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

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(45) **Date of Patent:** **** Jun. 13, 2023**

- (54) **VOLTAGE DETECTOR**
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- (72) Inventor: **Huifang Zheng**, Shenzhen (CN)
- (**) Term: **15 Years**
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- (22) Filed: **Dec. 29, 2022**
- (51) **LOC (14) Cl.** **10-04**
- (52) **U.S. Cl.**
USPC **D10/78; D13/137.3**
- (58) **Field of Classification Search**
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D10/96-103; D13/160, 146, 184, 199,
D13/137.3
CPC G01R 31/54; G01R 31/69; G01R 31/006;
G01R 31/52; G01R 1/06788; G01R
1/06711; G01R 31/364; G01R 31/3646;
G01R 31/385; G01R 1/04; H01R 24/68;
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2201/02; H01R 13/6675; H01R 13/7038;
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H01R 13/7135; H01R 24/30; H01R
2103/00; H01R 11/281; H01M 10/4285;
Y02E 60/10; Y10T 29/4922; H01H 83/04
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

- D432,990 S * 10/2000 Stekelenburg D13/137.3
- D514,963 S 2/2006 Shionoiri et al.
- D625,635 S * 10/2010 Tian D10/78
- D646,598 S * 10/2011 Tian D10/78
- D664,457 S 7/2012 Buchanan
- D712,762 S * 9/2014 Glaser D10/78
- D792,252 S 7/2017 Garner
- D859,312 S * 9/2019 Aromin D13/160
- D868,698 S * 12/2019 Aromin D13/137.1

- D943,537 S * 2/2022 Su D13/160
- D957,972 S * 7/2022 Fu D10/78
- D966,120 S * 10/2022 Elrod D10/78

(Continued)

FOREIGN PATENT DOCUMENTS

- CN 302109990 * 5/2012
- CN 306140771 * 7/2020

(Continued)

OTHER PUBLICATIONS

Poniie, Portable Micro Electricity Usage Monitor Electrical Power Consumption Watt Meter Voltage,Date first available Oct. 18, 2019, [online]retrieved Feb. 1, 2023,available from <https://www.amazon.com/DP/B07VPTN8FZ> (Year: 2019).*

(Continued)

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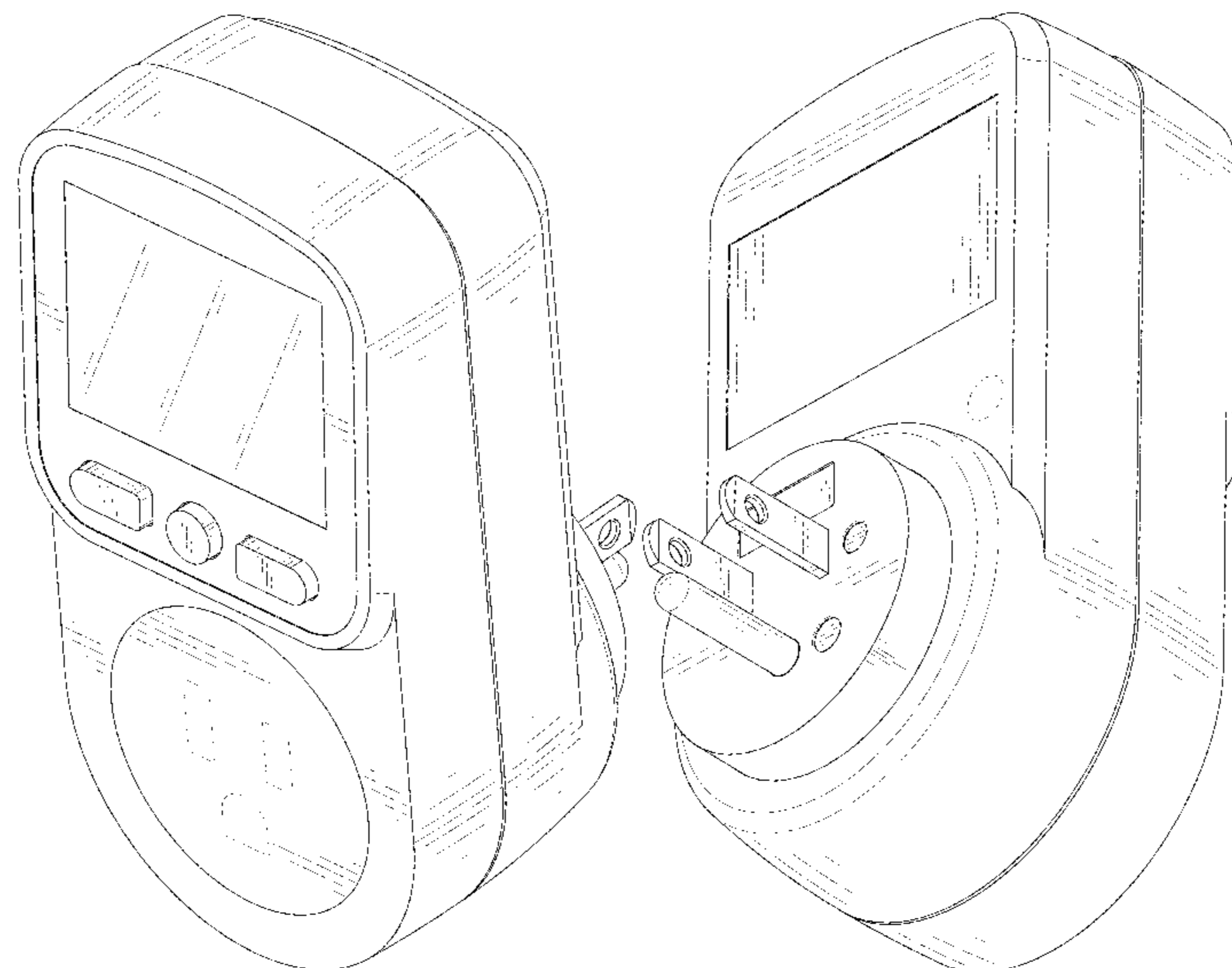
(57) **CLAIM**

