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(12) **United States Design Patent** (10) **Patent No.:** **US D836,070 S**
Barrefelt et al. (45) **Date of Patent:** **** Dec. 18, 2018**

(54) **ELECTRICAL OR OPTICAL CONNECTOR**

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

(21) Appl. No.: **29/649,325**

(22) Filed: **May 29, 2018**

Related U.S. Application Data

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(30) **Foreign Application Priority Data**

Jan. 26, 2015 (EM) 002620237

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

(52) **U.S. Cl.**
USPC **D13/133**

(58) **Field of Classification Search**

USPC D13/118, 120, 123, 133-135, 145-147, D13/149, 151, 153-157, 173, 184, 199
CPC ... A61B 1/00; H01R 9/00; H01R 9/05; H01R 13/00; H01R 13/33; H01R 13/40; H01R 13/52; H01R 13/56; H01R 13/58; H01R 13/62; H01R 13/63; H01R 33/00; G02B 6/36; F16L 21/06

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D320,001 S * 9/1991 Hirabayashi D13/146
D437,294 S 2/2001 Amin

(Continued)

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Assistant Examiner — Shawn T Gingrich

(74) *Attorney, Agent, or Firm* — Barley Snyder

(57) **CLAIM**

The ornamental design for an electrical or optical connector, as shown and described.

DESCRIPTION

FIG. 1 is a bottom, front, and right side perspective view of an electrical or optical connector;

FIG. 2 is a front view thereof;

FIG. 3 is a rear view thereof;

FIG. 4 is a left side elevation view thereof;

FIG. 5 is a right side elevation view thereof;

FIG. 6 is a top plan view thereof;

FIG. 7 is a bottom plan view thereof;

FIG. 8 is a bottom, front, and right side perspective view of a second embodiment of an electrical or optical connector;

FIG. 9 is a front view thereof;

FIG. 10 is a rear view thereof;

FIG. 11 is a left side elevation view thereof;

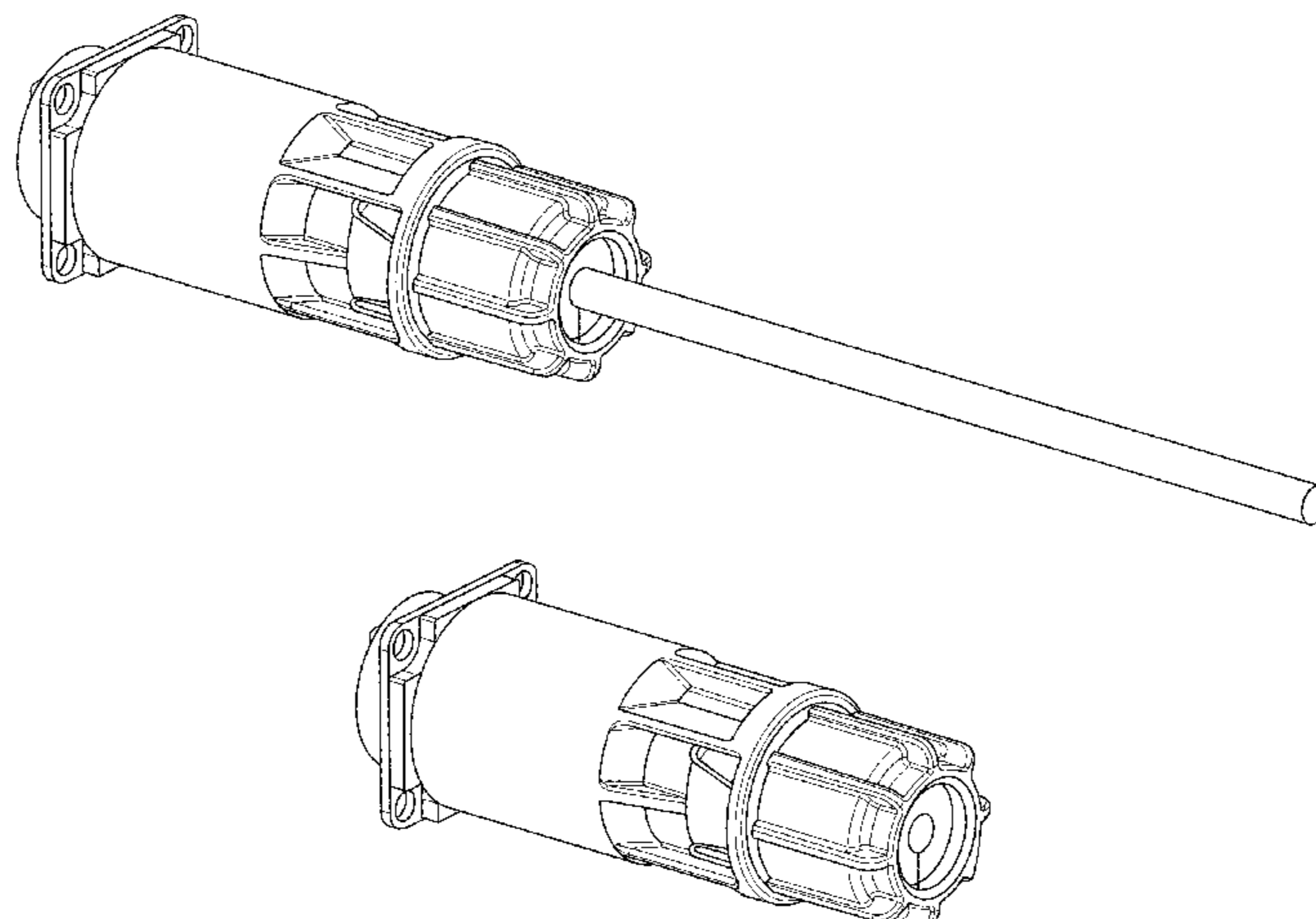
FIG. 12 is a right side elevation view thereof;

FIG. 13 is a top plan view thereof; and,

FIG. 14 is a bottom plan view thereof.

