



US00D965777S

(12) **United States Design Patent**  
**Marici et al.**

(10) **Patent No.:** **US D965,777 S**  
(45) **Date of Patent:** **\*\* Oct. 4, 2022**

(54) **TIP CAP AND DISINFECTING UNIT**

(71) Applicant: **Becton, Dickinson and Company**,  
Franklin Lakes, NJ (US)

(72) Inventors: **Paul P. Marici**, Piscataway, NJ (US);  
**Richard Timmers**, Westwood, NJ  
(US); **Ulas Kemal Ayaz**, Glen Ridge,  
NJ (US); **Paul Tarsia**, Ringwood, NJ  
(US)

(73) Assignee: **Becton, Dickinson and Company**,  
Franklin Lakes, NJ (US)

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

(21) Appl. No.: **29/750,257**

(22) Filed: **Sep. 11, 2020**

(51) **LOC (13) Cl.** ..... **24-02**

(52) **U.S. Cl.**  
USPC ..... **D24/130**

(58) **Field of Classification Search**  
USPC ..... D24/144, 146, 133, 127-131, 112-115,  
D24/231

(Continued)

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

7,418,880 B1 \* 9/2008 Smith ..... G01N 1/14  
D24/114  
D581,049 S \* 11/2008 Sudo ..... D24/130

(Continued)

**FOREIGN PATENT DOCUMENTS**

GB 6122281 \* 3/2021  
JP D1693119 \* 8/2021  
KR 300830169.0000 \* 12/2015

**OTHER PUBLICATIONS**

Syringe Tip Cap TrueCare Red, Sterile, Male/Female Luer, McKesson, [Post date: unknown], [Site seen May 19, 2022], Seen at URL:

<https://mms.mckesson.com/product/1136391/TrueCare-Biomedix-TCBCOMBICAP> (Year: 2022).\*

(Continued)

*Primary Examiner* — Natasha Vujcic

*Assistant Examiner* — Gilbert B Ford

(74) *Attorney, Agent, or Firm* — Servilla Whitney LLC

(57) **CLAIM**

We claim, the ornamental design for a tip cap and disinfecting unit, as shown and described.

**DESCRIPTION**

FIG. 1 is a front isometric view of a tip cap and disinfecting unit;

FIG. 2 is a top view of the tip cap and disinfecting unit of FIG. 1;

FIG. 3 is a bottom view of the tip cap and disinfecting unit of FIG. 1;

FIG. 4 is a left side view of the tip cap and disinfecting unit of FIG. 1;

FIG. 5 is right side view of the tip cap and disinfecting unit of FIG. 1;

FIG. 6 is a rear view of the tip cap and disinfecting unit of FIG. 1;

FIG. 7 is a front view of the tip cap and disinfecting unit of FIG. 1;

FIG. 8 is a front isometric view of the tip cap and disinfecting unit of FIG. 1 attached to a syringe, said syringe shown as an environmental structure;

FIG. 9 is a top view of the tip cap and disinfecting unit of FIG. 1 attached to a syringe, said syringe shown as an environmental structure;

FIG. 10 is a bottom view of the tip cap and disinfecting unit of FIG. 1 attached to a syringe, said syringe shown as an environmental structure;

FIG. 11 is a left side view of the tip cap and disinfecting unit of FIG. 1 attached to a syringe, said syringe shown as an environmental structure;

FIG. 12 is right side view of the tip cap and disinfecting unit of FIG. 1 attached to a syringe, said syringe shown as an environmental structure;

(Continued)

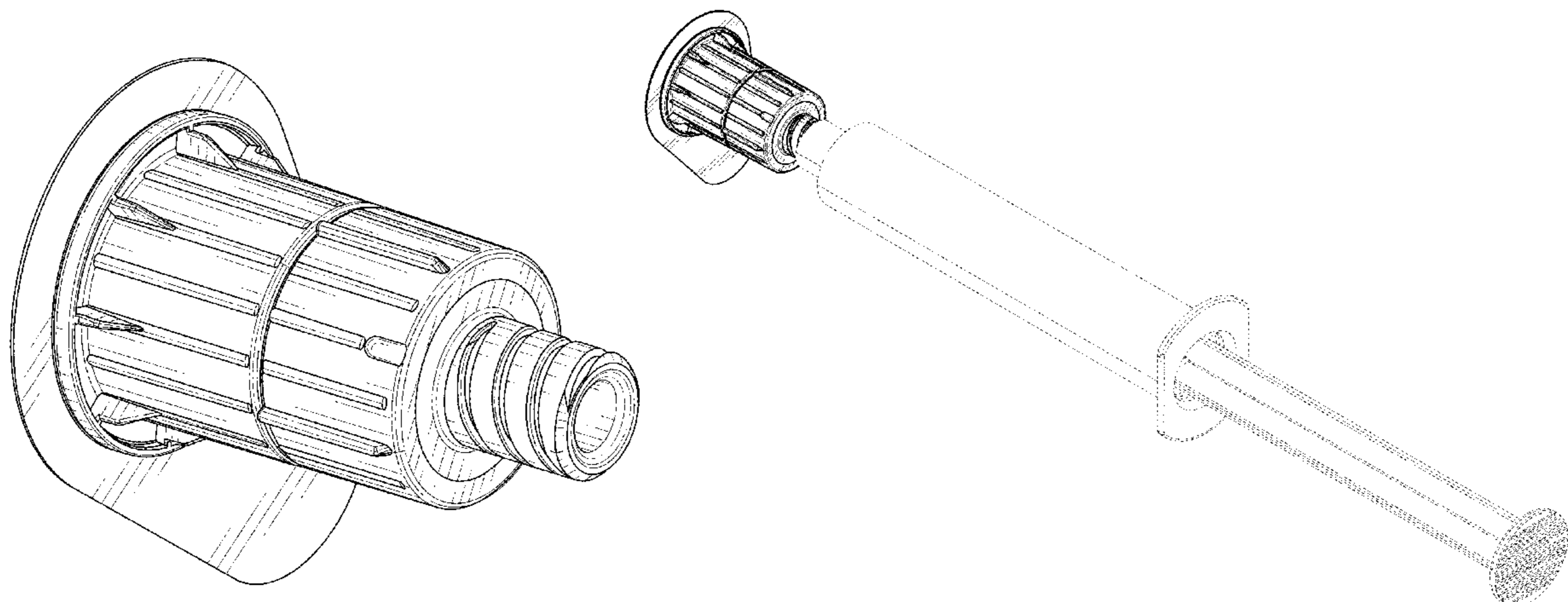


FIG. 13 is a rear view of the tip cap and disinfecting unit of FIG. 1 attached to a syringe, said syringe shown as an environmental structure; and,

FIG. 14 is a front view of the tip cap and disinfecting unit of FIG. 1 attached to a syringe, said syringe shown as an environmental structure.