The ornamental design for a voltage detector, as shown and described.

DESCRIPTION

FIG. 1 is a first perspective view of a voltage detector showing my new design;
FIG. 2 is a second perspective view thereof;
FIG. 3 is a front view thereof;
FIG. 4 is a back 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.
The broken lines shown in the drawings depict portions of the voltage detector that form no part of the claimed design.

1 Claim, 8 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

D973,025 S * 12/2022 Ke D13/137.3
2008/0042657 A1* 2/2008 Radle G01R 31/69
324/67
2021/0223331 A1* 7/2021 Thornton G01R 31/54
2022/0091194 A1* 3/2022 Painting H01R 24/68

FOREIGN PATENT DOCUMENTS

CN 307580571 * 6/2022
EM 009186463-0001 * 9/2022
EM 009187719-0001 * 9/2022
GB 6252332 * 12/2022

OTHER PUBLICATIONS

Suraielec Store, Watt Meter, Plug-in Socket Power Meter, Date first available Oct. 25, 2020, [online]retrieved Feb. 1, 2023, available from <https://www.amazon.com/DP/B08GSPLZBN> (Year: 2020).*

Ponnie, PN2000 Plug-in Kilowatt Electricity Usage Monitor, Date first available Nov. 7, 2017, [online]retrieved Feb. 1, 2023, available from <https://www.amazon.com/DP/B0777H8MS8> (Year: 2017).*

