



US00D920500S

(12) **United States Design Patent** (10) **Patent No.:** **US D920,500 S**
He (45) **Date of Patent:** **** May 25, 2021**

(54) **MICRONEEDLE INSTRUMENT**
(71) Applicant: **Xianlin He**, Zhanjiang (CN)
(72) Inventor: **Xianlin He**, Zhanjiang (CN)
(**) Term: **15 Years**
(21) Appl. No.: **29/761,917**
(22) Filed: **Dec. 14, 2020**
(51) **LOC (13) Cl.** **24-02**
(52) **U.S. Cl.**
USPC **D24/112**
(58) **Field of Classification Search**
USPC D24/112-114, 108, 130, 127, 133, 186;
606/181, 185; 604/264, 523-528, 272,
604/164.01-164.11, 187, 93.01; 600/101,
600/139, 143; 128/200.24, 207.14,
128/207.15
CPC . A61B 15/14514; A61M 25/065; A61M 5/42;
A61M 25/0612; A61M 25/00; A61M
39/00; A61M 27/00; A61M 25/0043;
A61M 25/0067; A61M 25/0097; A61F
2/958
See application file for complete search history.

8,628,498 B2 * 1/2014 Safabash A61M 25/0606
604/164.12
D705,422 S 5/2014 Burton et al.
8,790,327 B2 * 7/2014 Takemoto A61M 39/00
604/403
D866,752 S * 11/2019 Rogge D24/113
D869,647 S * 12/2019 Dorsey D24/112
D903,866 S 12/2020 Chen
D907,765 S * 1/2021 Eriksen A61M 5/2066
D24/112
2012/0123387 A1 * 5/2012 Gonzalez A61M 37/0015
604/506
2016/0184571 A1 * 6/2016 Admati A61M 5/31
604/199
2019/0083769 A1 * 3/2019 Nagai A61M 37/0015
2019/0201673 A1 * 7/2019 Smith A61B 17/34

* cited by examiner

Primary Examiner — David G Muller

(57) **CLAIM**

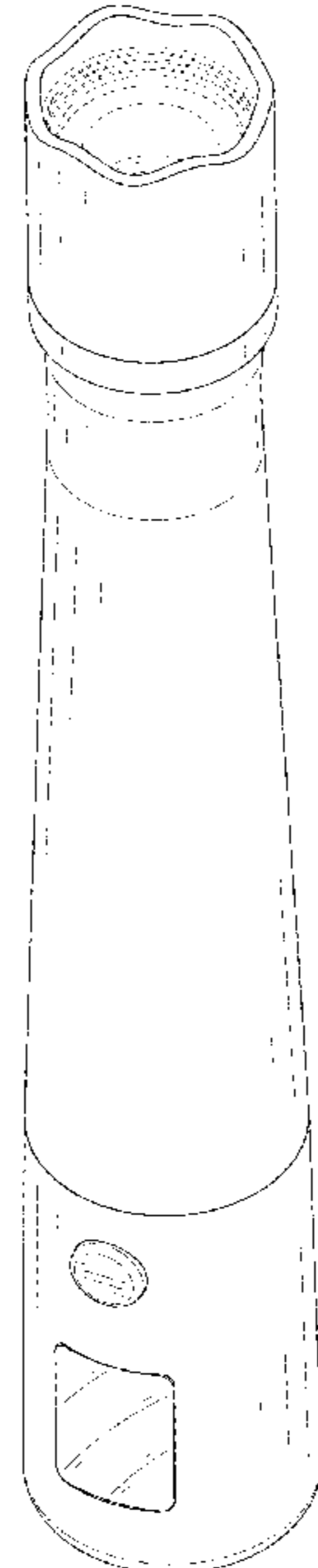
The ornamental design for a microneedle instrument, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of a microneedle instrument showing my new design;
FIG. 2 is another perspective view thereof;
FIG. 3 is a front elevational view thereof;
FIG. 4 is a rear elevational view thereof;
FIG. 5 is a left side elevational view thereof;
FIG. 6 is a right side elevational view thereof;
FIG. 7 is a top plan view thereof; and,
FIG. 8 is a bottom plan view thereof.
The broken lines in the drawings depict portions of the microneedle instrument that form no part of the claimed design.