The broken lines in the drawings illustrate portions of the tip cap and disinfecting unit and form no part of the claimed design.

**1 Claim, 14 Drawing Sheets**

(58) **Field of Classification Search**

CPC .. A61M 39/165; A61M 39/20; A61M 39/162;  
A61M 2205/02

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D589,612 S \* 3/2009 Sudo ..... D24/130  
9,414,990 B2 \* 8/2016 Ivosevic ..... A61J 1/2082  
D787,053 S \* 5/2017 Huang ..... D24/130  
D787,669 S \* 5/2017 Huang ..... D24/130  
D804,023 S \* 11/2017 Huang ..... D24/130

D908,479 S \* 1/2021 Dyroff ..... D9/416  
D911,518 S \* 2/2021 Shi ..... D24/130  
10,933,202 B1 \* 3/2021 Banik ..... A61J 1/2096  
11,083,883 B2 \* 8/2021 Ryan ..... A61M 39/162  
11,123,536 B2 \* 9/2021 Follman ..... A61M 39/20  
11,135,359 B2 \* 10/2021 Chaves, Sr. .... A61M 25/0631  
11,253,687 B2 \* 2/2022 Gilman ..... A61M 5/3202  
2014/0366914 A1 \* 12/2014 Kerr ..... A61B 1/122  
15/104.93  
2015/0246352 A1 \* 9/2015 Bullington ..... A61B 5/154  
422/546  
2021/0138224 A1 \* 5/2021 Marici ..... A61M 39/20

OTHER PUBLICATIONS

SwabCap®—Cap the connector, be a patient protector, BBraunmau, Youtube, [Post date: Dec. 9, 2014], [Site seen May 19, 2022], Seen at URL: [https://www.youtube.com/watch?v=dy\\_XeGAec5o&t=31s](https://www.youtube.com/watch?v=dy_XeGAec5o&t=31s) (Year: 2014).\*

DualCap® Disinfection & Protection System, MeritMedical, [Post date: Apr. 17, 2020], [Site seen May 19, 2022], Seen at URL: <https://www.merit.com/cardiac-intervention/interventional-fluid-management/infection-prevention/dualcap/> (Year: 2020).\*

Curos Disinfecting Port Protectors, Catalog, 3M, [Post date 2018], [Site seen May 19, 2022], Seen at URL: <https://www.medline.com/media/catalog/Docs/MKT/CUROS.PDF> (Year: 2018).\*

