



US00D717947S

(12) **United States Design Patent**
Cederschiöld

(10) **Patent No.:** **US D717,947 S**

(45) **Date of Patent:** **** Nov. 18, 2014**

(54) **SPIKE FOR MEDICAL VIAL ACCESS DEVICE**

(75) Inventor: **Alexander Cederschiöld**, Göteborg (SE)

(73) Assignee: **Carmel Pharma AB**, Molndal (SE)

(**) Term: **14 Years**

(21) Appl. No.: **29/427,142**

(22) Filed: **Jul. 13, 2012**

(51) **LOC (10) Cl.** **24-01**

(52) **U.S. Cl.**
USPC **D24/129**

(58) **Field of Classification Search**

CPC A61M 5/3286; A61M 2205/195;
A61M 5/162; A61M 5/19; A61M 5/1782;
A61J 2001/201; A61J 1/20; B65B 3/003
USPC D24/107, 108, 127, 129, 130; 604/403,
604/404, 406, 411, 412, 414, 415; 141/285,
141/309, 311 R, 329

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,359,977 A * 12/1967 Burke 604/406
3,941,171 A * 3/1976 Ogle 141/309

(Continued)

FOREIGN PATENT DOCUMENTS

DE 102009004459 A1 * 7/2010 A61J 1/20
EP 2358327 B1 * 11/2013 A61J 1/20

(Continued)

OTHER PUBLICATIONS

Connor et al., Effectiveness of a Dosed-System Device in Containing Surface Contamination with Cyclophosphamide and Ifosfamide in an I.V. Admixture Area, Am J Health-Syst Pharm-vol. 59 Jan. 1, 2002.

(Continued)

Primary Examiner — Deanna L Pratt

Assistant Examiner — Ieisha Price

(74) *Attorney, Agent, or Firm* — The Webb Law Firm

(57) **CLAIM**

The ornamental design for a spike for a medical vial access device, as shown and described.

DESCRIPTION

FIG. 1 is a top perspective view of a spike for medical vial access device according to our new design;

FIG. 2 is a bottom perspective view of the spike for medical vial access device;

FIG. 3 is an enlarged perspective view of the spike for medical vial access device shown in FIG. 2;

FIG. 4 is a bottom perspective view of the spike for medical vial access device taken from a different angle;

FIG. 5 is an enlarged perspective view of the spike for medical vial access device shown in FIG. 4;

FIG. 6 is a bottom perspective view of the spike for medical vial access device taken from still another angle;

FIG. 7 is an enlarged perspective view of the spike for medical vial access device shown in FIG. 6;

FIG. 8 is a top plan view of the spike for medical vial access device;

FIG. 9 is an enlarged top plan view of the spike for medical vial access device shown in FIG. 8;

FIG. 10 is a right elevation view of the spike for medical vial access device;

FIG. 11 is an enlarged right elevation view of the spike of the medical vial access device shown in FIG. 10;

FIG. 12 is a front elevation view of the spike for medical vial access device;

FIG. 13 is an enlarged front elevation view of the spike for medical vial access device shown in FIG. 12;

FIG. 14 is a rear elevation view of the spike for medical vial access device;

FIG. 15 is a left elevation view of the spike for medical vial access device;

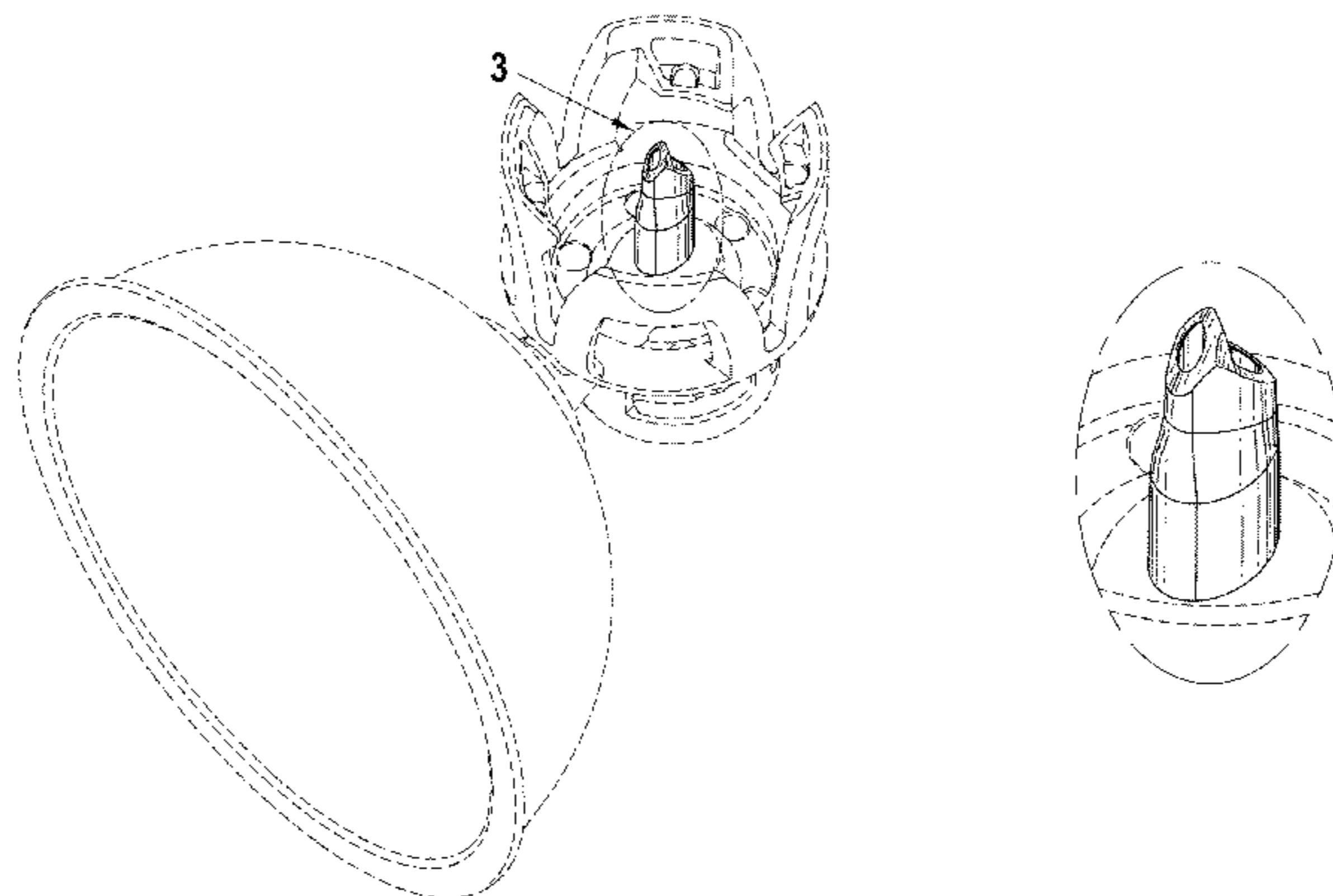
FIG. 16 is an enlarged left elevation view of the spike for medical vial access device shown in FIG. 15;

