



US00D872402S

(12) **United States Design Patent** (10) **Patent No.:** **US D872,402 S**
Jia (45) **Date of Patent:** **** Jan. 7, 2020**

- (54) **WINDOW CLEANING ROBOT**
- (71) Applicant: **Caimin Jia**, Nanyang (CN)
- (72) Inventor: **Caimin Jia**, Nanyang (CN)
- (73) Assignee: **Eozy International GmbH**, Eisenhüttenstadt (DE)
- (**) Term: **15 Years**
- (21) Appl. No.: **29/644,956**
- (22) Filed: **Apr. 23, 2018**
- (51) **LOC (12) Cl.** **07-05**
- (52) **U.S. Cl.**
USPC **D32/40**
- (58) **Field of Classification Search**
USPC D32/18, 21-24, 31, 40-42
CPC . A47L 9/16; A47L 9/20; A47L 9/1683; A47L 9/1666; A47L 9/1608; A47L 9/2857; A47L 9/2842; A47L 9/2836; A47L 9/2847; A47L 9/2852; A47L 5/28; A47L 7/0038; G06N 3/008; E04H 4/1654
See application file for complete search history.

- (56) **References Cited**
U.S. PATENT DOCUMENTS
D527,854 S * 9/2006 Marzynski D15/199
D548,411 S * 8/2007 Schroter D32/21
D548,902 S * 8/2007 Chun D32/21
D548,903 S * 8/2007 Chun D32/21
D551,815 S * 9/2007 Schroeter D32/21
D771,885 S * 11/2016 Caruso D32/21
D773,758 S * 12/2016 Caruso D32/21
D818,226 S * 5/2018 Nam D32/21
D828,660 S * 9/2018 Jang D32/21