\* cited by examiner

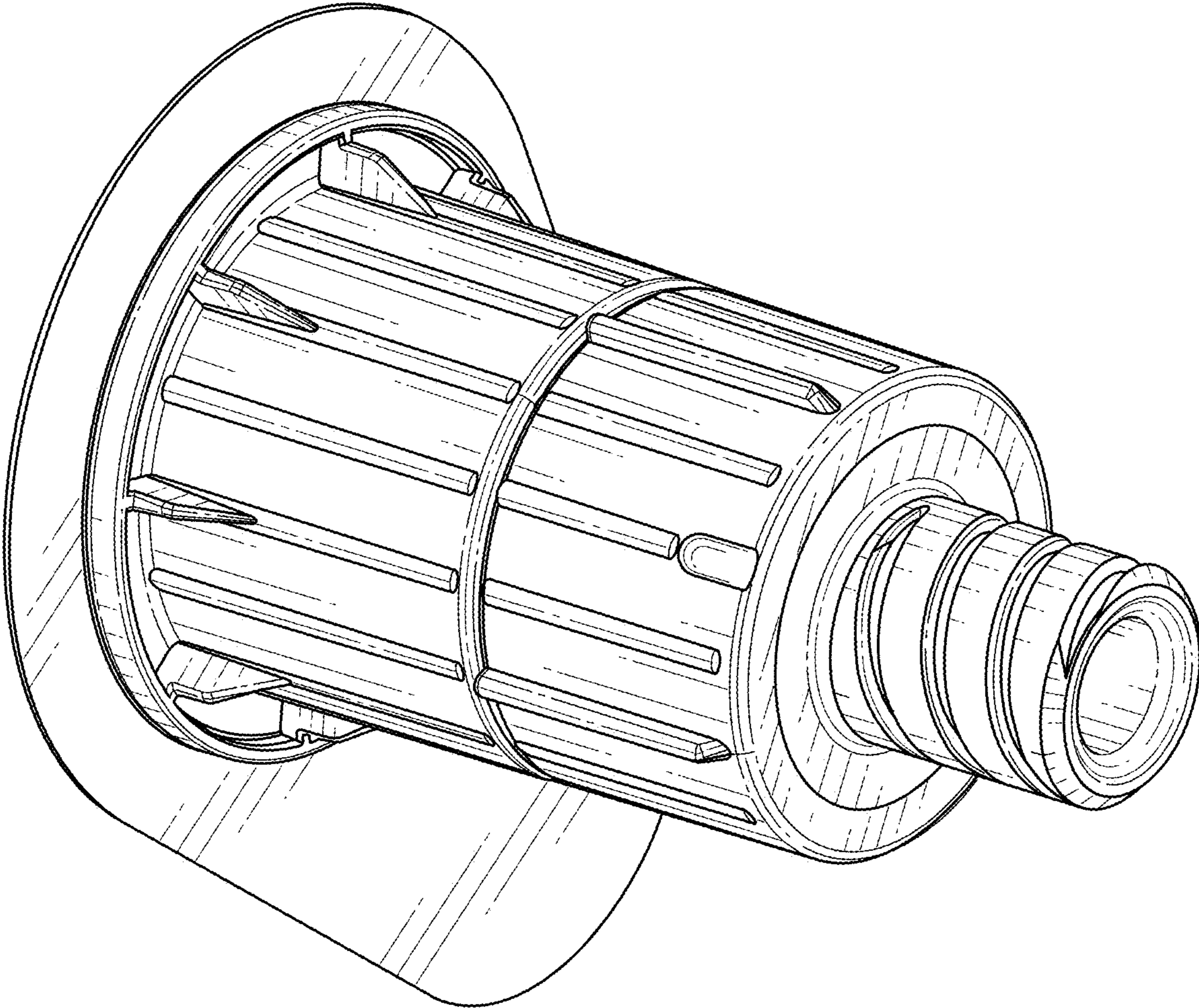


FIG. 1

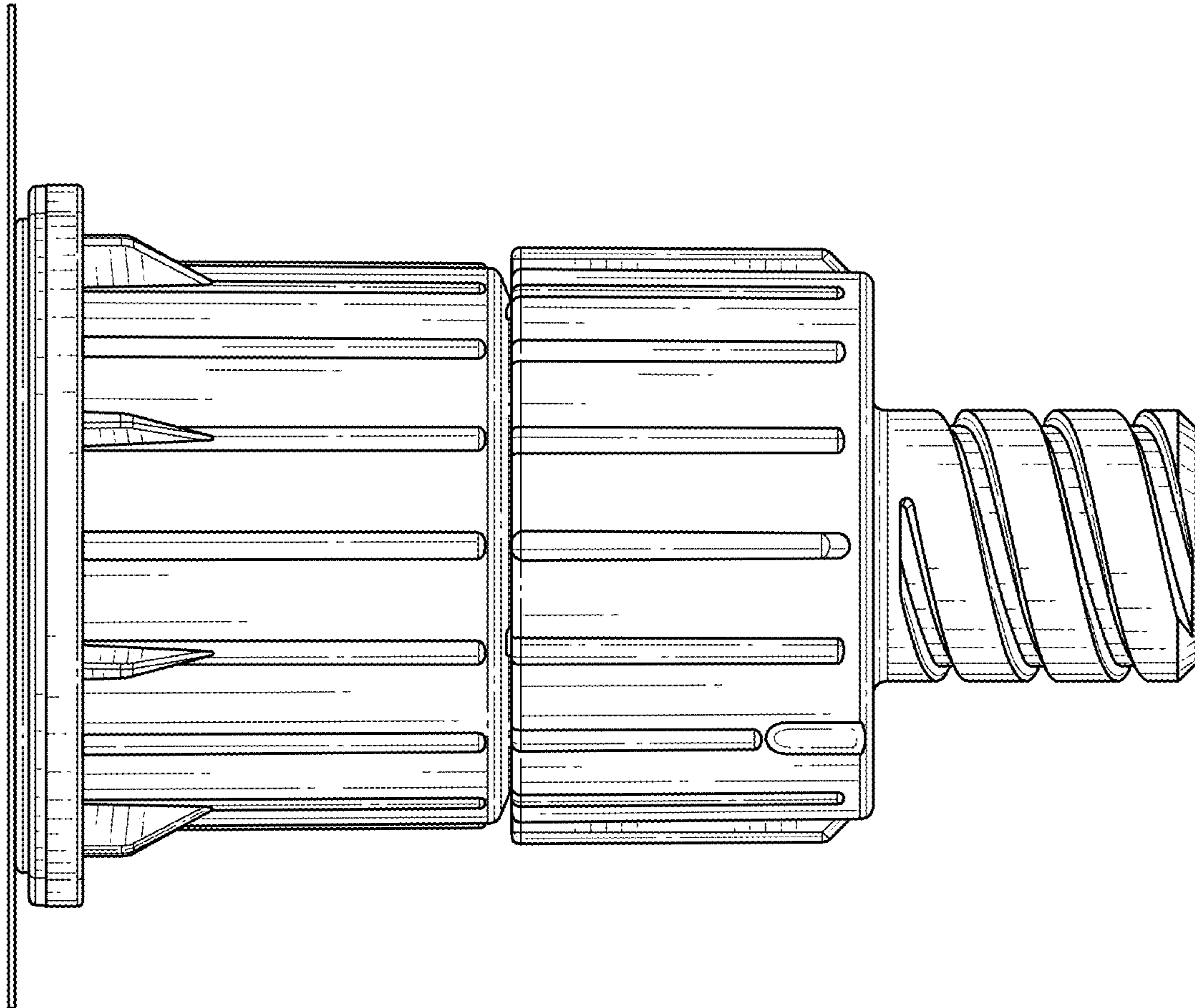


FIG. 2

