



US00D848958S

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

(10) **Patent No.: US D848,958 S**

(45) **Date of Patent: \*\* May 21, 2019**

(54) **TOGGLE FOR A SELF-POWERED WIRELESS SWITCH**

(71) Applicant: **Eaton Intelligent Power Limited**,  
Dublin (IE)

(72) Inventors: **Alex Zhuang**, Shanghai (CN); **George Zhang**, Shanghai (CN); **Erik Jeffrey Gouhl**, Fayetteville, GA (US); **Harry Zhang**, Shanghai (CN); **Andrew Yang**, Jiangsu (CN); **Darron Kirby Lacey**, Peachtree City, GA (US); **Tom Xiong**, Shanghai (CN)

(73) Assignee: **Eaton Intelligent Power Limited**,  
Dublin (IE)

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

(21) Appl. No.: **29/593,417**

(22) Filed: **Feb. 8, 2017**

(51) **LOC (11) Cl.** ..... **13-03**

(52) **U.S. Cl.**  
USPC ..... **D13/173**

(58) **Field of Classification Search**  
USPC ..... D13/162, 169, 174, 173  
CPC ..... H01H 9/02; H01H 9/0271; H01H 9/16;  
H01H 9/18; H01H 9/161; H01H 9/181;  
H01H 9/182; H01H 13/04; H01H 13/14;  
H01H 13/20; H01H 13/30; H01H 19/635;  
H01H 23/00; H01H 23/02; H01H 23/025;  
H01H 23/04; H01H 23/145; H01H  
2300/03; H05B 33/0803; H05B 33/0863;  
H05B 37/02; H05B 37/0254; H05B  
37/0272; H05B 39/02; H05B 39/04;  
H05B 39/085; H05B 39/086; H05B  
39/088

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,793,265 A 5/1957 Crissinger  
2,866,873 A 12/1958 Lamb

3,170,999 A 2/1965 Brown  
3,946,347 A 3/1976 Sauer  
4,091,346 A 5/1978 Nishimura et al.  
4,292,615 A 9/1981 Ohashi  
4,344,103 A 8/1982 Nagamoto et al.  
4,489,297 A 12/1984 Haydon et al.

(Continued)

OTHER PUBLICATIONS

U.S. Appl. No. 15/427,814, filed Feb. 8, 2017, Zhuang et al.

(Continued)

*Primary Examiner* — Selina Sikder

(74) *Attorney, Agent, or Firm* — Myers Bigel, P.A.

(57) **CLAIM**

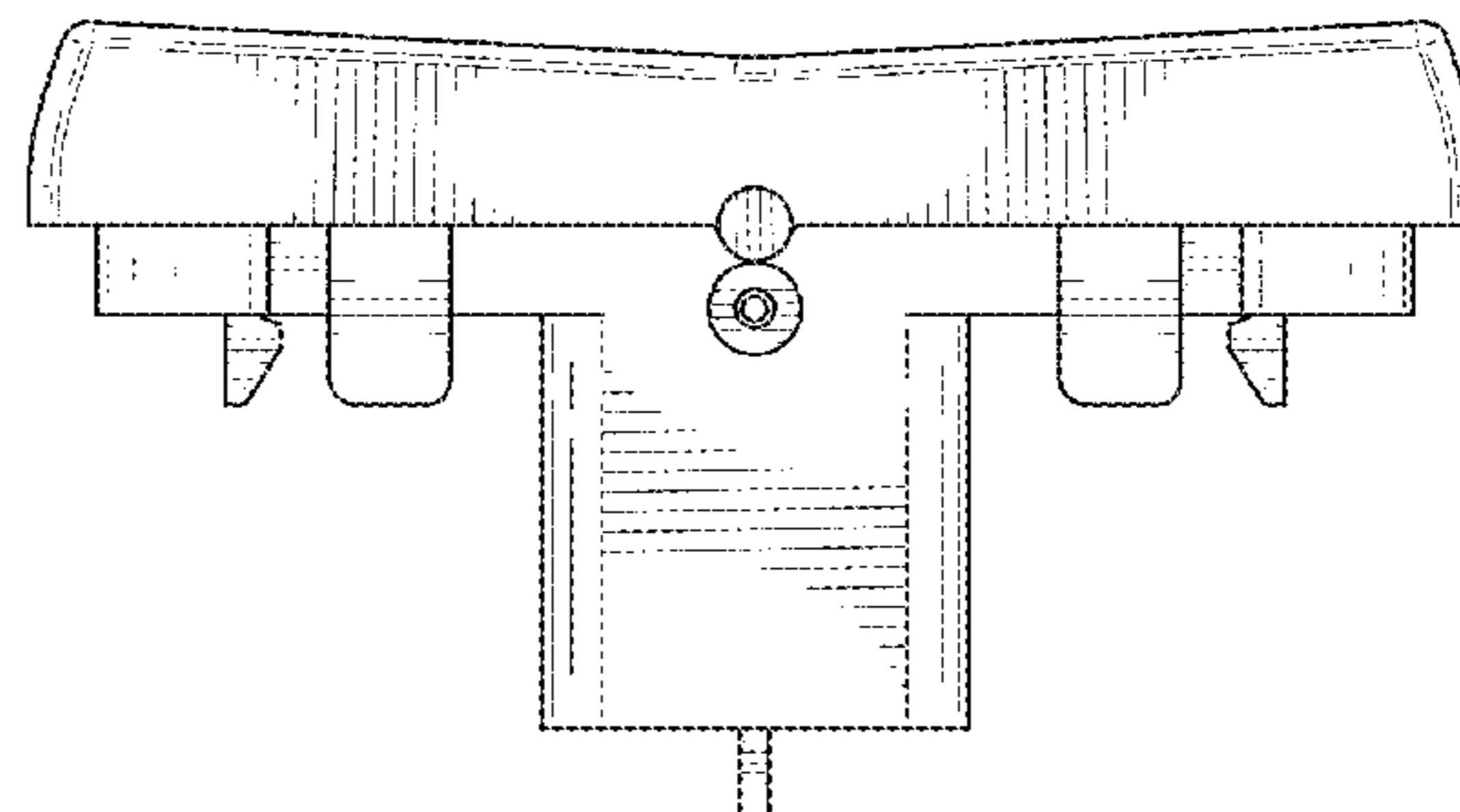
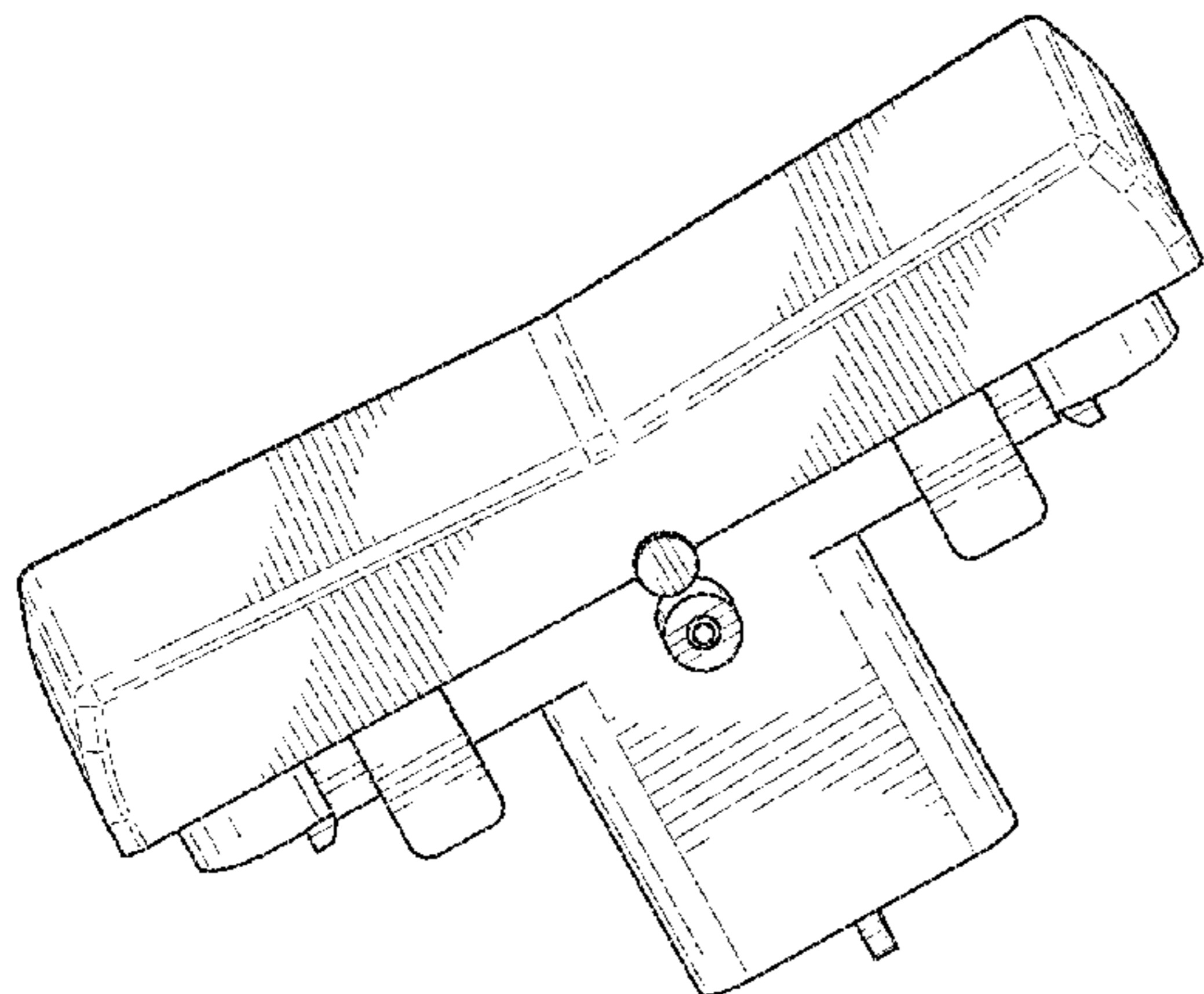
The ornamental design for a toggle for a self-powered wireless switch, as shown and described.

