



US00D829906S

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

(10) **Patent No.:** **US D829,906 S**
(45) **Date of Patent:** **** Oct. 2, 2018**

(54) **TROCAR**

(71) Applicants: **KYOCERA Corporation**, Kyoto-shi,
Kyoto (JP); **KYOCERA OPTEC Co., Ltd.**, Ome-shi, Tokyo (JP)

(72) Inventors: **Takaharu Fujii**, Tokorozawa (JP);
Takashi Saotome, Hamura (JP)

(73) Assignees: **KYOCERA Corporation**, Kyoto-shi,
Kyoto (JP); **KYOCERA OPTEC Co., Ltd.**, Ome-shi, Tokyo (JP)

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

(21) Appl. No.: **29/603,778**

(22) Filed: **May 12, 2017**

(30) **Foreign Application Priority Data**

Nov. 14, 2016 (JP) 2016-024722

(51) **LOC (11) Cl.** **24-02**

(52) **U.S. Cl.**
USPC **D24/146**

(58) **Field of Classification Search**
USPC D7/649; D8/93, 97, 300, 310, 311, 313;
D19/110, 115; D24/146, 147, 148, 127,
D24/133, 172, 173, 174, 176
CPC .. B26B 3/00; B26B 1/10; B26B 5/005; A61B
17/089; A61B 17/1617; A61B 17/3211;
A61B 17/3417; A61B 5/1411
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D541,417 S * 4/2007 Albrecht D24/146
8,206,411 B2 * 6/2012 Thompson A61B 17/3462
600/184
D700,326 S * 2/2014 Minnelli D24/146
D713,033 S * 9/2014 Sauer D24/146

D753,303 S * 4/2016 Dannaher D24/146
D797,288 S * 9/2017 Zhou D24/146
2005/0070946 A1 * 3/2005 Franer A61B 17/3498
606/185
2007/0185453 A1 * 8/2007 Michael A61B 17/3462
604/164.01

(Continued)

FOREIGN PATENT DOCUMENTS

JP 1534006 S 9/2015
JP 2016016053 A 2/2016

(Continued)

OTHER PUBLICATIONS

HC1504404800, Endoscopes for Children “Olympus New OES Pro”, (Olympus Optical Co Ltd), Jan. 16, 2004, Retrieved from the Known Design Database of the Japan Patent Office using Internet, <URL: https://www.j-platpat.inpit.go.jp/web/ishou/dpdj/DPDJ_GM301_Detailed.action >.