1 Claim, 8 Drawing Sheets

(56) **References Cited**
U.S. PATENT DOCUMENTS
5,964,718 A * 10/1999 Duchon A61B 5/150022
600/583
6,929,650 B2 * 8/2005 Fukuzawa A61B 5/15186
600/576
7,438,694 B2 * 10/2008 Boozer A61B 5/14532
600/583
7,682,353 B2 * 3/2010 Tanghoj A61F 5/44
604/544



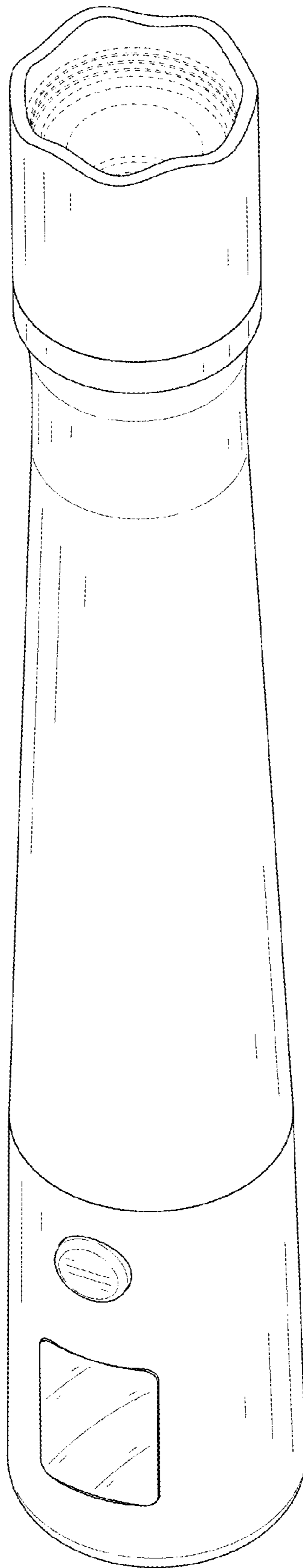


FIG. 1