DESCRIPTION

FIG. 1 is a side perspective view of a first embodiment of a toggle for a self-powered wireless switch;  
FIG. 2 is a side view thereof;  
FIG. 3 is an opposing side view thereof;  
FIG. 4 is an end view thereof;  
FIG. 5 is an opposing end view thereof;  
FIG. 6 is a top view thereof;  
FIG. 7 is a bottom view thereof;  
FIG. 8 is a top perspective view of a second embodiment of a toggle for a self-powered wireless switch;  
FIG. 9 is a side view thereof;  
FIG. 10 is an opposing side view thereof;  
FIG. 11 is an end view thereof;  
FIG. 12 is an opposing end view thereof;  
FIG. 13 is a top view thereof; and,  
FIG. 14 is a bottom view thereof.

The broken lines in the drawings depict portions of the switch that form no part of the claimed design.

**1 Claim, 14 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

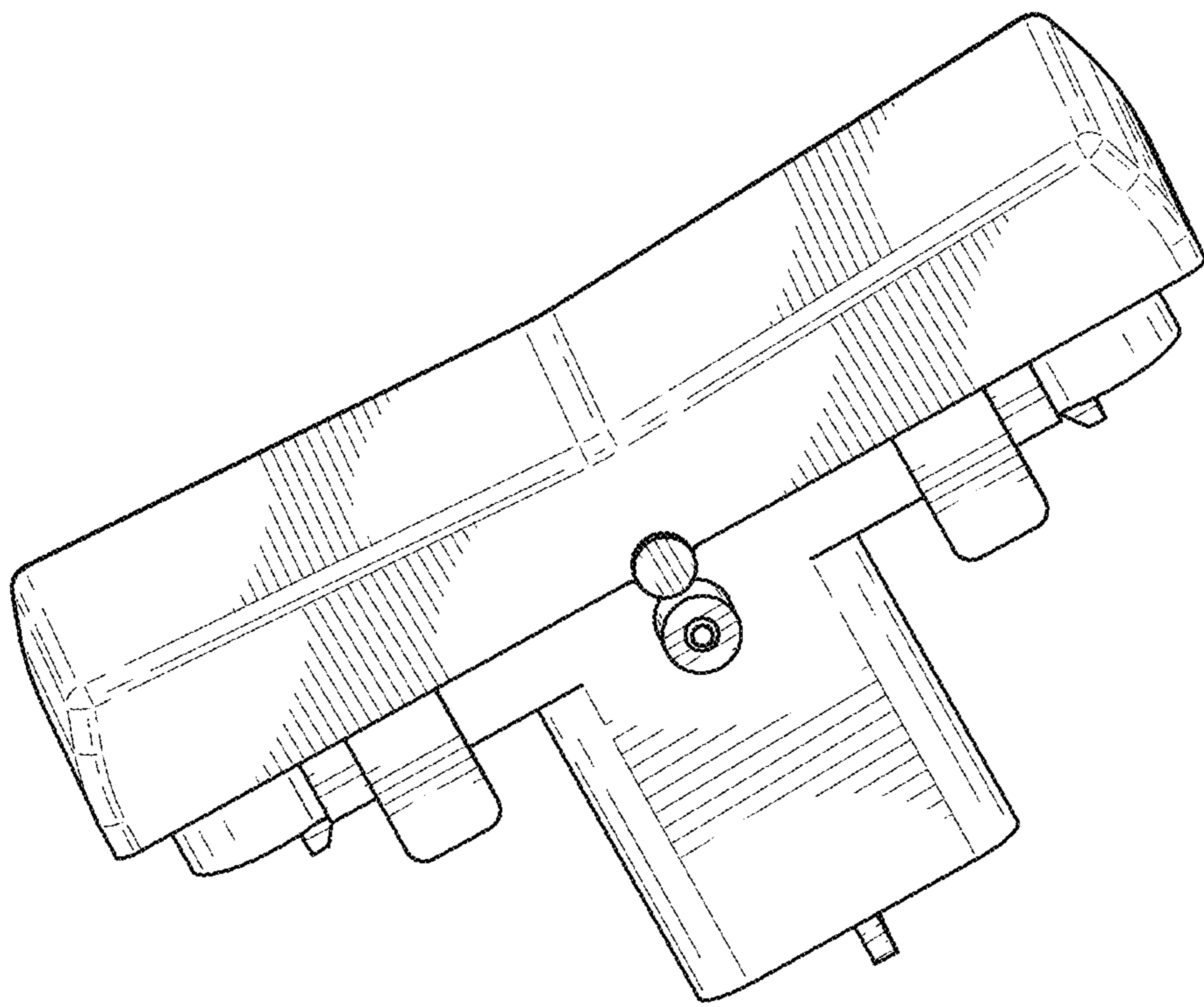
4,492,942 A 1/1985 Mueller  
 4,669,804 A \* 6/1987 Munroe ..... H02G 3/18  
 4,734,669 A 3/1988 Maenishi et al.  
 5,189,259 A \* 2/1993 Carson ..... H01H 9/02  
 5,696,350 A \* 12/1997 Anker ..... H02G 3/14  
 5,895,888 A \* 4/1999 Arenas ..... H02G 3/14  
 5,934,451 A 8/1999 Yu et al.  
 6,259,340 B1 7/2001 Fuhr et al.  
 6,657,144 B2 \* 12/2003 Savicki, Jr. .... H01H 23/04  
 6,891,117 B1 5/2005 Gouhl et al.  
 6,911,884 B2 6/2005 Uotome et al.  
 6,960,972 B2 11/2005 Nakamura et al.  
 7,034,236 B2 \* 4/2006 Endres ..... H01H 19/635  
 D534,875 S \* 1/2007 Wu ..... D13/169  
 D576,962 S \* 9/2008 Kidman ..... D13/169  
 D583,335 S \* 12/2008 Ni ..... D13/169  
 7,482,534 B2 \* 1/2009 Ye ..... H01H 3/0213  
 7,595,460 B1 9/2009 Dodal et al.  
 7,595,712 B2 9/2009 Nishino et al.  
 7,667,155 B1 \* 2/2010 Ni ..... H01H 23/145  
 7,872,551 B2 1/2011 Nakamura et al.  
 7,960,651 B2 \* 6/2011 Alderson ..... H02G 3/14  
 8,138,872 B2 3/2012 Yoshihara et al.  
 8,284,003 B2 10/2012 Klossek et al.