The broken lines shown in the drawings are included for the purpose of illustrating environmental structure and form no part of the claimed design.

1 Claim, 14 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

7,934,943 B2 5/2011 Malstrom et al.
D647,481 S * 10/2011 Ohmori D13/133
D675,161 S * 1/2013 Rayner D13/133
D677,627 S 3/2013 Dobler
D714,725 S 10/2014 Vogelmann
8,882,364 B2 * 11/2014 Busse G02B 6/3825
385/77
9,256,030 B2 2/2016 Belenkiy et al.
D769,822 S * 10/2016 Reynolds D13/146
D769,882 S 10/2016 Reynolds
D804,426 S 12/2017 Watkins
9,923,288 B2 3/2018 Bertrand
D820,210 S * 6/2018 Barrefelt D13/133
2011/0244721 A1 10/2011 Amidon
2011/0312210 A1 12/2011 Chawgo et al.
2011/0312211 A1 12/2011 Natoli
2014/0057487 A1 2/2014 May
2014/0340076 A1 * 11/2014 Ilg H01R 13/516
324/156
2015/0369406 A1 * 12/2015 Dieduksman H02G 3/0468
285/417
2015/0372417 A1 * 12/2015 Dieduksman G02B 6/3807
439/461
2016/0018603 A1 * 1/2016 Mooij G02B 6/3817
385/76
2016/0134006 A1 5/2016 Endo et al.
2016/0134066 A1 * 5/2016 Endo H01R 9/05
439/578
2016/0172783 A1 * 6/2016 Endo H01R 13/052
439/746
2017/0288335 A1 10/2017 Hsu
2017/0299817 A1 10/2017 Huang et al.
2017/0346200 A1 11/2017 Bertrand et al.
2017/0365962 A1 12/2017 Gniadek
2018/0115120 A1 * 4/2018 Islam H01R 13/6658