FIG. 17 is a bottom plan view of the spike for medical vial access device; FIG. 18 is an enlarged bottom plan view of the spike for medical vial access device shown in FIG. 17; and,

FIG. 19 is a cross-sectional view of the spike for medical vial access device.

The even broken line showing of the medical vial access device and the uneven broken lines shown circling the spike in all views is included for the purpose of illustrating the environment of the claimed design and form no part thereof.

1 Claim, 11 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

4,055,176 A * 10/1977 Lundquist 604/127
 4,296,786 A 10/1981 Brignola
 4,564,054 A 1/1986 Gustavsson
 4,673,404 A 6/1987 Gustavsson
 4,834,744 A 5/1989 Ritson
 D314,051 S * 1/1991 Berglund et al. D24/129
 D341,420 S * 11/1993 Conn D24/112
 6,139,534 A * 10/2000 Niedospial et al. 604/411
 6,343,629 B1 2/2002 Wessman et al.
 6,409,708 B1 6/2002 Wessman
 6,616,632 B2 * 9/2003 Sharp et al. 604/117
 6,715,520 B2 4/2004 Andreasson et al.
 6,719,719 B2 * 4/2004 Carmel et al. 604/82
 7,306,584 B2 12/2007 Wessman et al.
 7,743,799 B2 6/2010 Mosler et al.
 7,744,581 B2 6/2010 Wallen et al.
 7,867,215 B2 1/2011 Akerlund et al.
 D637,713 S 5/2011 Nord et al.
 7,942,860 B2 5/2011 Horppu
 7,981,101 B2 7/2011 Walsh
 8,029,747 B2 10/2011 Helmerson
 8,075,550 B2 12/2011 Nord et al.
 8,167,863 B2 5/2012 Yow
 D703,812 S * 4/2014 Cederschiold et al. D24/129
 2002/0115981 A1 8/2002 Wessman
 2002/0169426 A1 11/2002 Takagi
 2003/0187420 A1 10/2003 Akerlund et al.
 2005/0182383 A1 8/2005 Wallen
 2006/0030832 A1 2/2006 Niedospial et al.
 2006/0276759 A1 12/2006 Kinast et al.

2007/0106244 A1 * 5/2007 Mosler et al. 604/411
 2008/0312633 A1 12/2008 Ellstrom
 2008/0312634 A1 12/2008 Helmerson
 2009/0057258 A1 3/2009 Tornqvist
 2010/0147402 A1 6/2010 Tornqvist
 2010/0249745 A1 9/2010 Ellstrom
 2010/0298805 A1 11/2010 Niedospial et al.
 2011/0125128 A1 5/2011 Nord et al.
 2012/0179129 A1 7/2012 Imai
 2012/0203194 A1 8/2012 Cederschiold et al.
 2014/0014210 A1 * 1/2014 Cederschiold 137/798

FOREIGN PATENT DOCUMENTS

FR 1600153 A 7/1970
 JP 1275176 A 6/2006
 JP 1436773 B 3/2012
 WO 2008067511 A1 6/2008
 WO WO2010069359 A1 6/2010
 WO WO2011060828 A1 5/2011
 WO WO2011060829 A1 5/2011

OTHER PUBLICATIONS

Protector 28 Product Sheet, Carmel Pharma. Inc., Mar. 2007.
 Yoshida et al., Use of a Closed System Device to Reduce Occupational Contamination and Exposure to Antineoplastic Drugs in the Hospital Work Environment, Ann. Occup. Hyg., vol. 53, No. 2, pp. 153-160, 2009.
 Phaseal Product Catalog—Product Overview, System Components, and Material Specifications, Carmel Pharma AB, Mar. 2010.