* cited by examiner

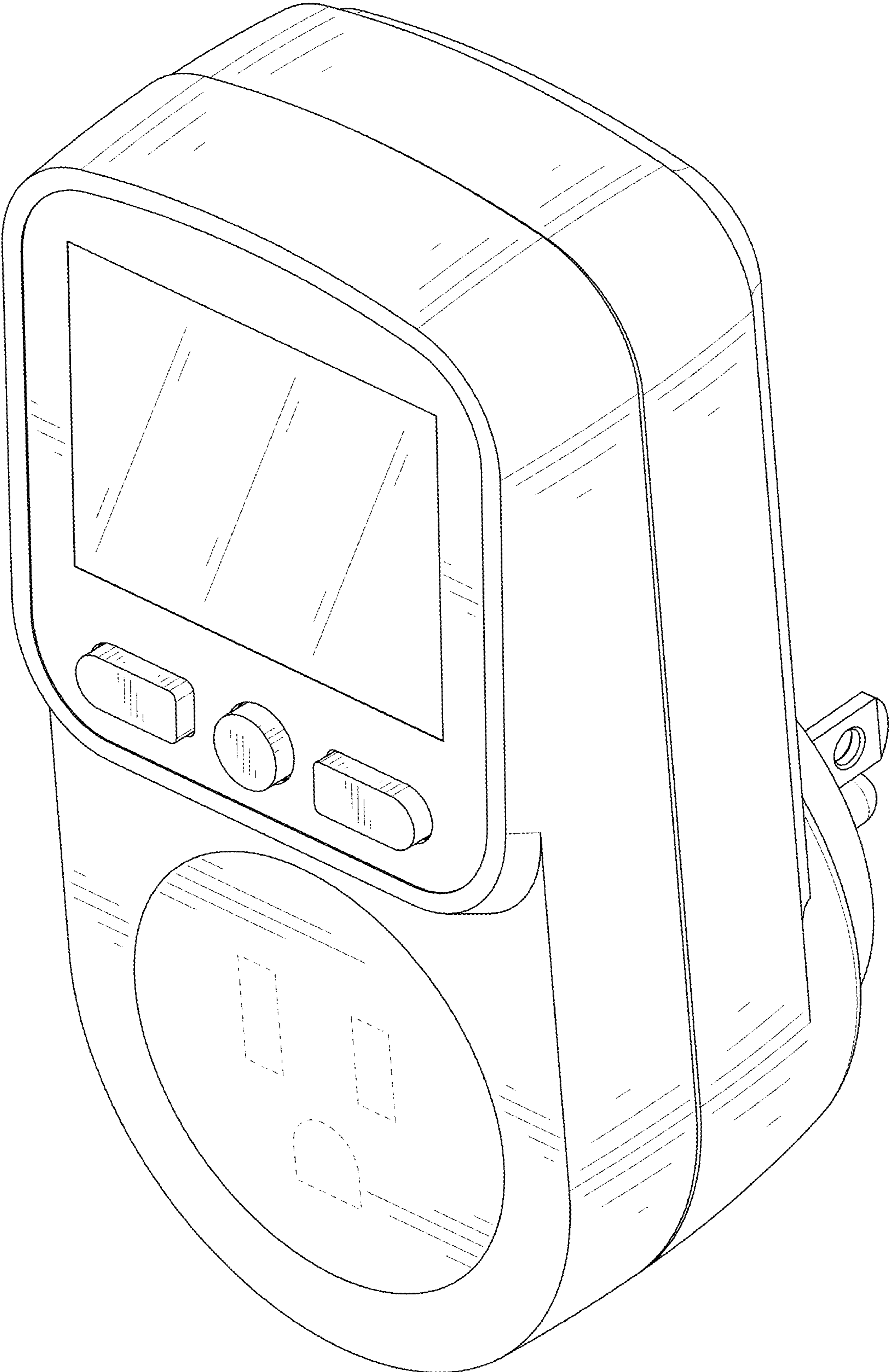


FIG. 1