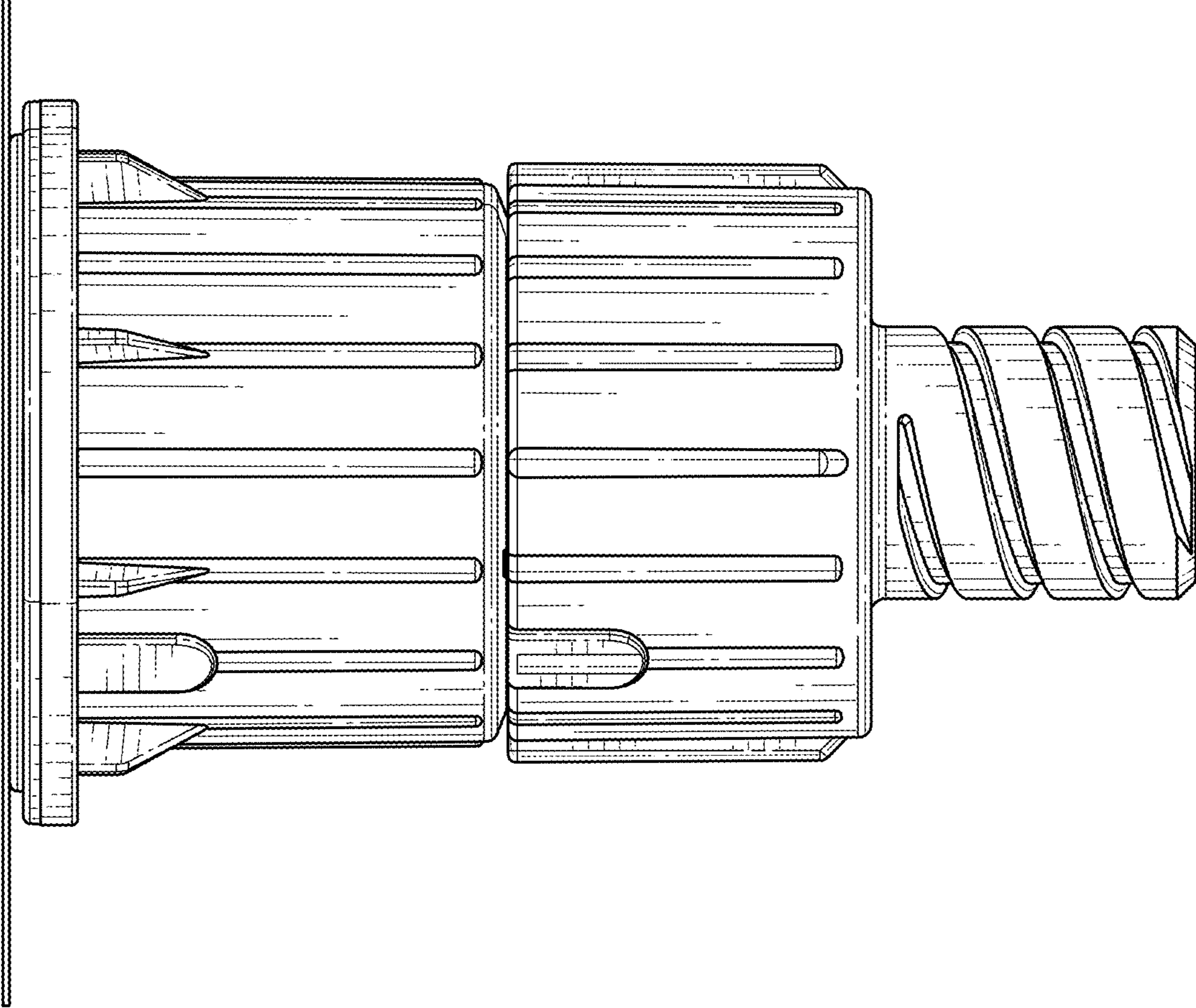


FIG. 3

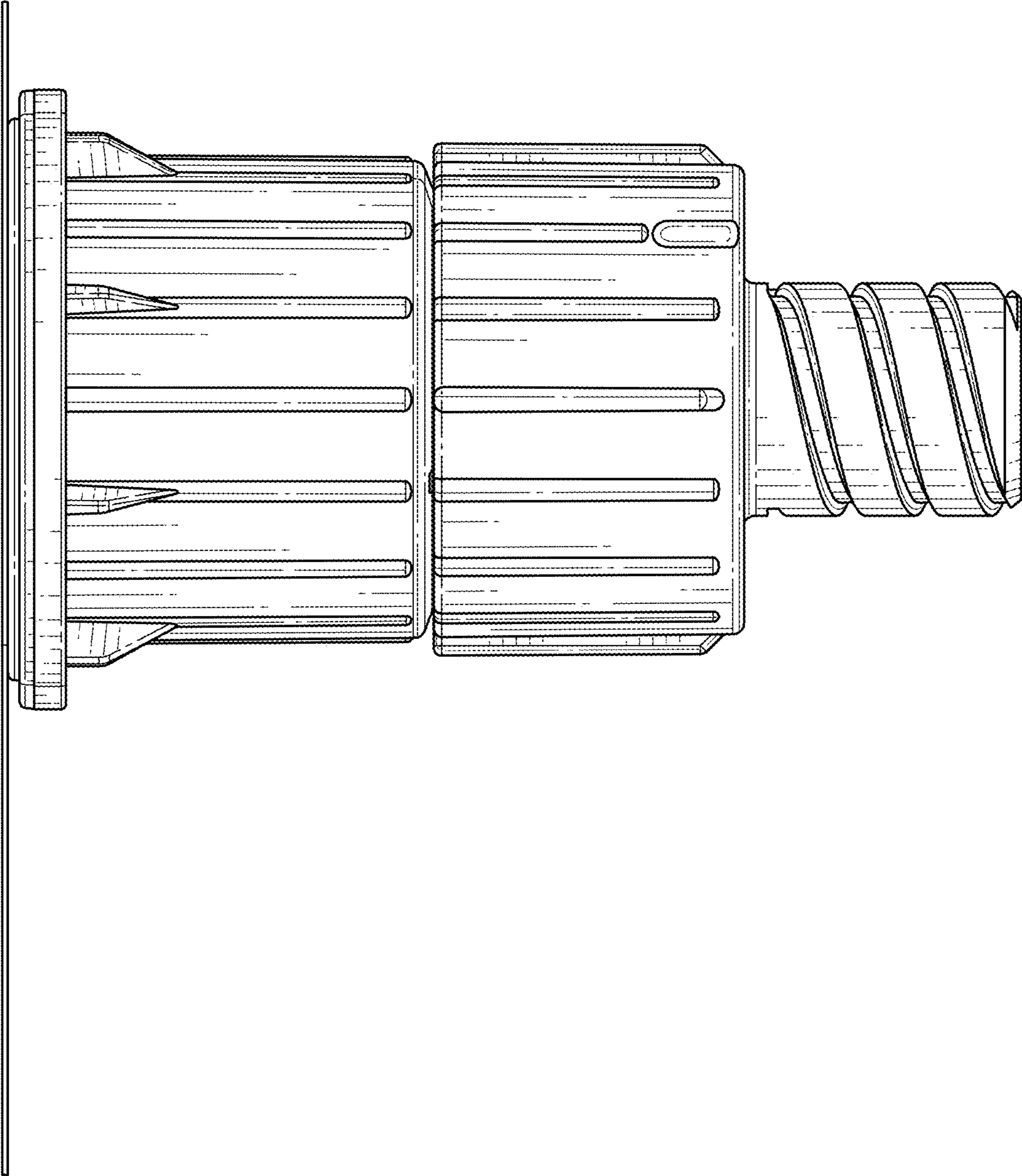


FIG. 4

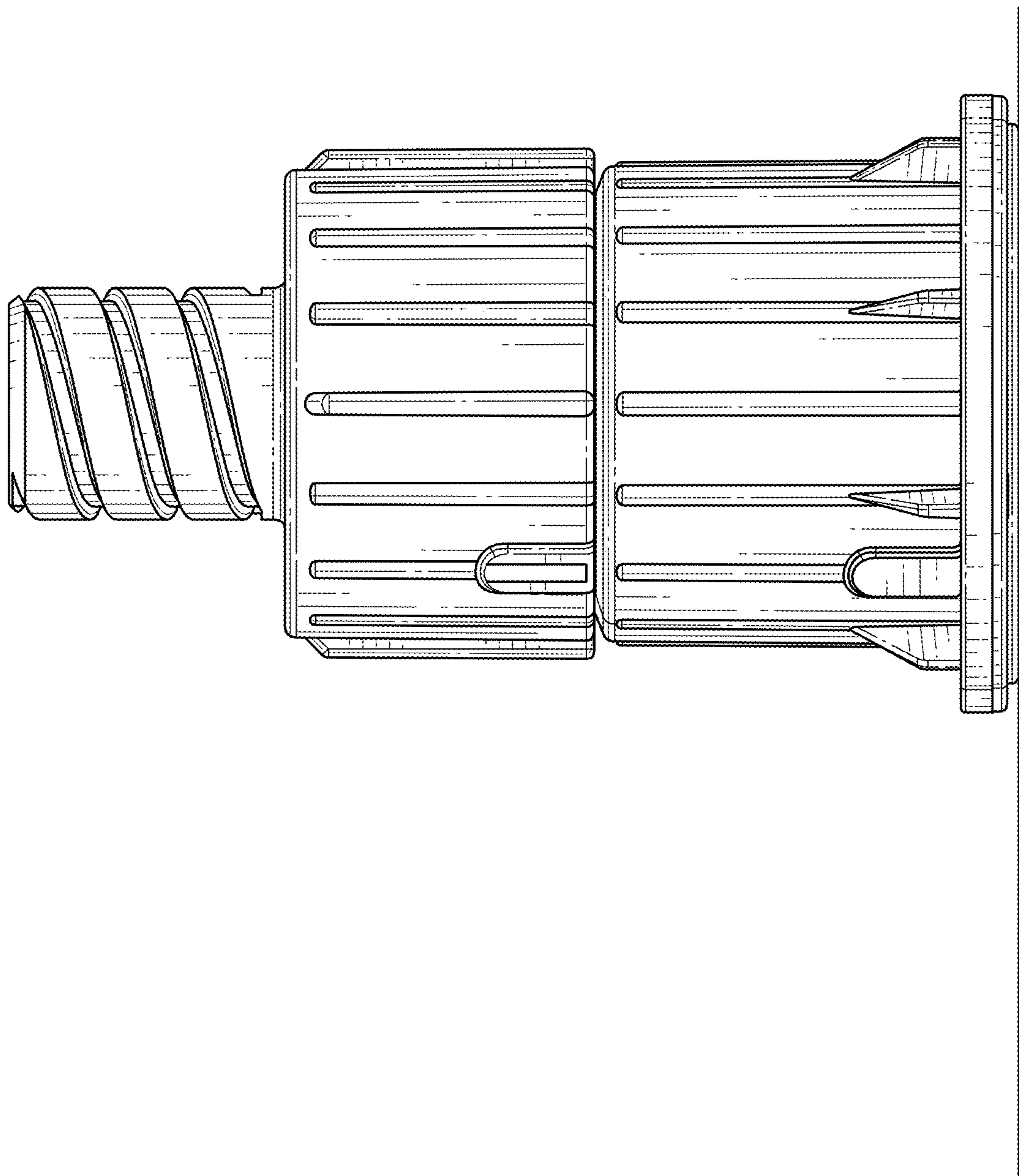