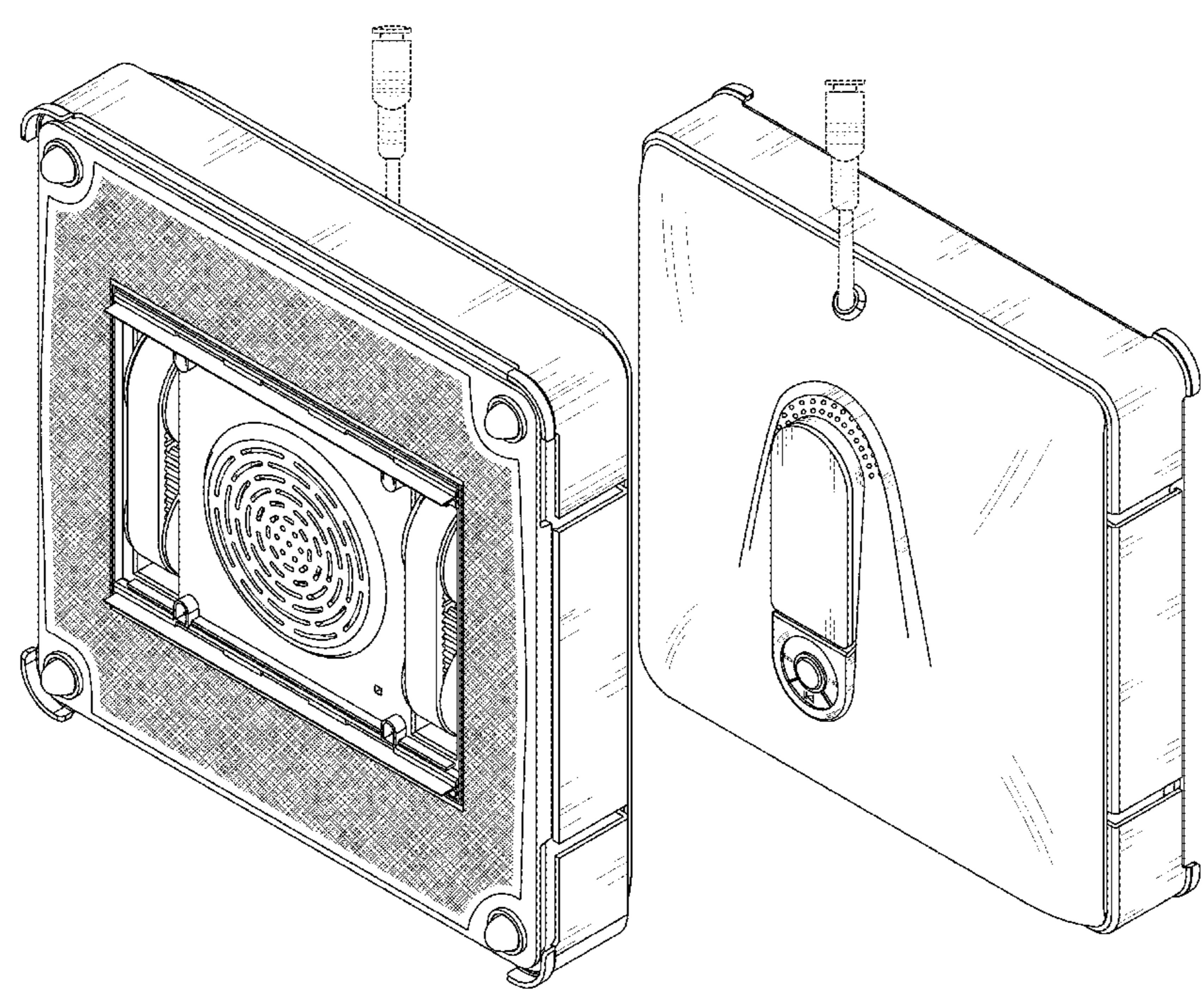
- 2015/0257622 A1* 9/2015 Qian A47L 11/4066
15/319
- 2016/0320777 A1* 11/2016 Yun G05D 1/0238
- 2017/0202412 A1* 7/2017 Chen A47L 1/02
- 2017/0235304 A1* 8/2017 Chen A47L 1/05
700/257
- 2017/0325647 A1* 11/2017 Kwak A47L 9/009
- 2018/0014709 A1* 1/2018 O'Brien A47L 9/2826
- 2018/0021942 A1* 1/2018 Hummel A47L 9/2884
700/253
- 2018/0055325 A1* 3/2018 Yoon A47L 9/2852
- 2018/0210445 A1* 7/2018 Choi G05D 1/0088
- 2018/0284786 A1* 10/2018 Moshkina-Martinson
A47L 9/2847
- 2018/0344115 A1* 12/2018 Shin G06T 5/40
- 2019/0015984 A1* 1/2019 Kim B25J 9/0003
- 2019/0072975 A1* 3/2019 Choi A47L 9/28

* cited by examiner
Primary Examiner — Michelle E. Wilson

(57) **CLAIM**
The ornamental design for a window cleaning robot, as shown and described.

DESCRIPTION
FIG. 1 is a front elevational view of a window cleaning robot showing my new design;
FIG. 2 is a rear elevational view thereof;
FIG. 3 is a left side elevational view thereof;
FIG. 4 is a right side elevational view thereof;
FIG. 5 is a top plan view thereof;
FIG. 6 is a bottom plan view thereof;
FIG. 7 is a rear perspective view thereof; and,
FIG. 8 is a front perspective view thereof.
The broken lines depict environment that forms no part of the claimed design.