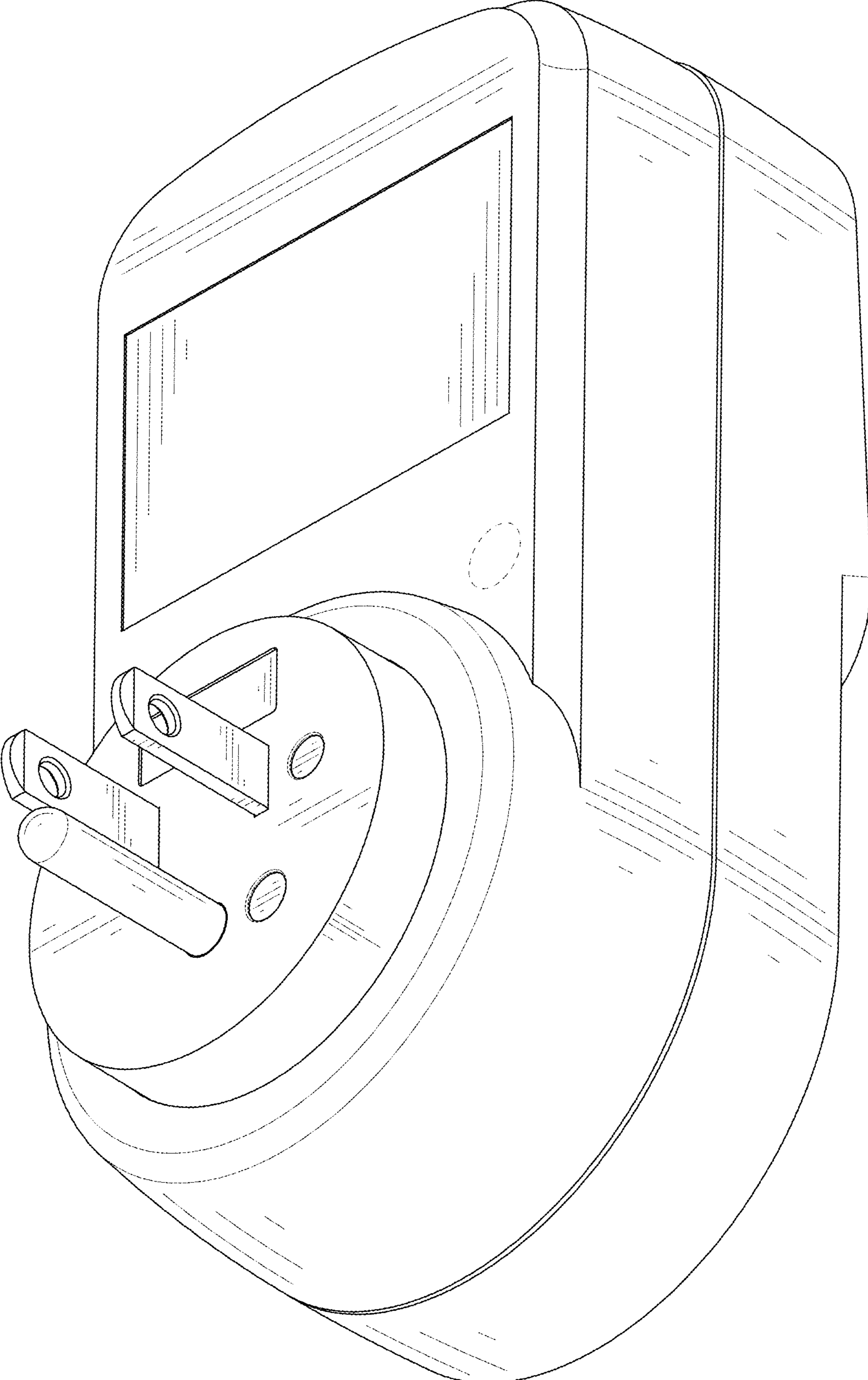


FIG. 2