* cited by examiner

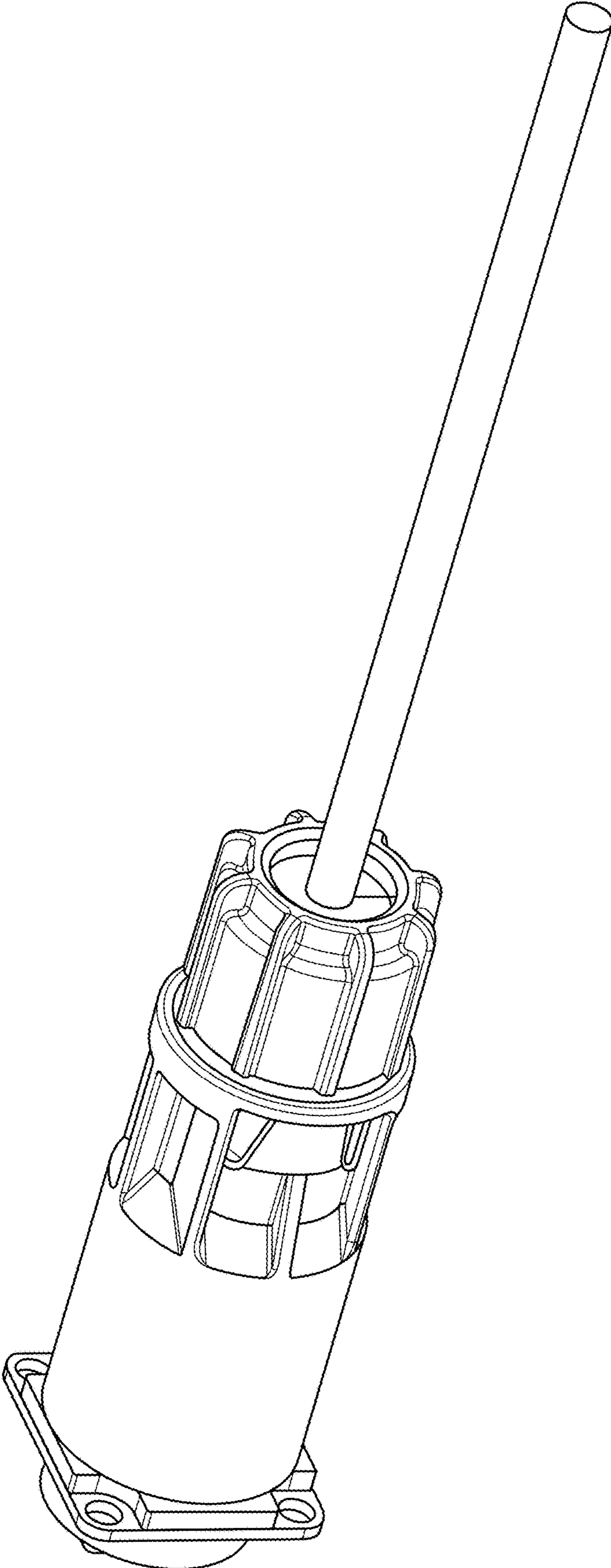


FIG. 1

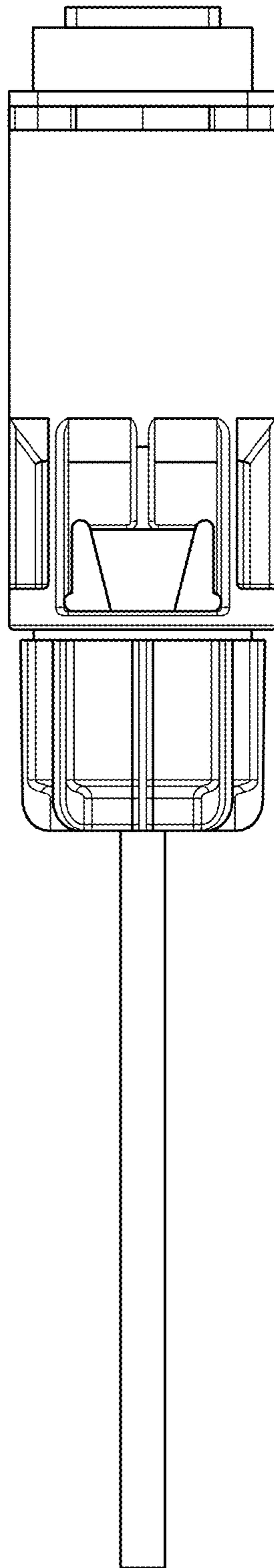


FIG. 2

