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(12) **United States Design Patent** (10) **Patent No.:** **US D803,081 S**
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- (54) **MULTI-PARAMETER SONDE HAVING A GUARD WITH MULTIPLE PAIRED PASSAGES**
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- (73) Assignee: **In-Situ, Inc.**, Fort Collins, CO (US)
- (*) Notice: This patent is subject to a terminal disclaimer.
- (**) Term: **15 Years**
- (21) Appl. No.: **29/558,417**
- (22) Filed: **Mar. 17, 2016**

Related U.S. Application Data

- (63) Continuation-in-part of application No. 29/513,888, filed on Jan. 6, 2015, now Pat. No. Des. 755,655.
- (51) **LOC (10) Cl.** **10-04**
- (52) **U.S. Cl.**
USPC **D10/81**
- (58) **Field of Classification Search**
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CPC G01N 33/22; G01N 33/221; G01N 33/18;
G01N 33/1806; G01N 33/1813; G01N 33/1893; G01N 33/182; G01N 33/1826;
G01N 33/1833; G01N 2033/184; G01N 33/1846; G01N 33/1853; G01N 33/186;
G01N 33/1866; G01N 2033/1873

See application file for complete search history.

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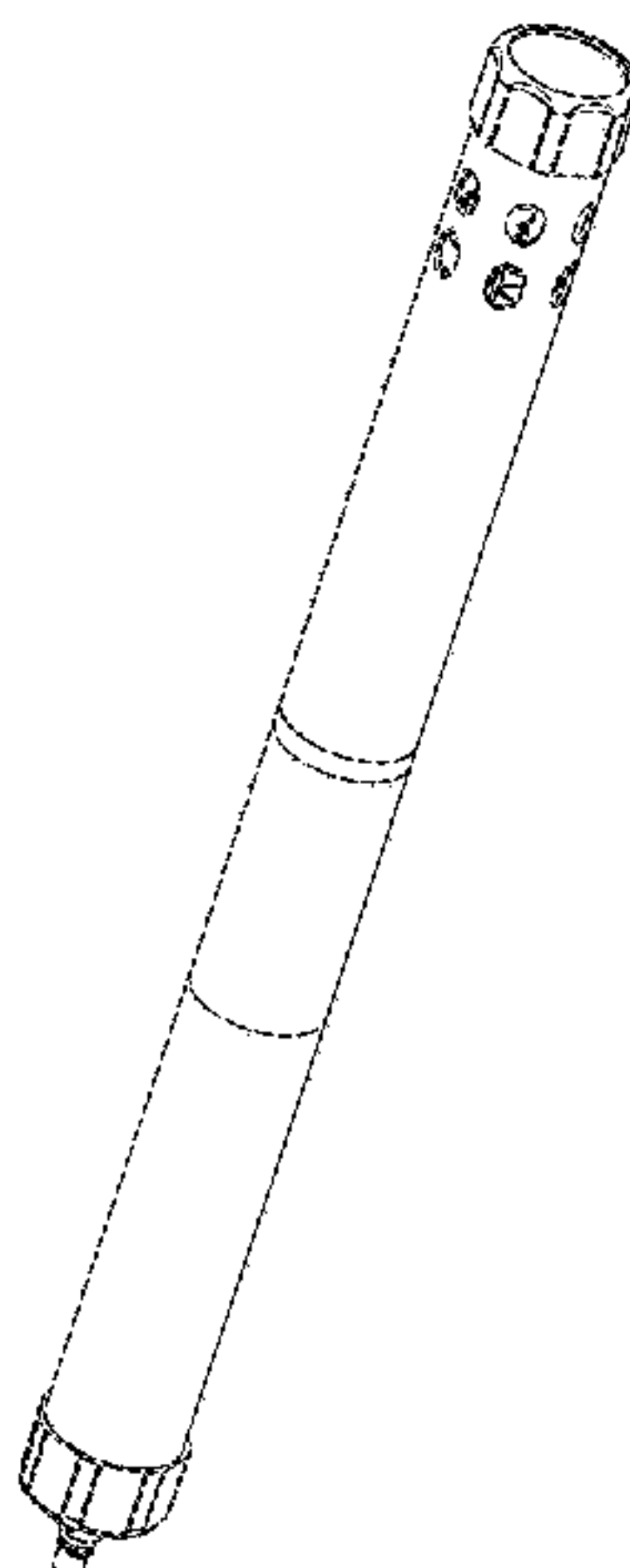
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(57) CLAIM

The ornamental design for a multi-parameter sonde having a guard with multiple paired passages, as shown and described.

DESCRIPTION

FIG. 1 is a top, perspective view of a multi-parameter sonde with the sensor guard and base portion, sensors and brush connected, showing our new design in a sonde-ready configuration; the portion visible through the passages of the sensor guard is illustrated in detail in FIGS. 13-17;

FIG. 2 is a bottom, perspective view thereof, with the brush (see FIGS. 19-26) observable through the passages;
 FIG. 3 is a side view thereof, it being understood the other side is identical in that the surface shape is cylindrical, having a total number of twelve passages arranged in six pairs, and are circumferentially aligned with an equal spacing between adjacent paired passages;
 FIG. 4 is a top view thereof;
 FIG. 5 is a bottom view thereof;
 FIG. 6 is a top, side, rear perspective view of a second embodiment of our design of FIG. 1, with the sensor guard portion in an alternate flipped position to provide a sonde-stored configuration, it being understood that all other surfaces are the same of those of FIGS. 1-5, with the exception that the plurality of openings of the sensor guard are positioned toward the bottom of the multi-parameter sonde so that the sensor ends are covered in a liquid-tight configuration;
 FIG. 7 is a side view thereof;
 FIG. 8 is a top perspective view of a third embodiment of our new design of FIG. 1, the sensor guard portion thereof in a removed configuration with a cap covering one end thereof;
 FIG. 9 is a bottom perspective view thereof;
 FIG. 10 is a side view thereof;
 FIG. 11 is a bottom perspective view thereof;
 FIG. 12 is a bottom view thereof, it being understood that the top view corresponds to FIG. 4;
 FIG. 13 is a top perspective view of the design of FIG. 1, with the sensor guard of FIGS. 8-12 removed therefrom;
 FIG. 14 is a side view thereof, it being understood the other side is identical in that the surface shape is cylindrical;
 FIG. 15 is a top perspective view of the distal sensor ends illustrating four sensors and brush of FIGS. 19-26 extending therefrom;
 FIG. 16 is a close-up view of the distal end of FIG. 15;
 FIG. 17 is a top view thereof;
 FIG. 18 is a top perspective view of FIG. 16 with the brush removed therefrom;
 FIG. 19 is top, front, inner side view of the design of FIGS. 1-7 and 13-17, the brush portion thereof;
 FIG. 20 is a top, front and outer side view thereof;
 FIG. 21 is a bottom, front and outer side view thereof;
 FIG. 22 is a bottom, front and inner side view thereof;
 FIG. 23 is a top, rear and outer side view thereof;
 FIG. 24 is a top, rear and inner side view thereof;
 FIG. 25 is a bottom, rear and outer side view thereof;
 FIG. 26 is a bottom, rear and inner side view thereof;
 FIG. 27 is a top, front, side perspective view of the design of FIGS. 1-7 and 13-18, the sonde base portion thereof, with the sensor guard, sensors and the brush/central support portions removed therefrom;
 FIG. 28 is a side view thereof, it being understood the other side is identical in that the surface shape is cylindrical;
 FIG. 29 is a top perspective view showing removal of one of the sensors (see, e.g., FIGS. 30-42) to further illustrate the embodiment of FIGS. 27-28 is from removal of the sensors and central support portion, the surface numbering indicia (1 and 2) on the sonde base portion beneath the sensors do not form part of the claimed design;
 FIG. 30 is a top and outer surface perspective view the design of FIGS. 1-7 and 13-18, a sensor thereof;
 FIG. 31 is a first inner-side view thereof;
 FIG. 32 is a top, second inner-side, central surface perspective view thereof;
 FIG. 33 is a second inner-side view thereof;

FIG. **34** is a bottom, first inner-side and central surface perspective view thereof;

FIG. **35** is a bottom, second inner-side, and central surface perspective view thereof;

FIG. **36** is a bottom and outer surface perspective view thereof;

FIG. **37** is a central surface view thereof;

FIG. **38** is an outer surface view thereof;

FIG. **39** is a top surface view thereof;

FIG. **40** is a bottom surface view thereof;

FIG. **41** is a top, first inner-surface, outer perspective view thereof; and,

FIG. **42** is a bottom, central surface view thereof.

FIGS. **13-42** show inner portions and components of the multi-parameter sonde, including the brush and sensors, which may be visible through the passages of the guard while the multi-parameter sonde is in use and in its intended environment, or when components that form the multi-parameter sonde are separately removed. FIGS. **13-42** are shown to provide additional clarity for the multi-parameter sonde in use and do not form part of the claimed design.