8,459,812 B2 \* 6/2013 Wu ..... H01H 23/025  
 8,592,681 B2 11/2013 Alderson et al.  
 8,658,893 B1 \* 2/2014 Shotey ..... H01H 11/0006  
 8,674,796 B2 3/2014 Ito et al.  
 8,853,893 B2 \* 10/2014 Savicki, Jr. .... H05B 33/0815  
 8,947,183 B2 2/2015 Yano et al.  
 D735,378 S \* 7/2015 Mozdzer ..... D13/139.1  
 9,240,269 B2 1/2016 Polack et al.  
 D777,685 S \* 1/2017 Tannous ..... D13/169  
 9,691,573 B2 \* 6/2017 Dhote ..... H01H 15/10  
 2004/0174287 A1 9/2004 Deak  
 2006/0091984 A1 5/2006 Schmidt  
 2009/0078484 A1 3/2009 Kocijan  
 2010/0052830 A1 3/2010 Shinoura  
 2010/0060394 A1 3/2010 Nagura et al.  
 2010/0182109 A1 7/2010 Kuo  
 2011/0032059 A1 2/2011 Ito et al.  
 2014/0158510 A1 6/2014 Lacey et al.  
 2014/0251774 A1 9/2014 Gouhl et al.  
 2015/0115967 A1 4/2015 Maier et al.  
 2015/0357133 A1 \* 12/2015 Keirstead ..... H01H 23/04  
 2016/0204686 A1 7/2016 Liu

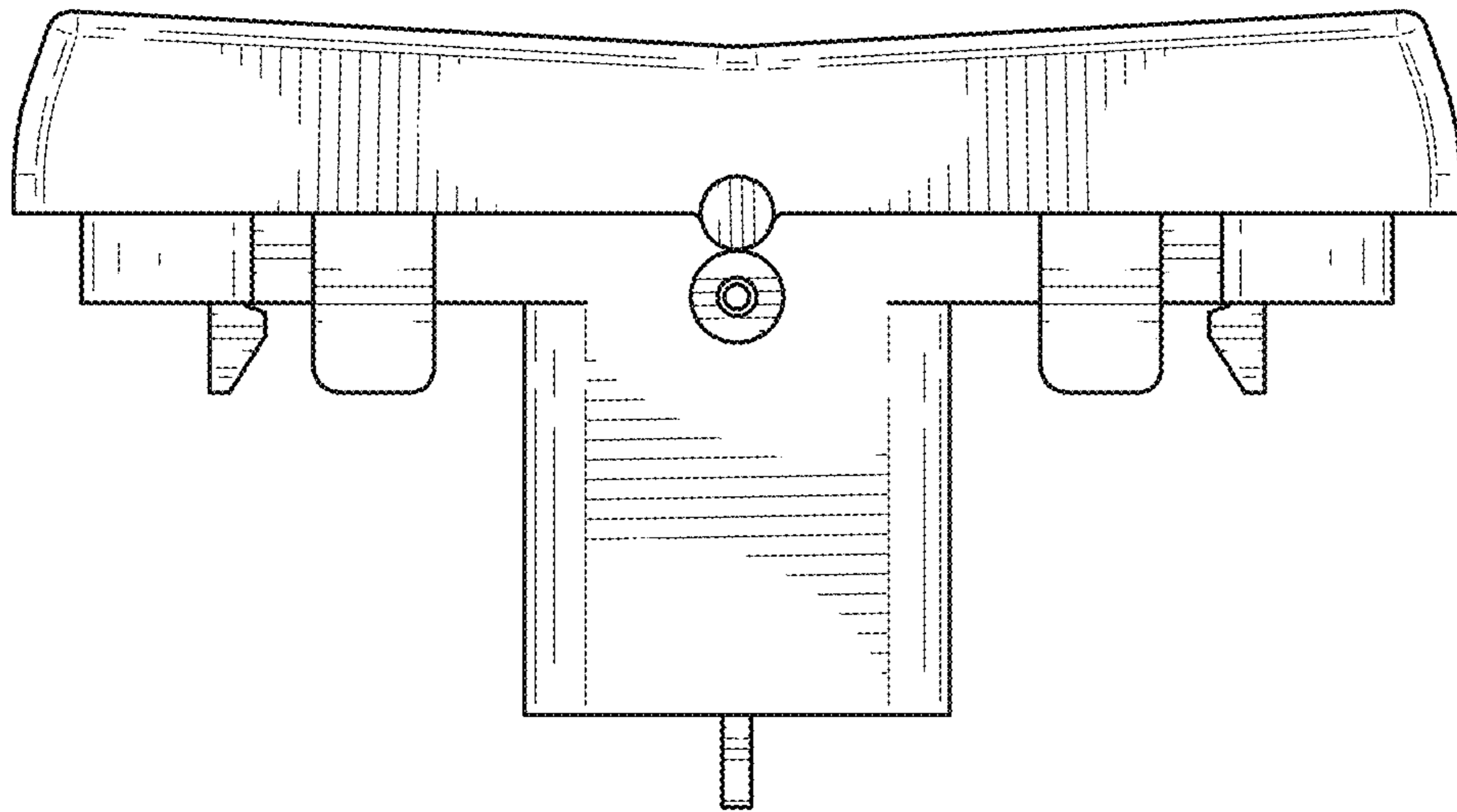
OTHER PUBLICATIONS

Leviton "No Wires, No Batteries, No Limits: Wireless Sensing Solution" *Product Brochure* (7 pages) (2008).  
 Leviton "Self-Powered Lighting Control Solutions by LevNet RF" *Product Brochure* (2 pages) (2010).  
 Leviton "Self-Powered Wireless Controls" [www.leviton.com](http://www.leviton.com) (3 pages) (date unknown; printed from the internet Jan. 13, 2017).