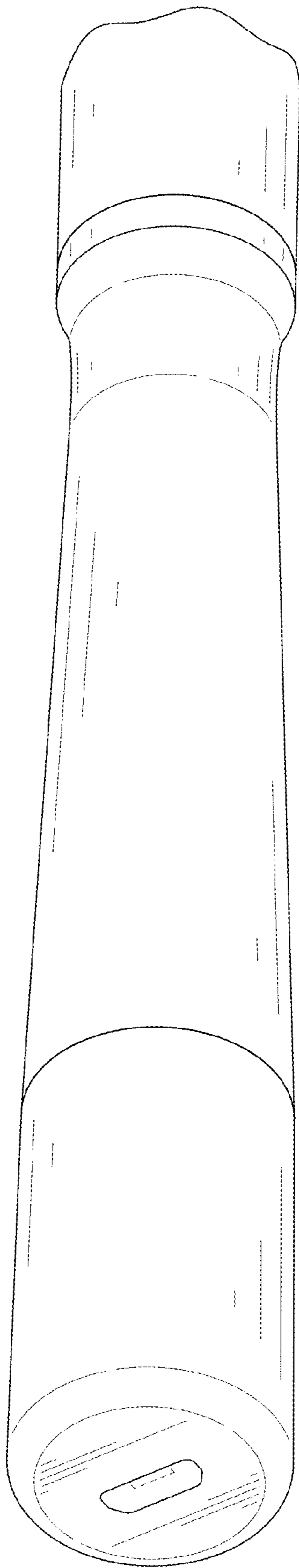


FIG. 2

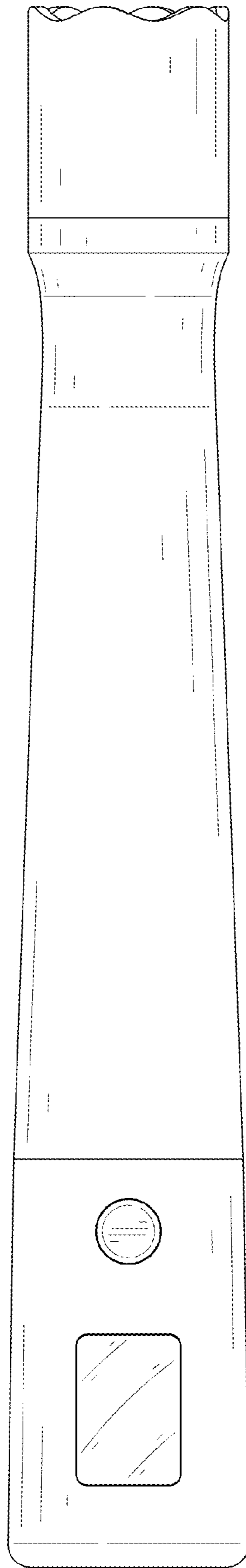


FIG. 3

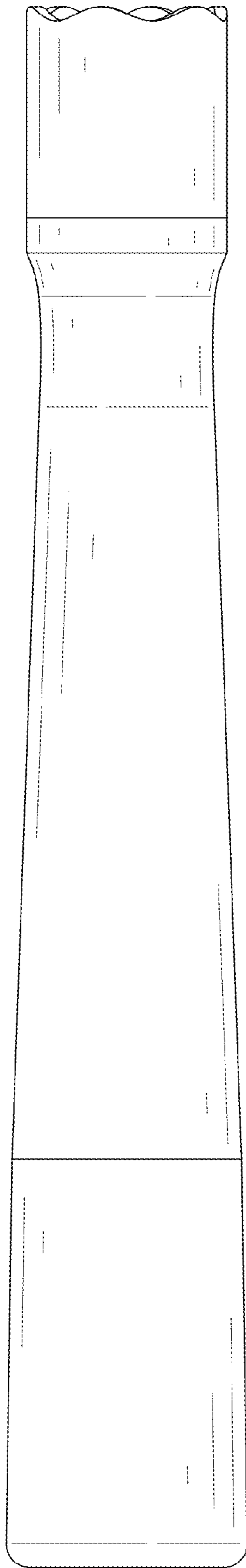


FIG. 4

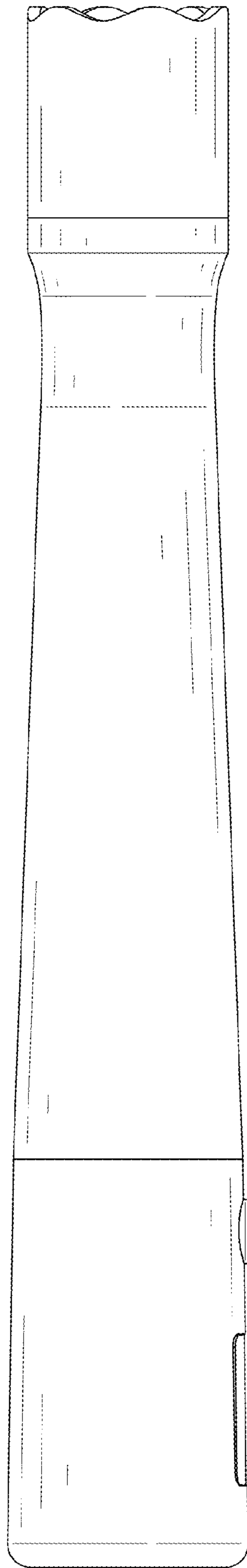