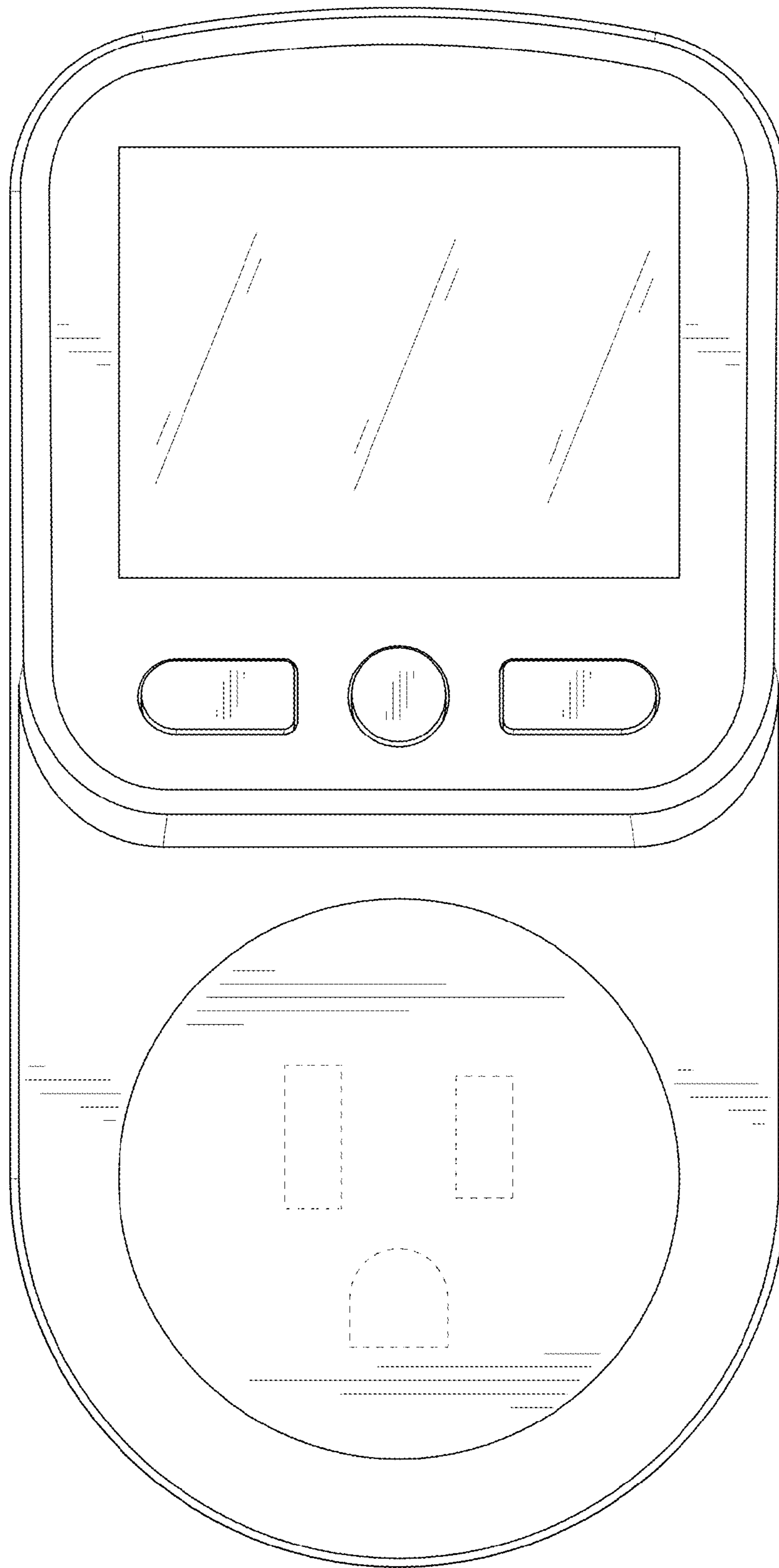


FIG. 3

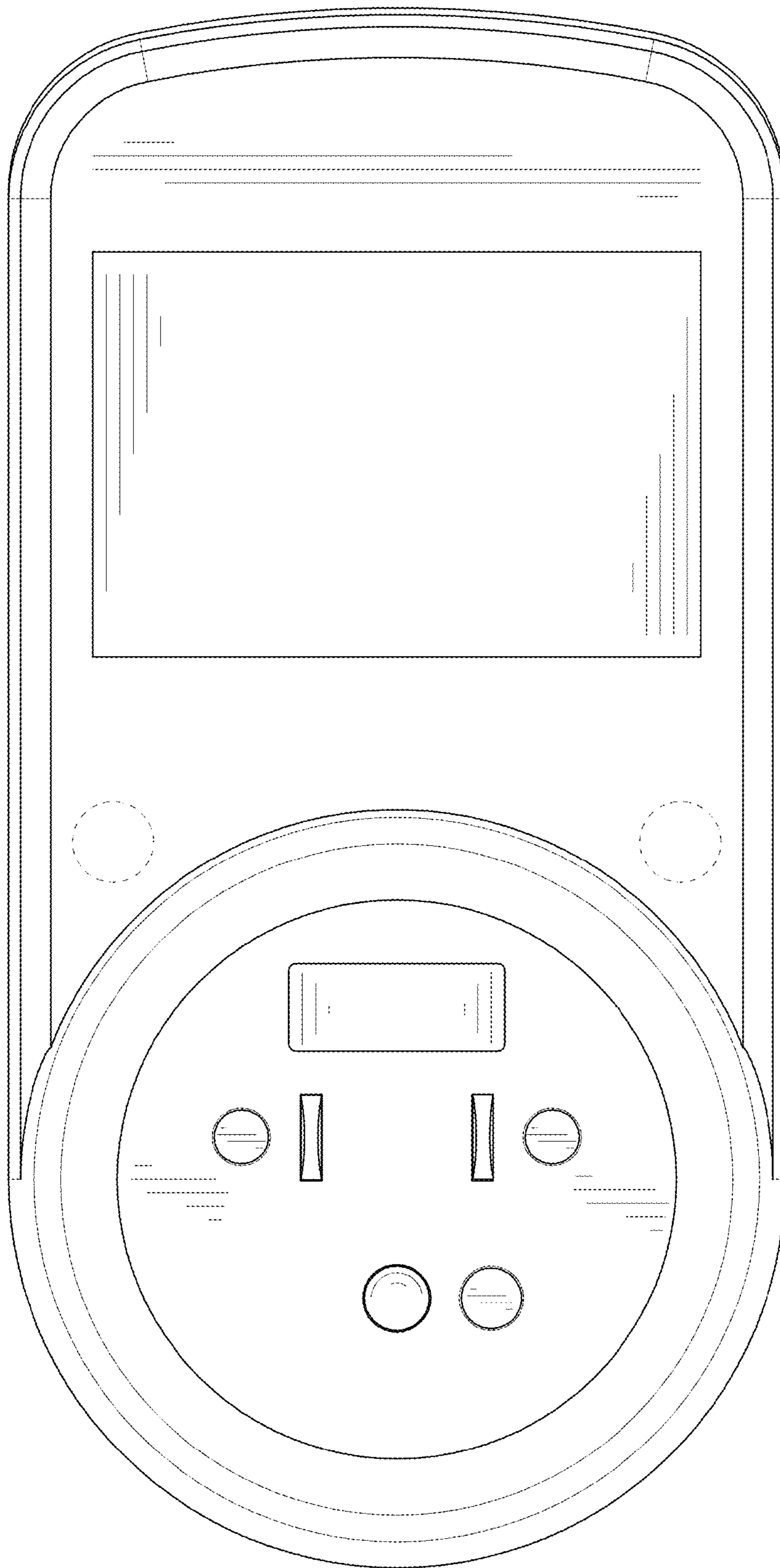