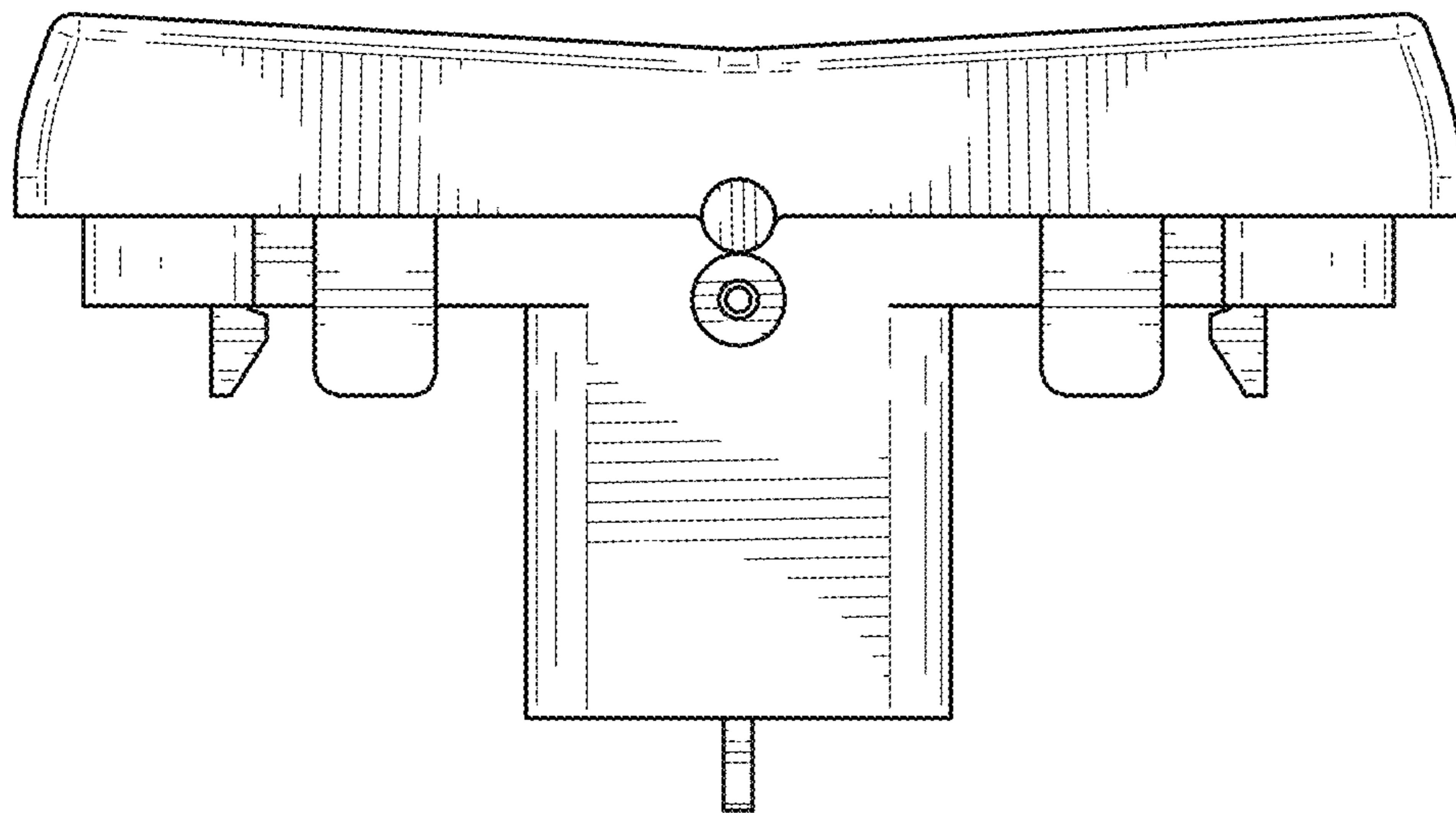
\* cited by examiner



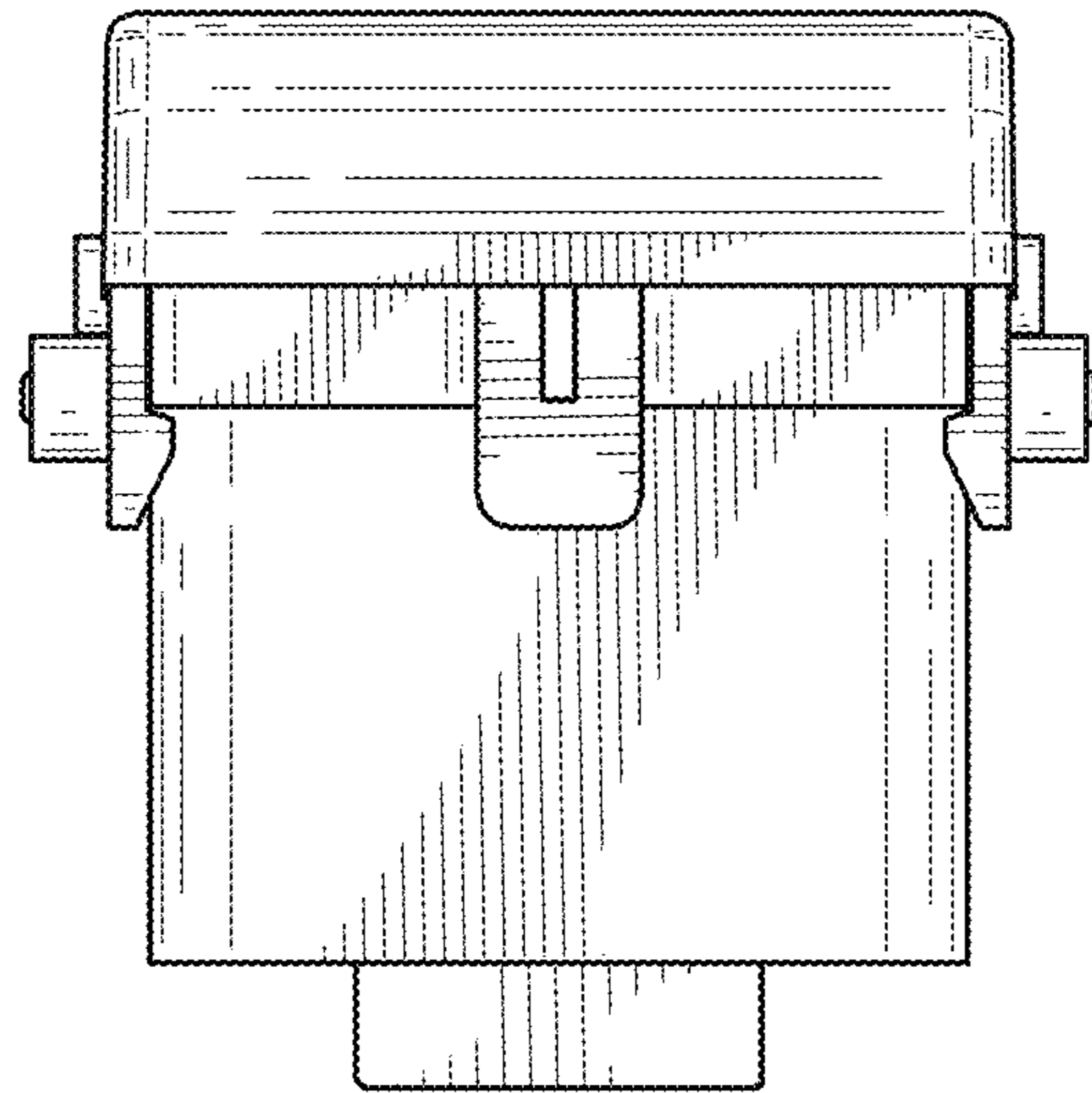
**FIG. 1**