1 Claim, 8 Drawing Sheets



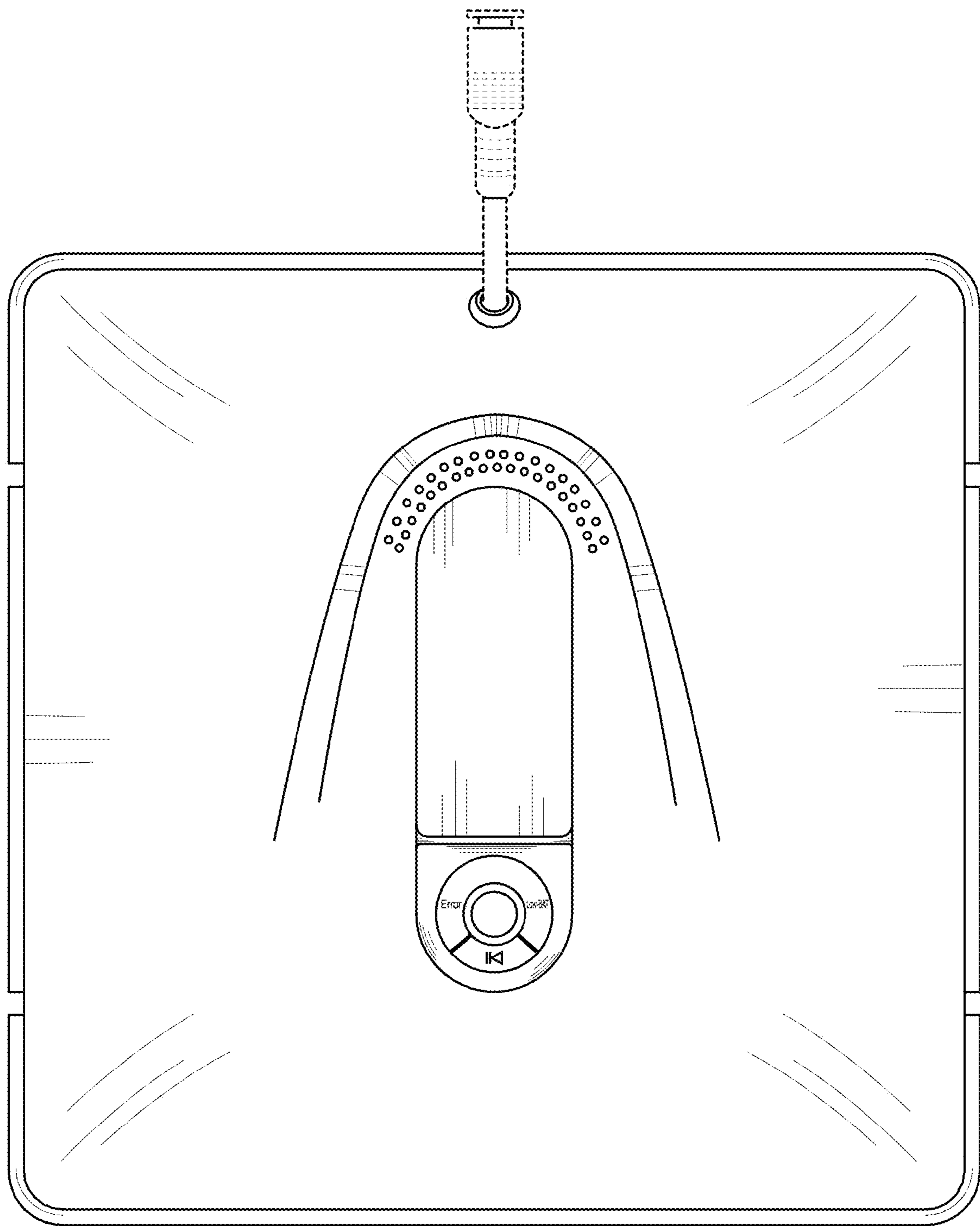