FIG. 4

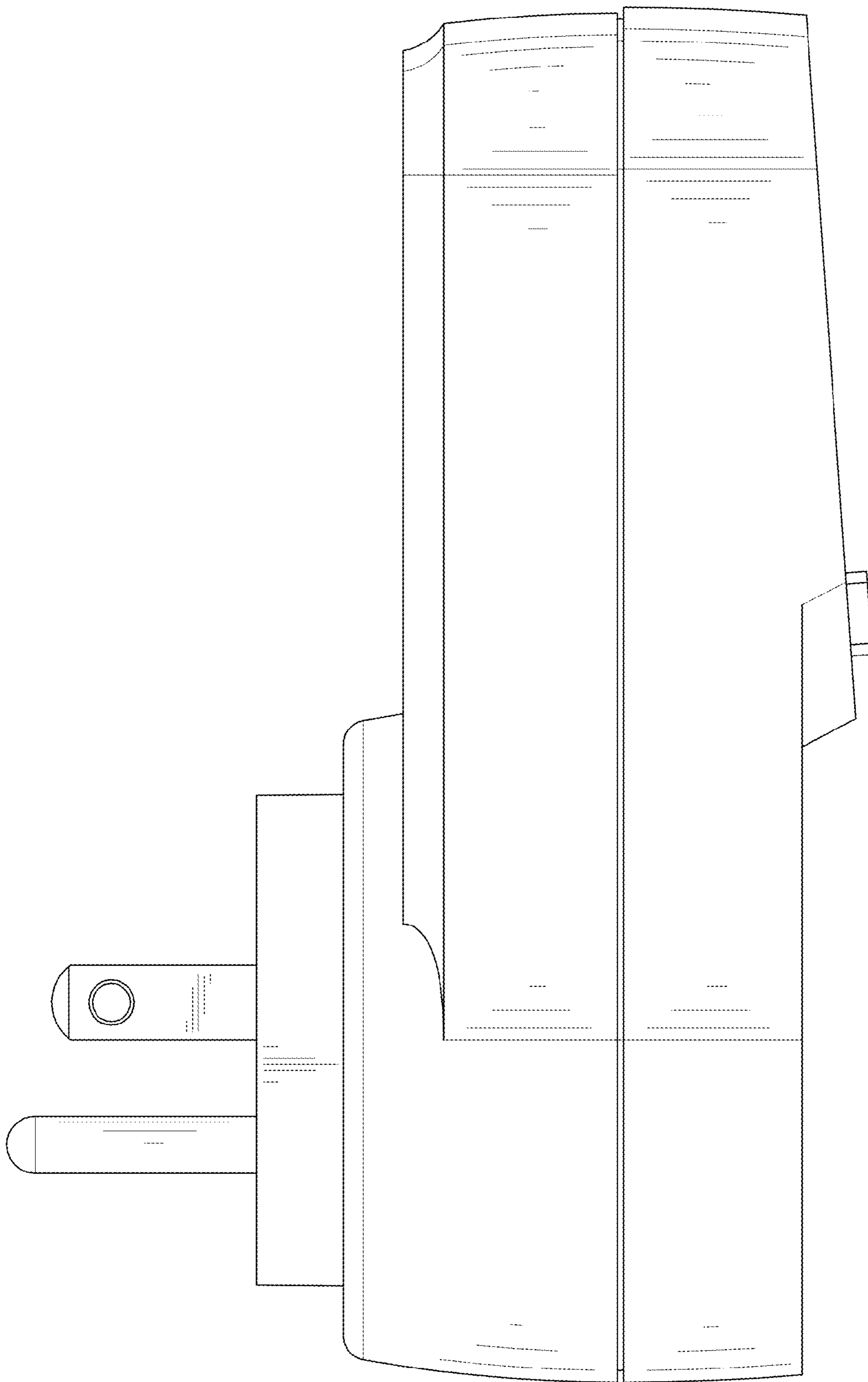


FIG. 5