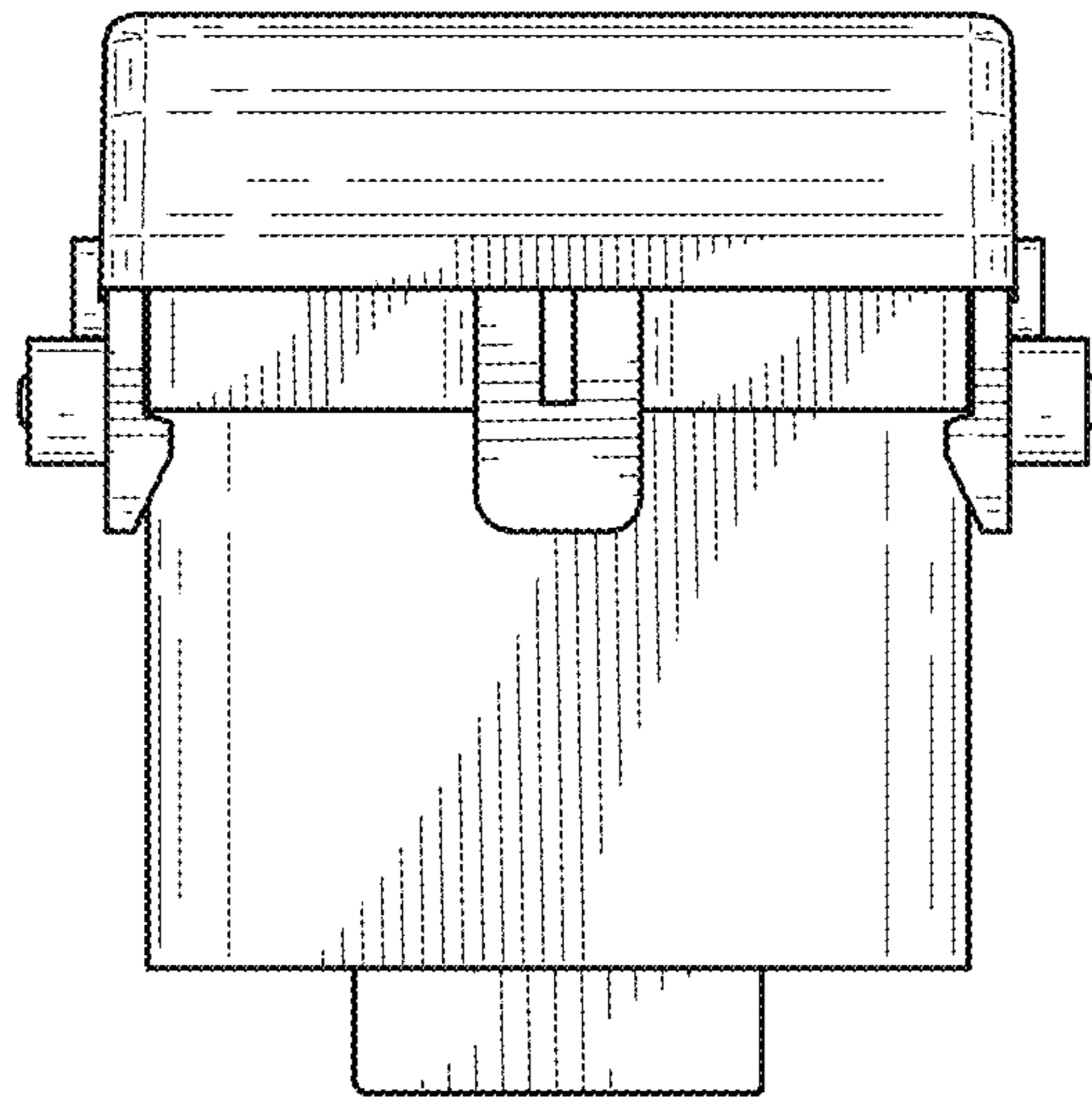
**FIG. 2**



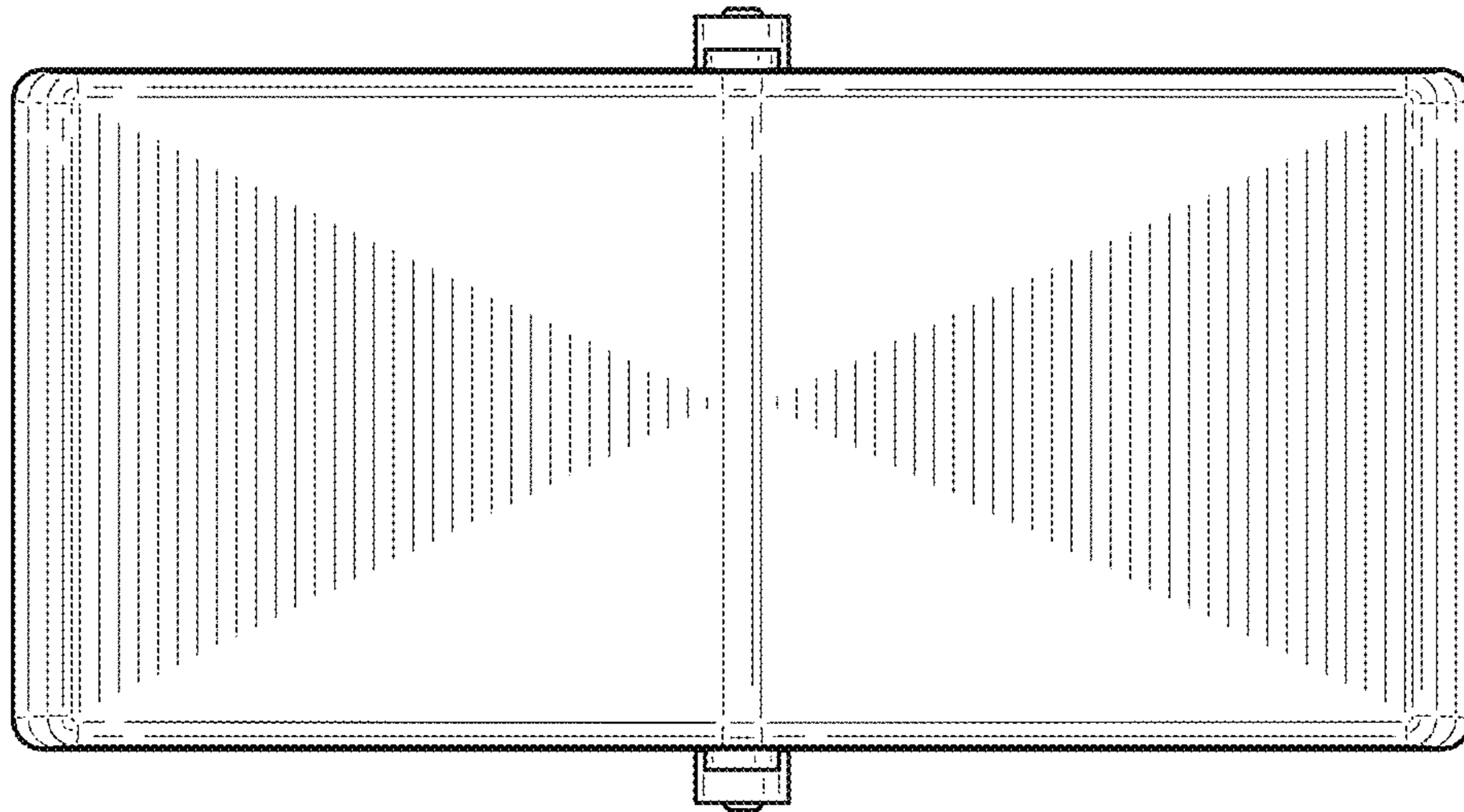
**FIG. 3**



**FIG. 4**



**FIG. 5**



**FIG. 