Primary Examiner — Cathron C Brooks

Assistant Examiner — Samantha Q. Lawrence

(74) *Attorney, Agent, or Firm* — Kenja IP Law PC

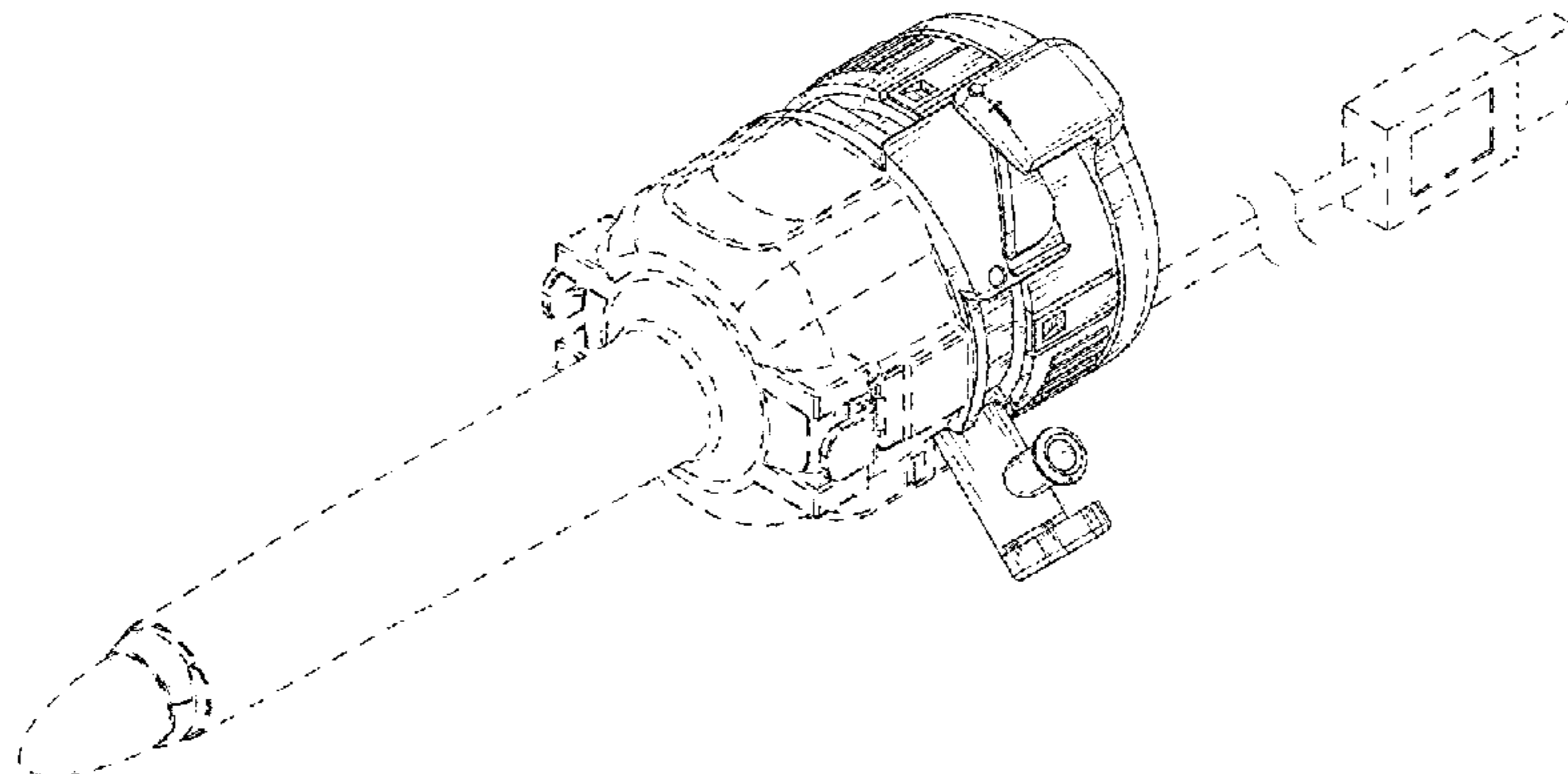
(57) **CLAIM**

The ornamental design for a trocar, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of a trocar showing my new design;
FIG. 2 is a front view thereof;
FIG. 3 is a rear view thereof;
FIG. 4 is a right side view thereof;
FIG. 5 is a left side view thereof;
FIG. 6 is a top view thereof; and,
FIG. 7 is a bottom view thereof.
The broken lines shown in FIGS. 1-7 illustrate portions of the trocar that form no part of the claimed design.

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

2011/0046449 A1* 2/2011 Minelli A61B 1/00128
600/205
2013/0237902 A1* 9/2013 McGinley A61B 17/3462
604/26