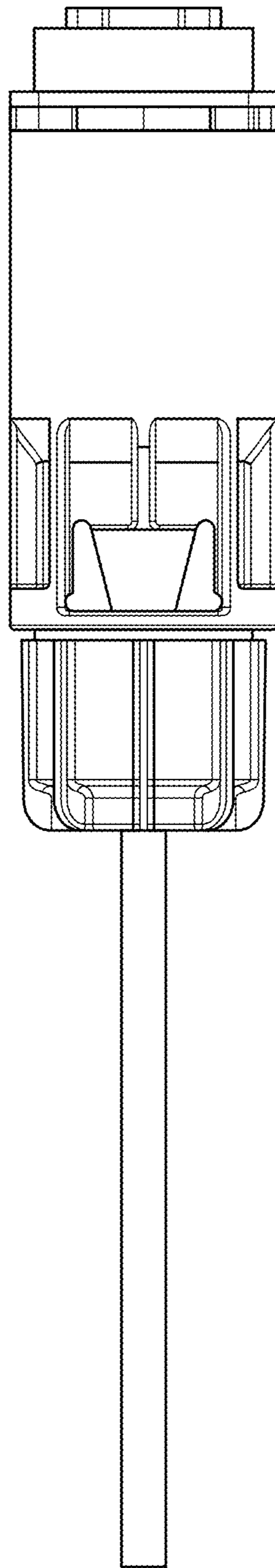


FIG. 3

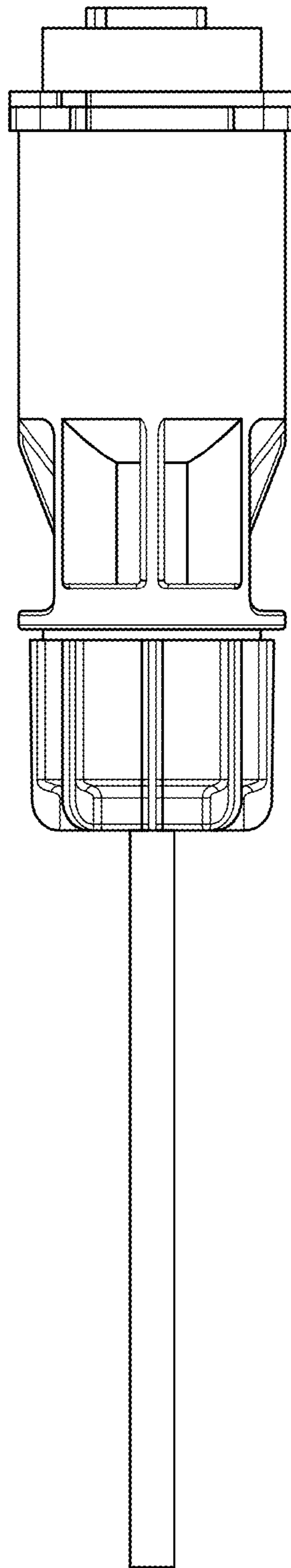


FIG. 4

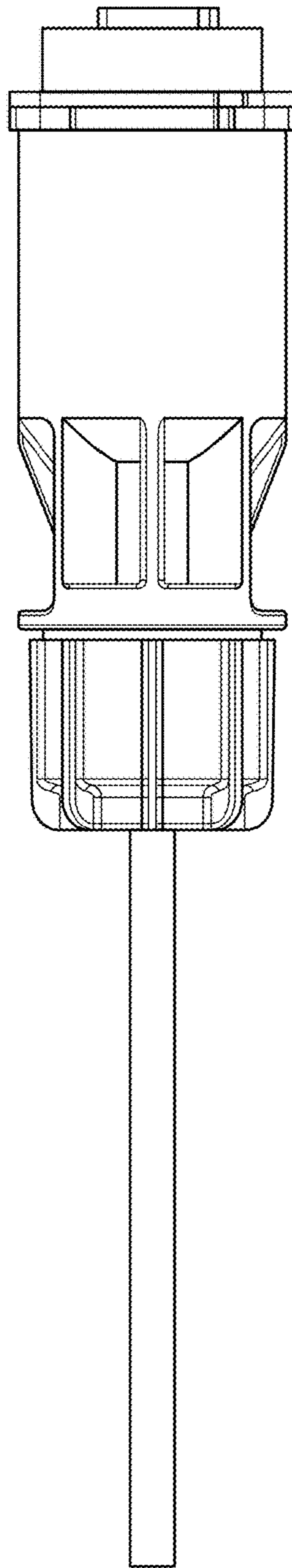