1 Claim, 31 Drawing Sheets

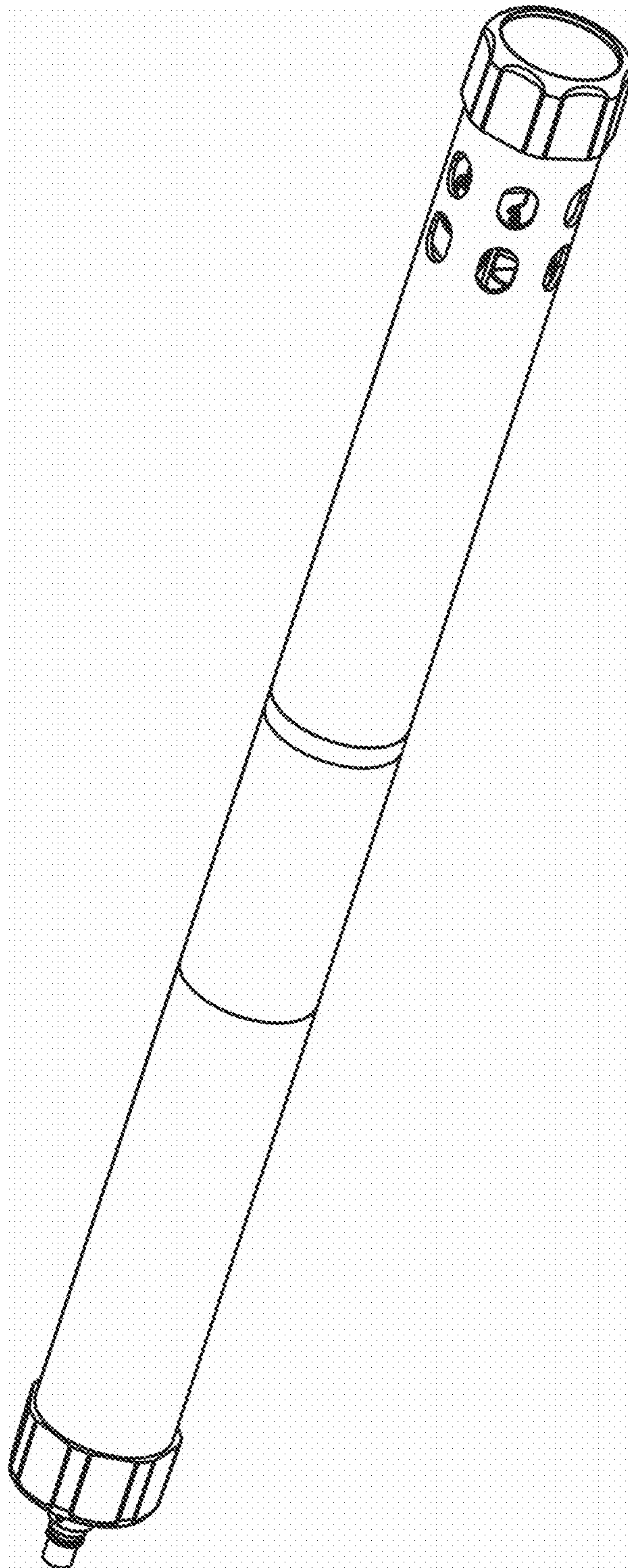


FIG. 1

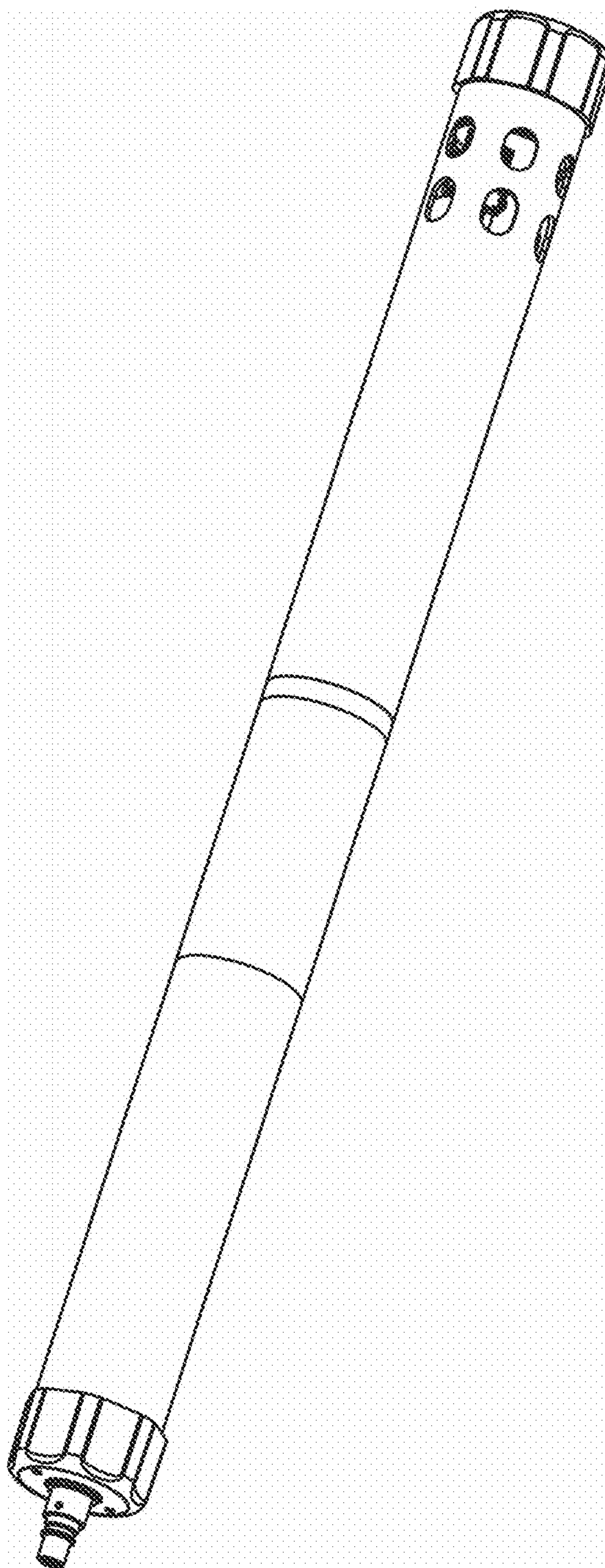


FIG. 2

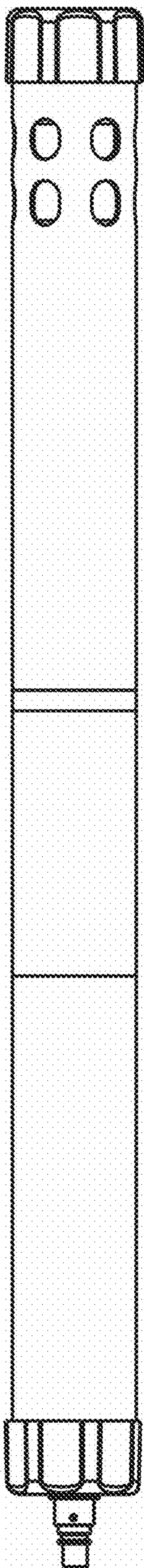


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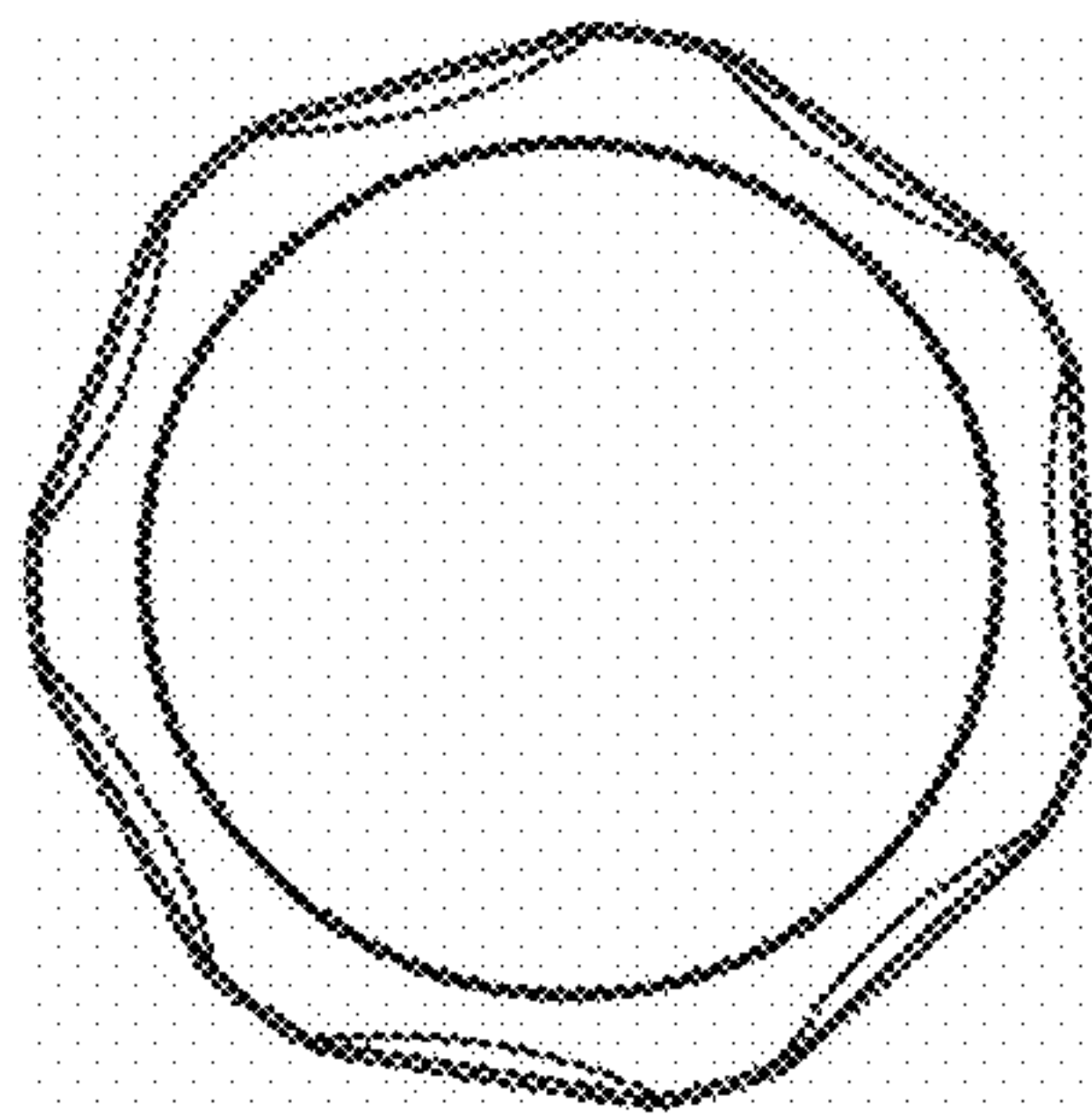