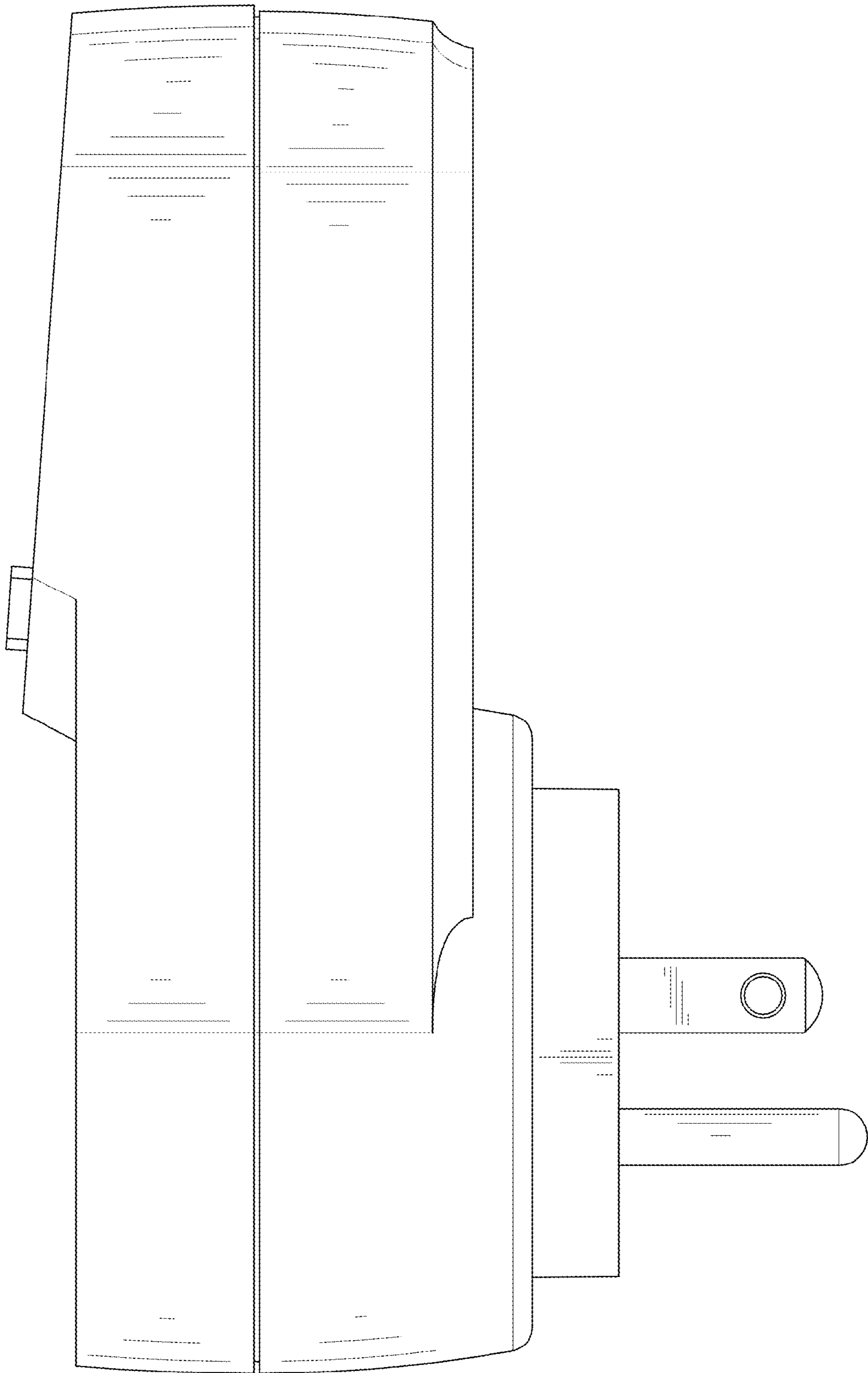


FIG. 6

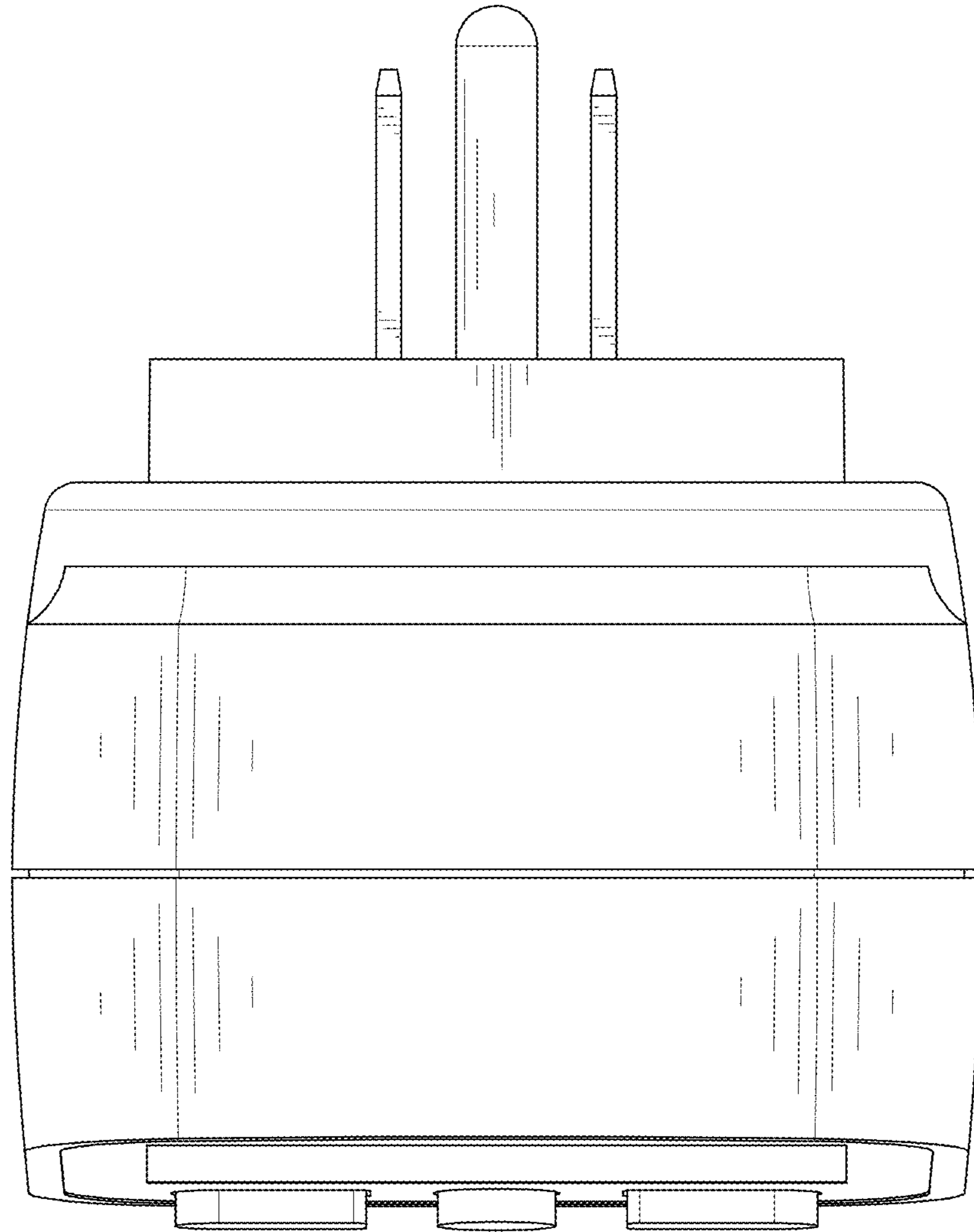