FIG. 5

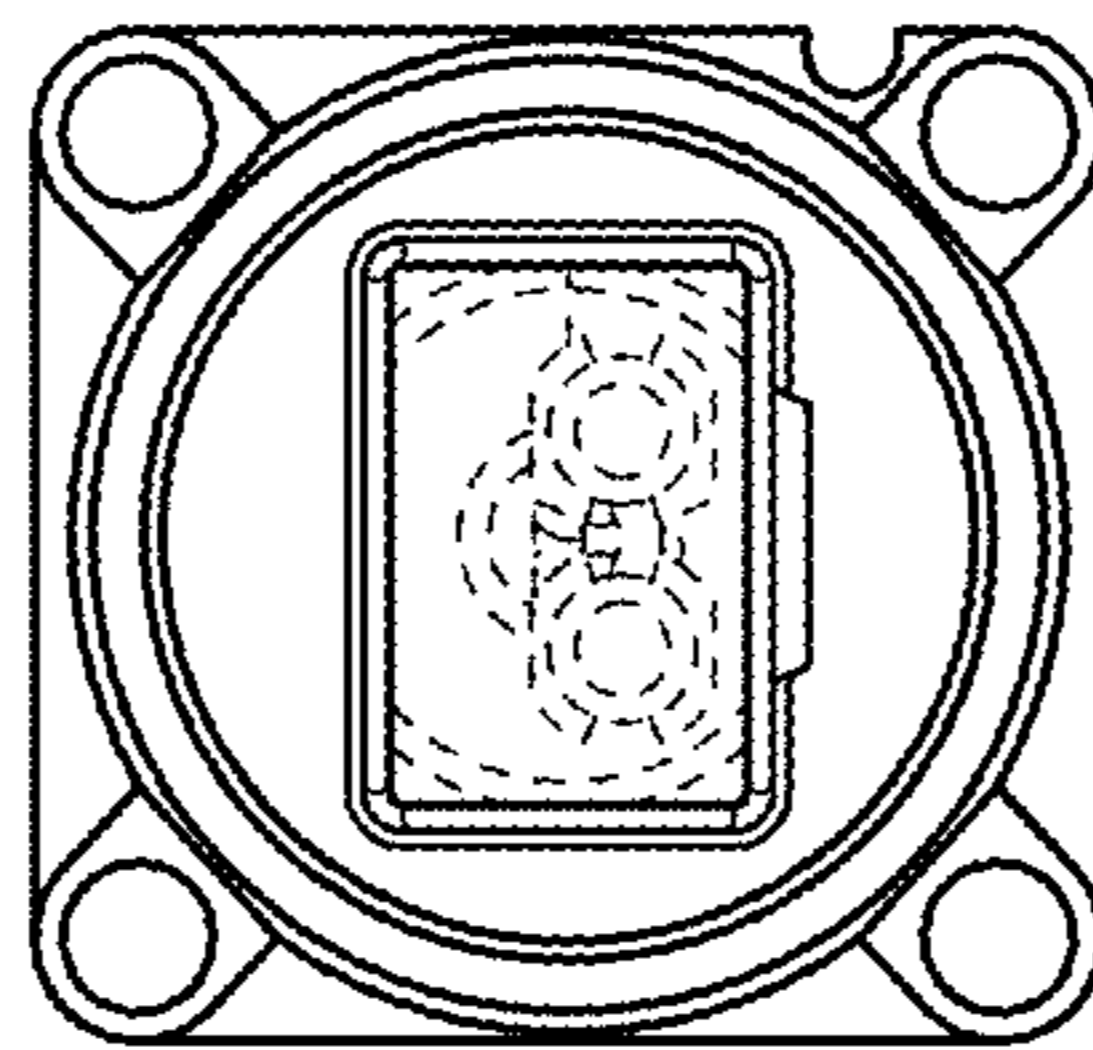


FIG. 6

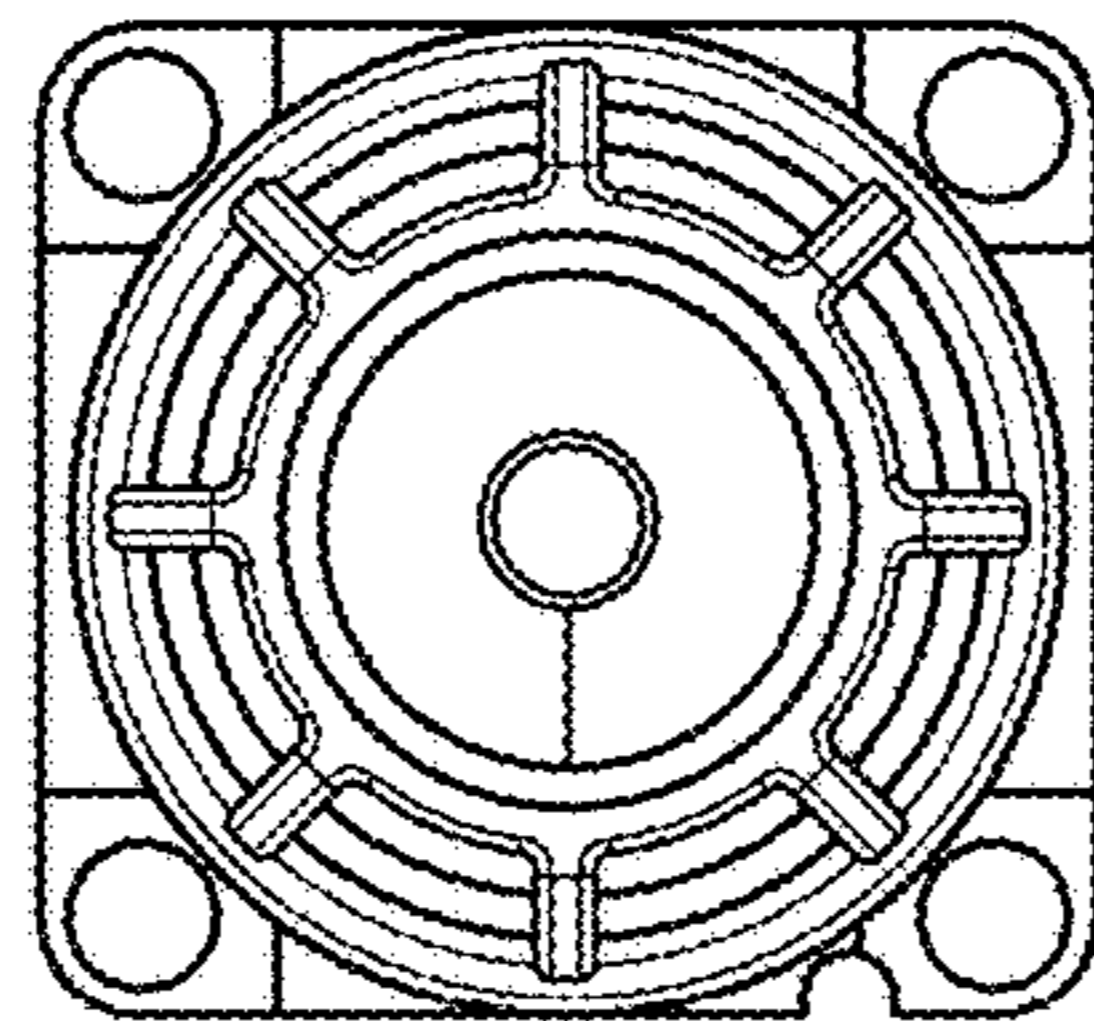