FIG. 4

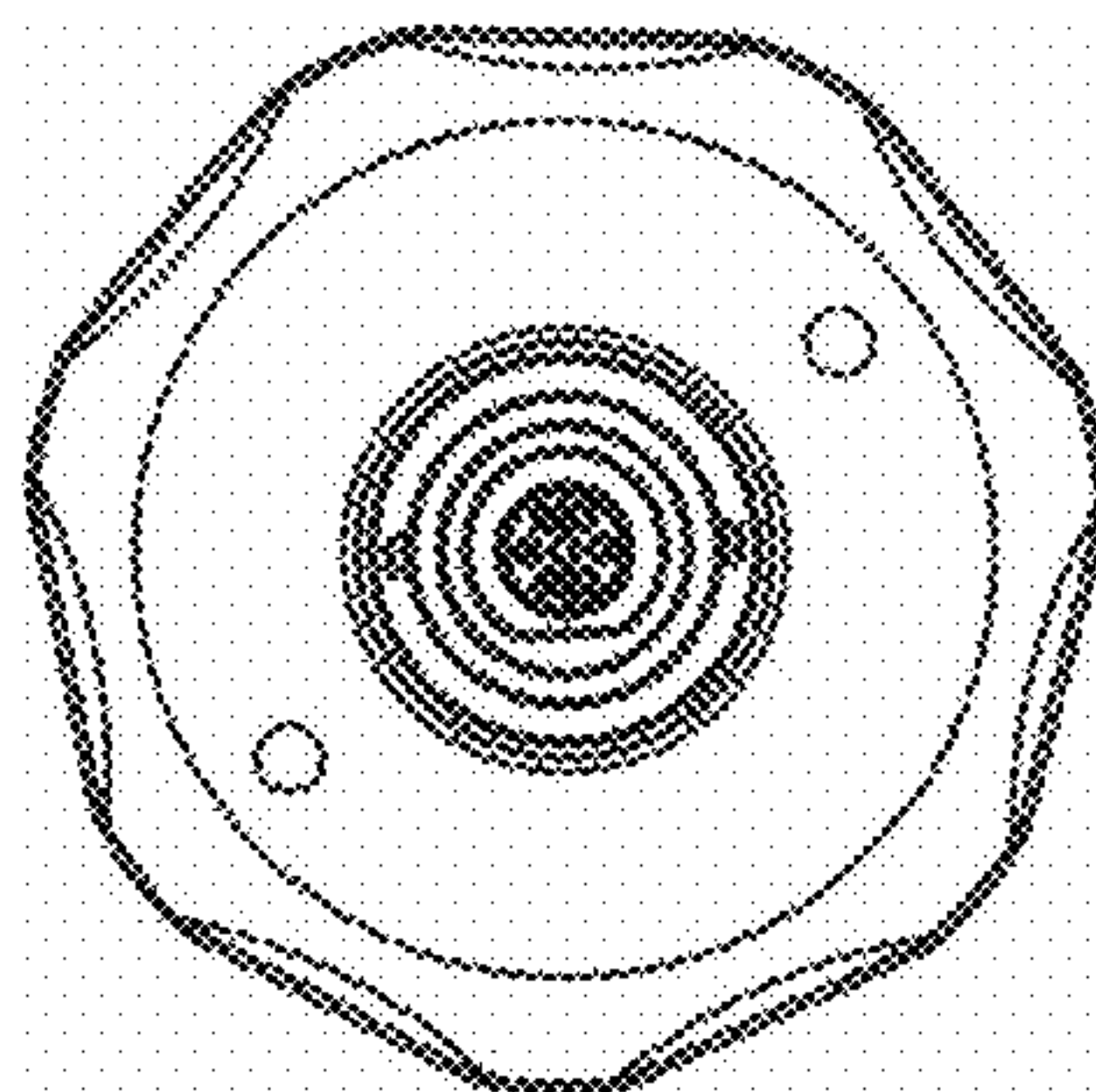


FIG. 5

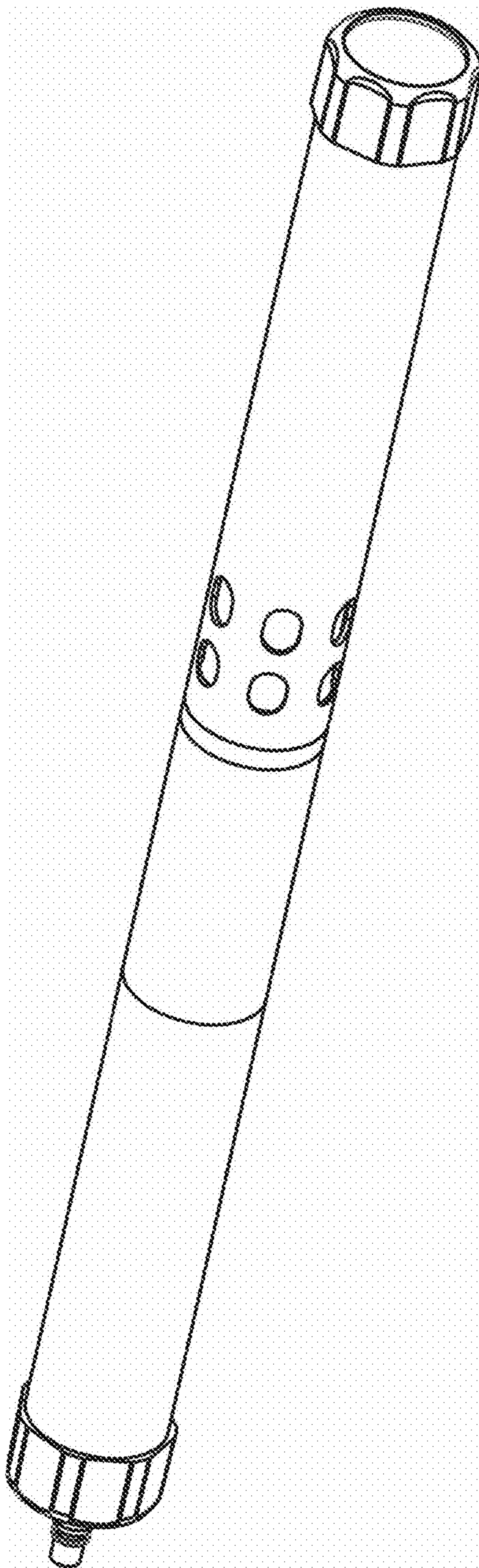


FIG. 6

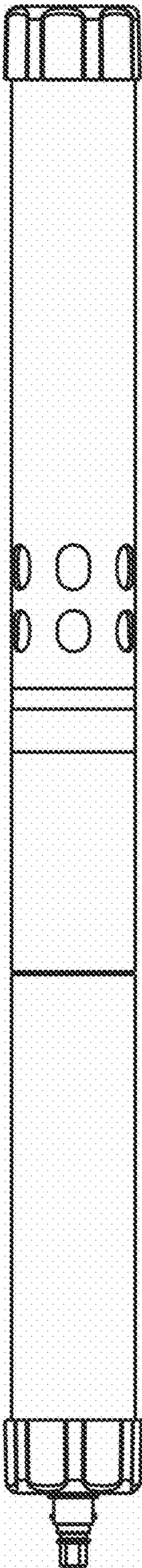


FIG. 7

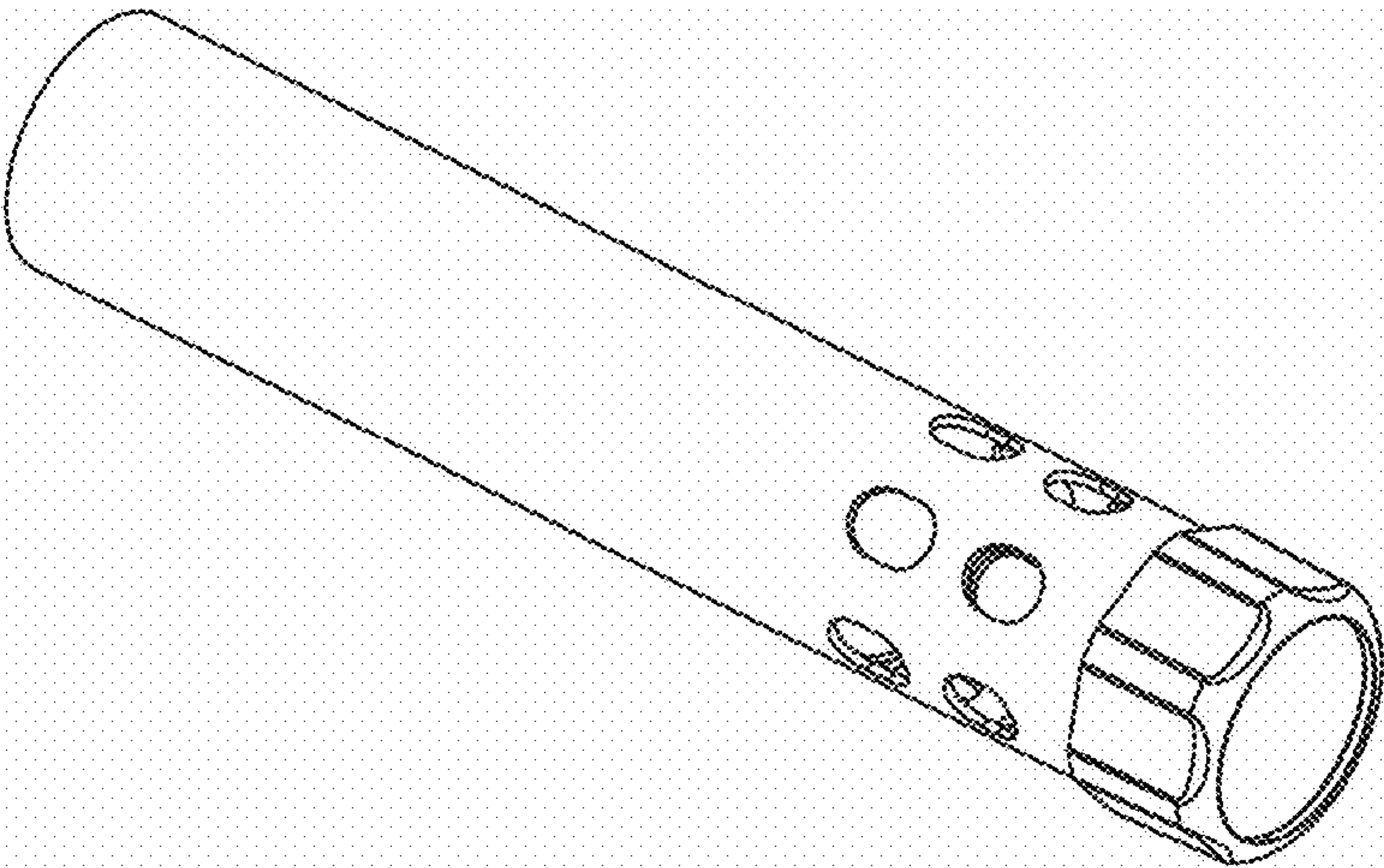


FIG. 8

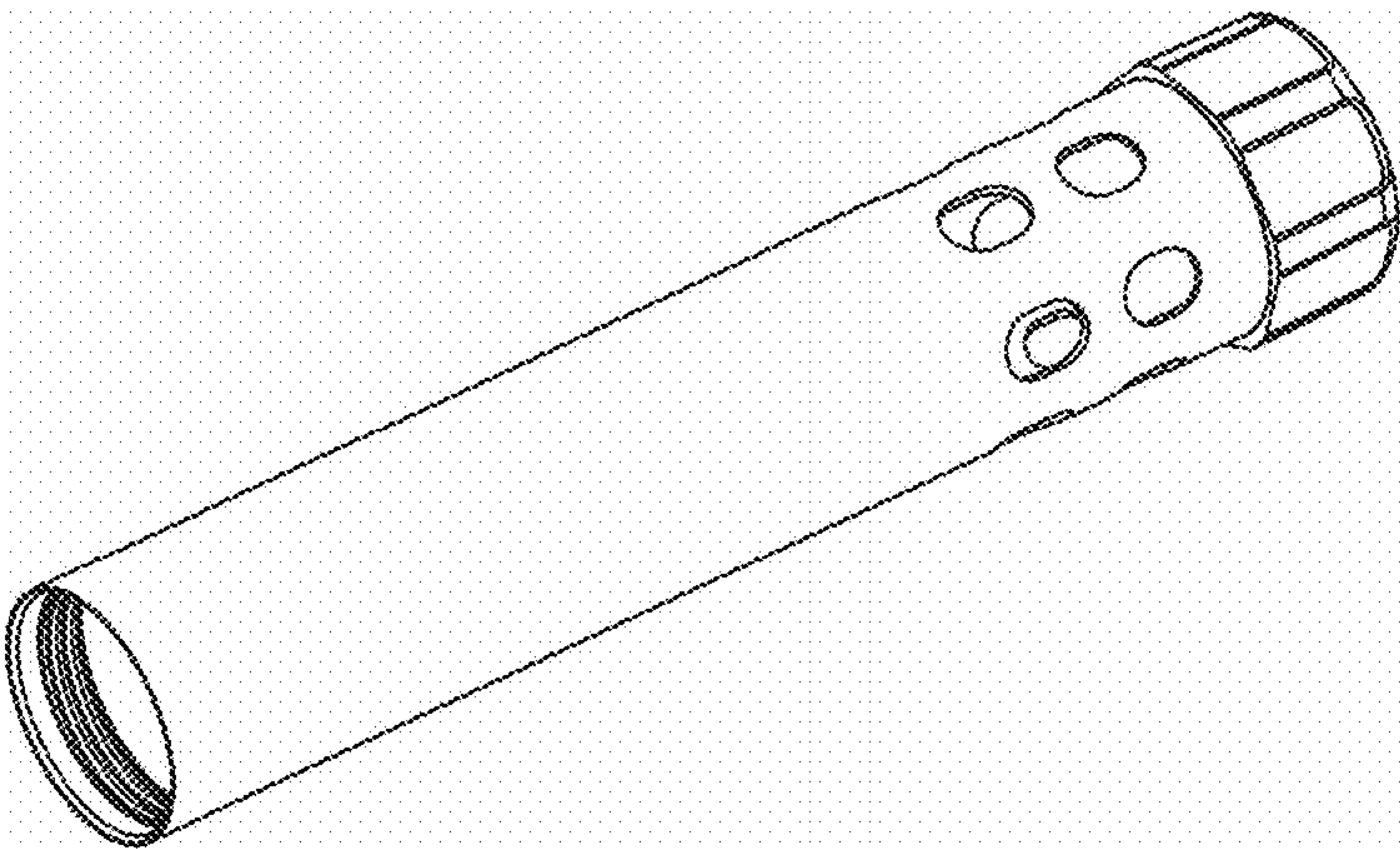


FIG. 9

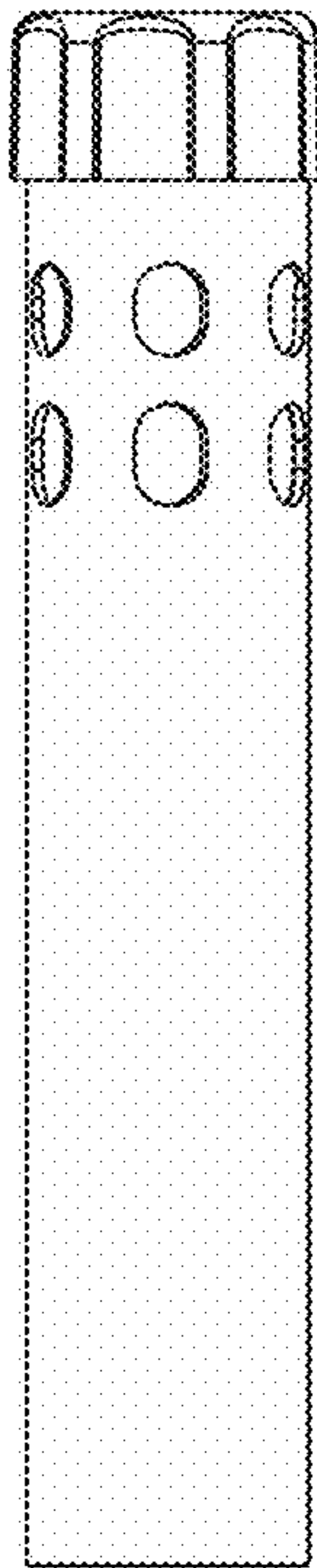


FIG. 10