FIG. 1

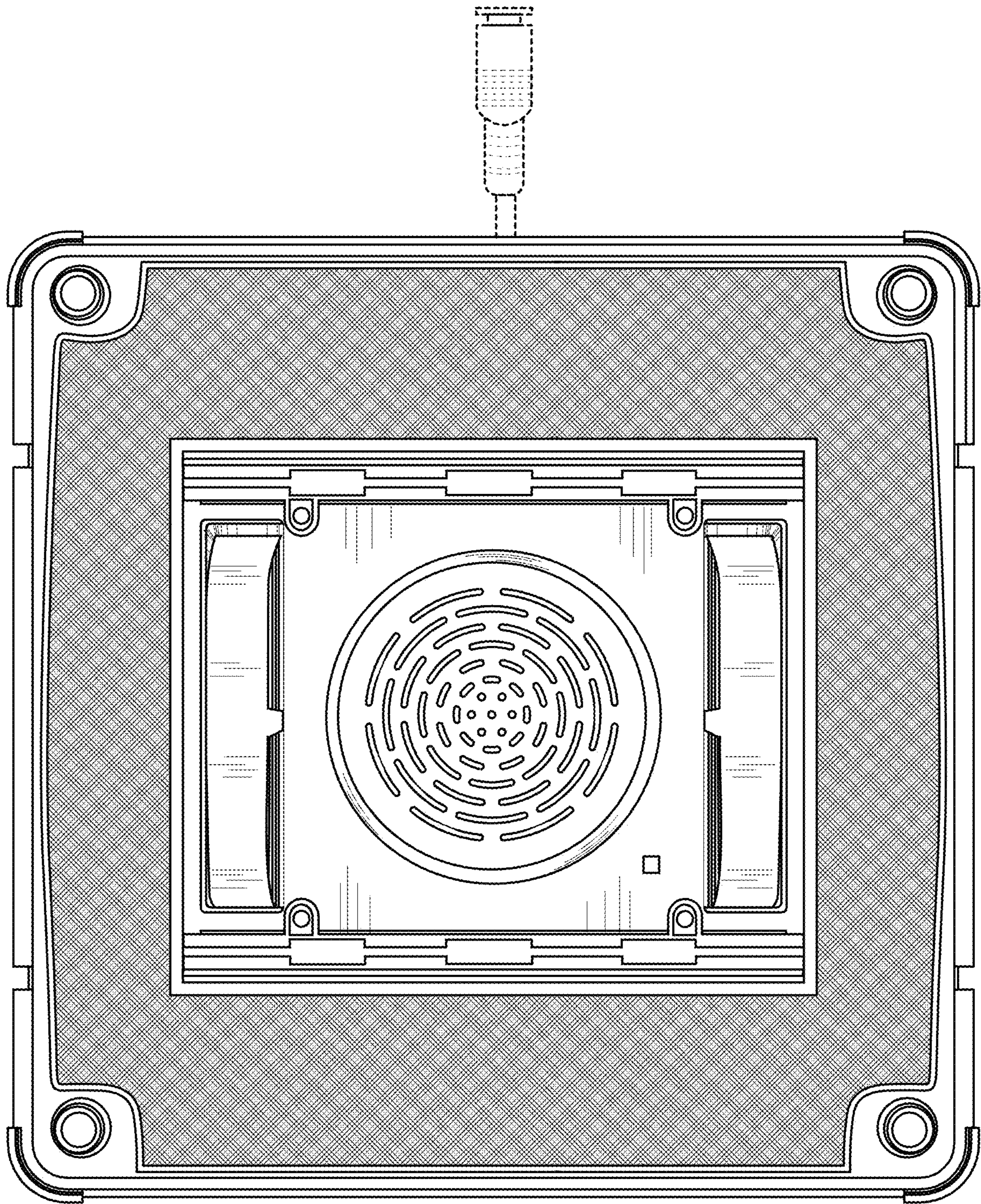


FIG.2