* cited by examiner

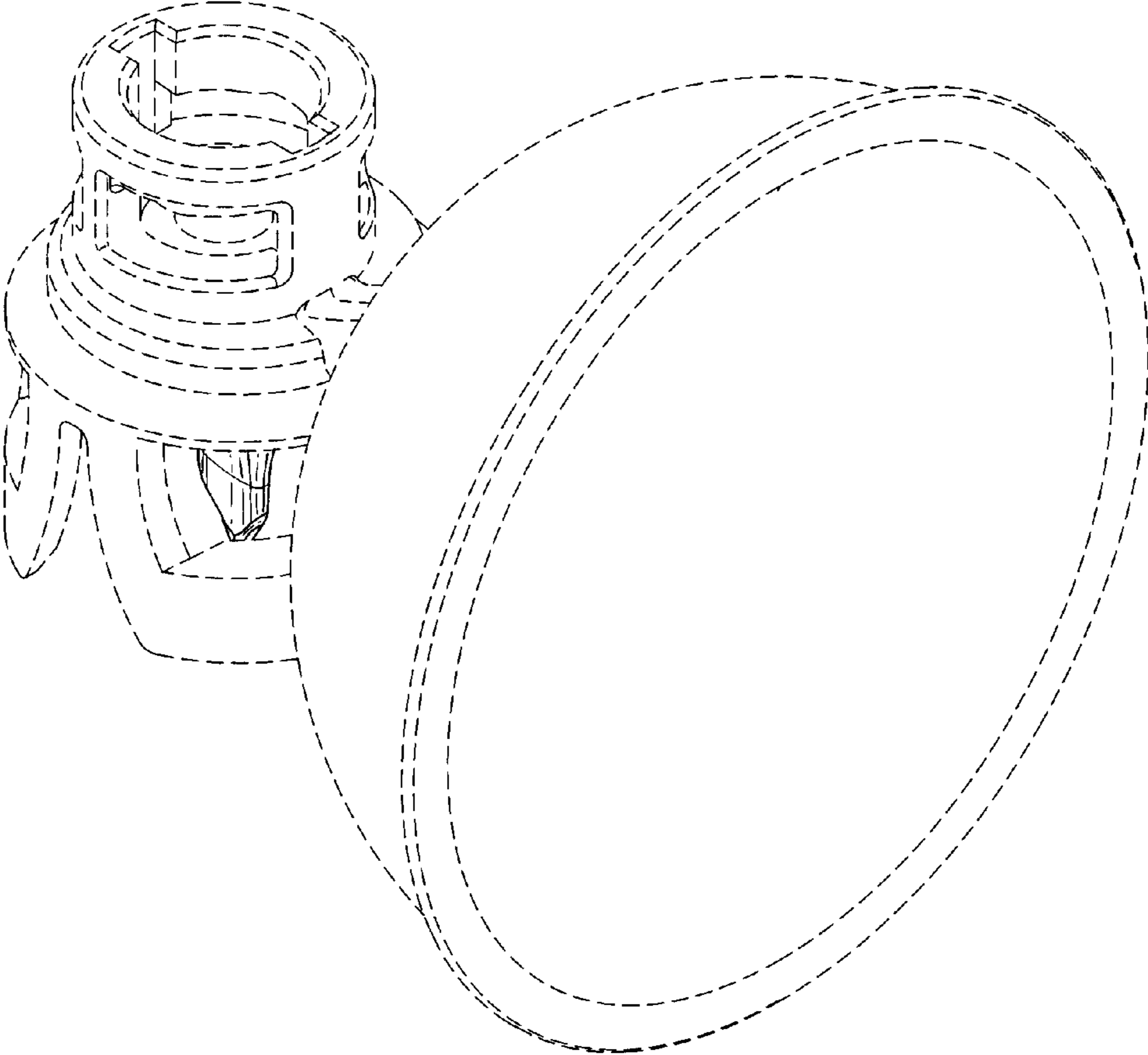


FIG. 1