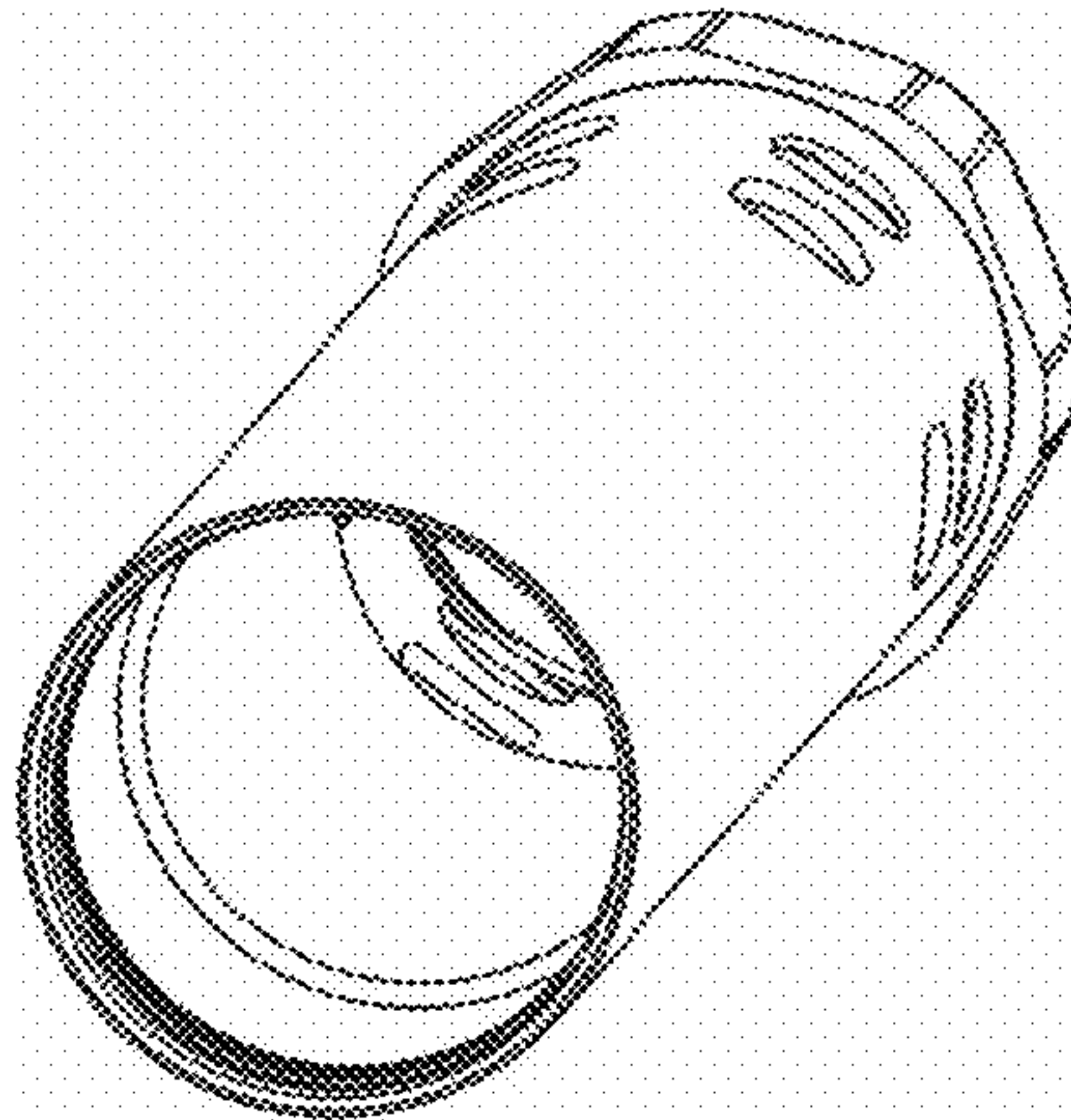


FIG. 11

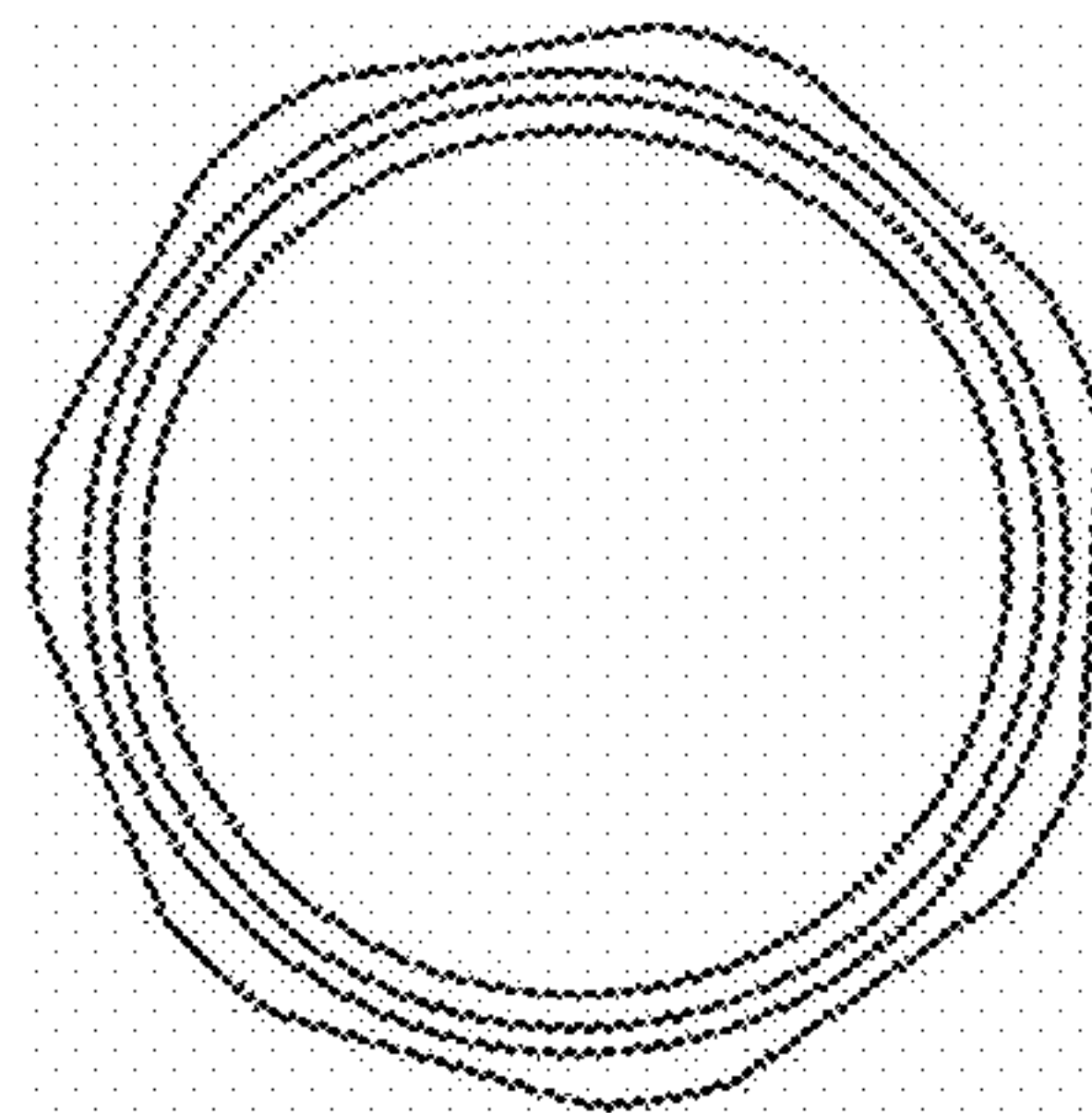


FIG. 12

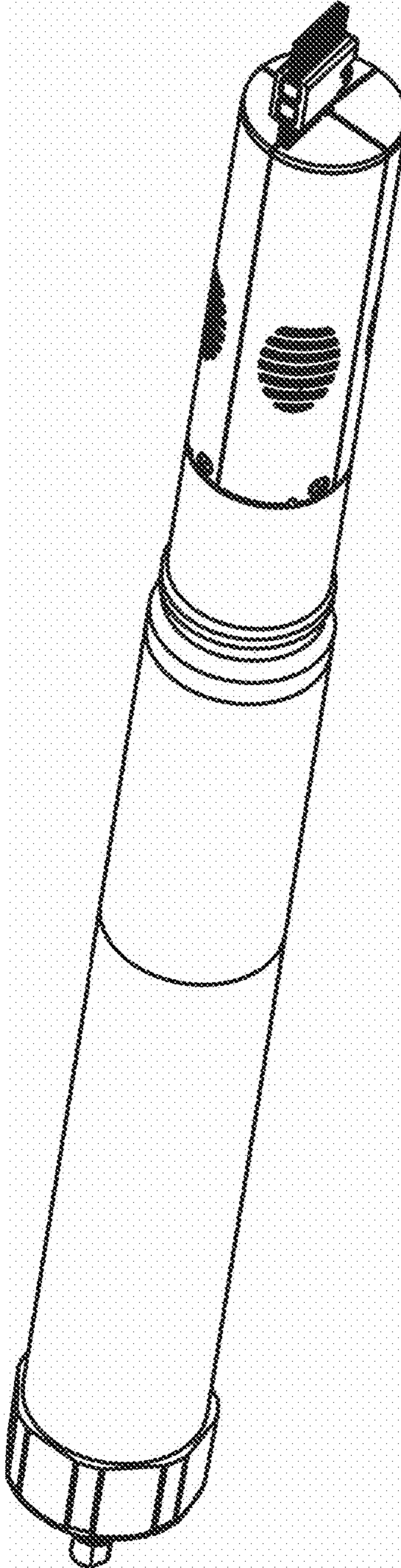


FIG. 13

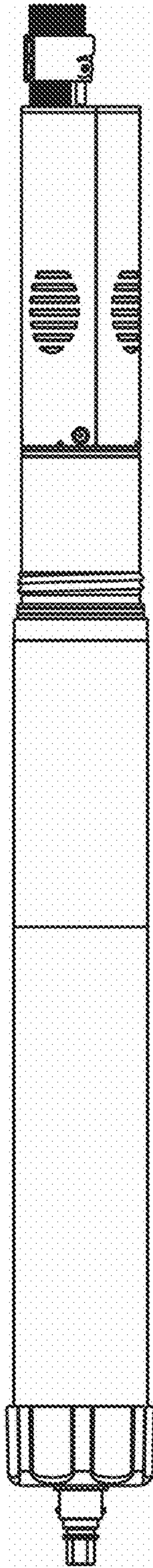


FIG. 14

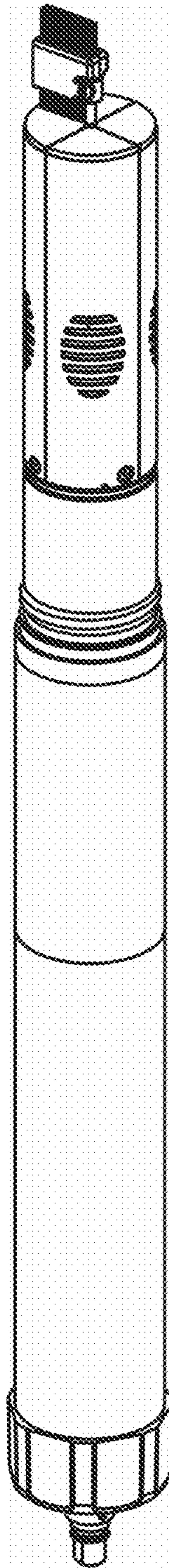


FIG. 15

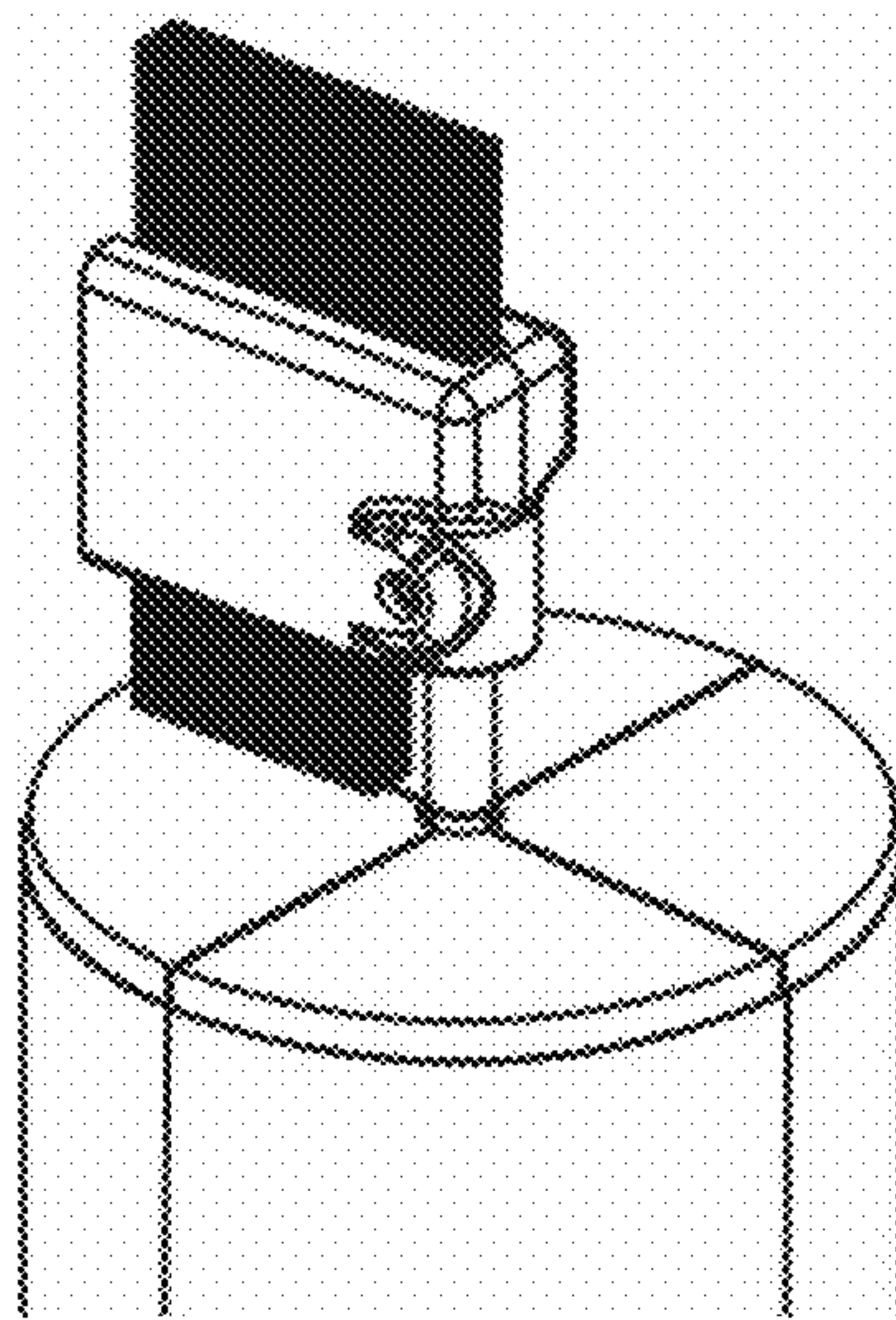


FIG. 16

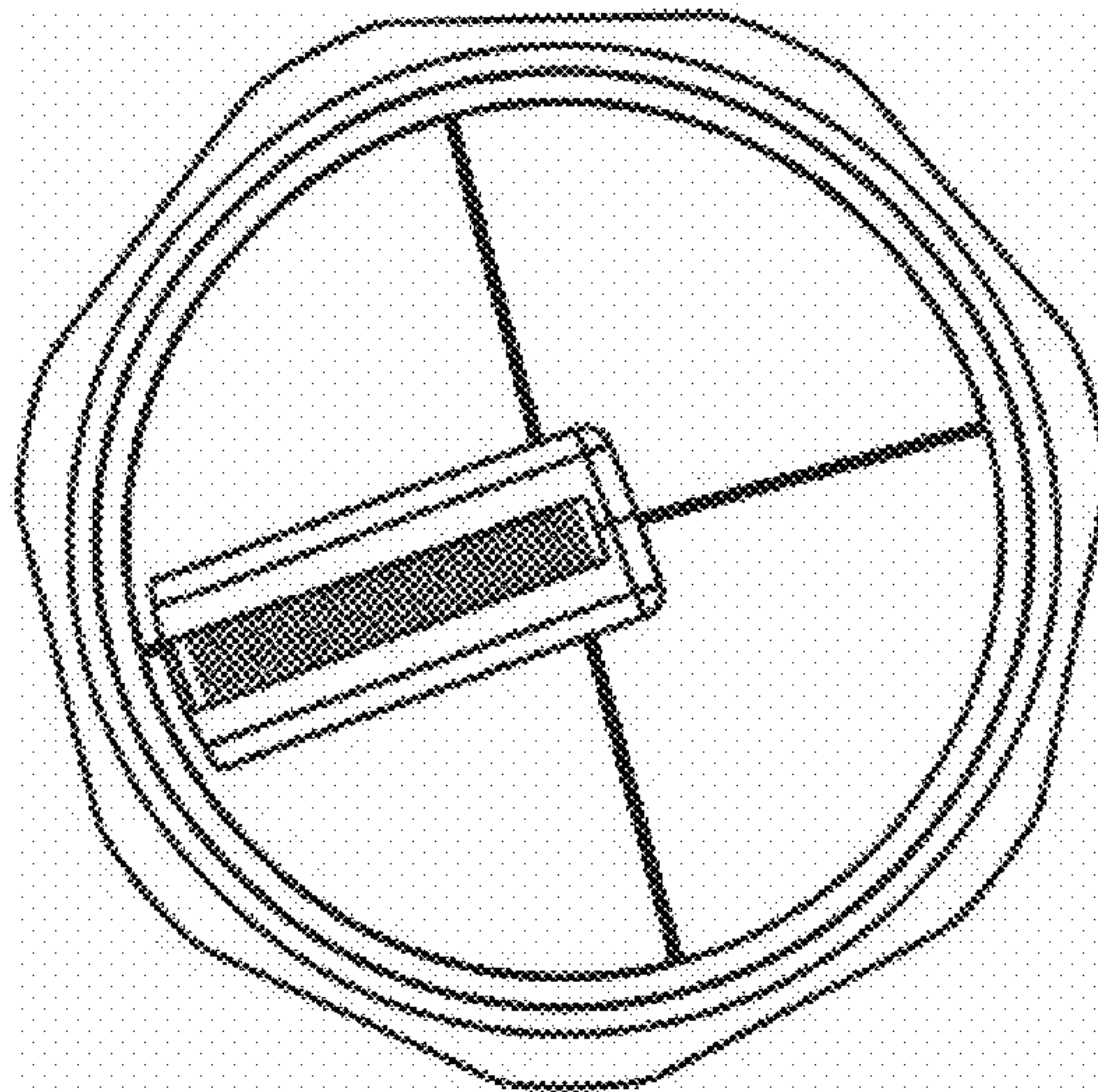