FIG. 7

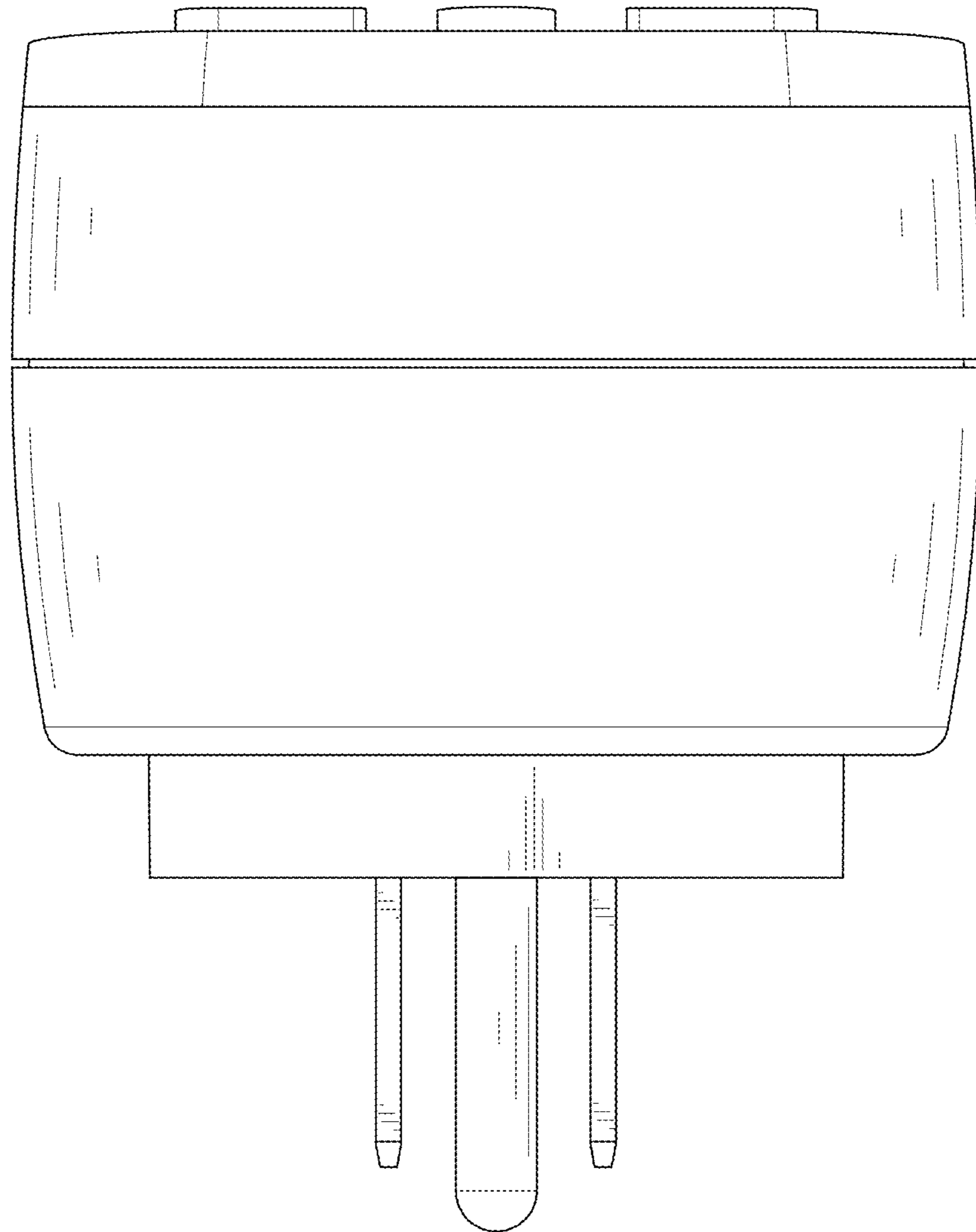


FIG. 8