FIG. 5

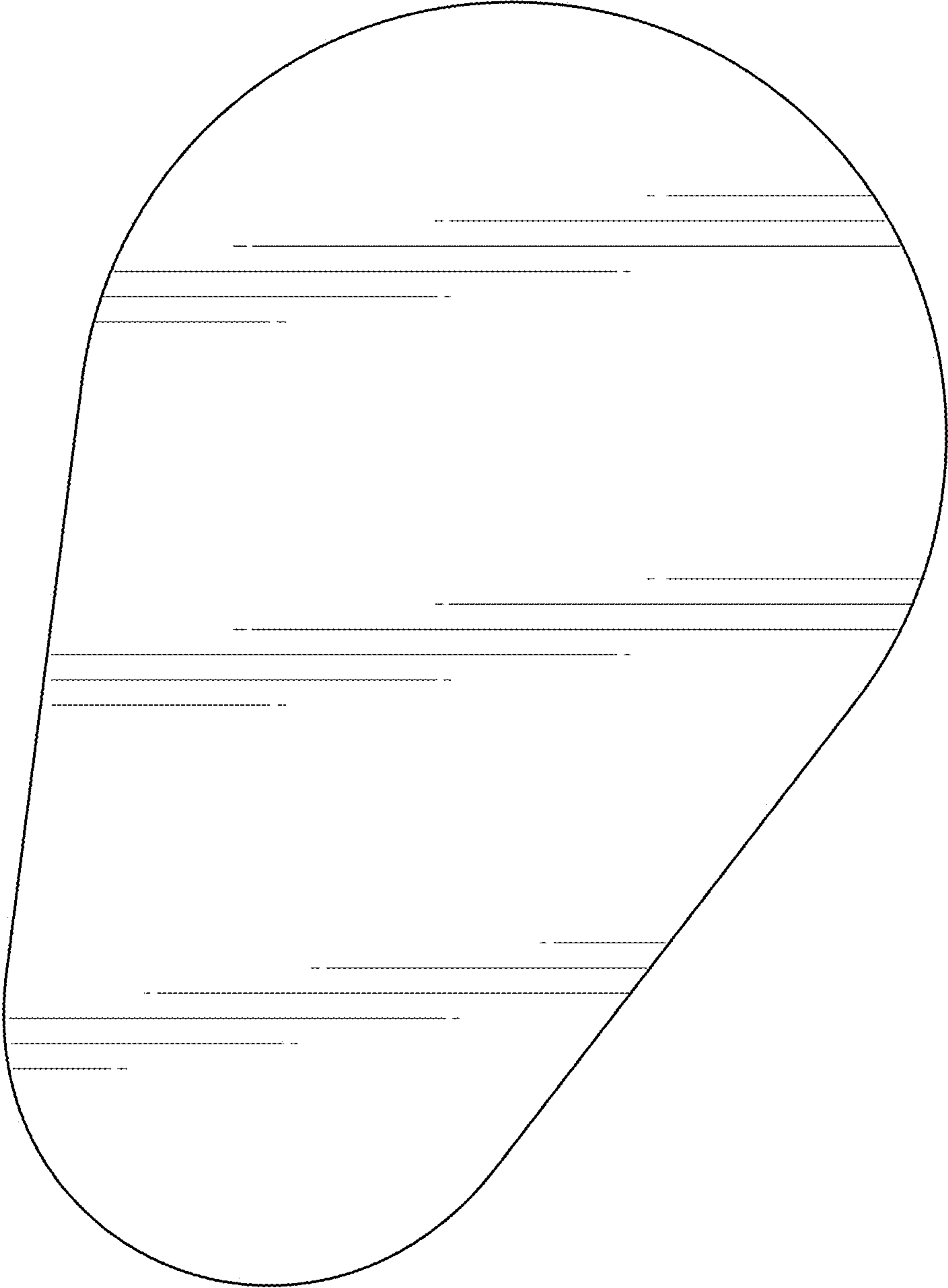


FIG. 6



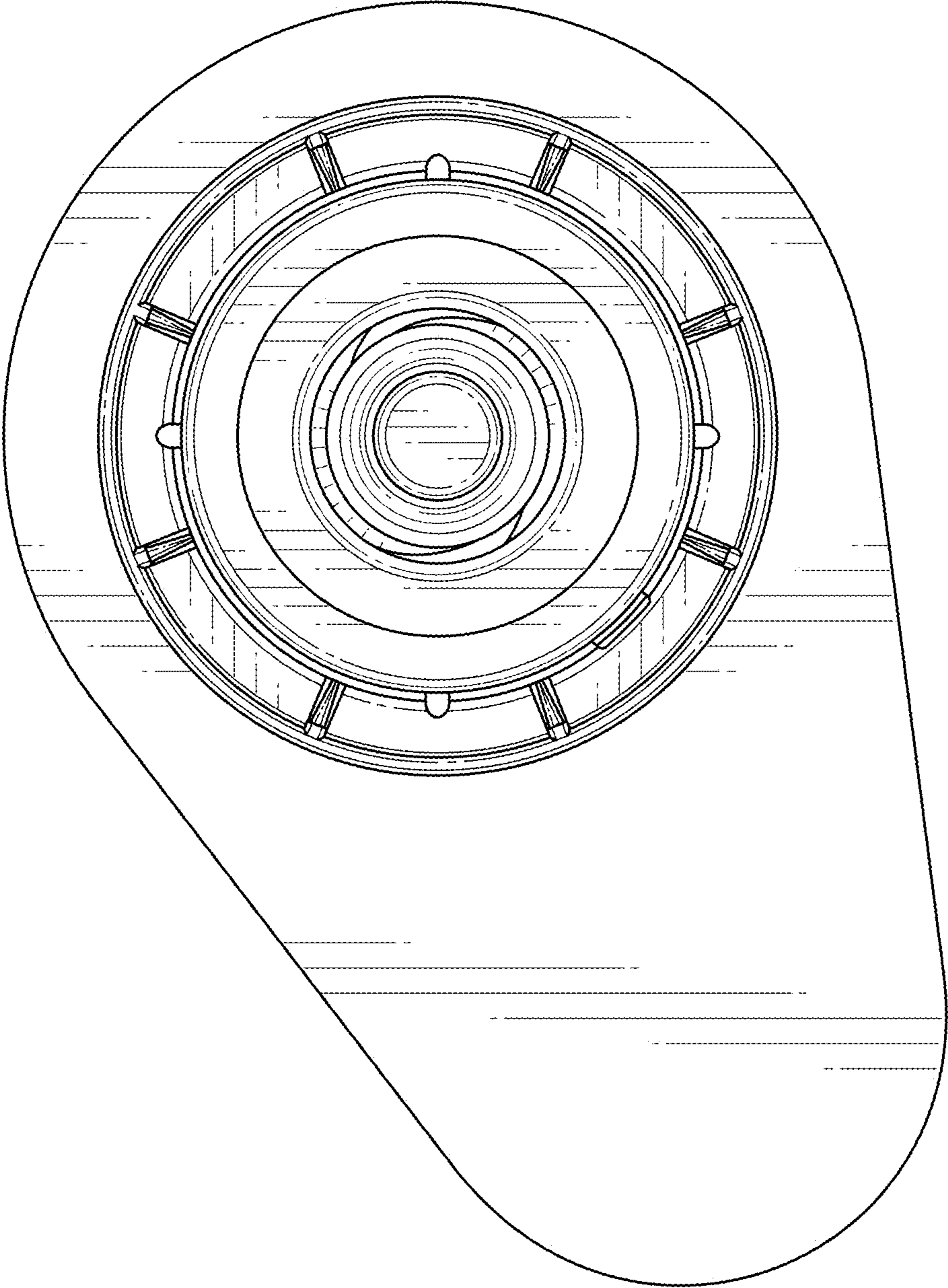