FIG. 5

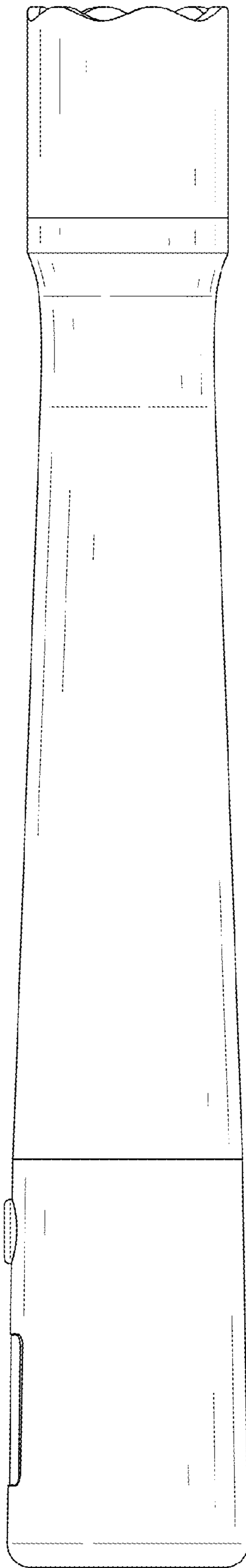


FIG. 6

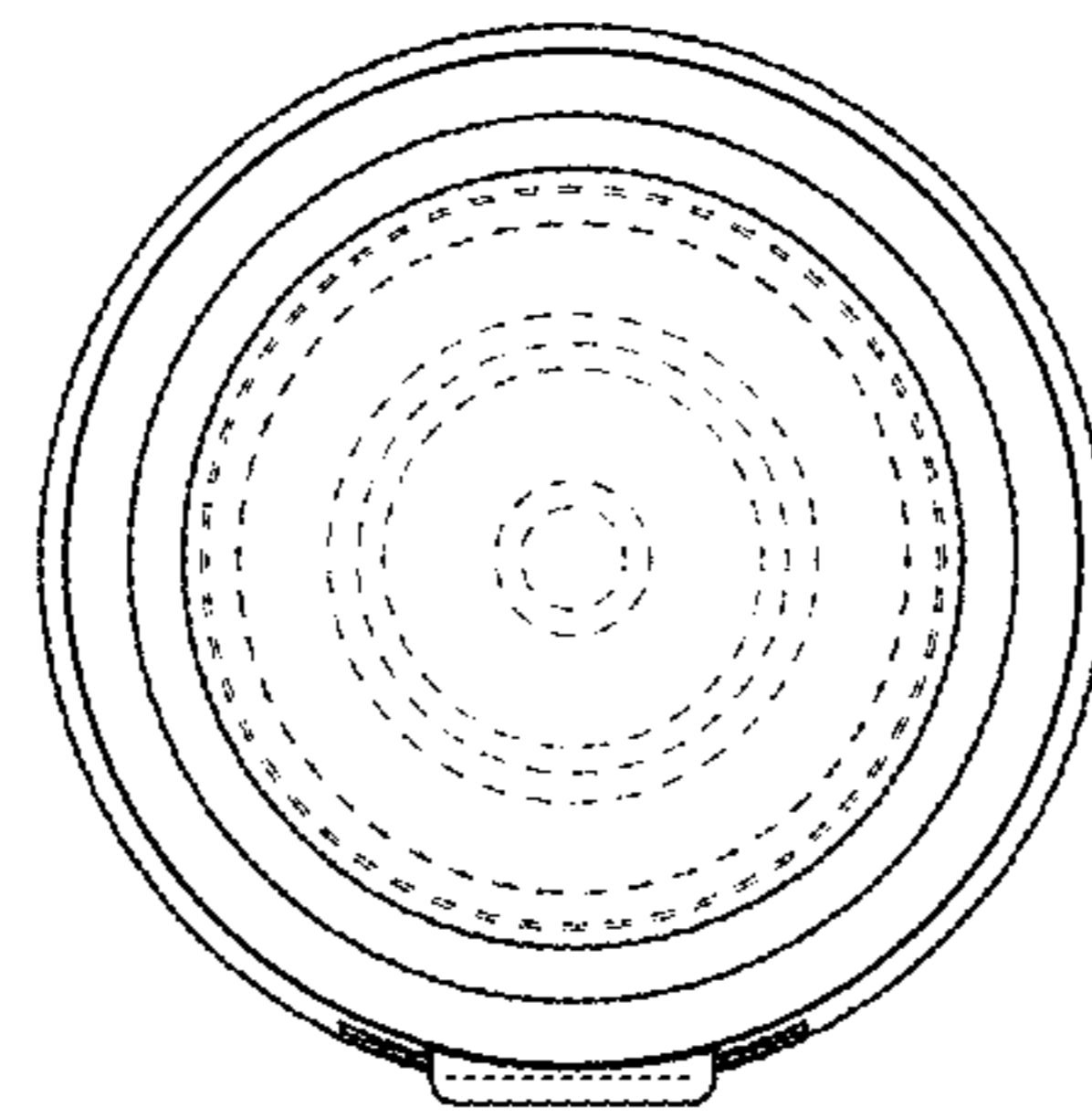


FIG. 7

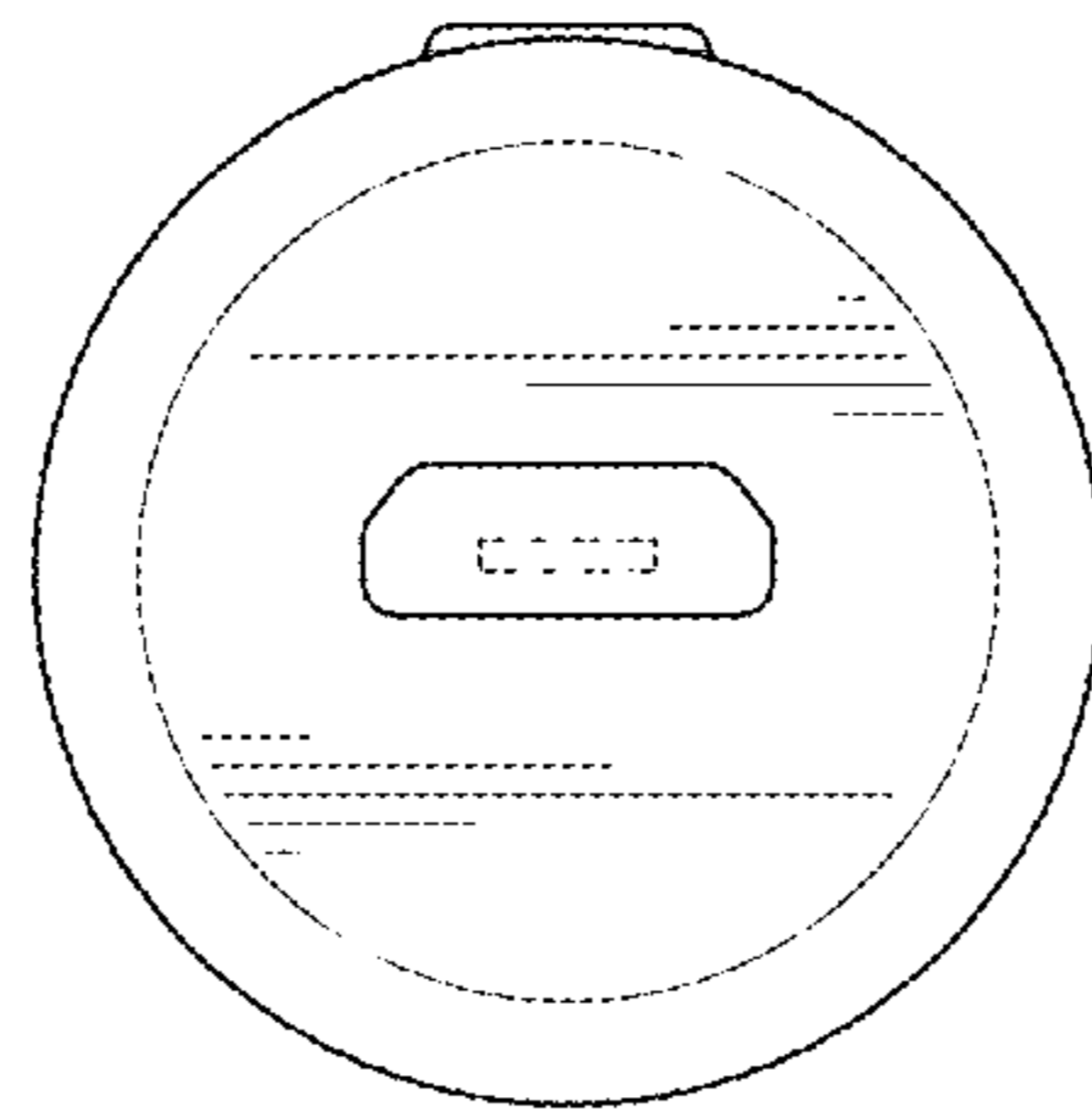


FIG. 8