FIG. 17

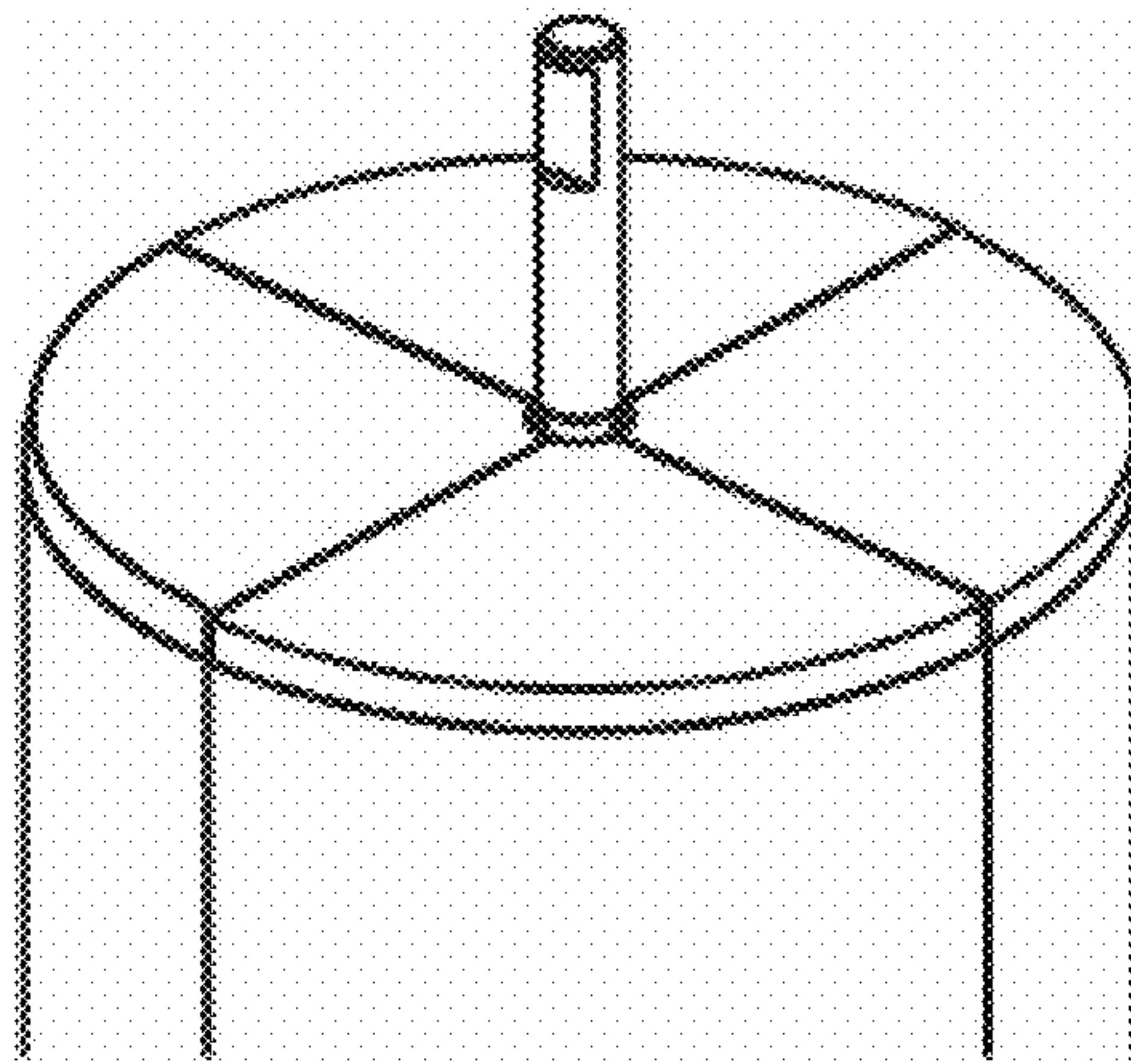


FIG. 18

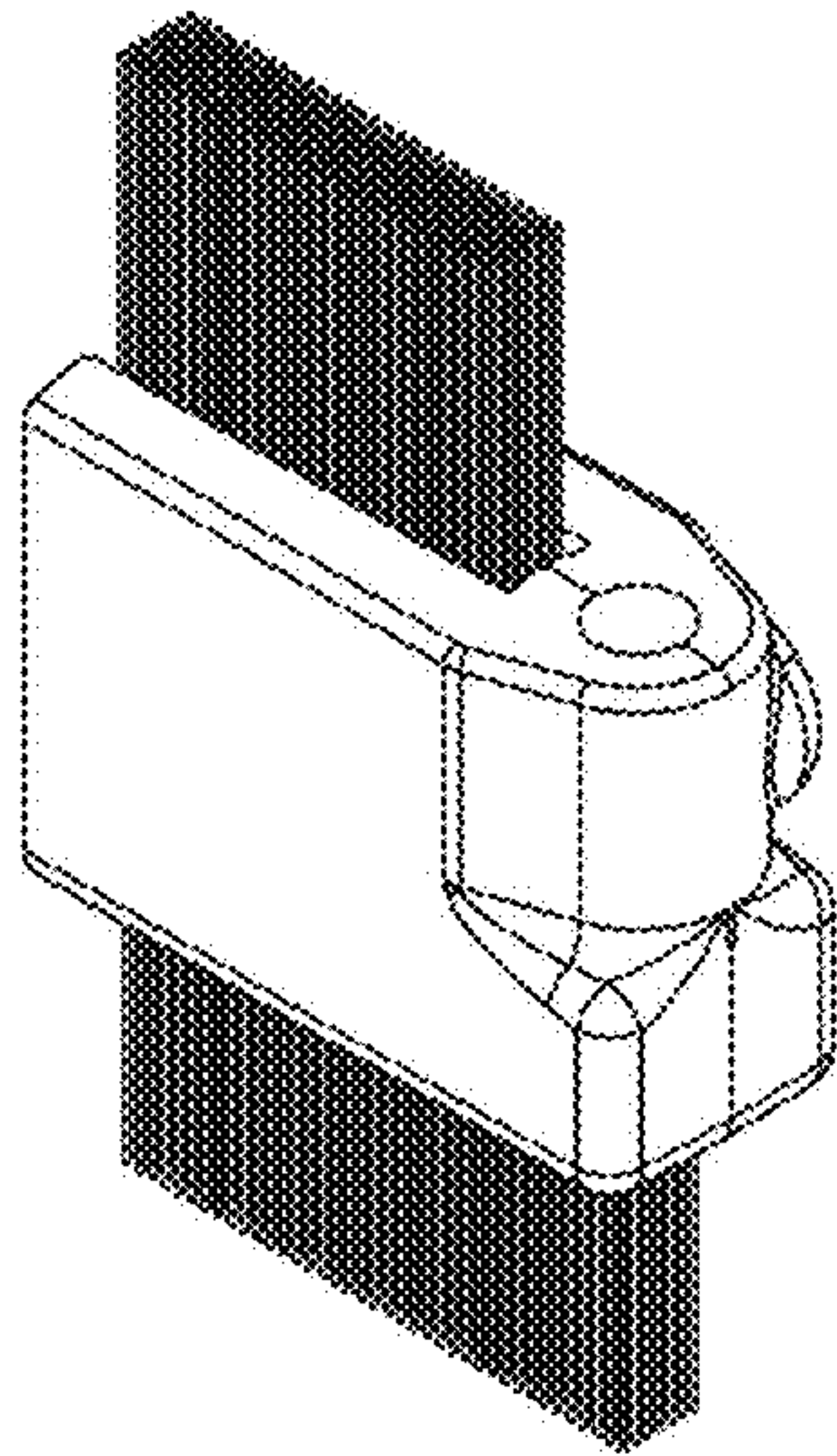


FIG. 19

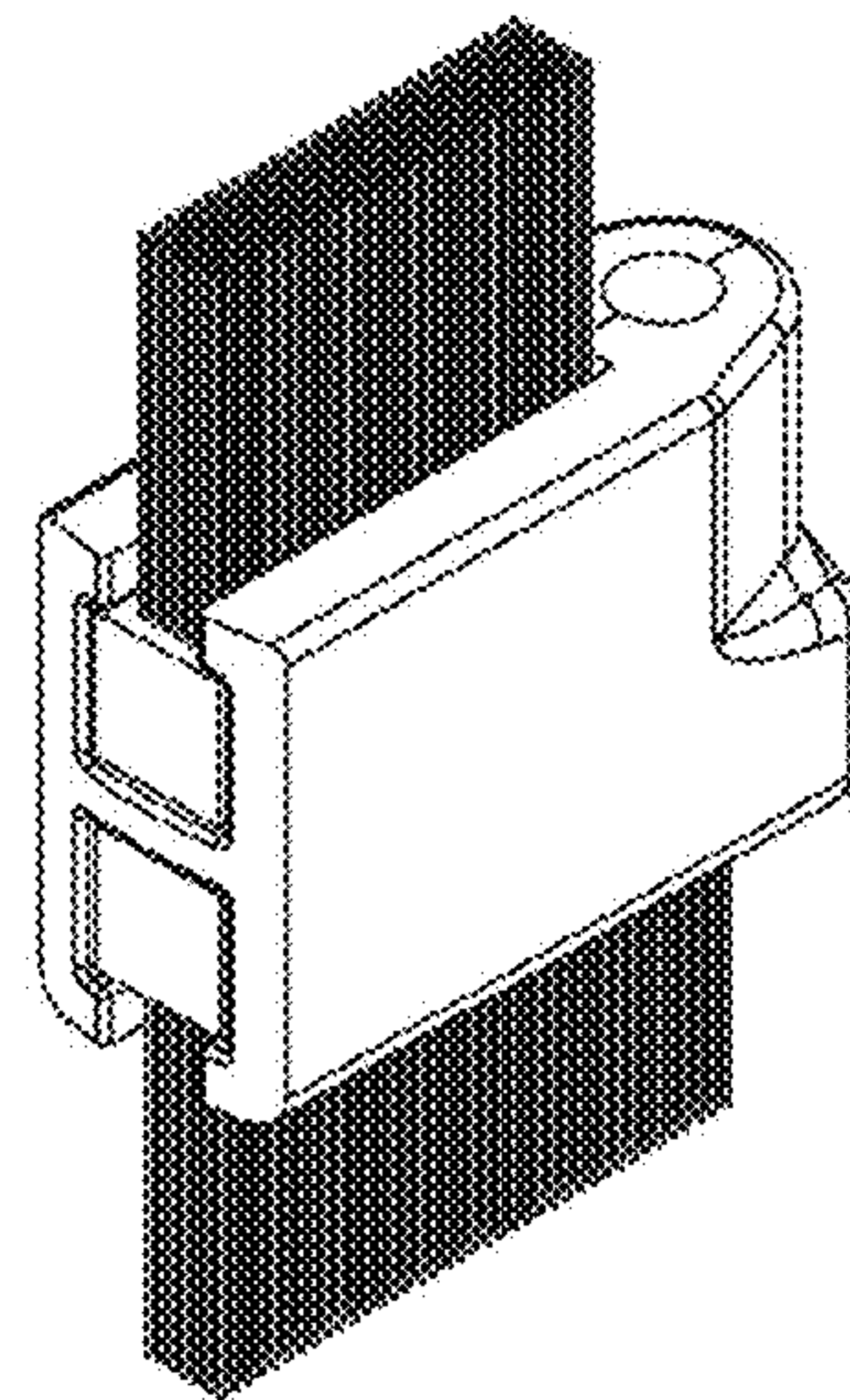


FIG. 20

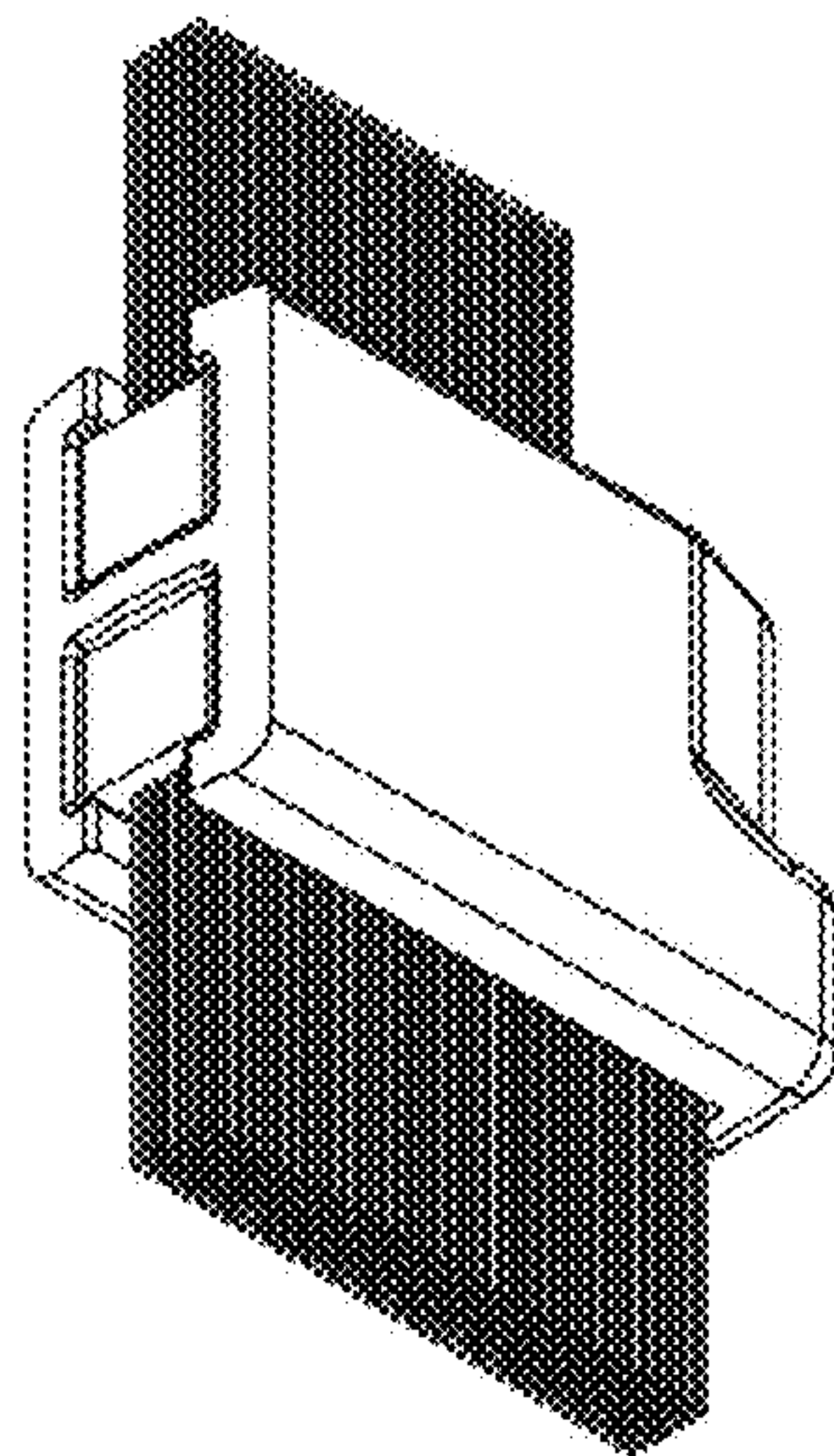


FIG. 21

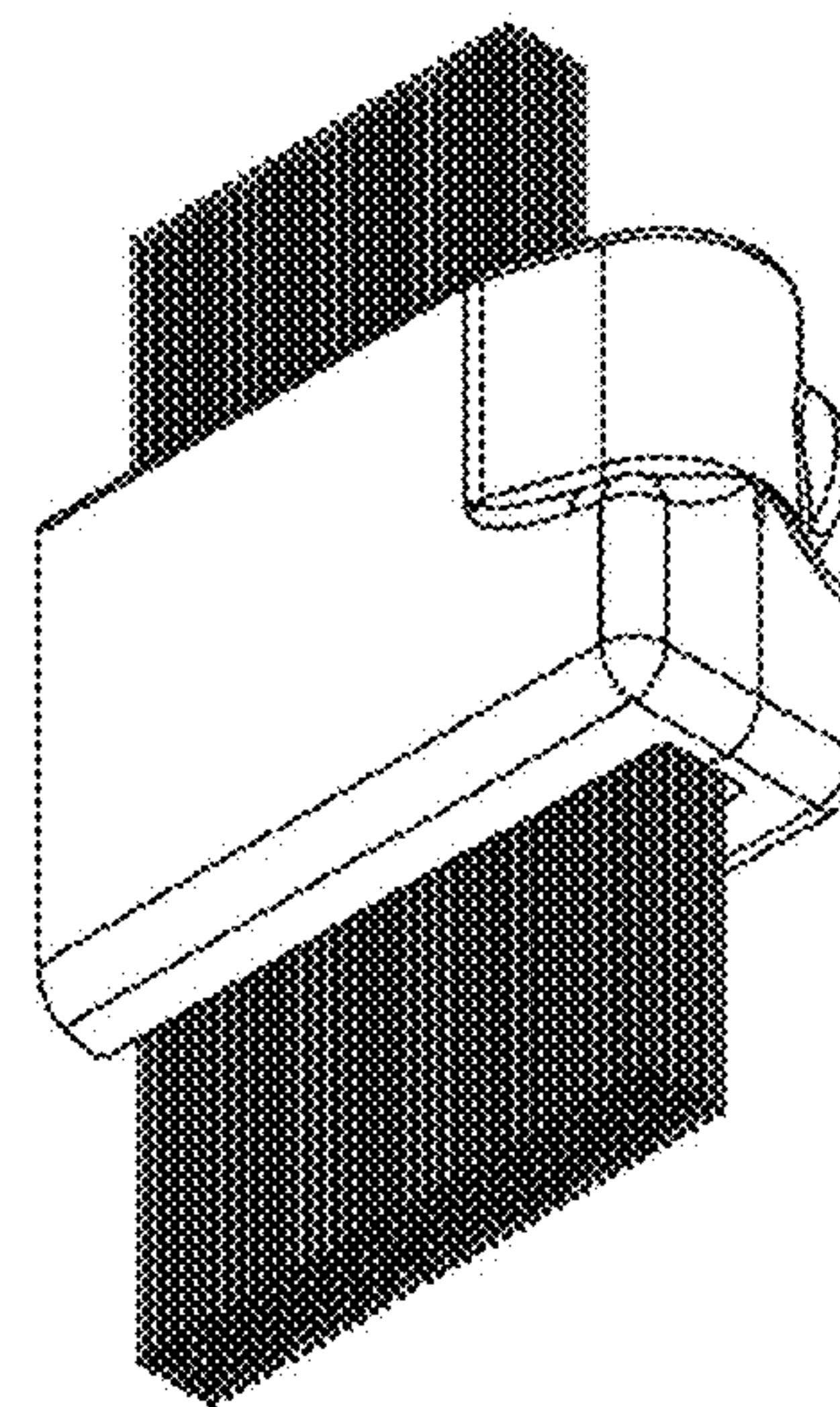


FIG. 22

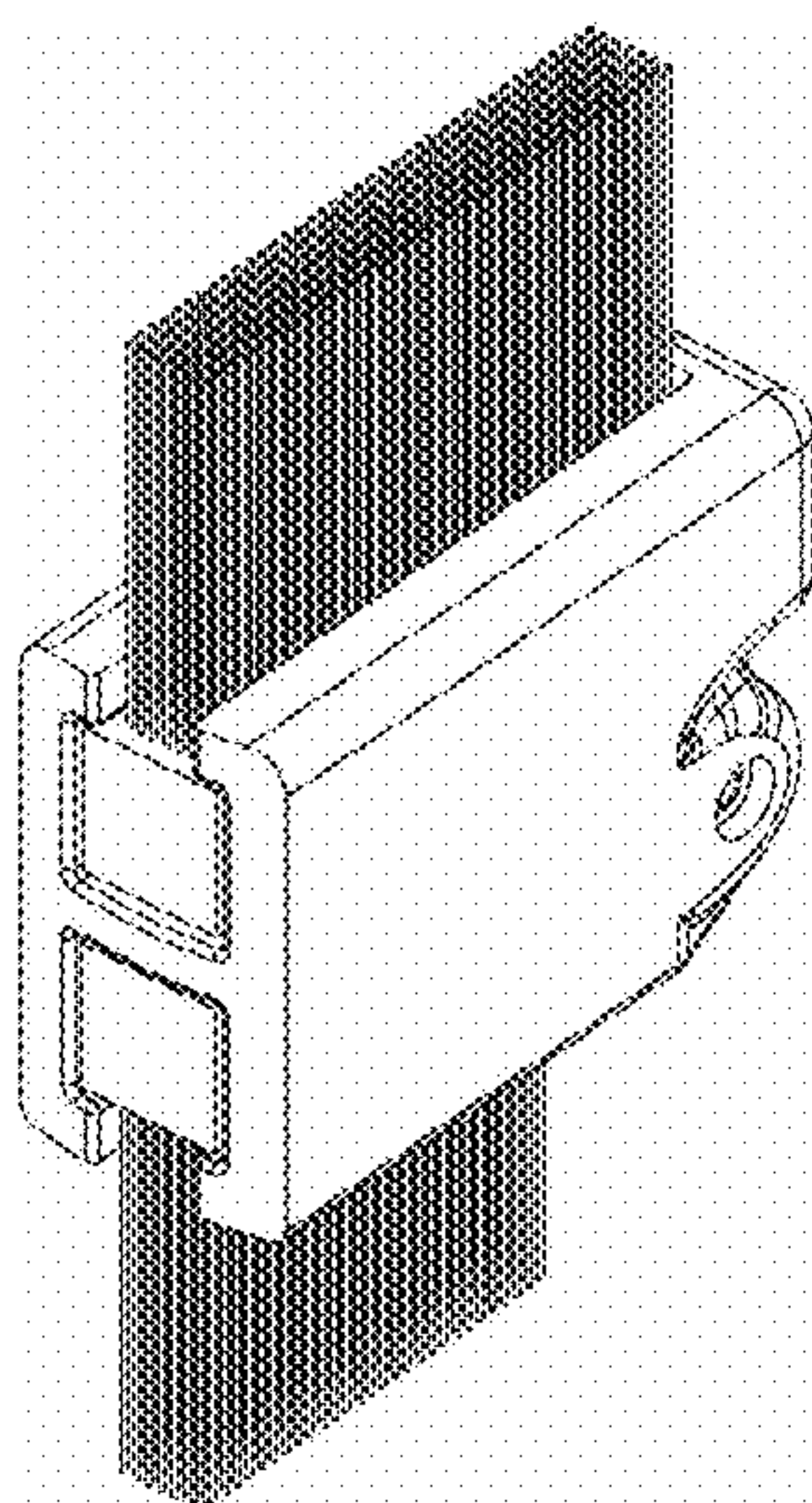


FIG. 23