FIG. 7

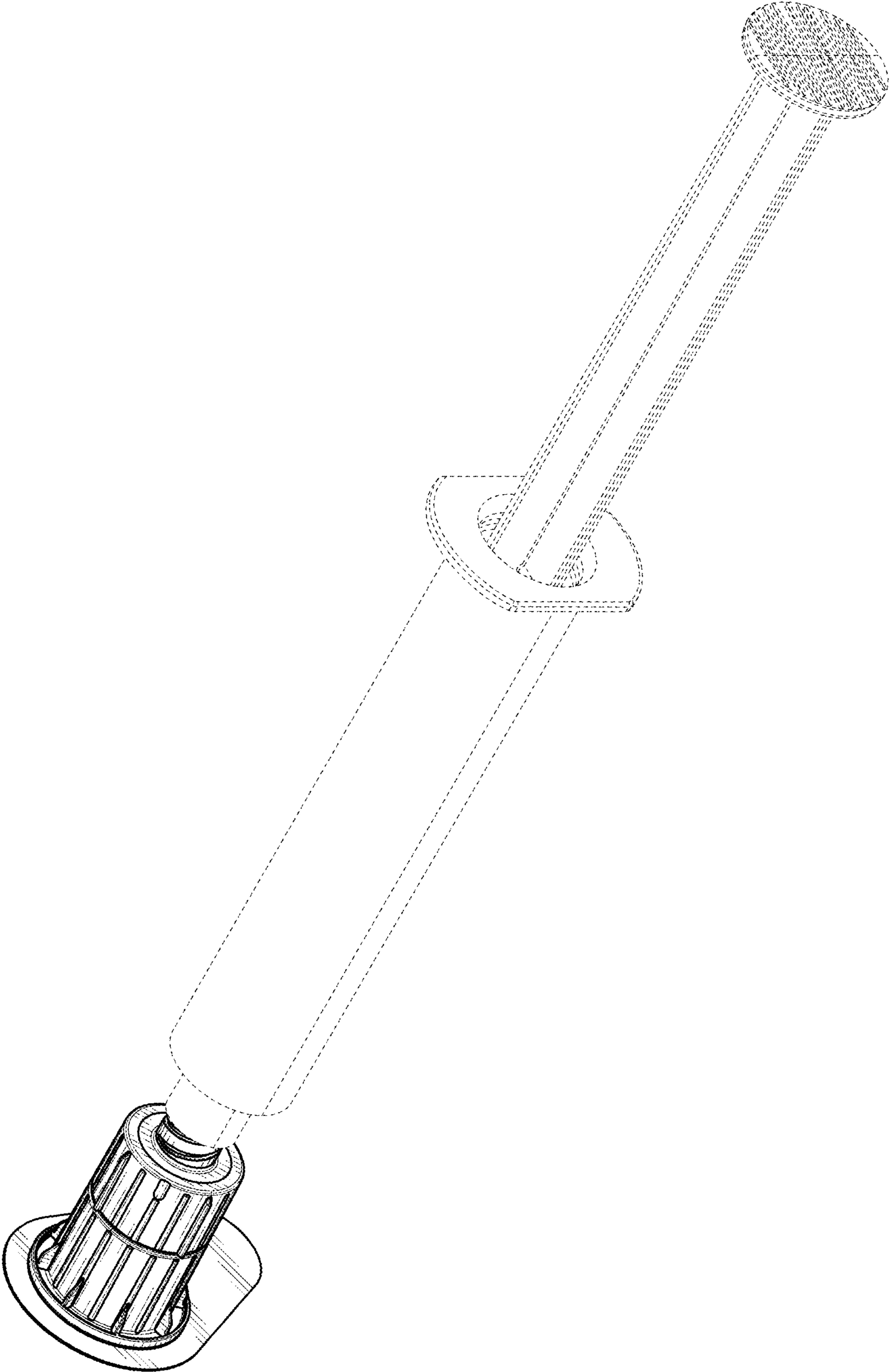


FIG. 8

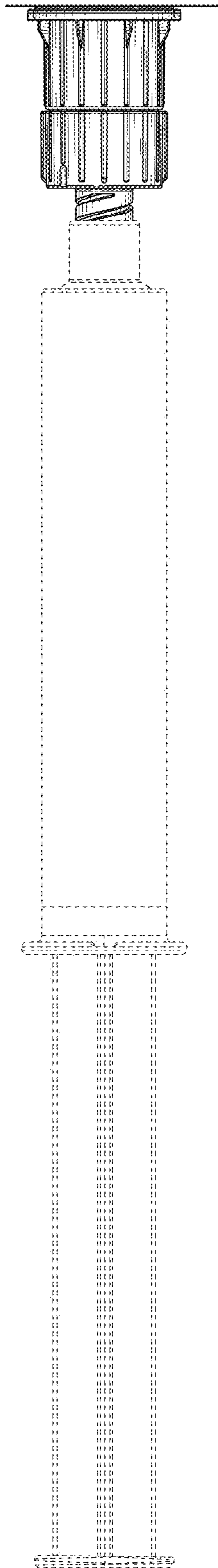


FIG. 9