FIG. 7

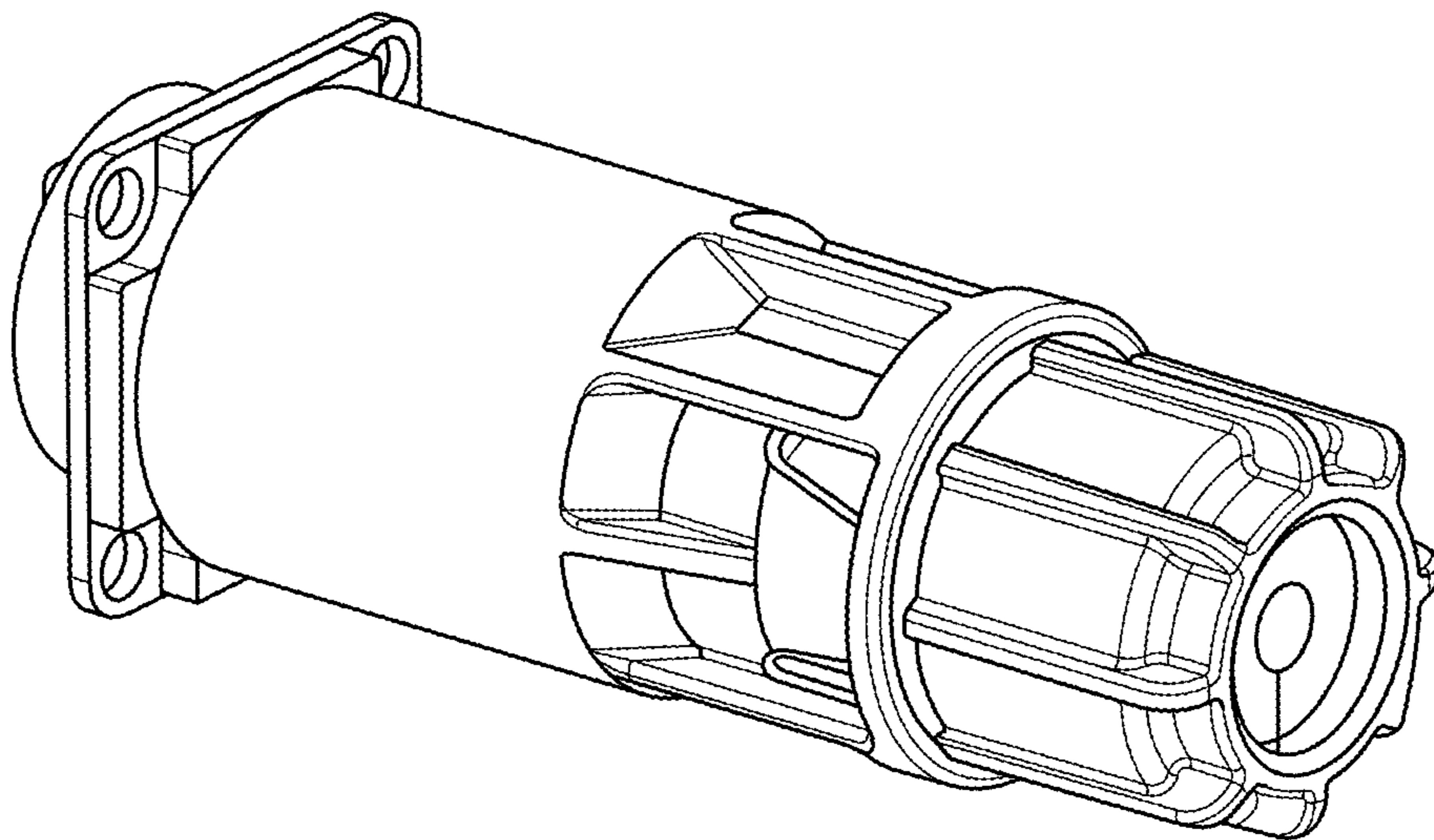


FIG. 8

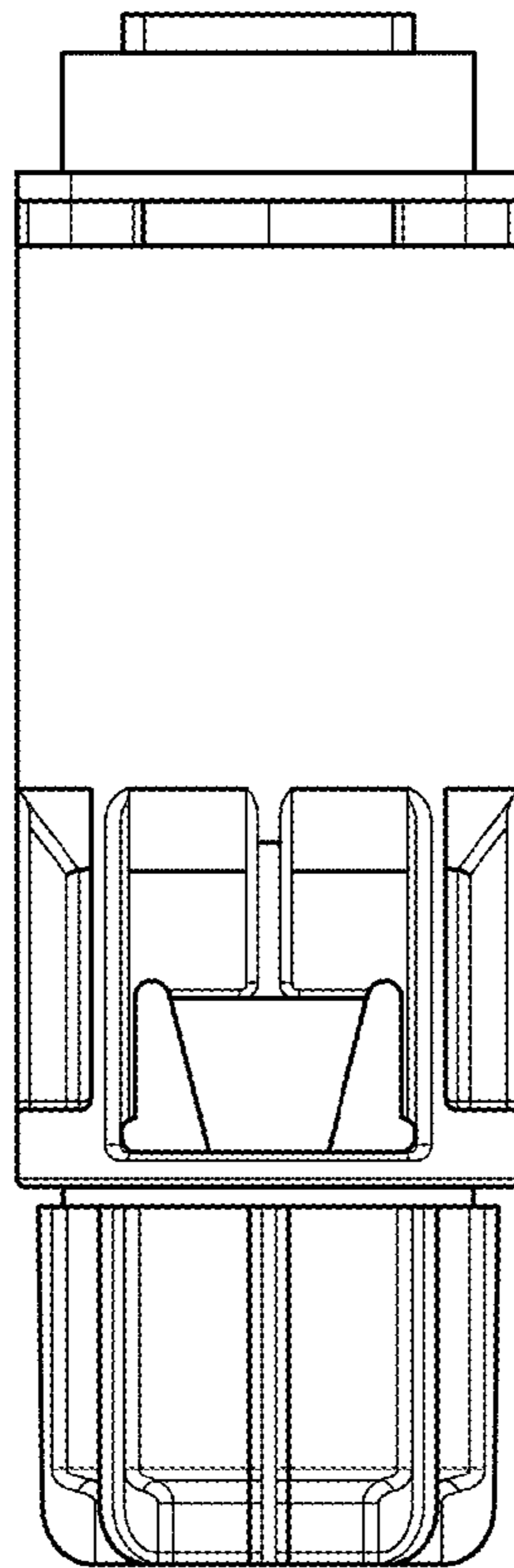


FIG. 9