6**



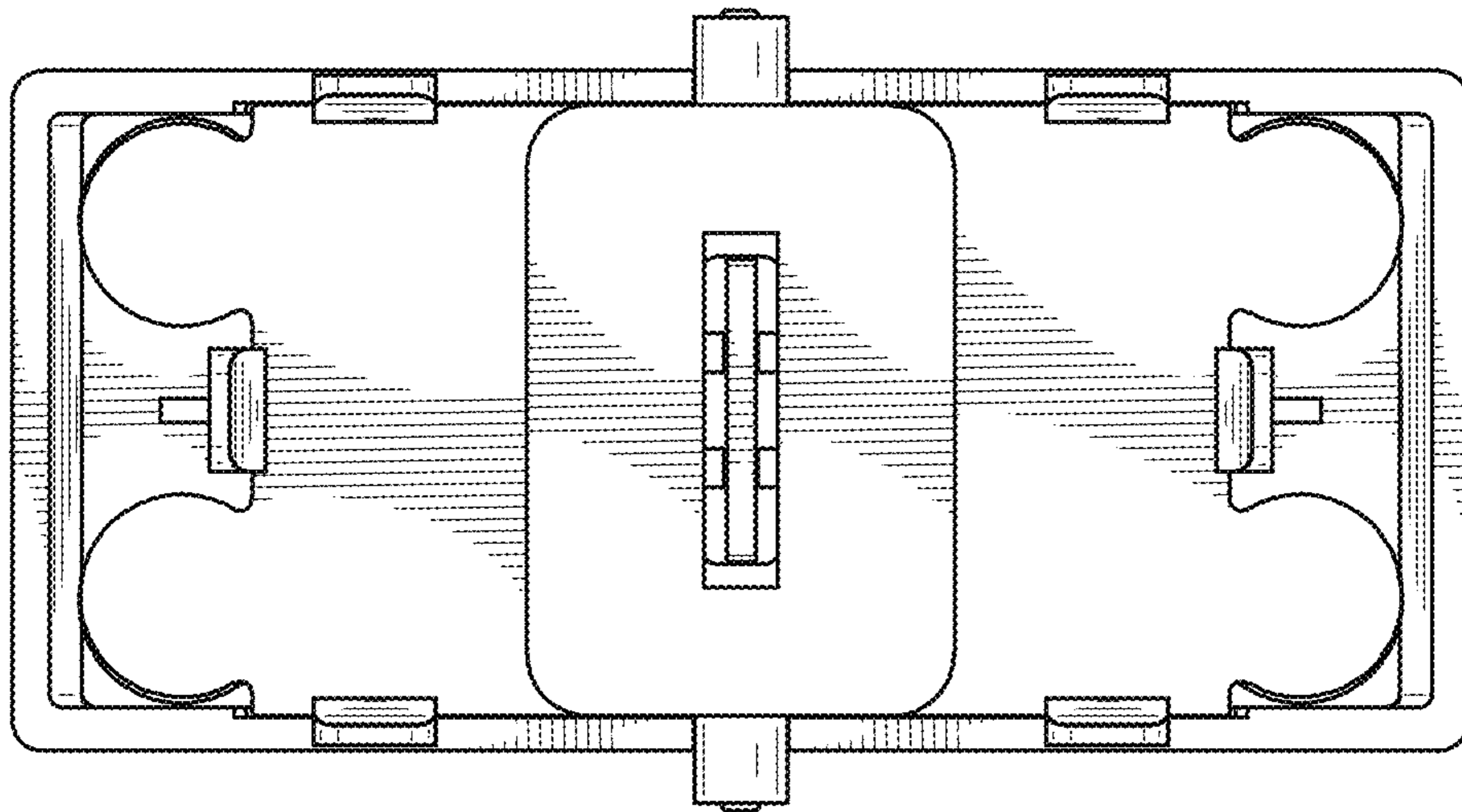
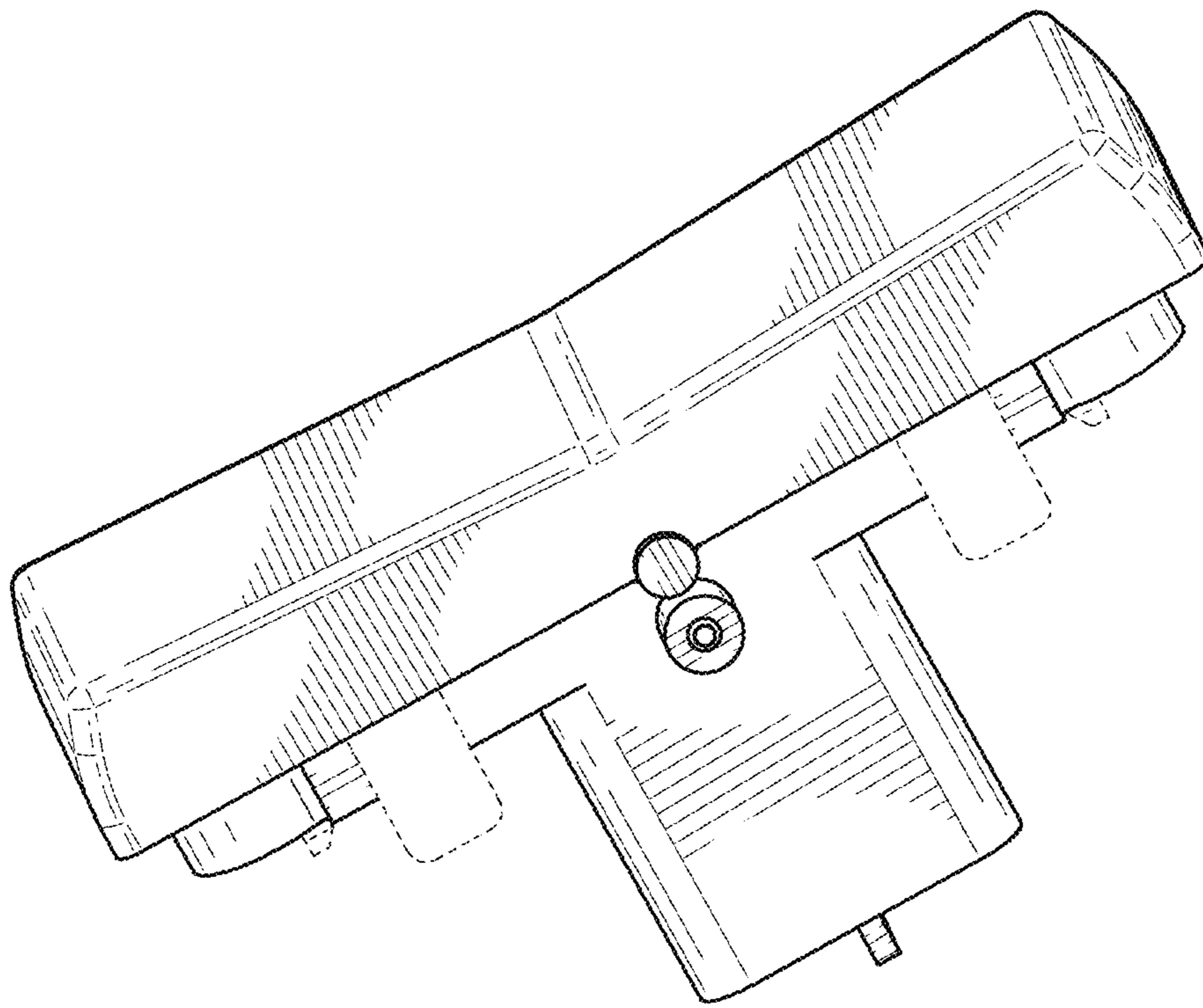
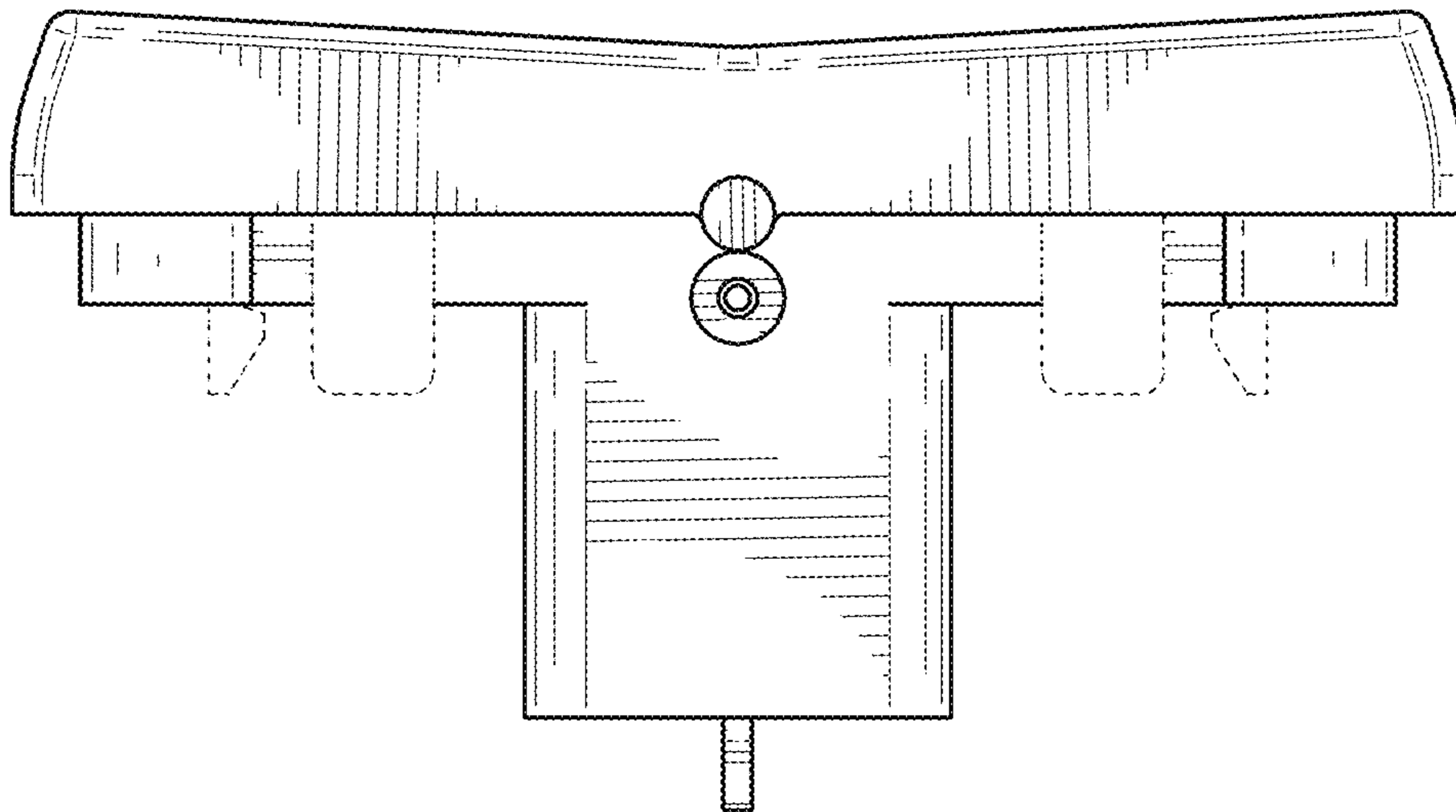