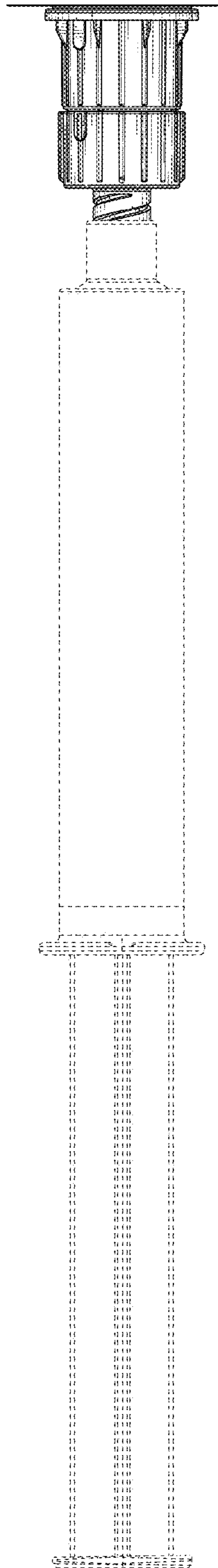


FIG. 10

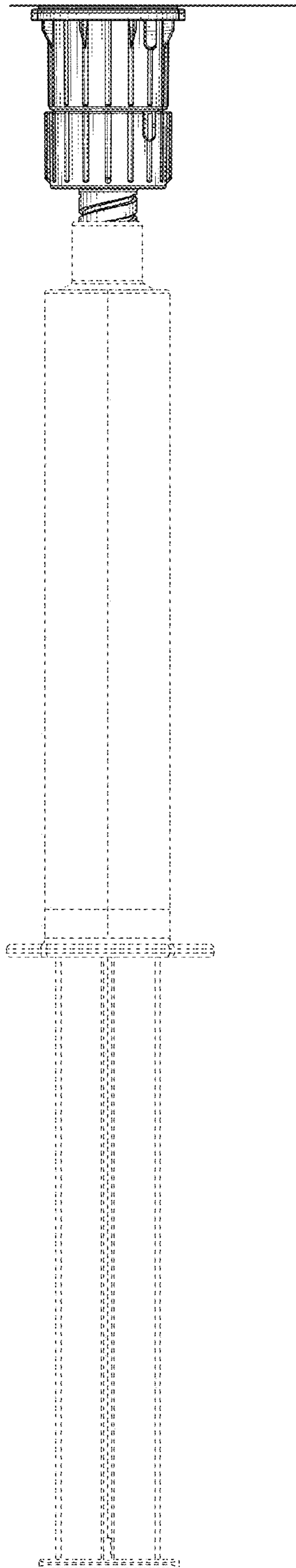


FIG. 11

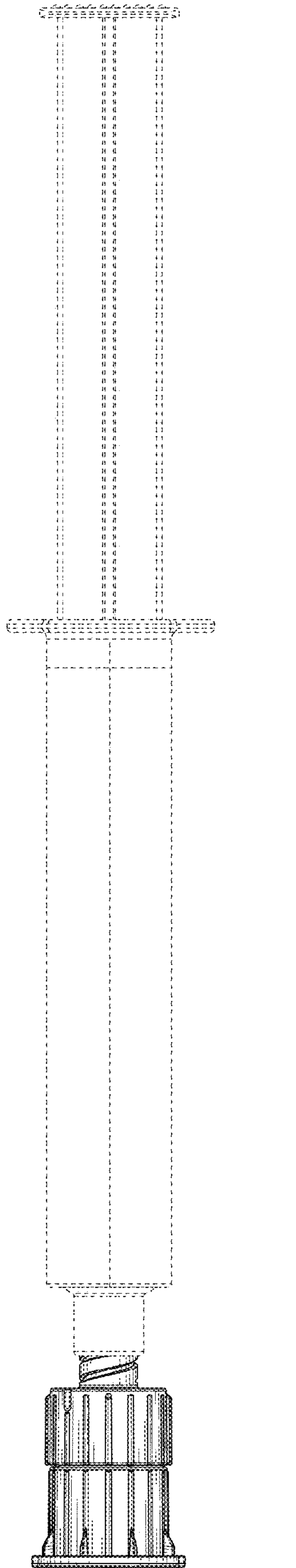