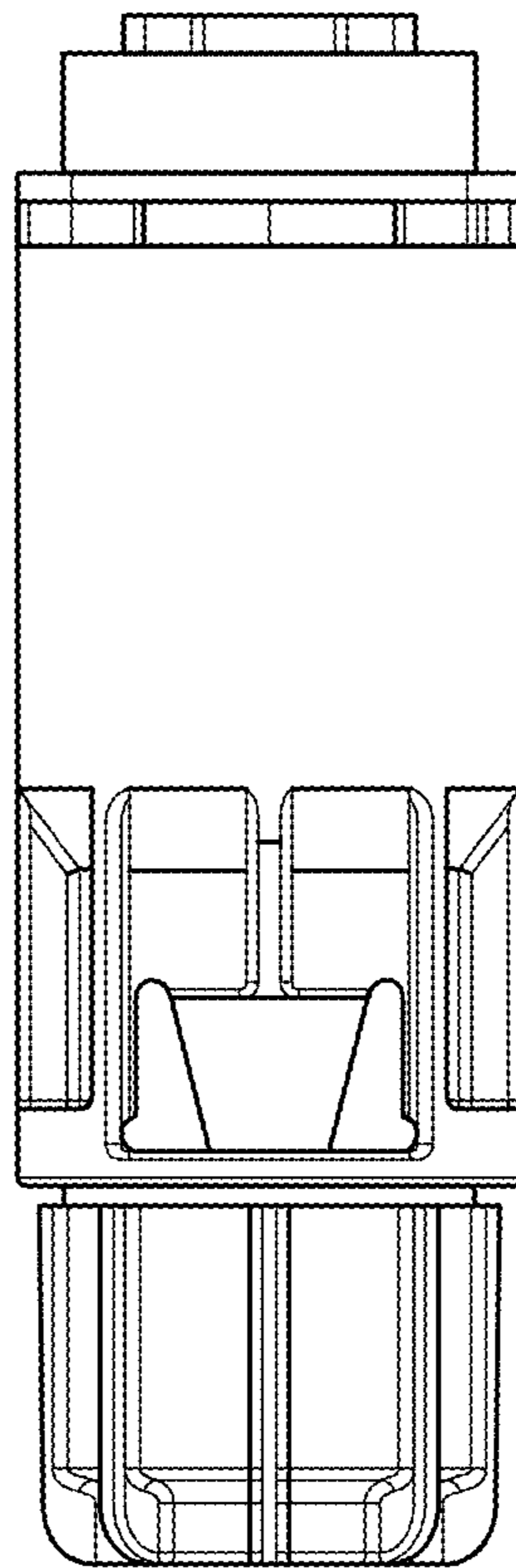


FIG. 10

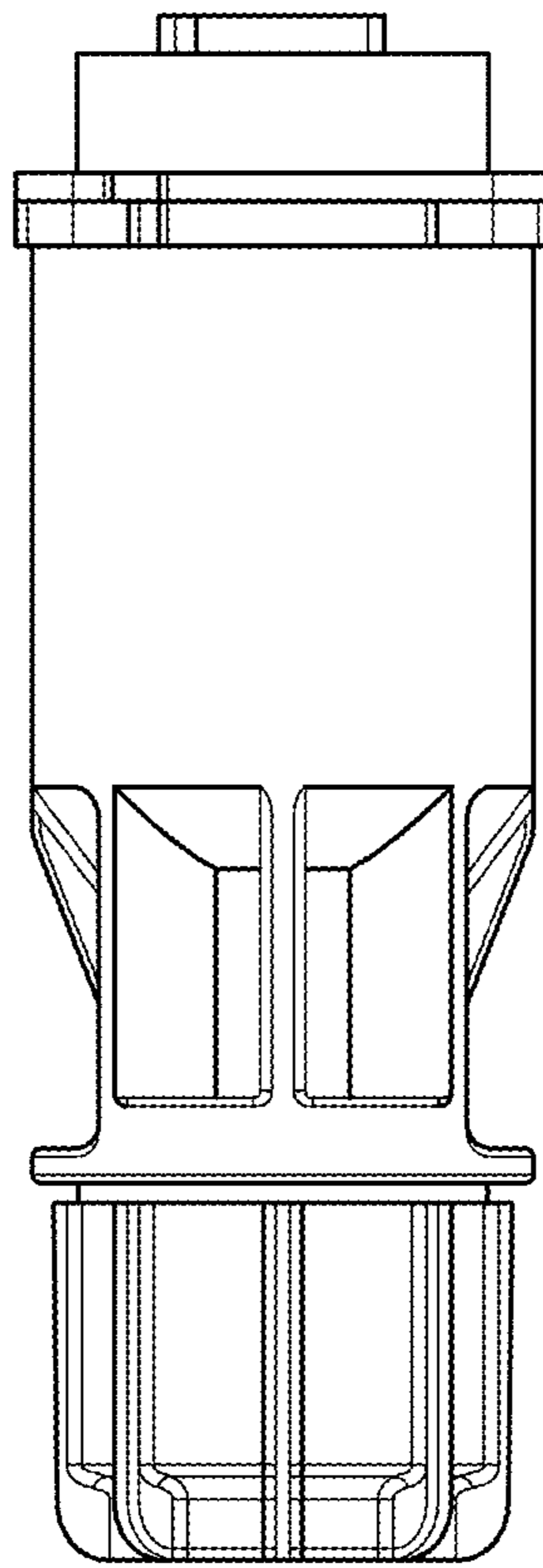


FIG. 11

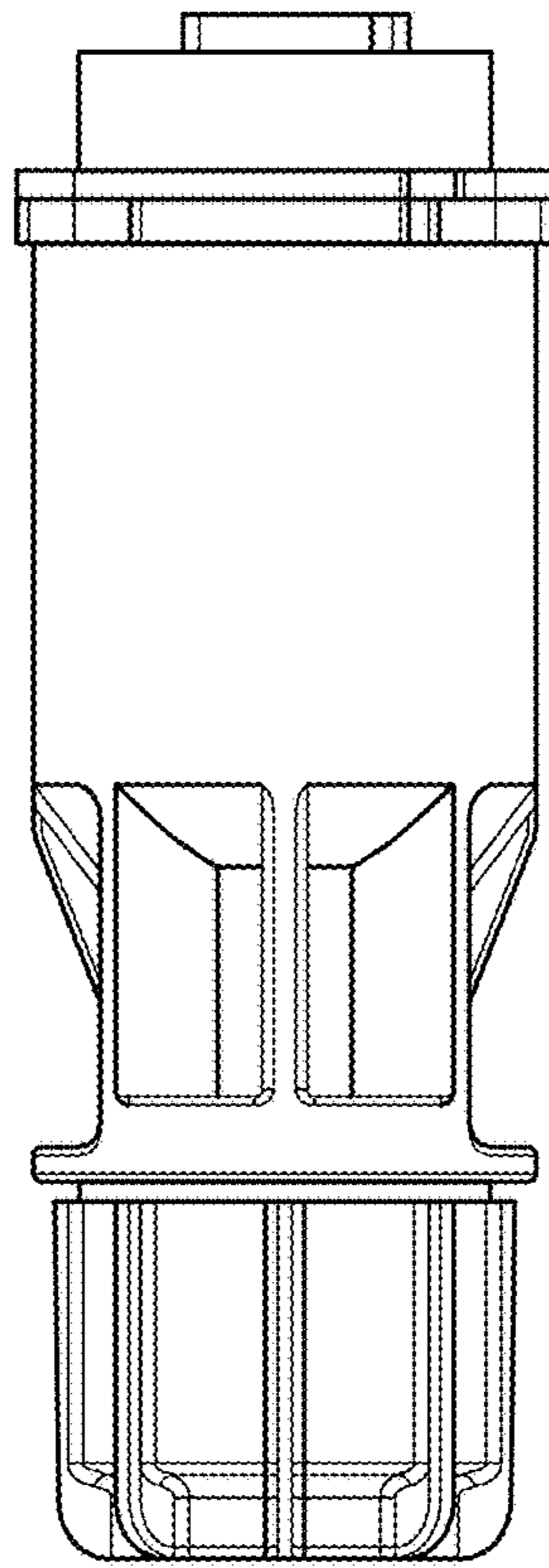