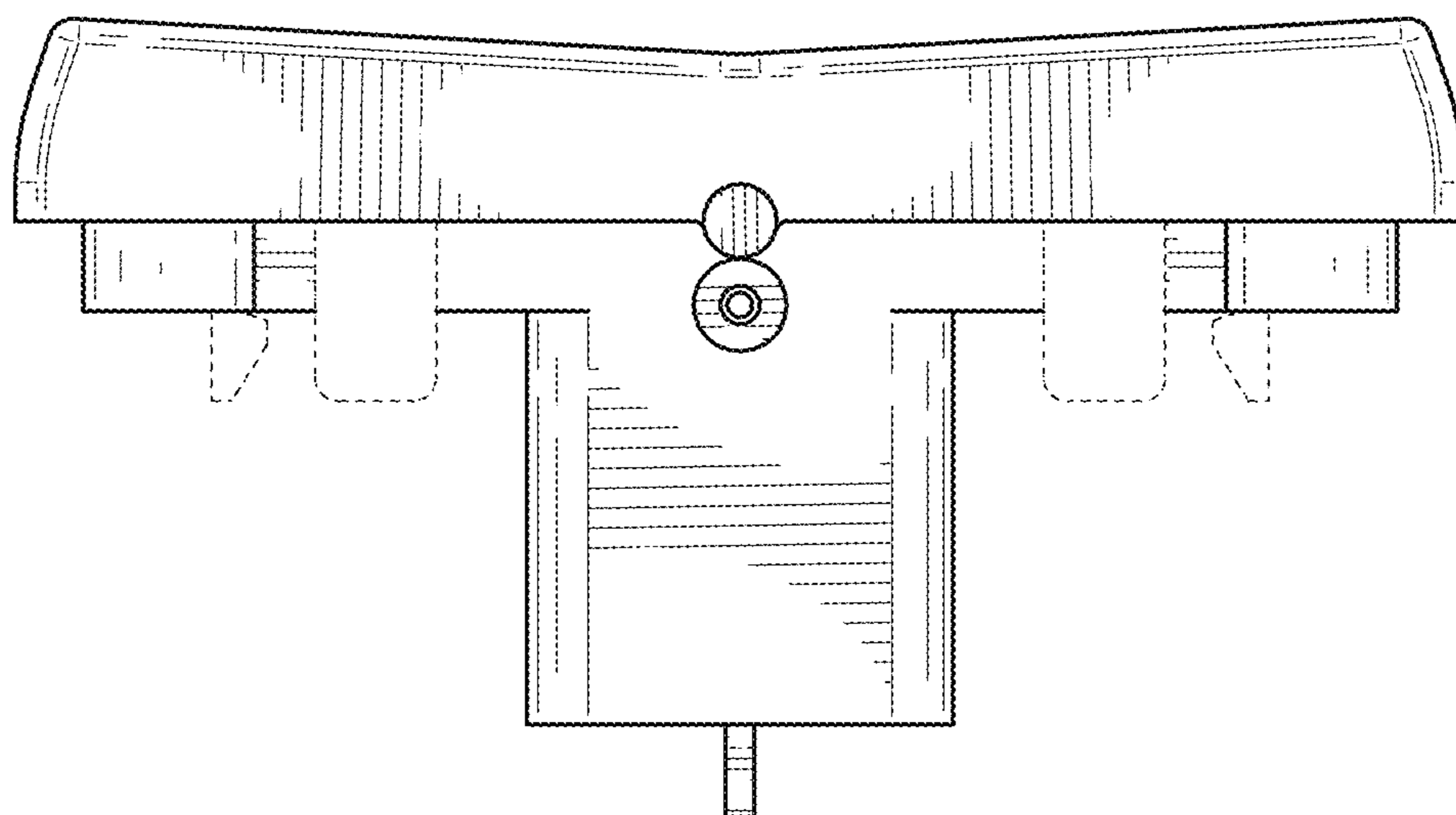
FIG. 7



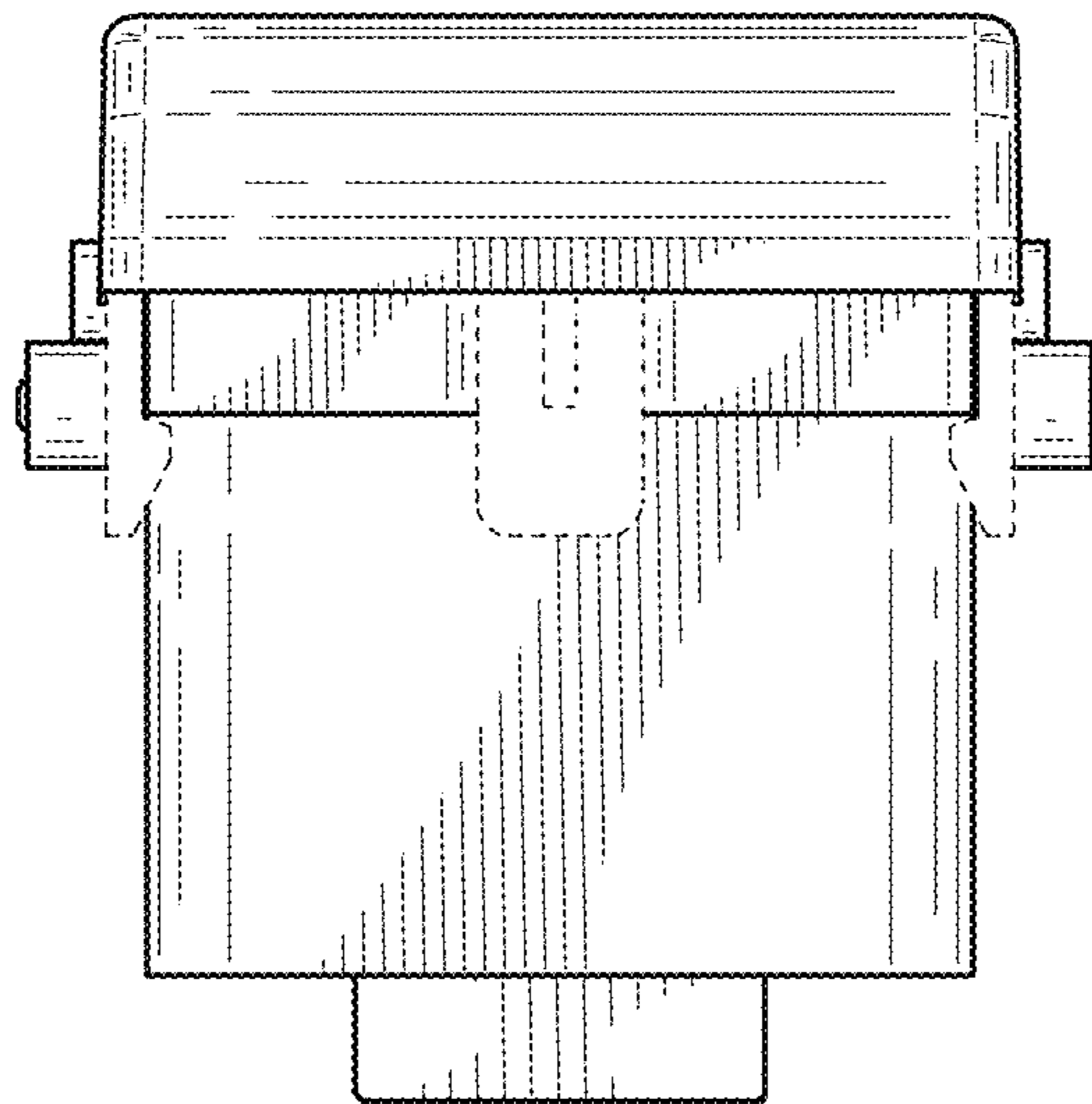
**FIG. 8**



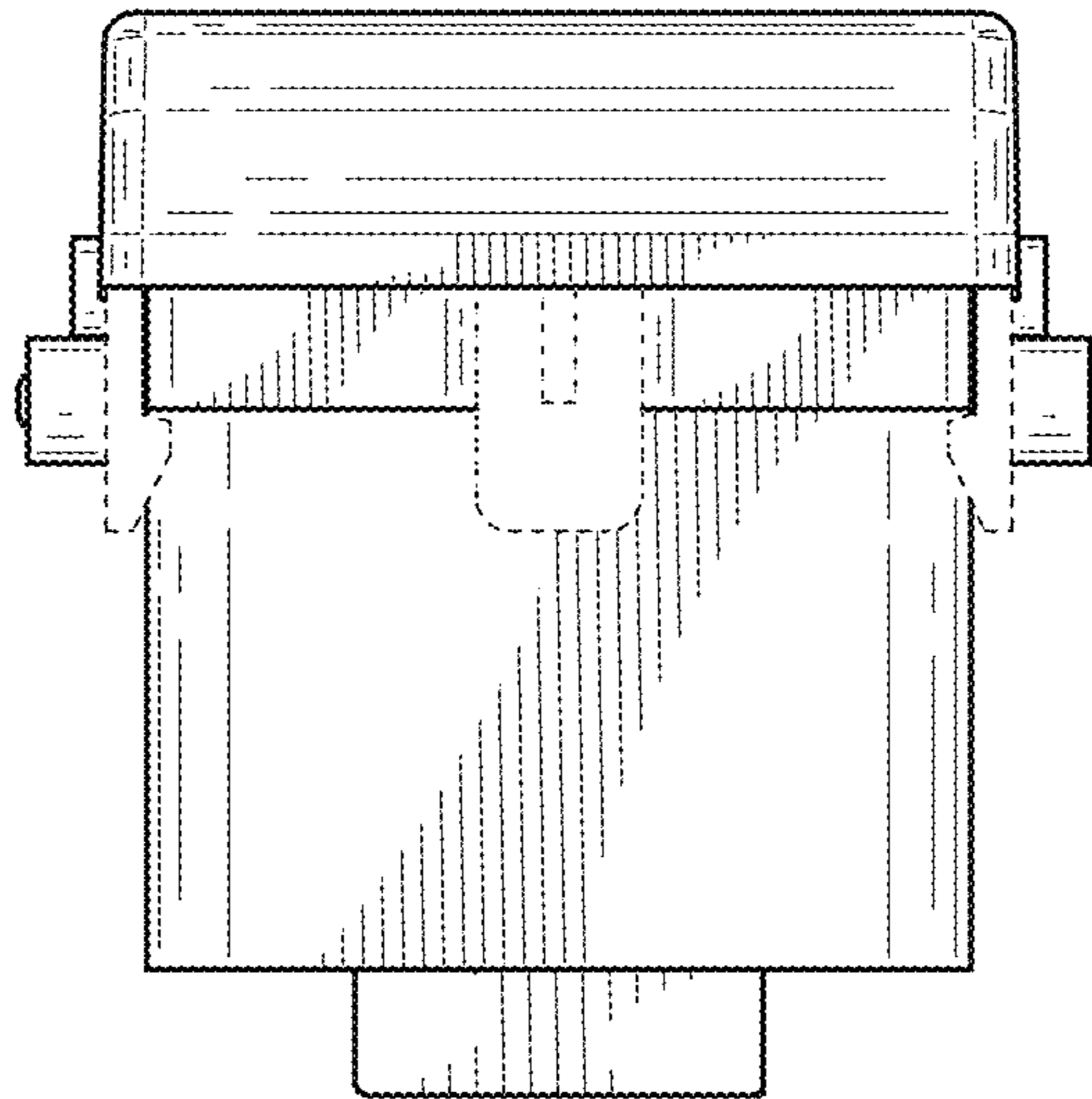