FOREIGN PATENT DOCUMENTS

JP 1556278 S 8/2016
JP 1556279 S 8/2016

* cited by examiner

FIG. 1

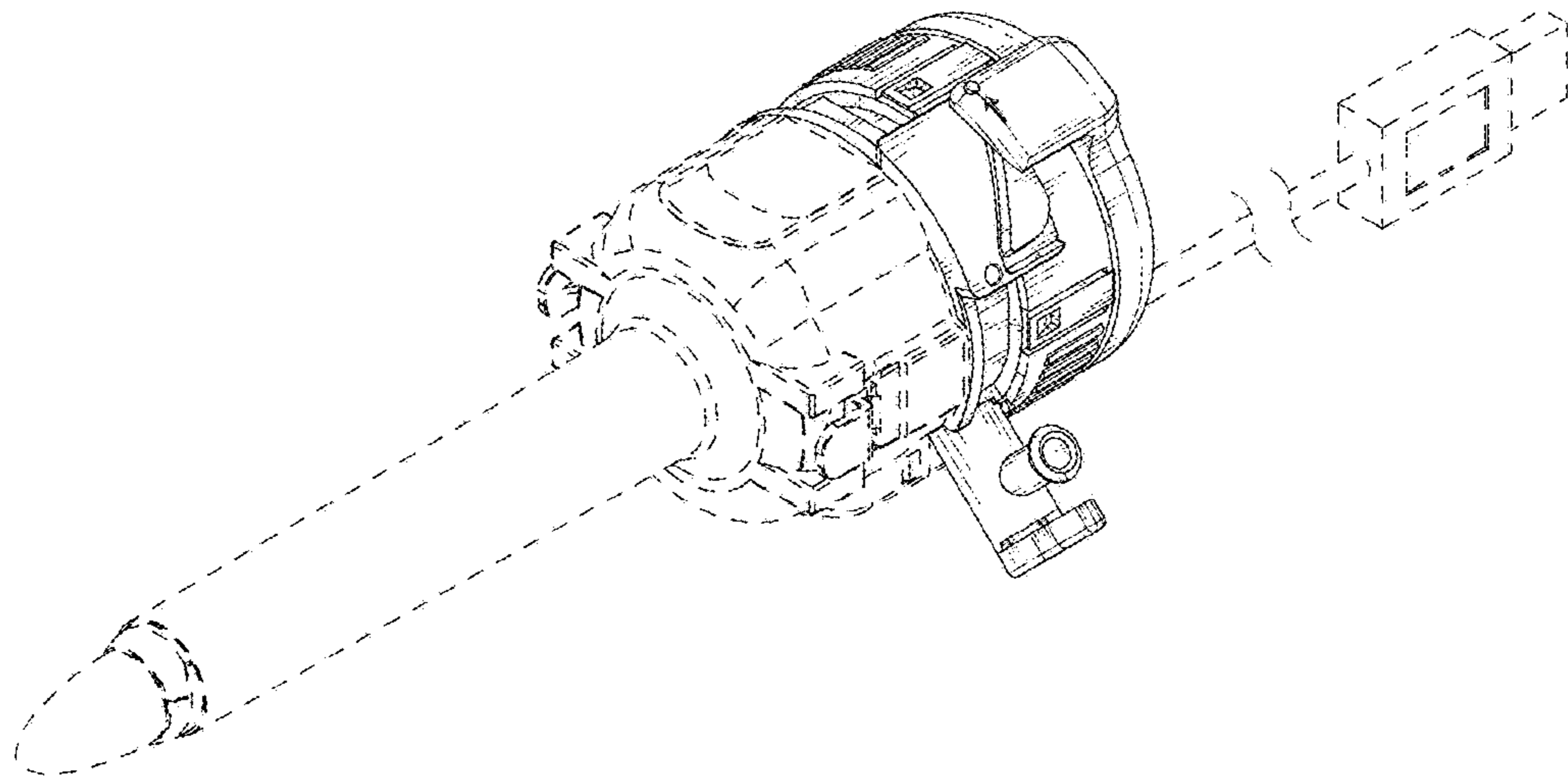


FIG. 2

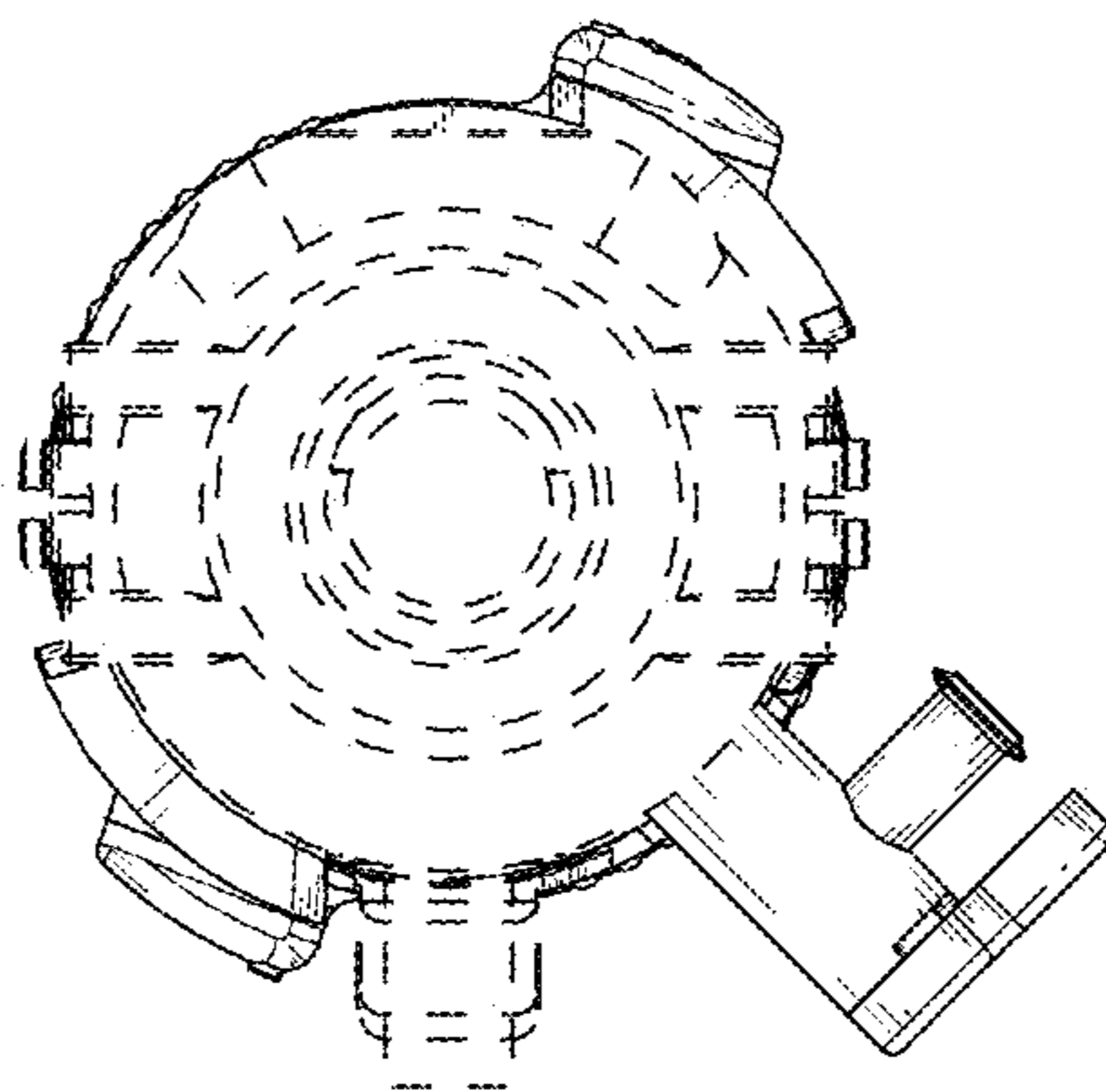


FIG. 3