FIG. 12

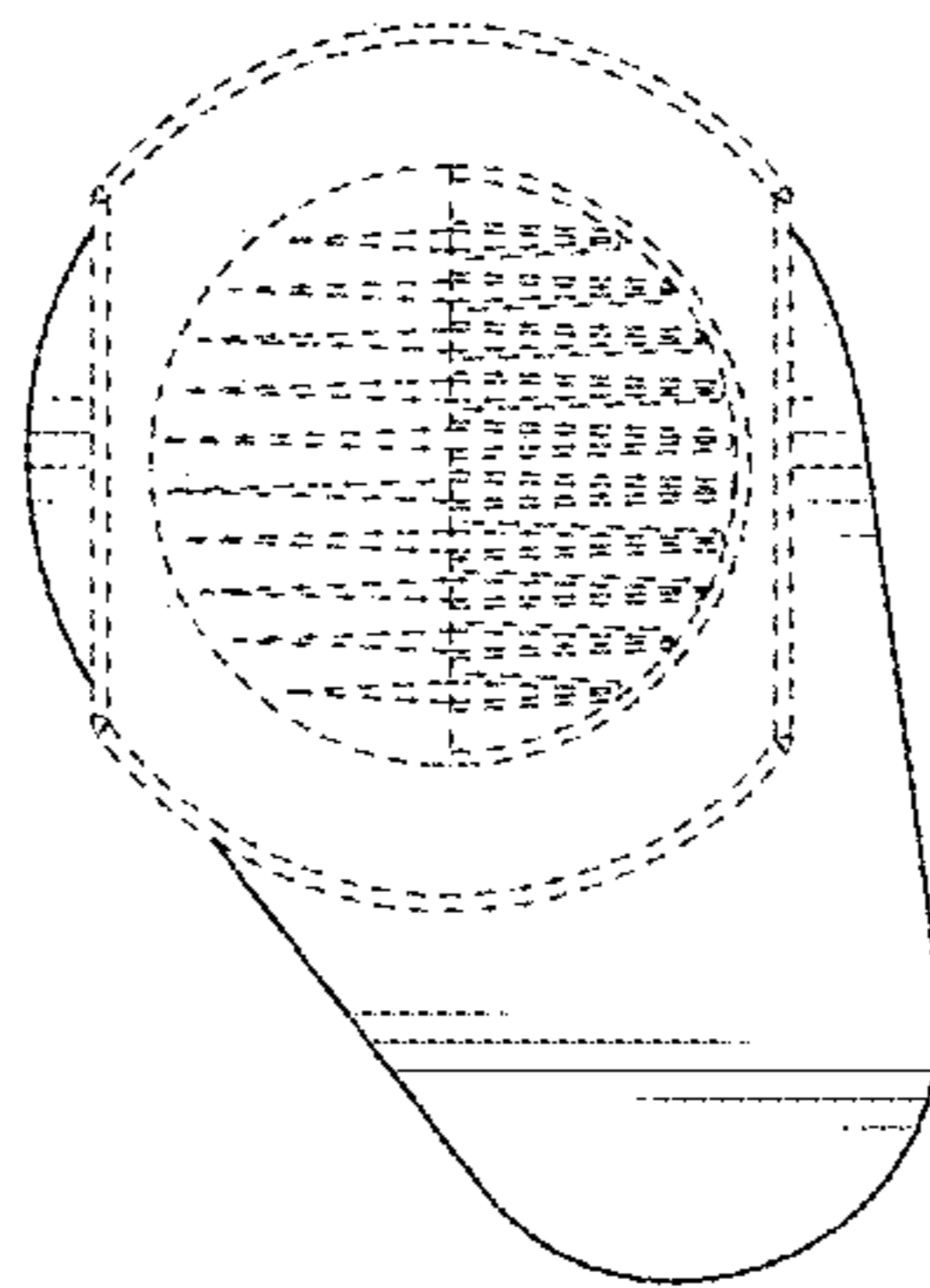


FIG. 13

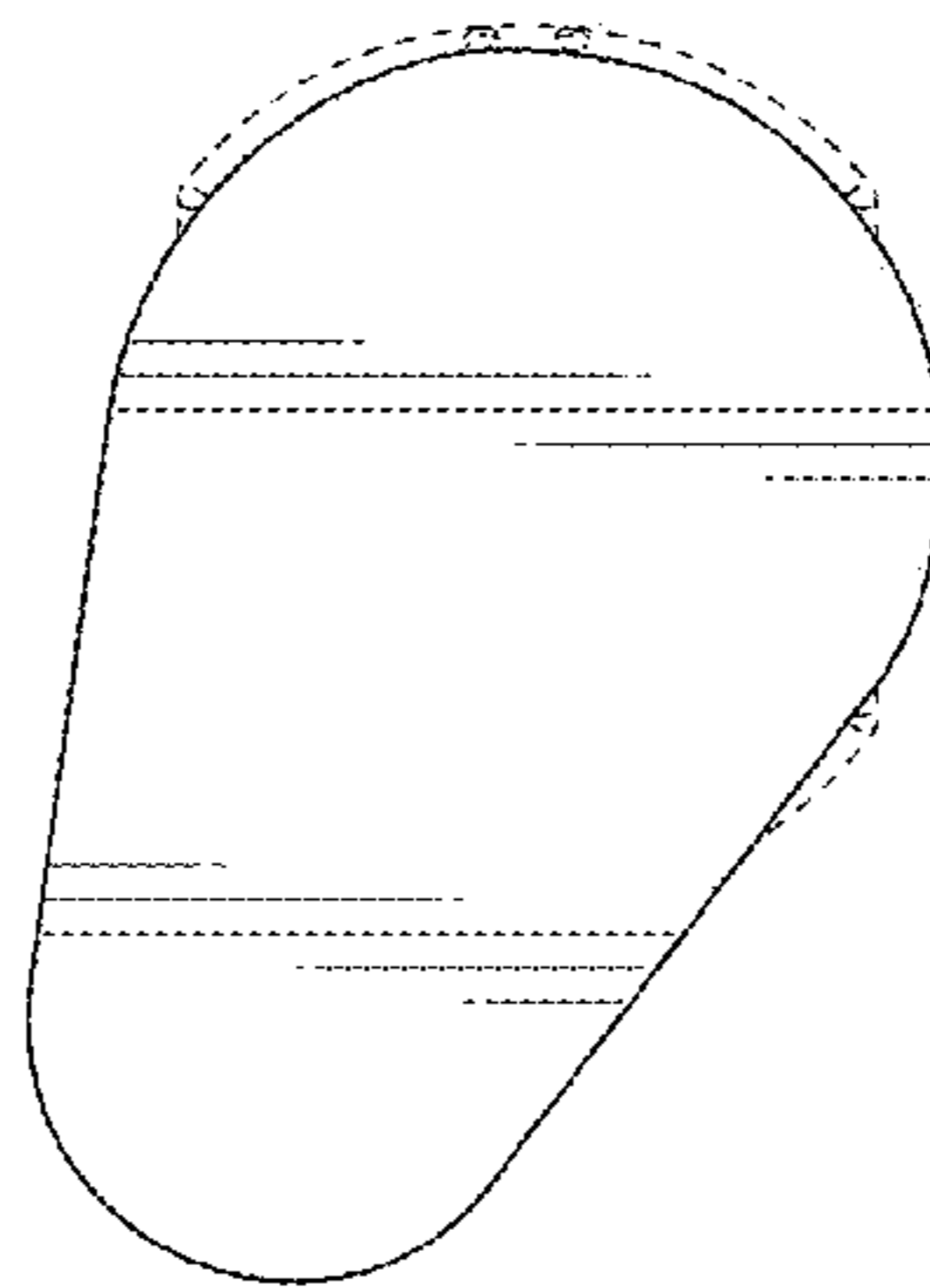


FIG. 14