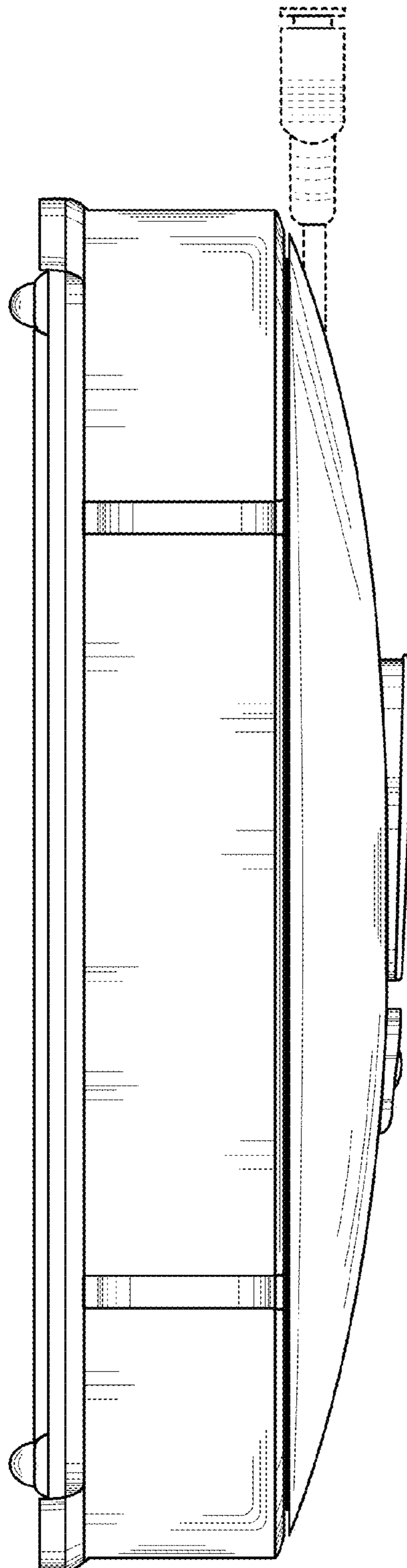


FIG.3

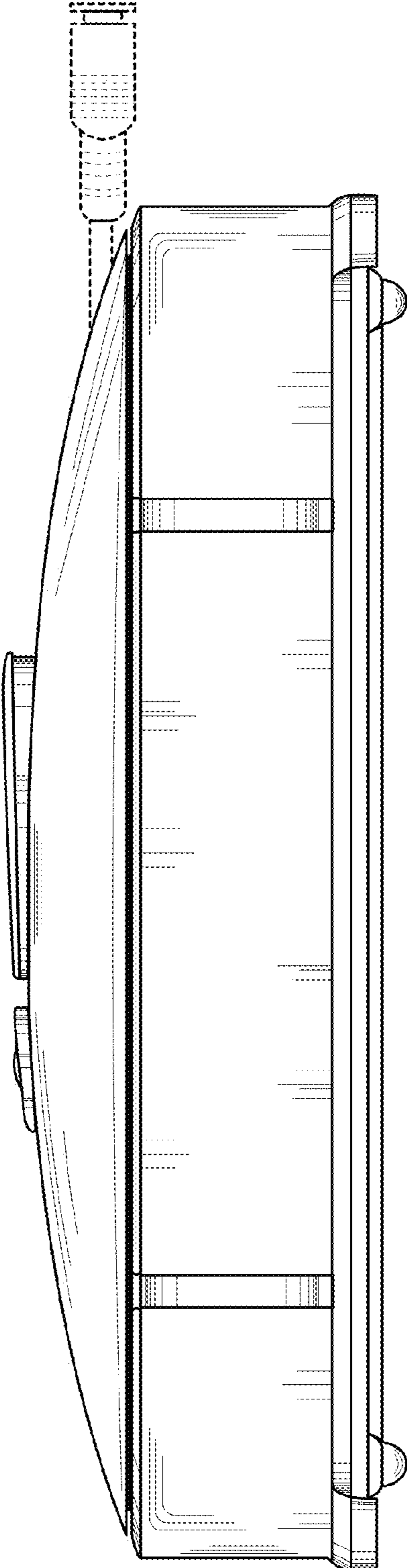