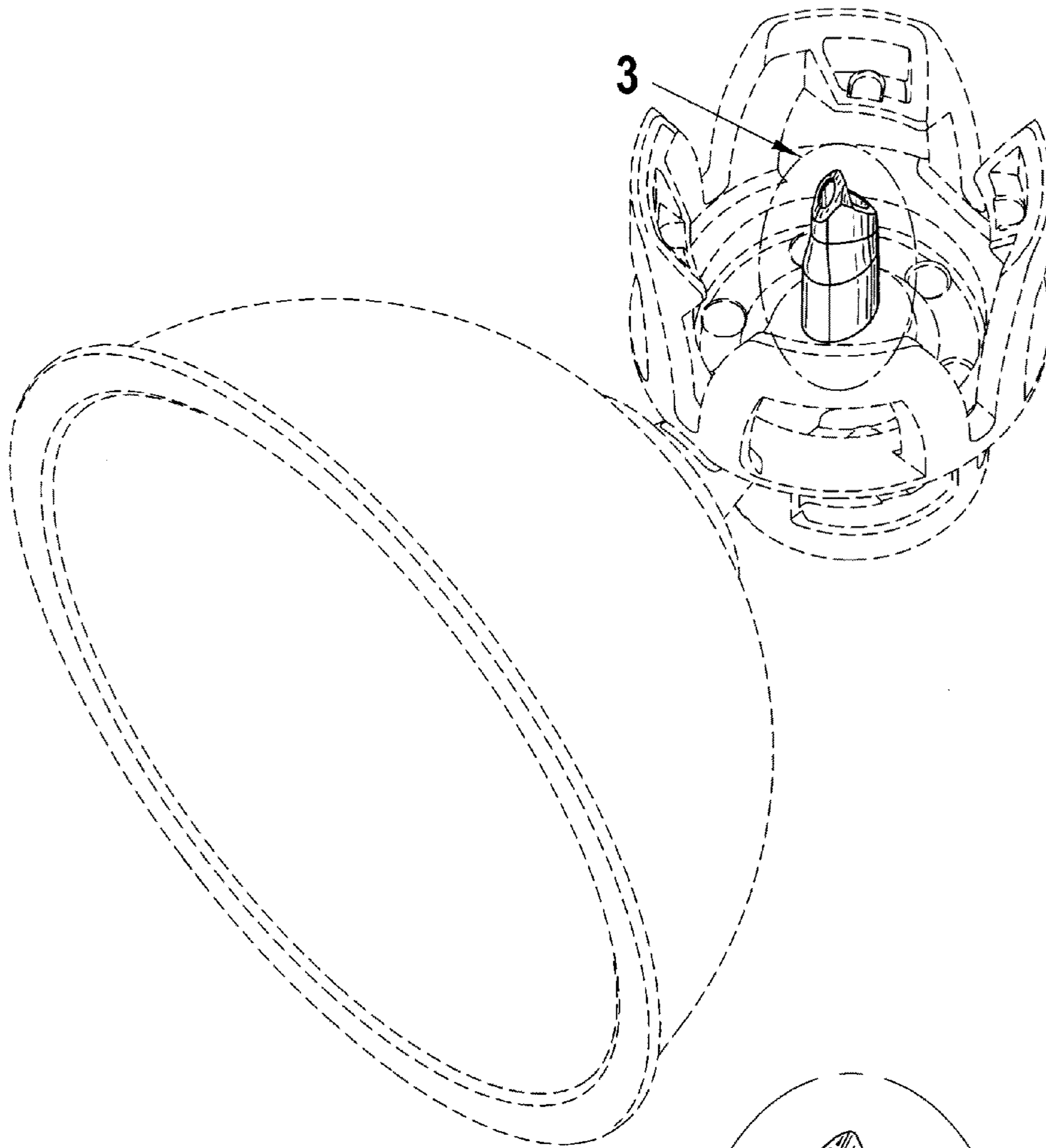


FIG. 2