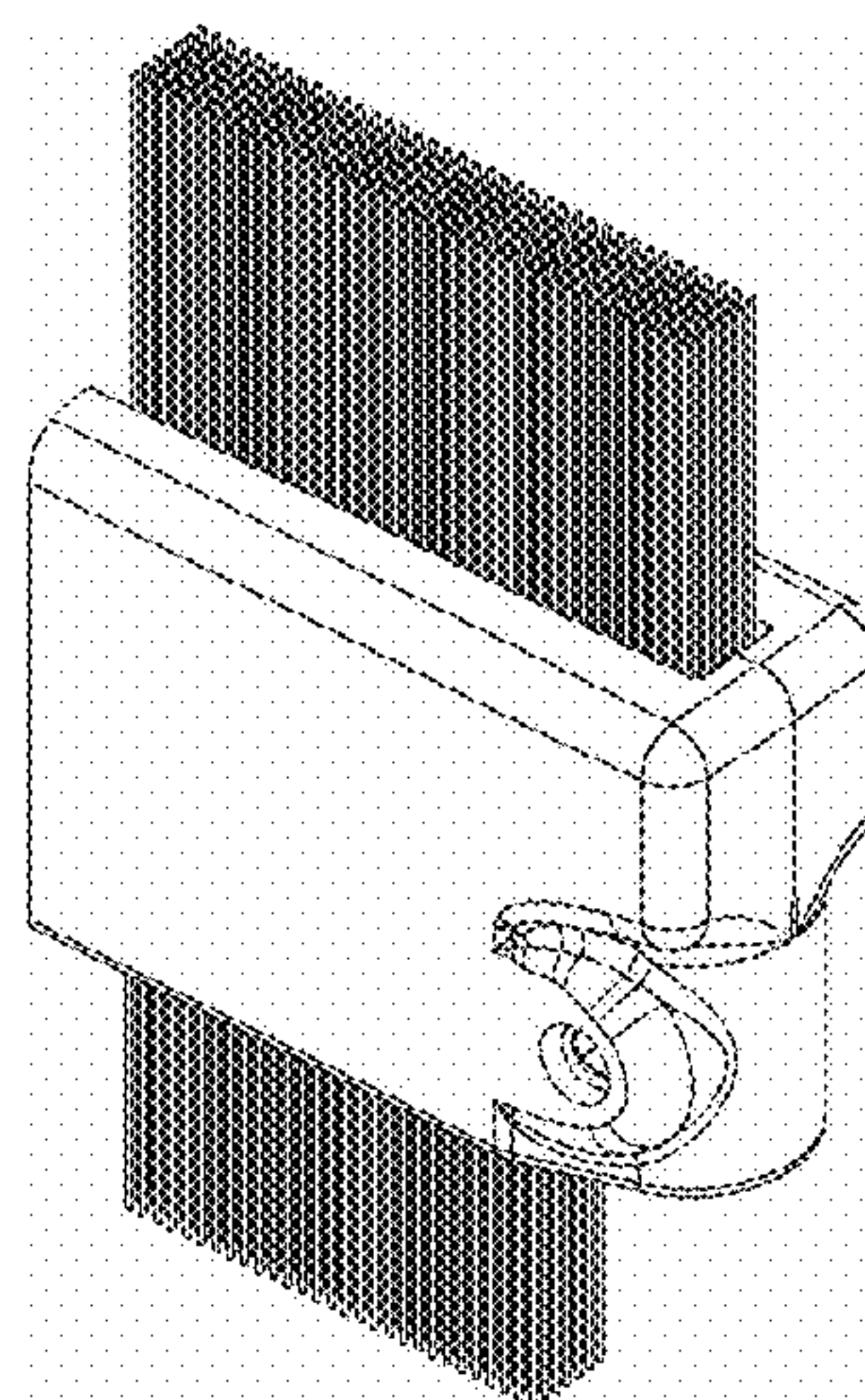


FIG. 24

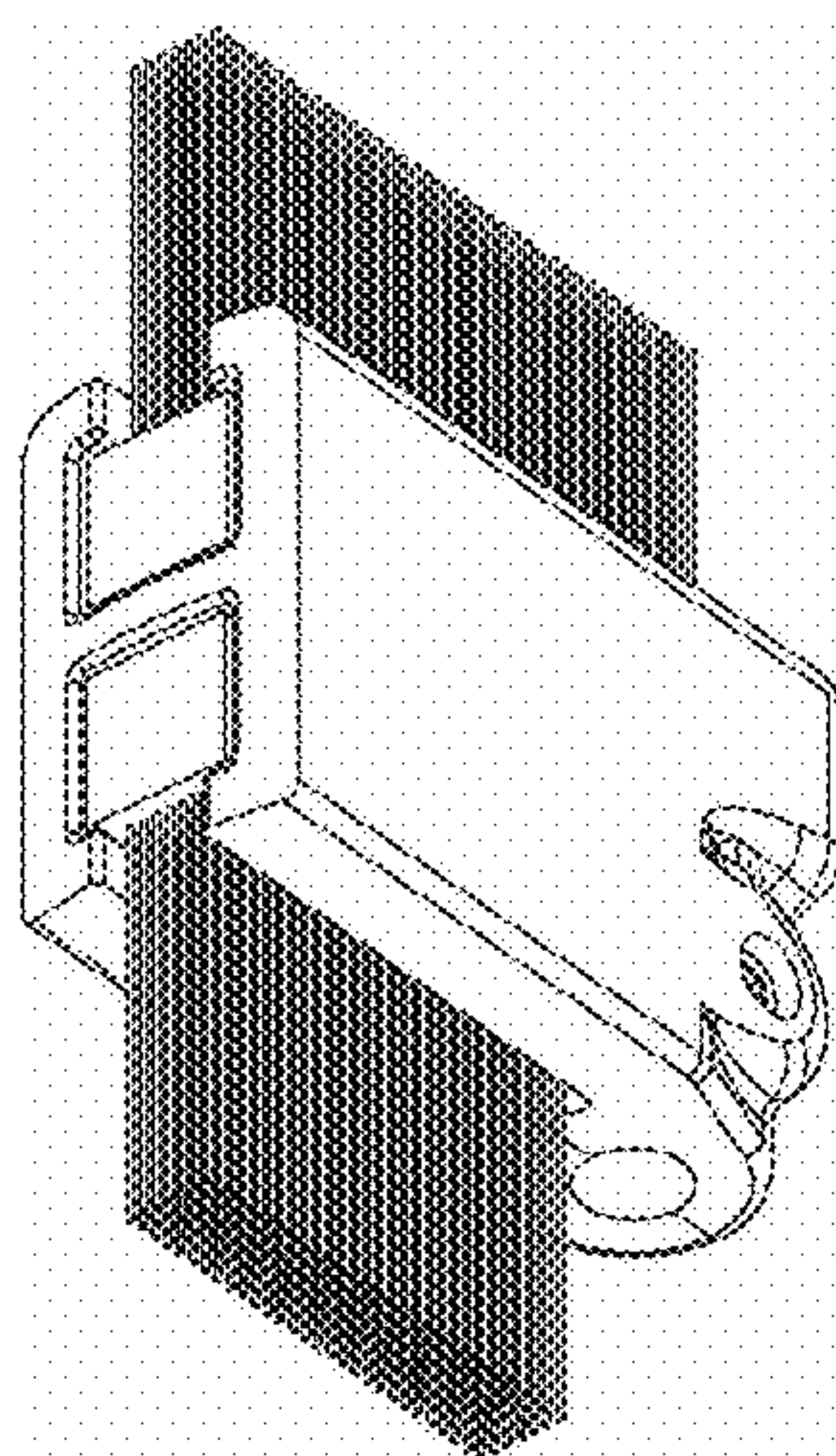


FIG. 25

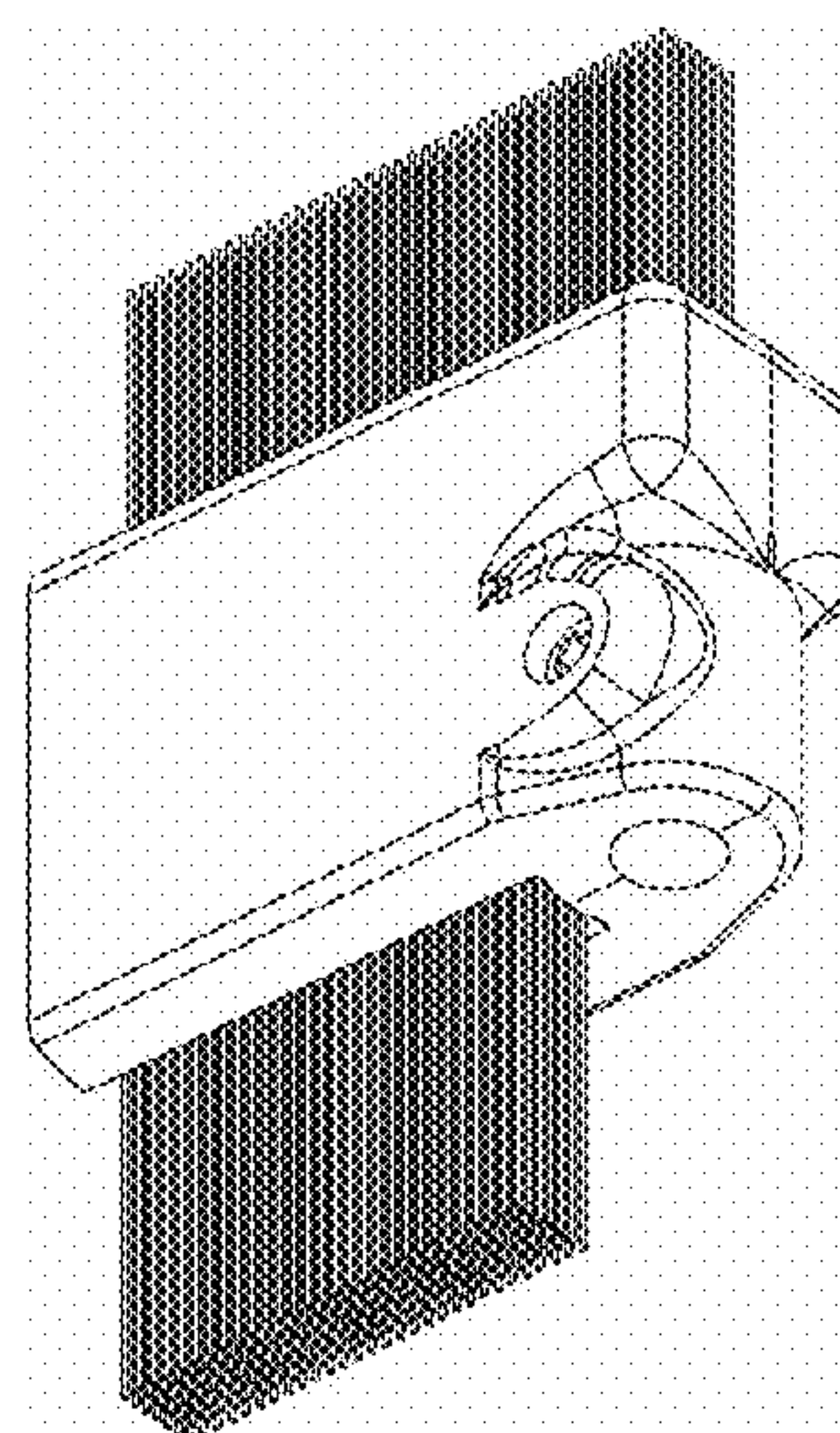


FIG. 26

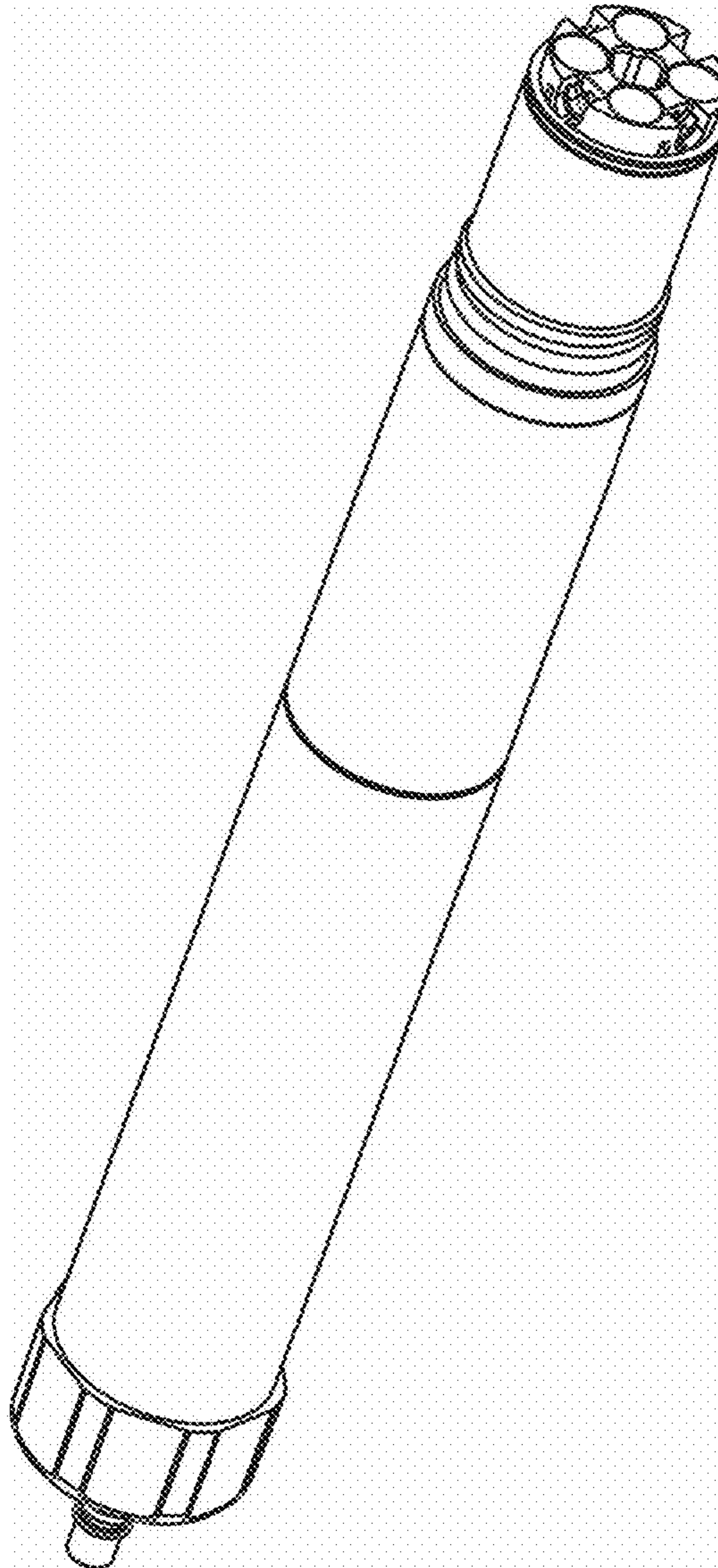


FIG. 27

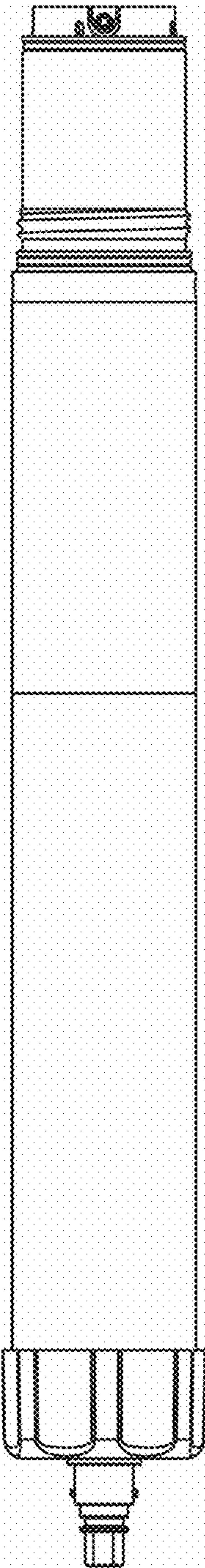


FIG. 28

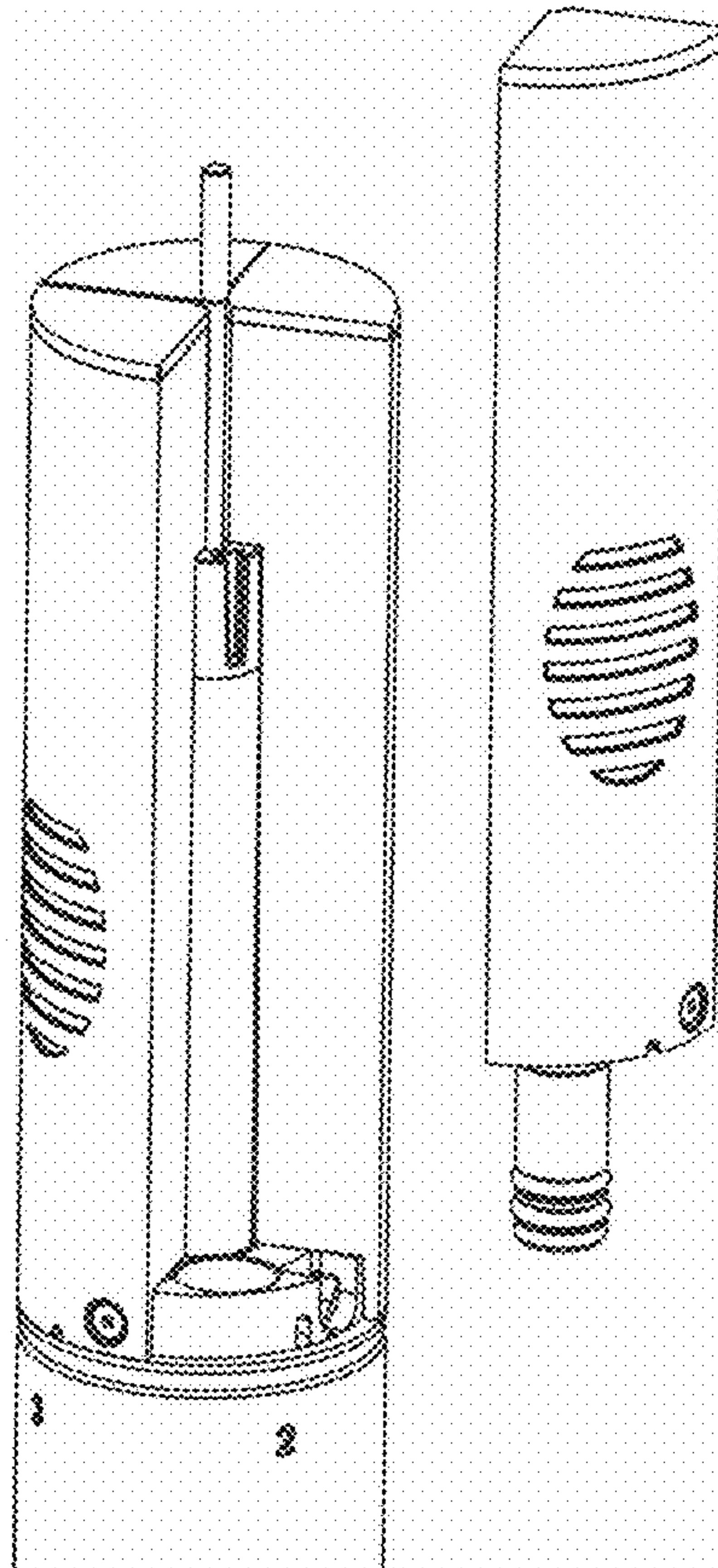


FIG. 29

