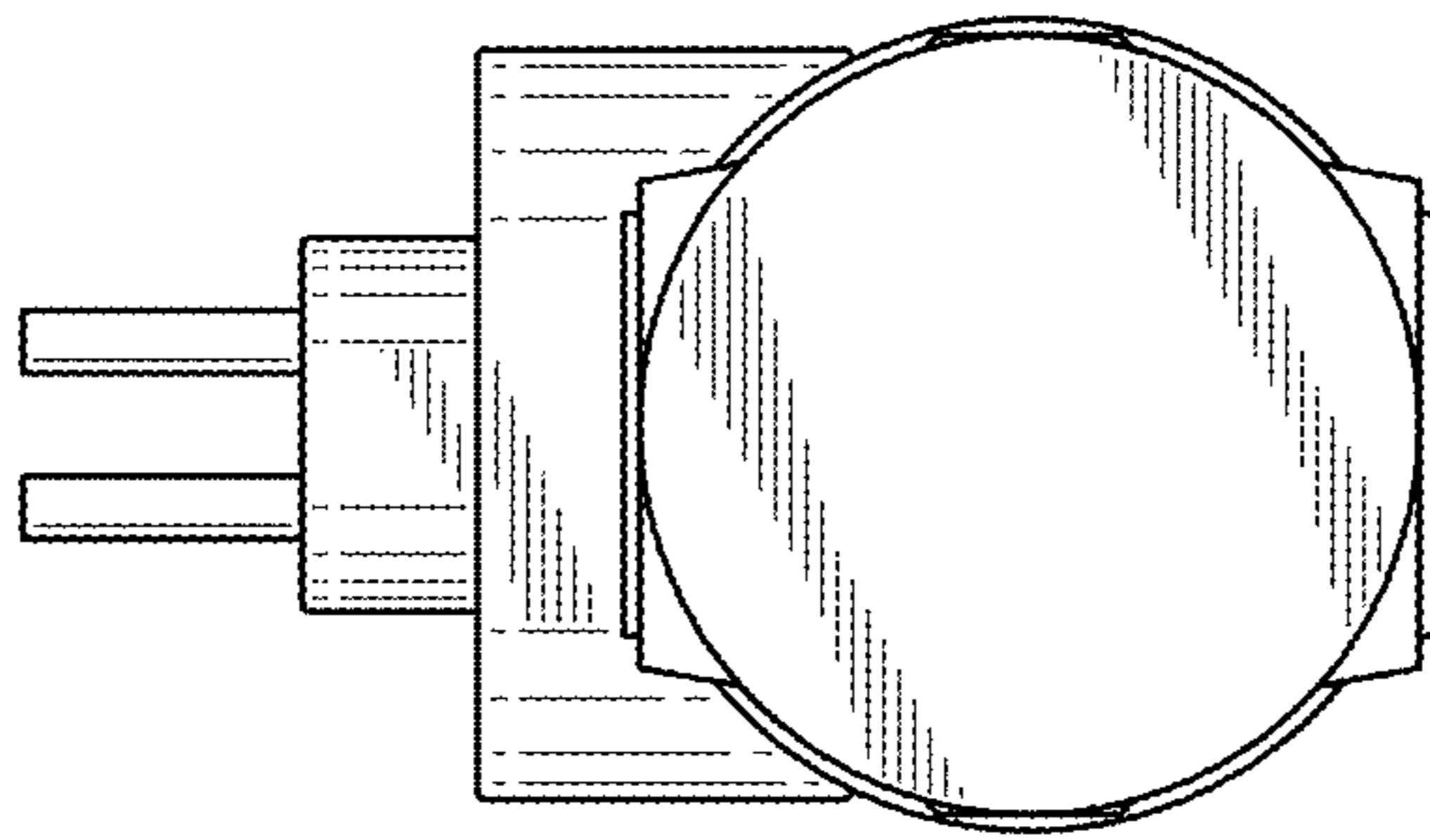


FIG. 15

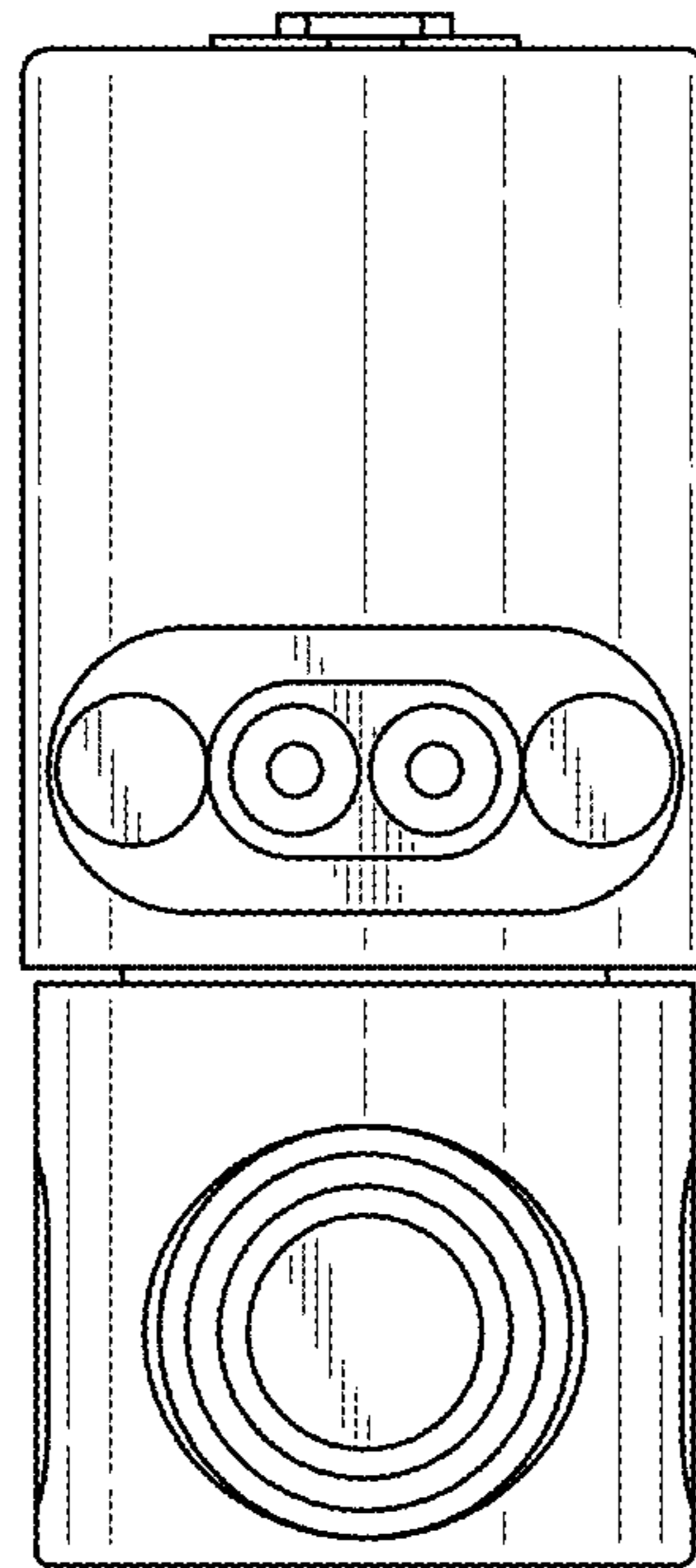


FIG. 16