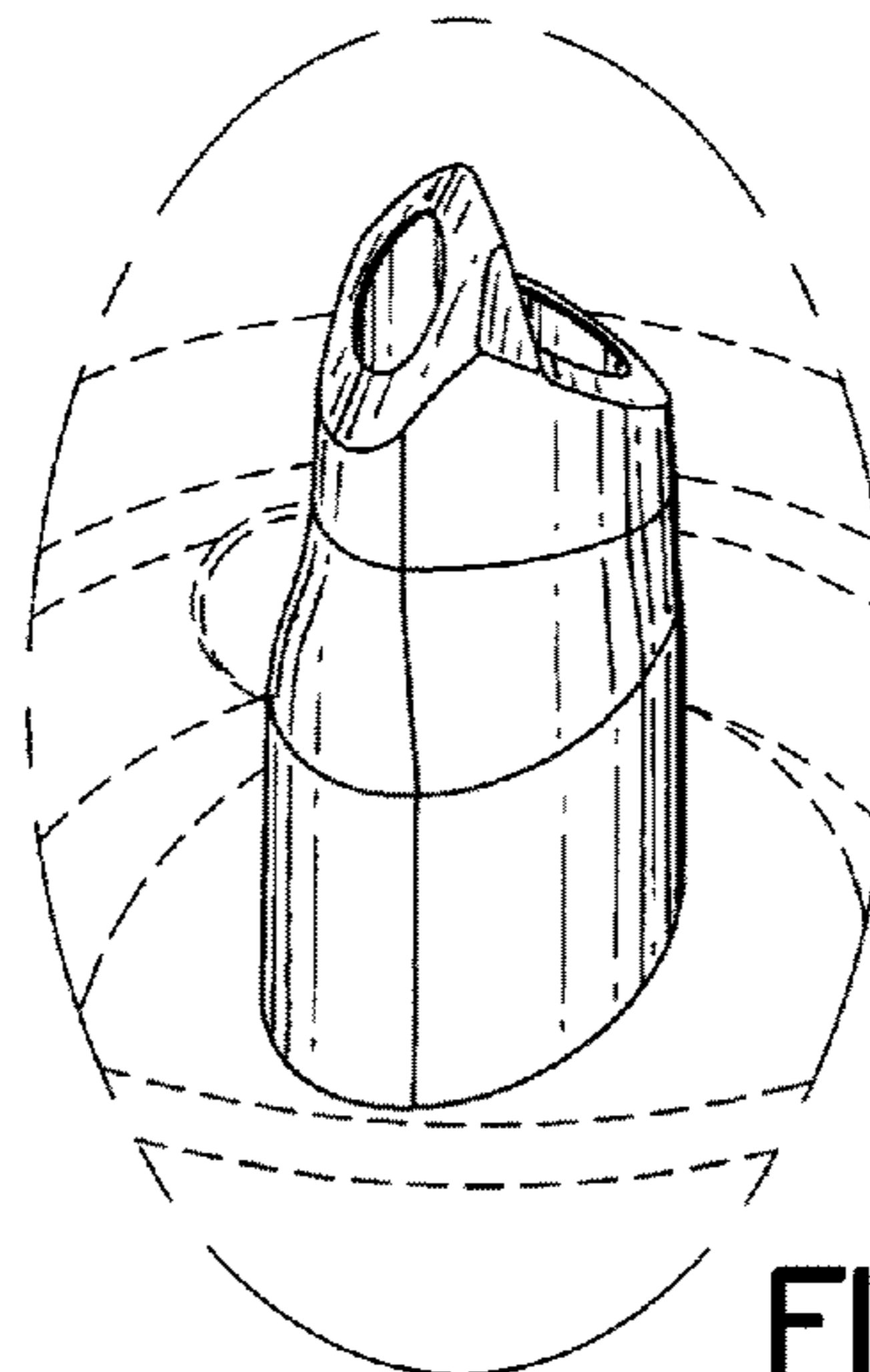


FIG. 3

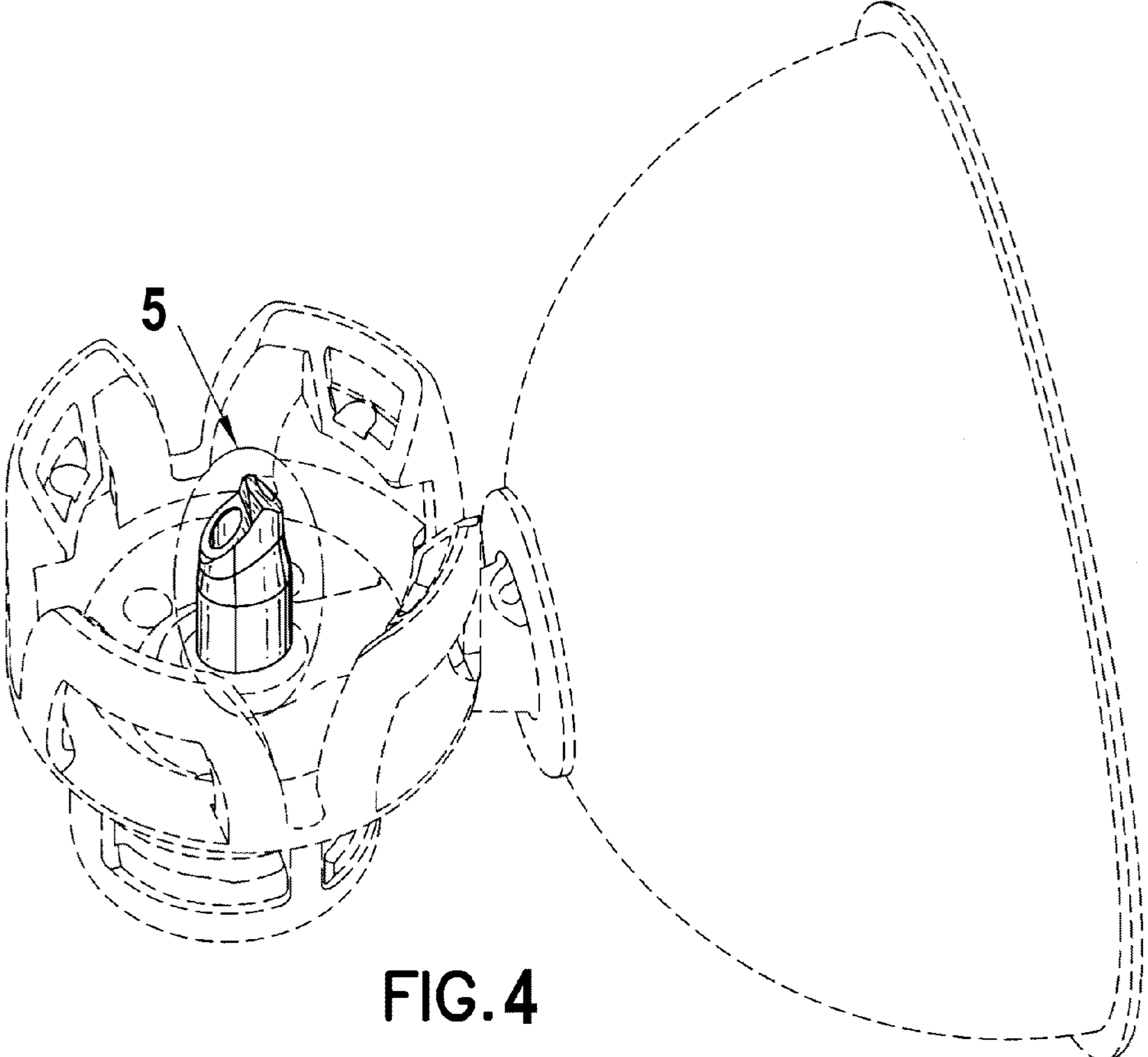