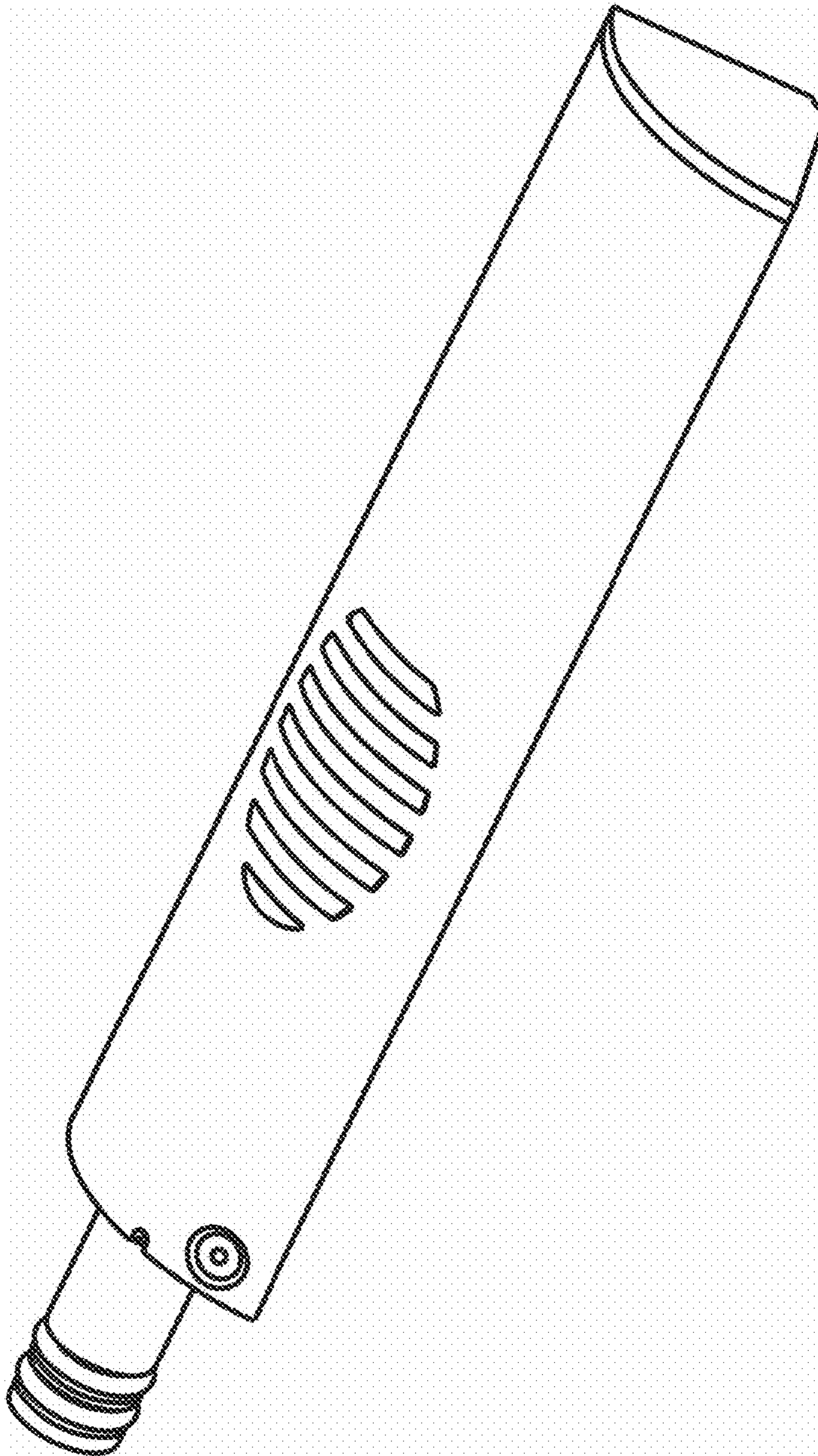


FIG. 30

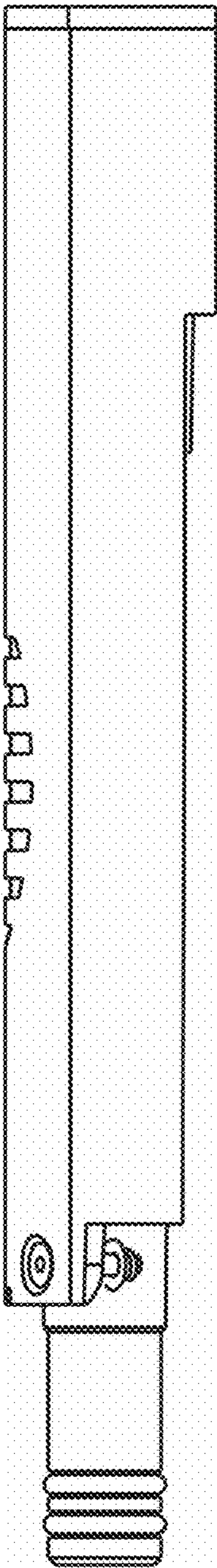


FIG. 31

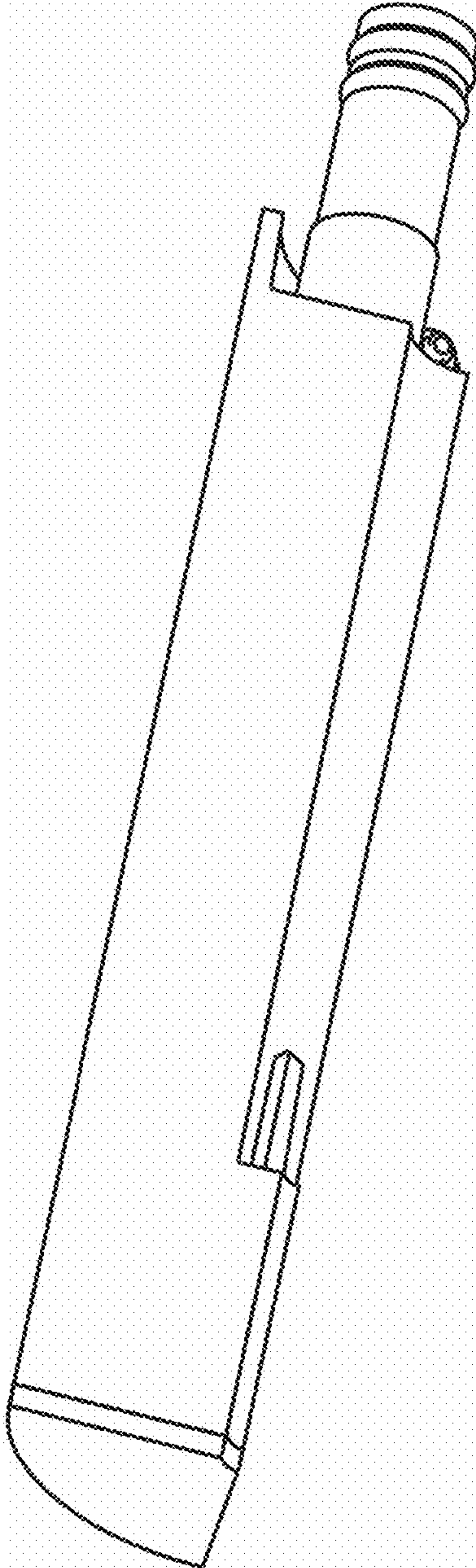


FIG. 32

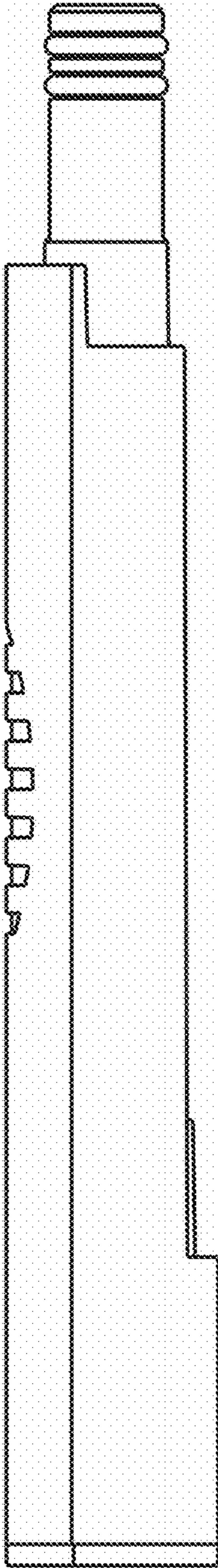


FIG. 33

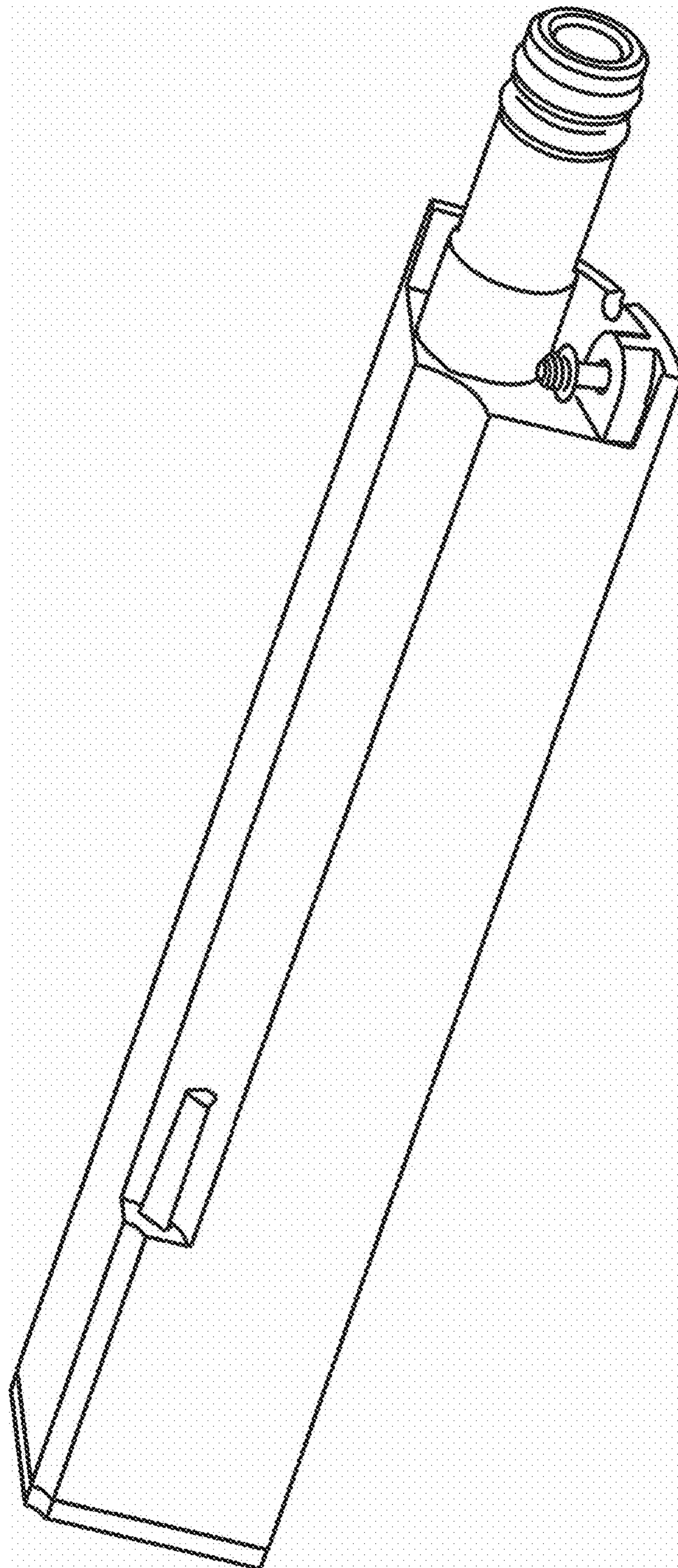


FIG. 34

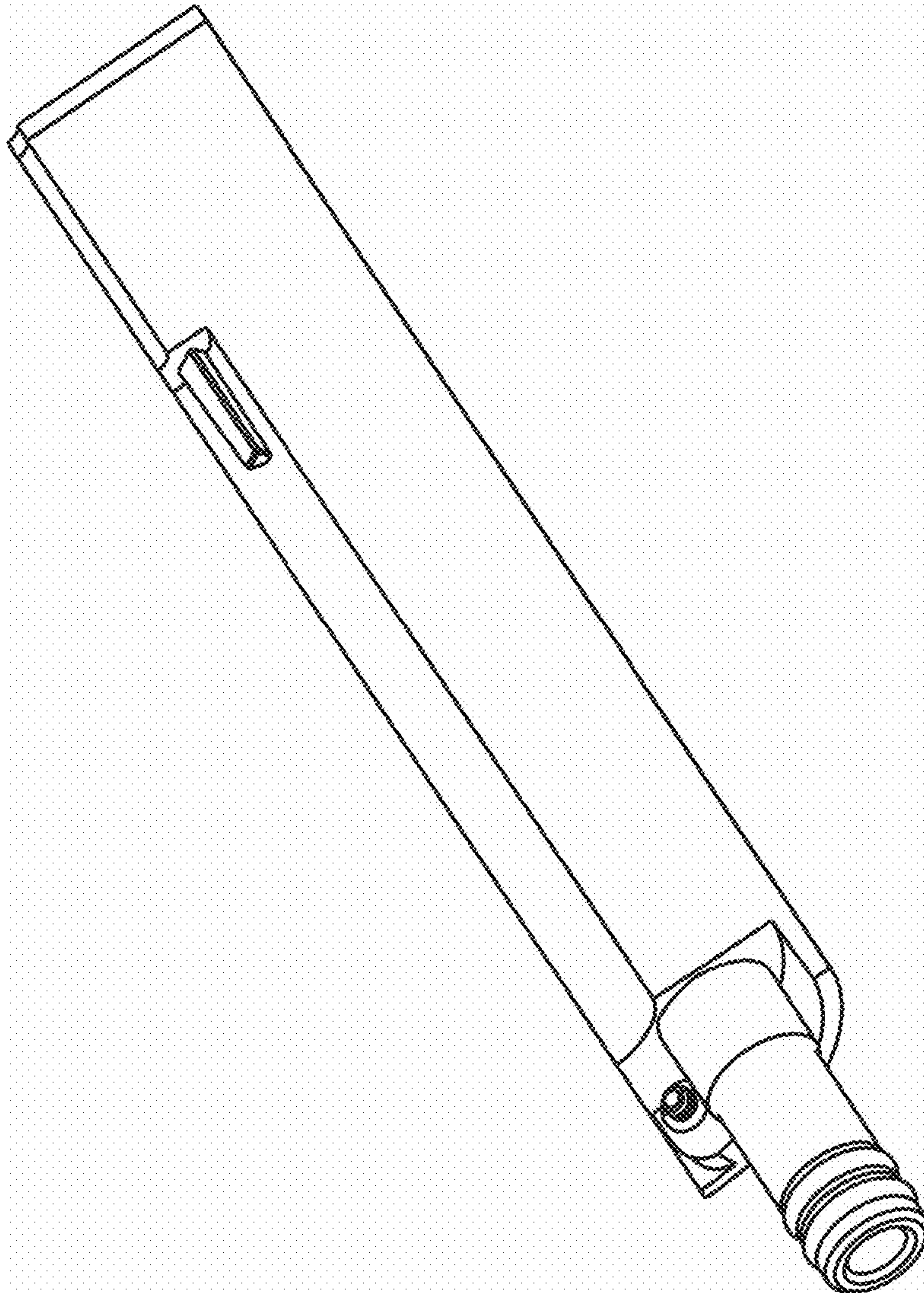


FIG. 35

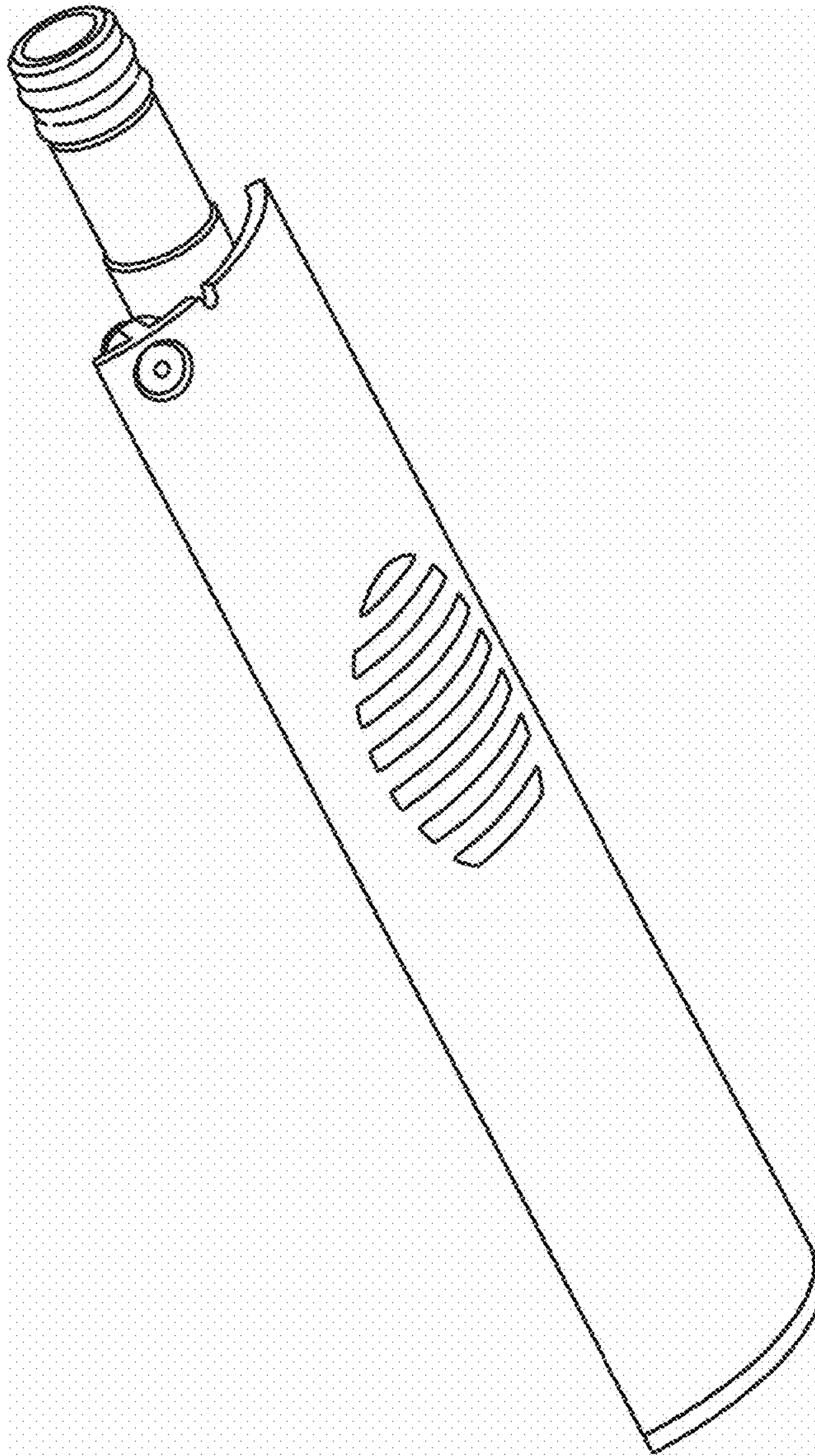