FIG. 12

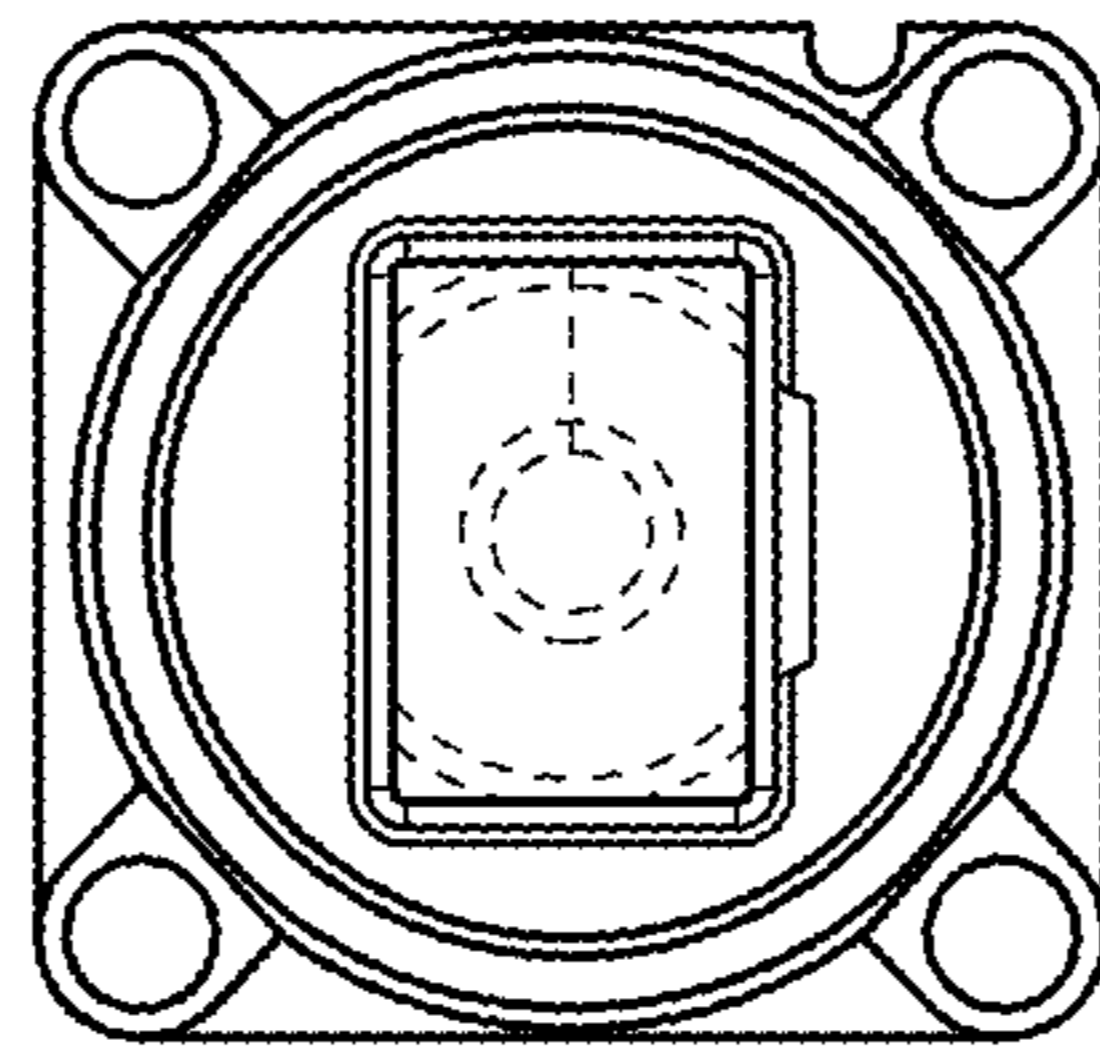


FIG. 13

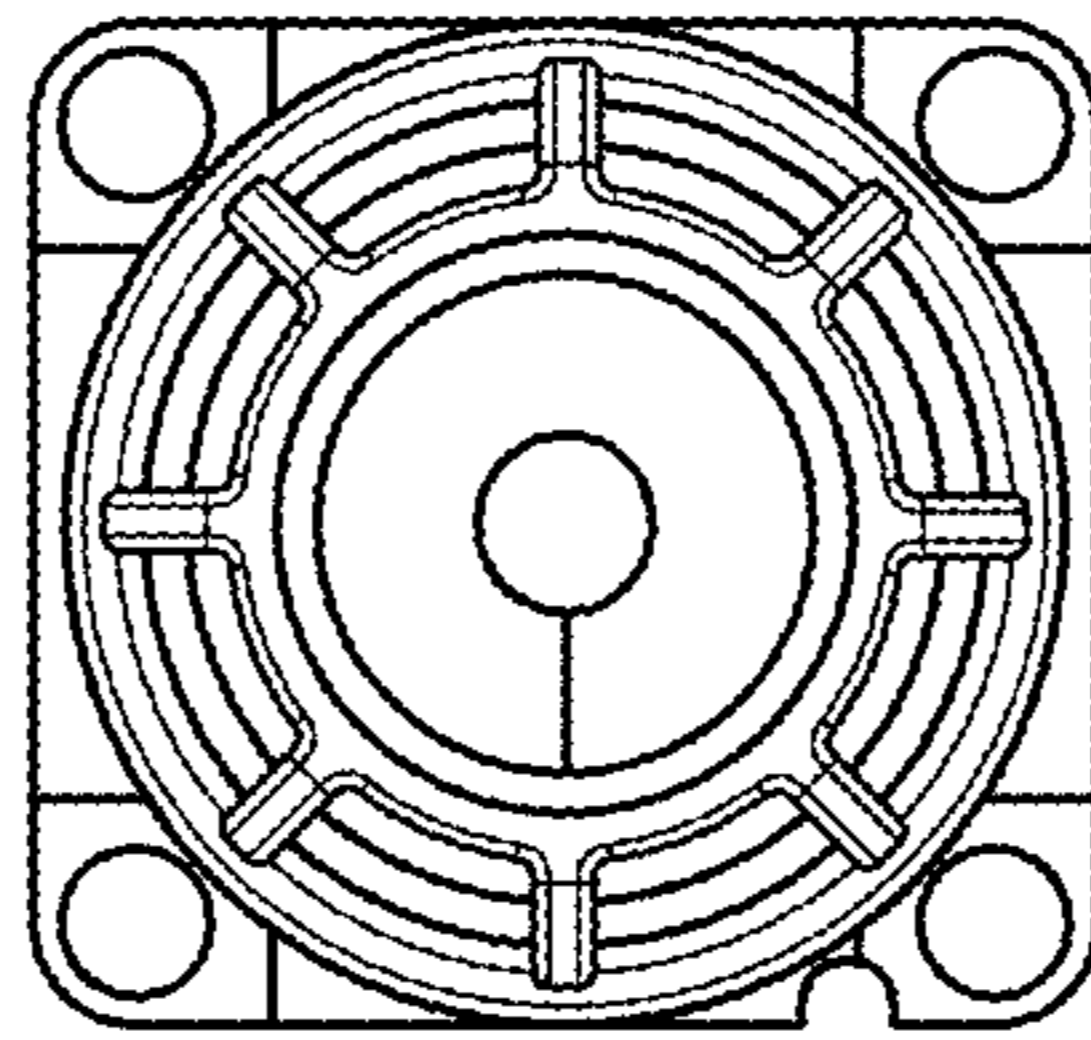


FIG. 14