**FIG. 9**



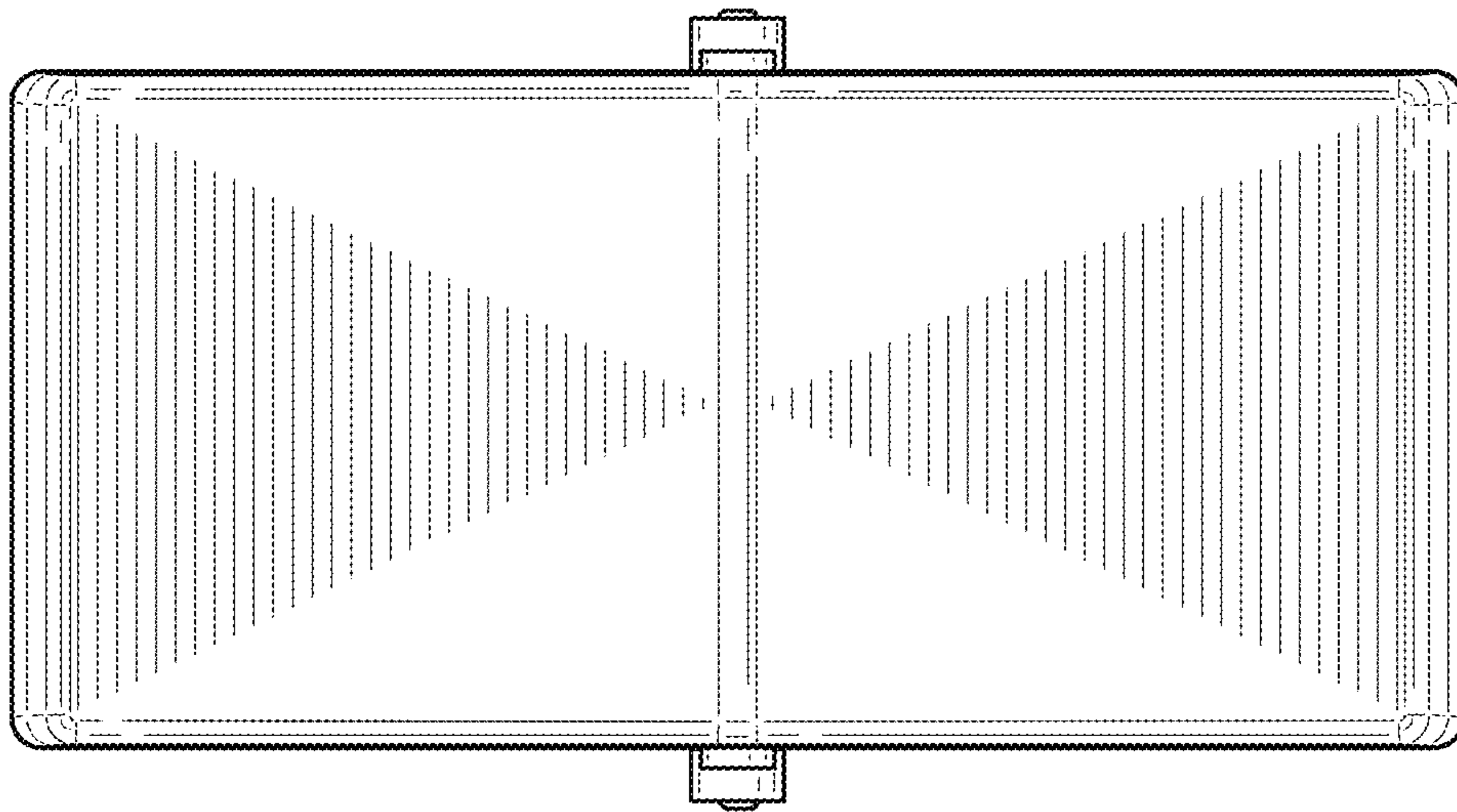
**FIG. 10**



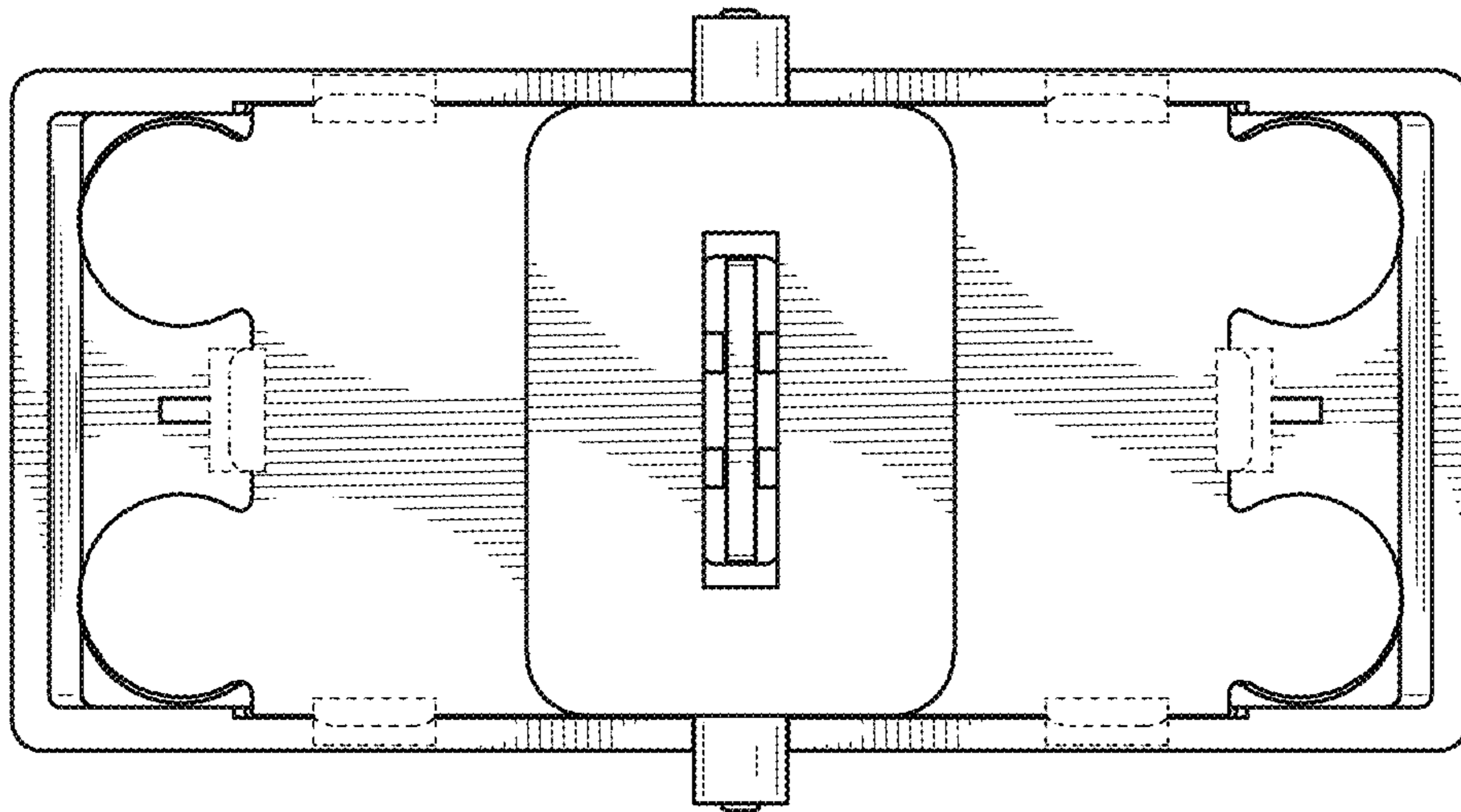
*FIG. 11*



**FIG. 12**



**FIG. 13**



**FIG. 14**