FIG. 36

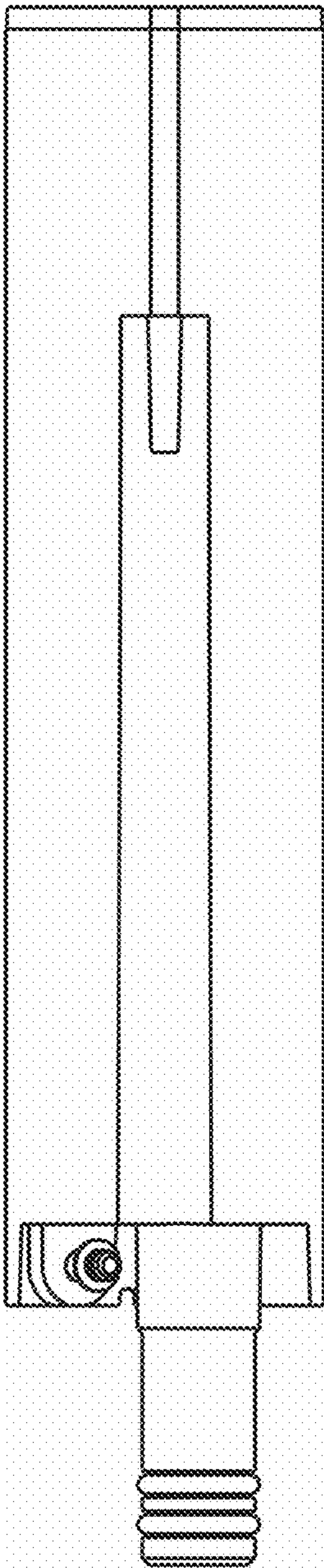


FIG. 37

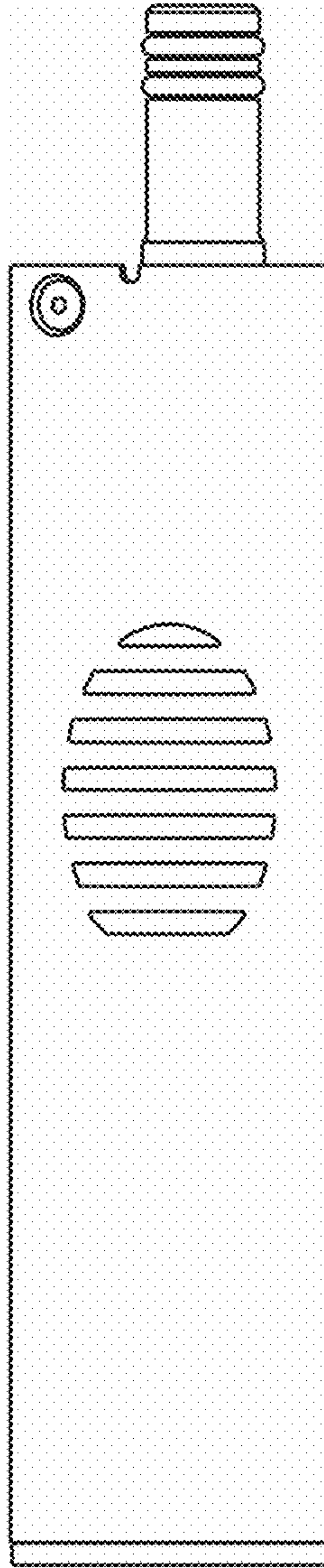


FIG. 38

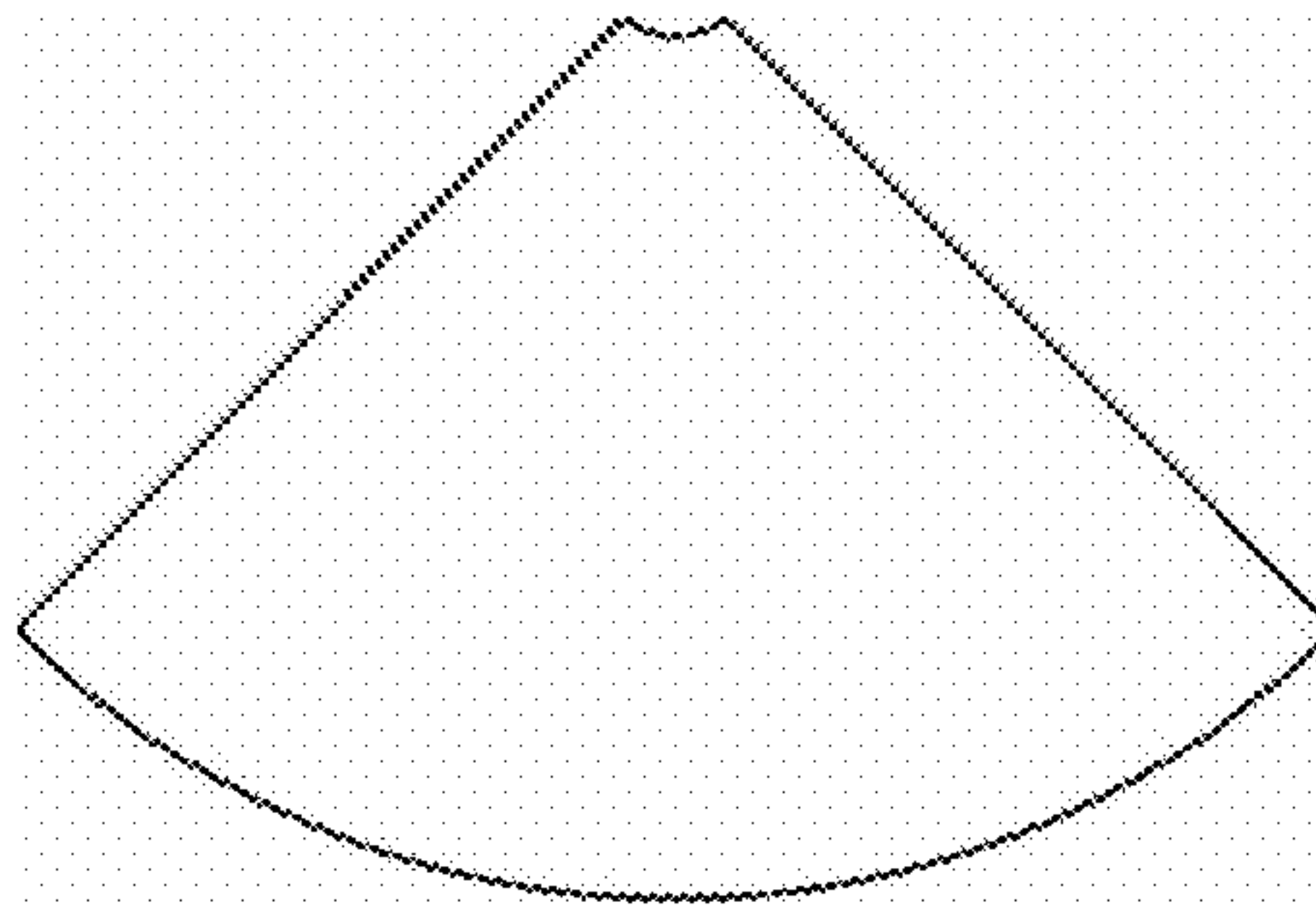


FIG. 39

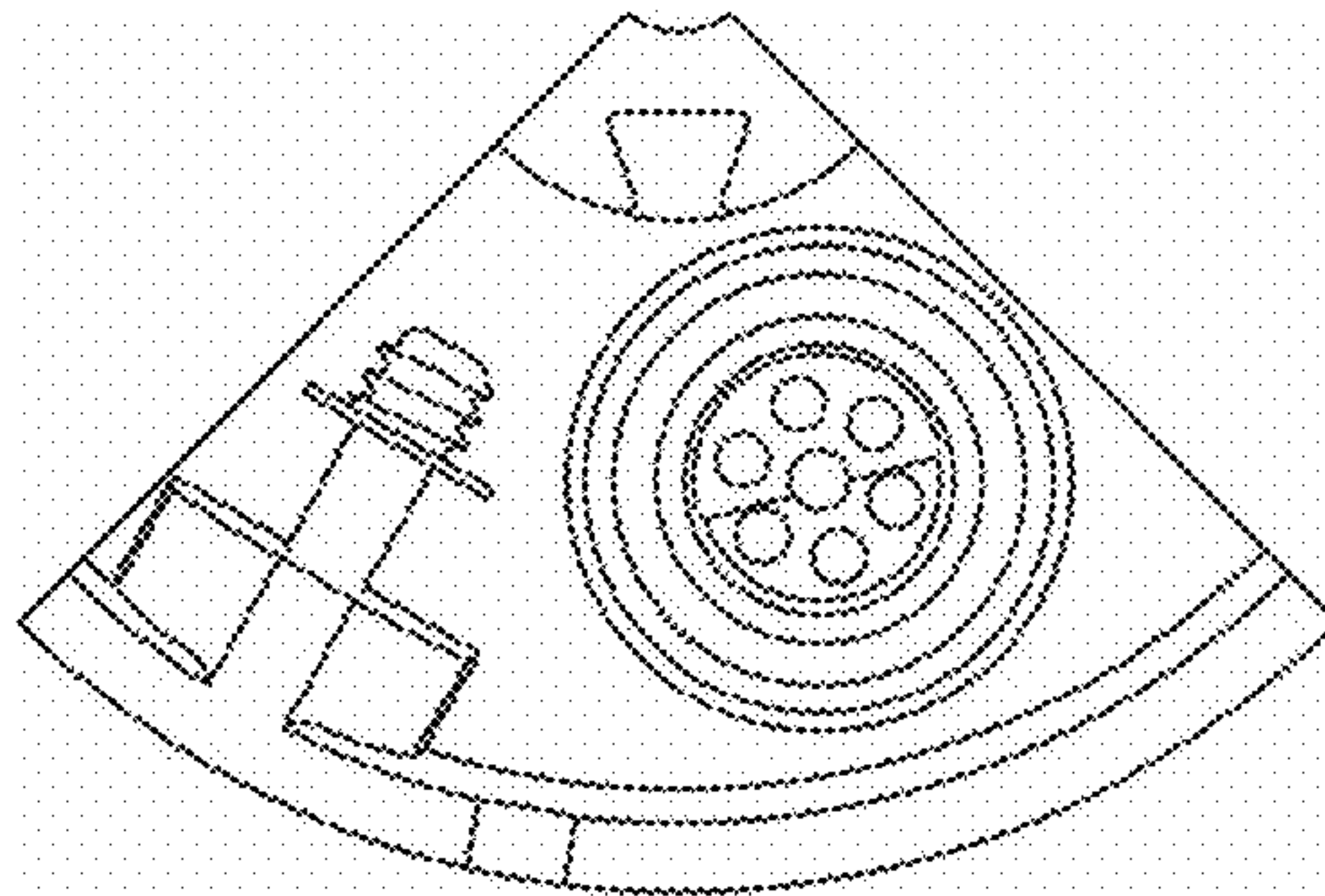


FIG. 40

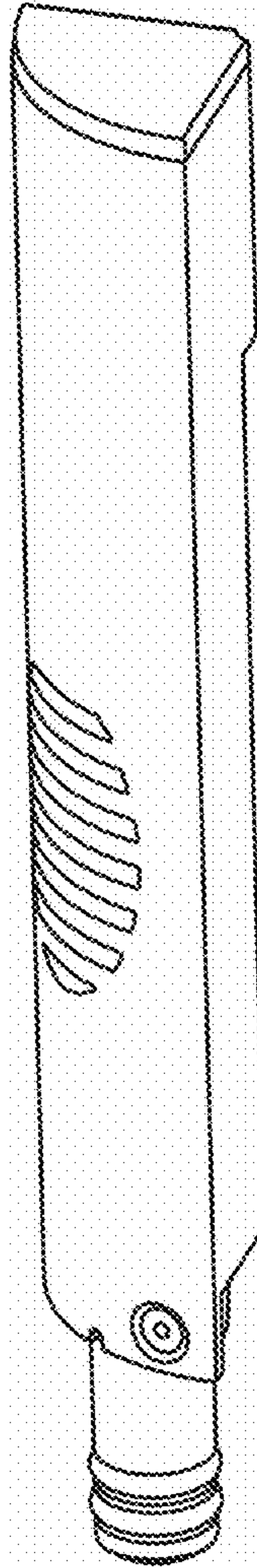


FIG. 41

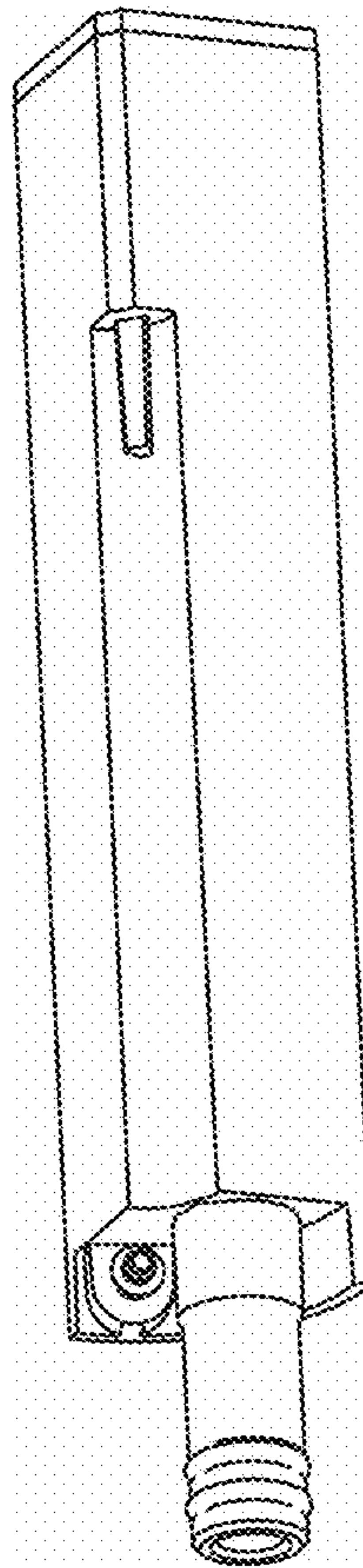


FIG. 42