FIG. 4

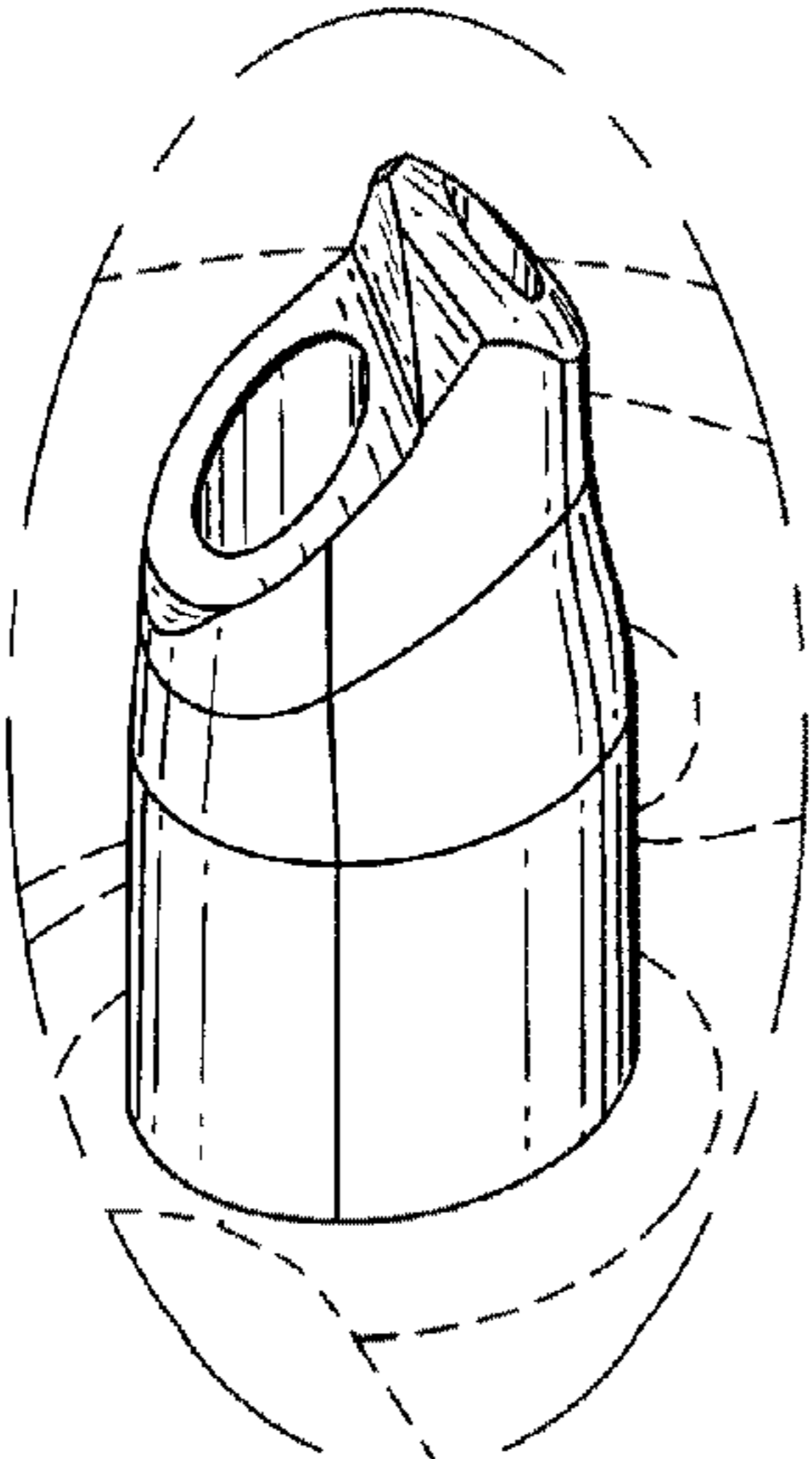


FIG. 5