FIG.4

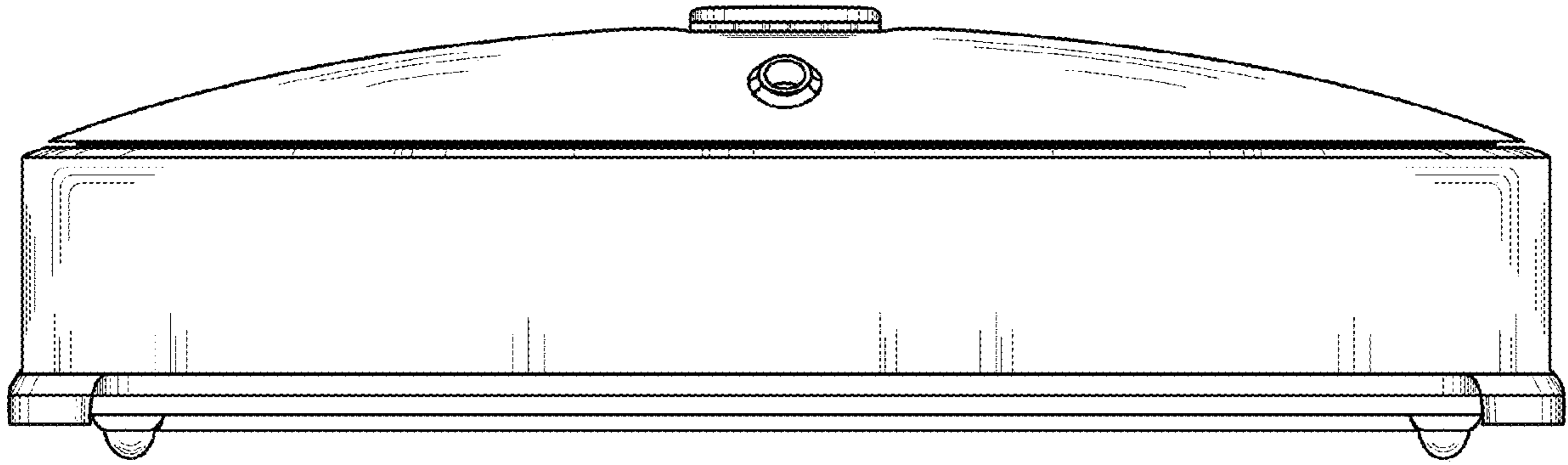


FIG.5