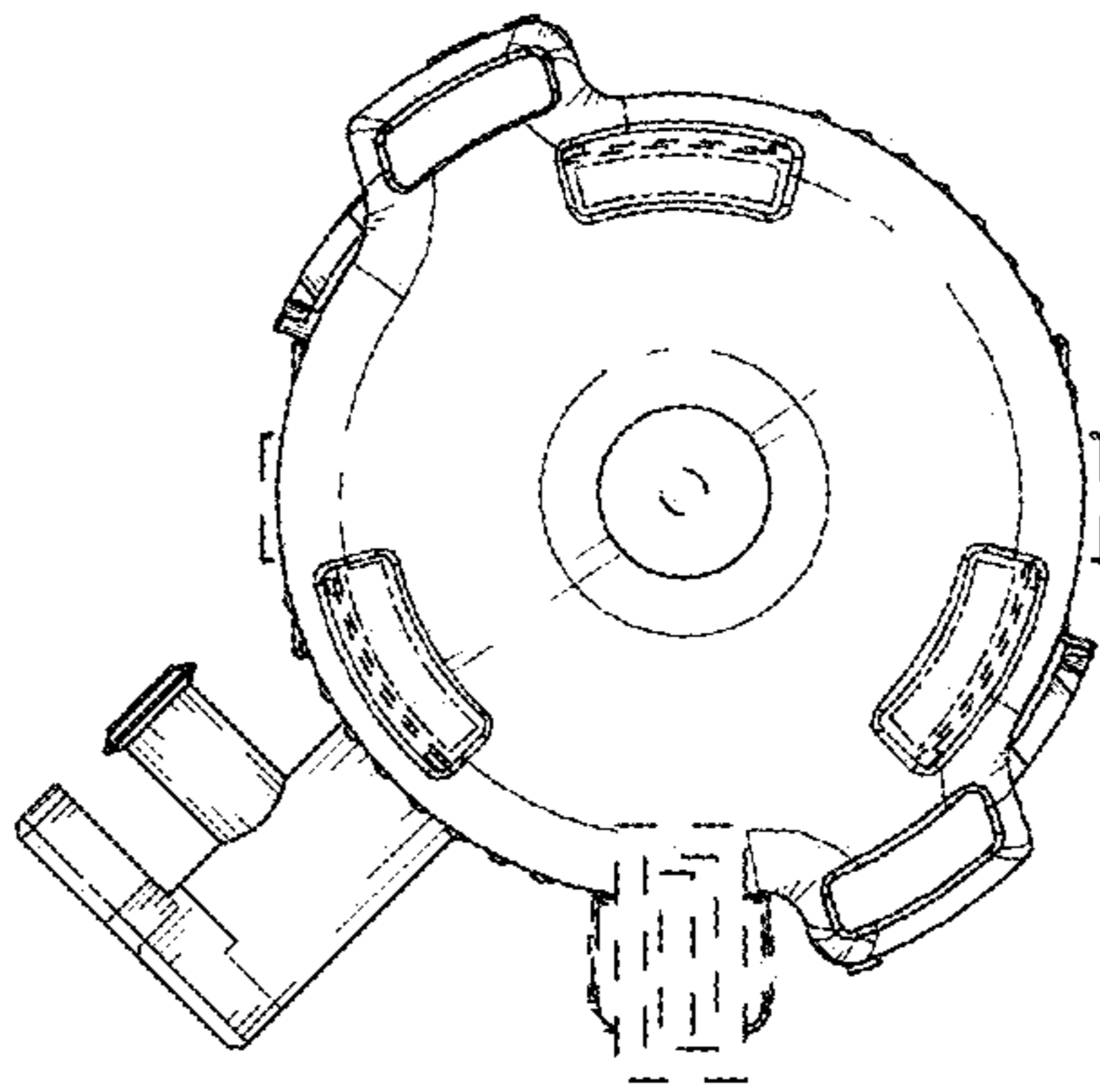


FIG. 4

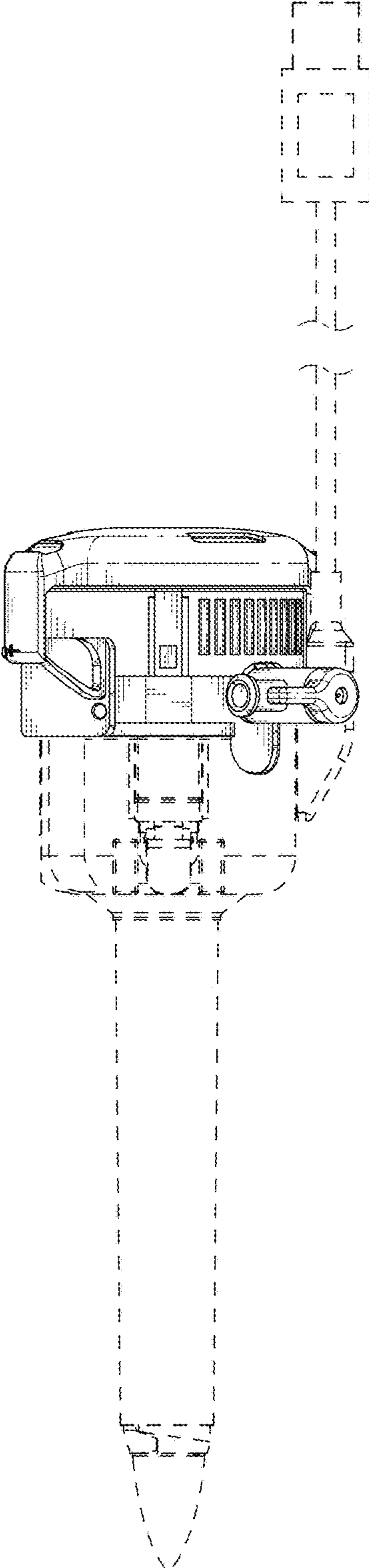


FIG. 5