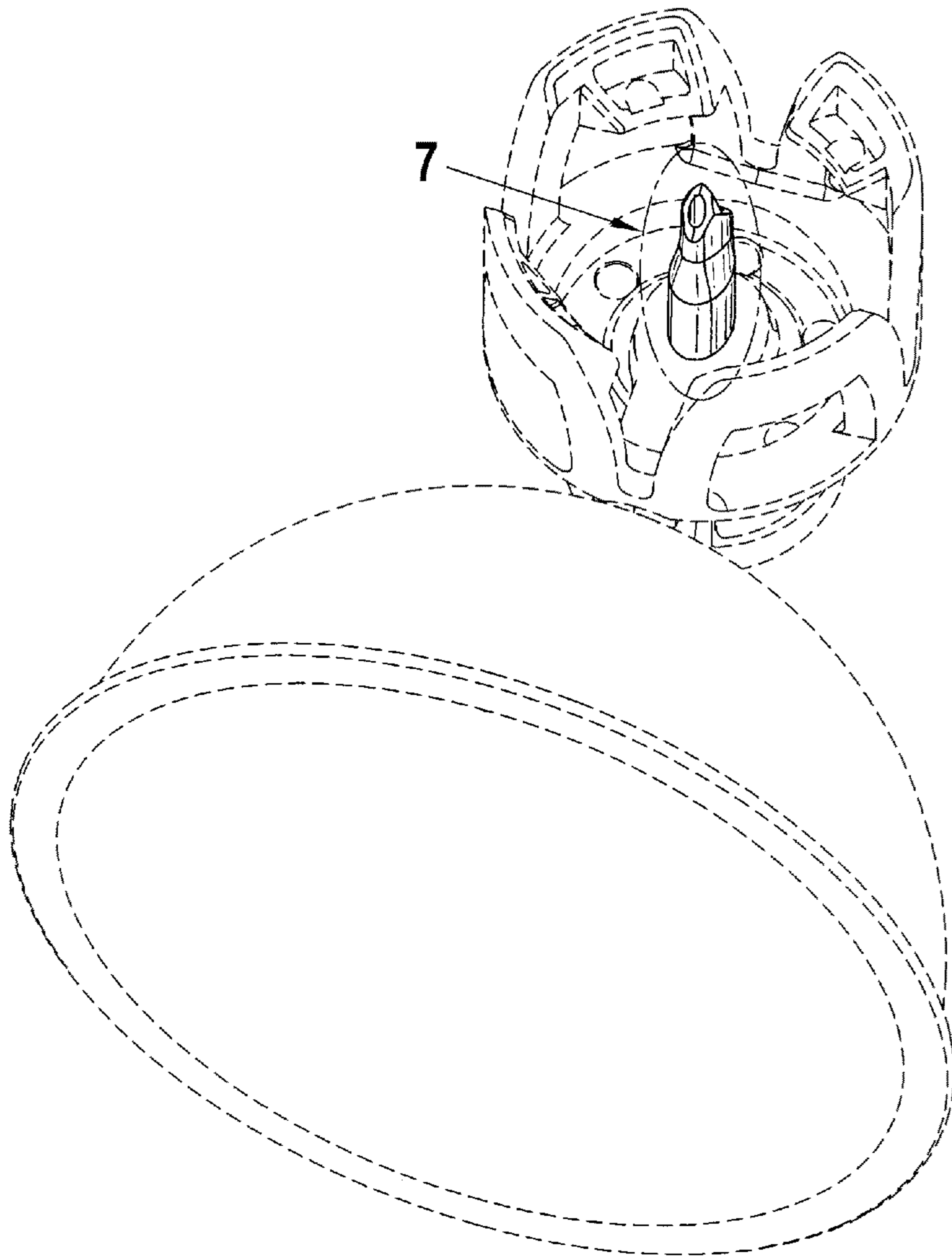


FIG. 6

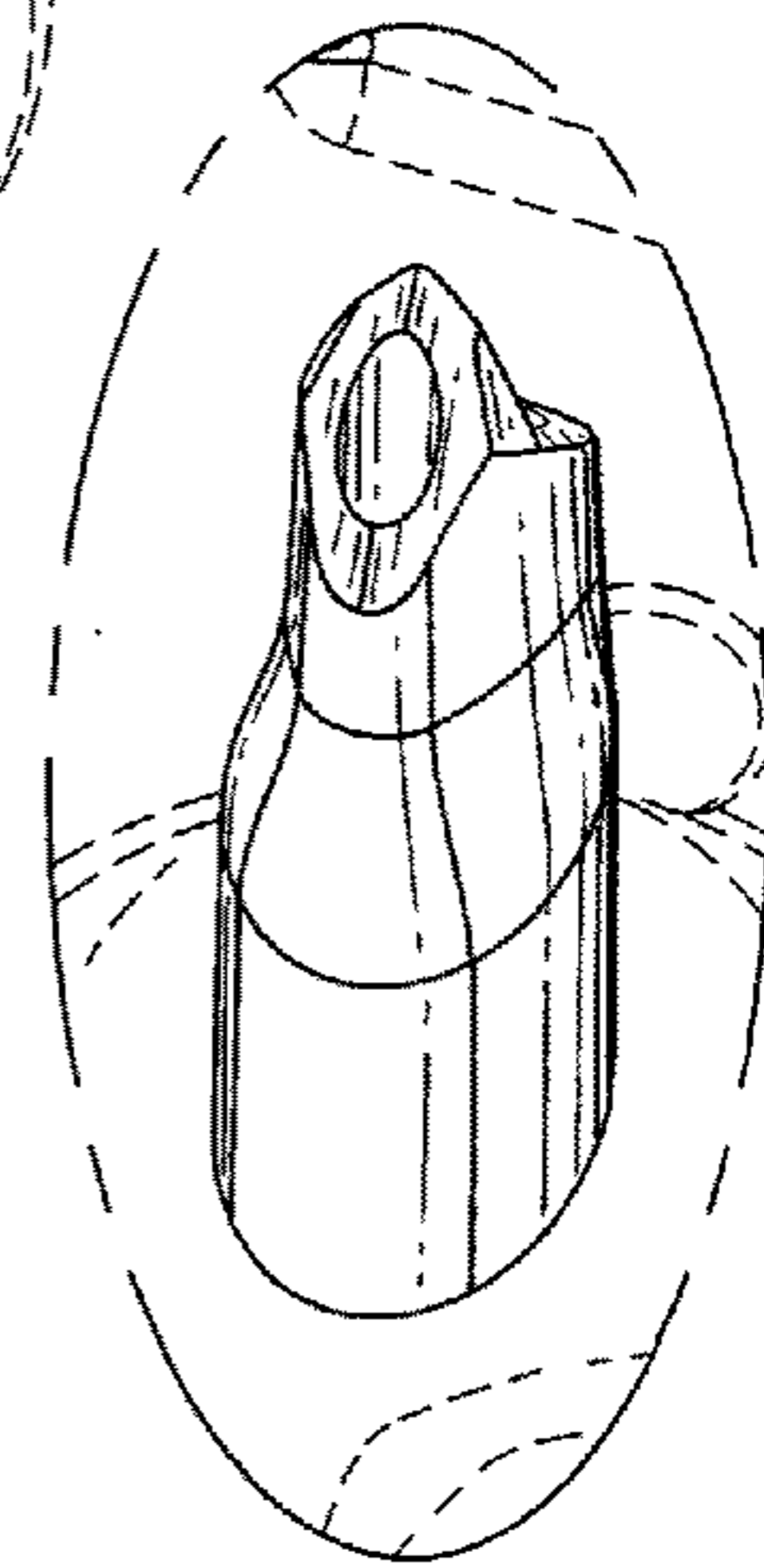