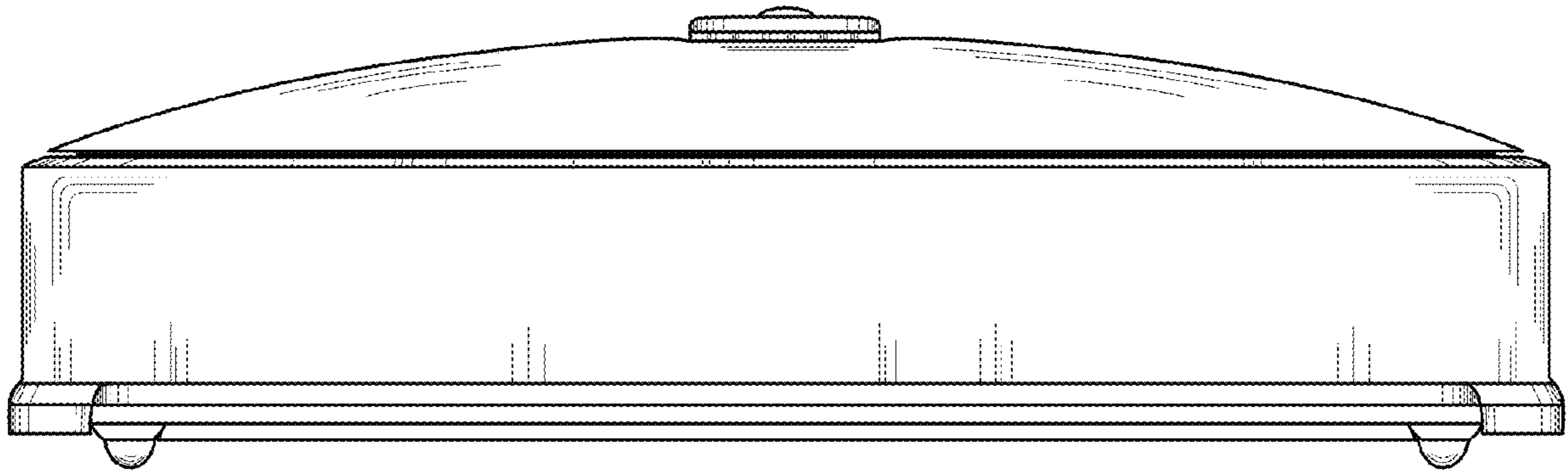


FIG.6

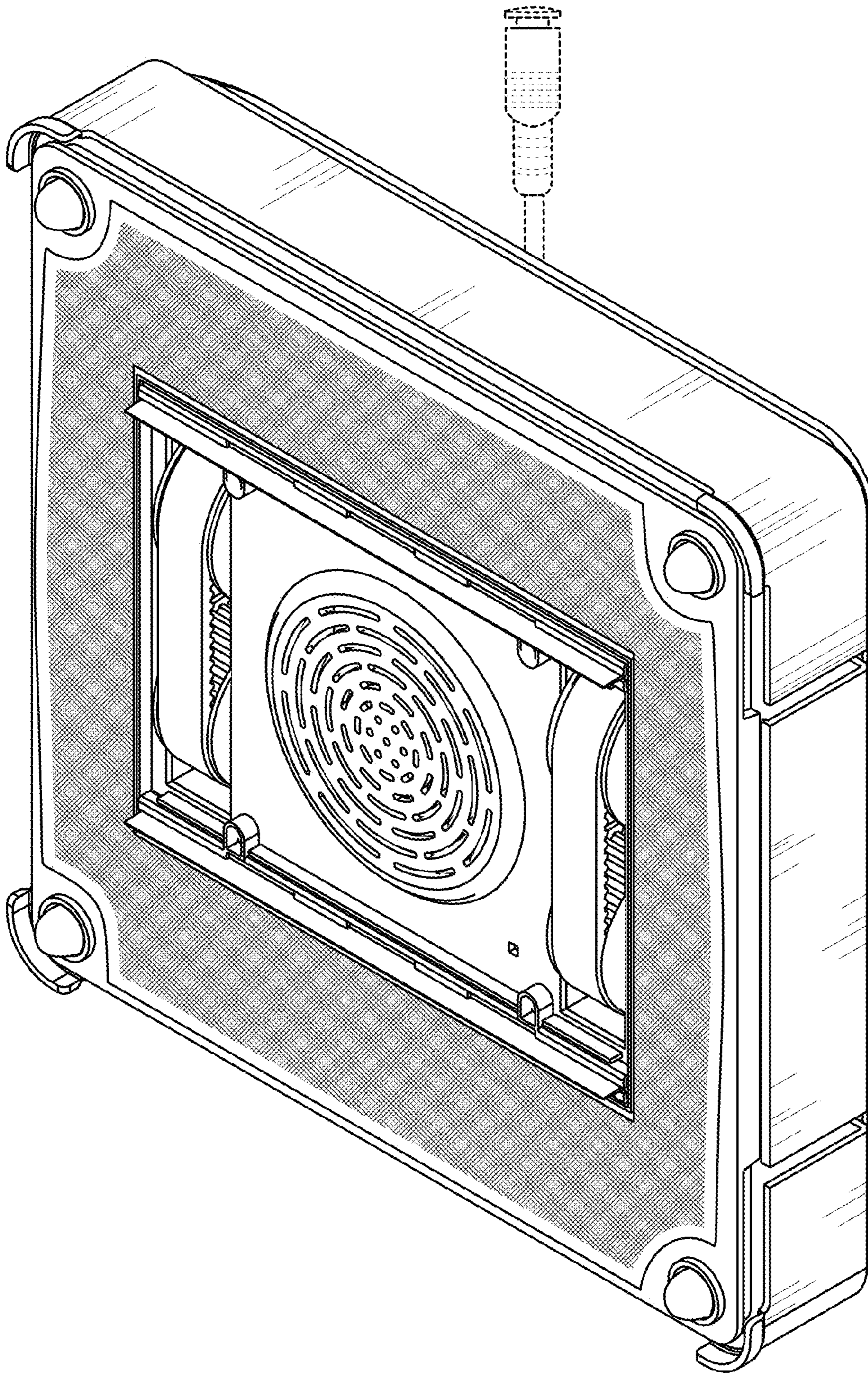