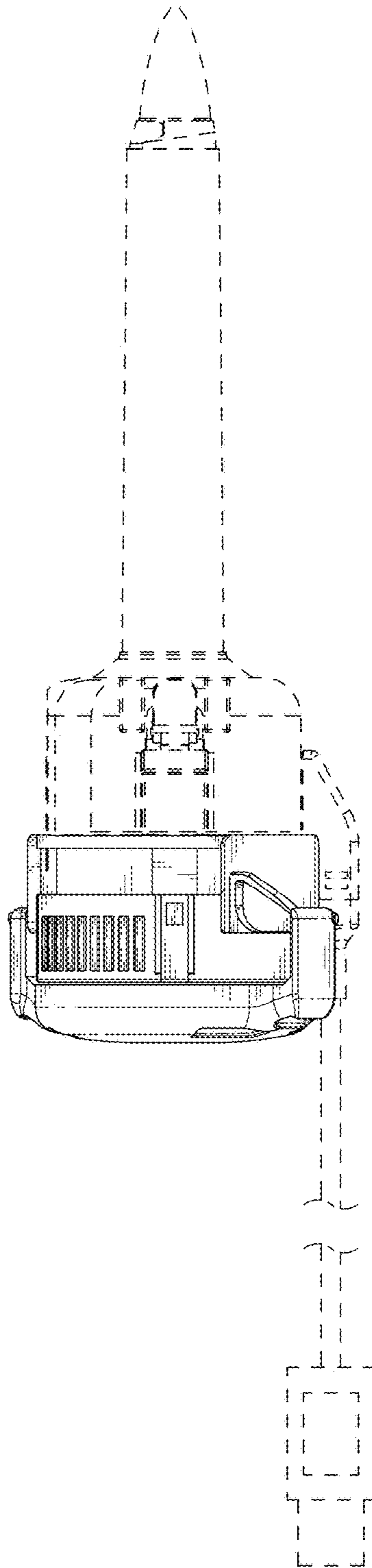


FIG. 6

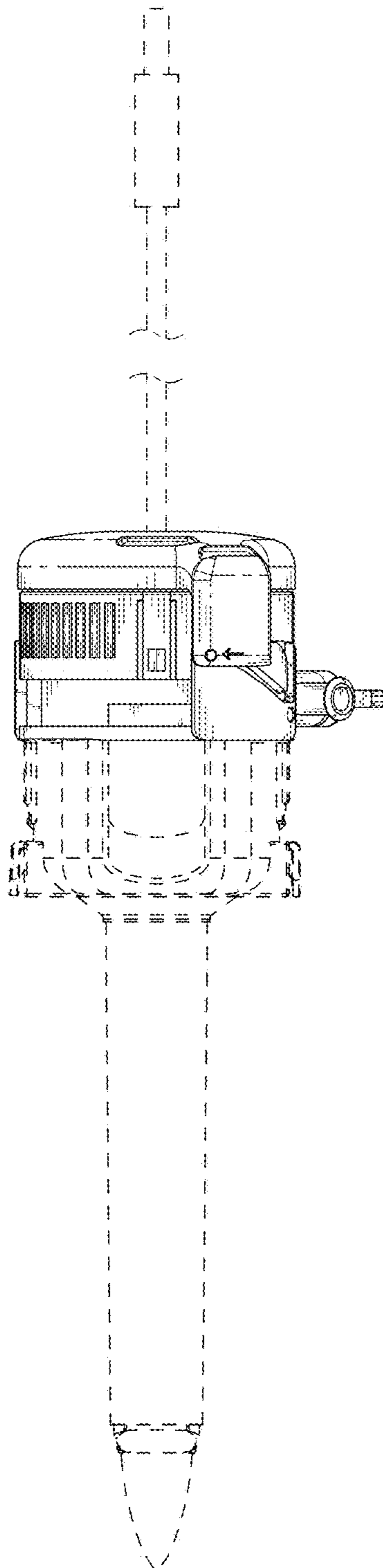


FIG. 7