FIG.7

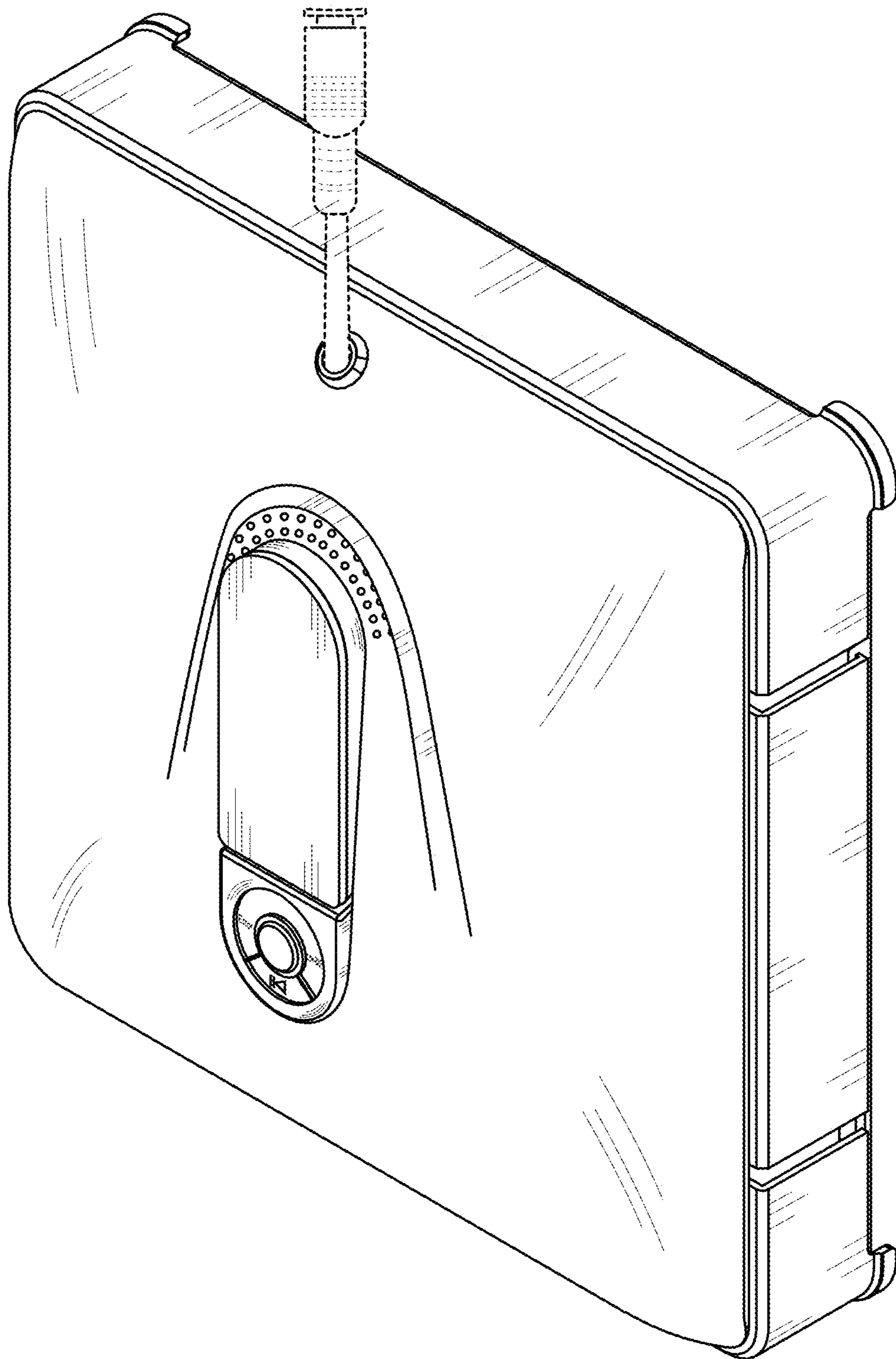


FIG. 8