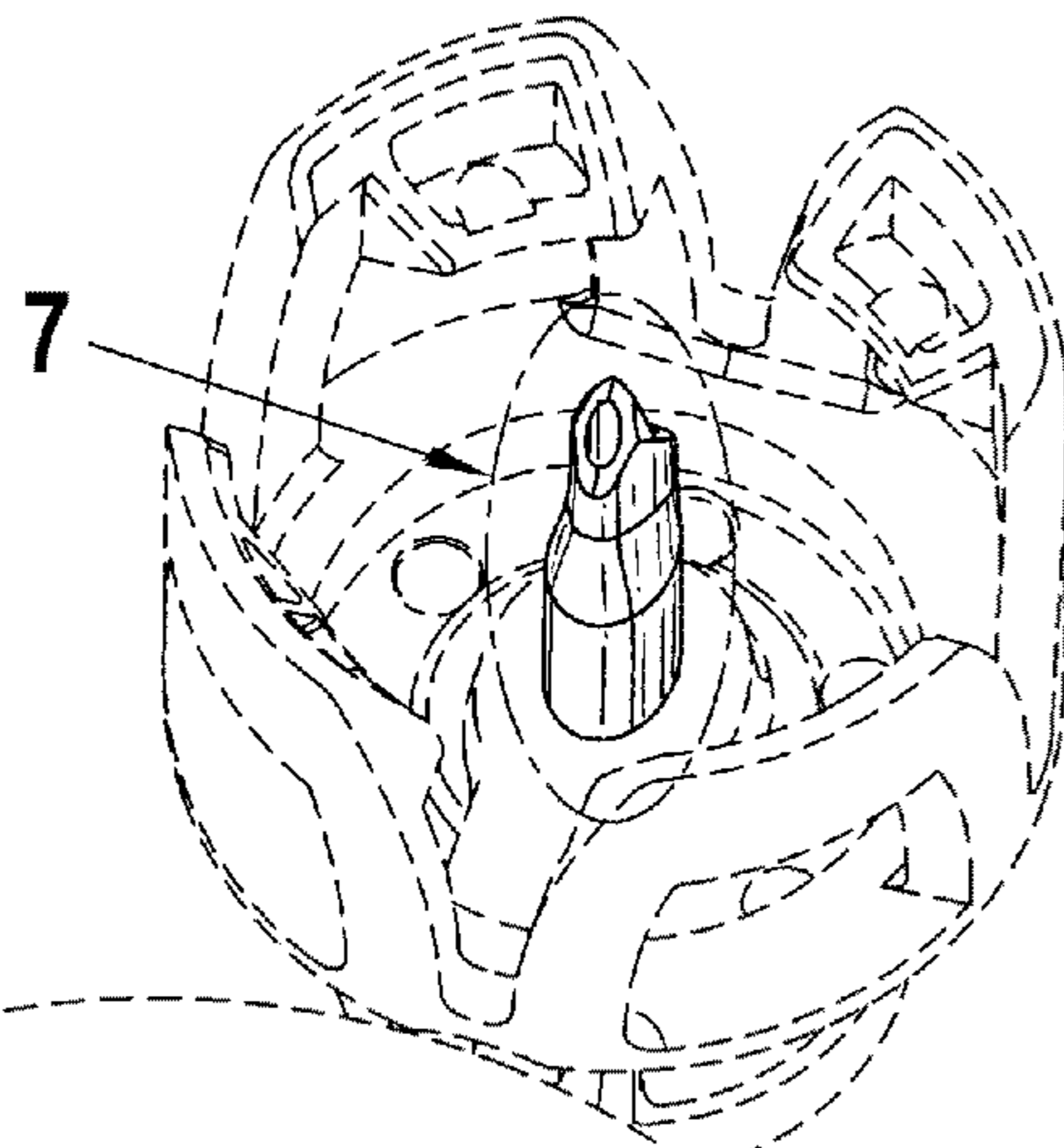


FIG. 7

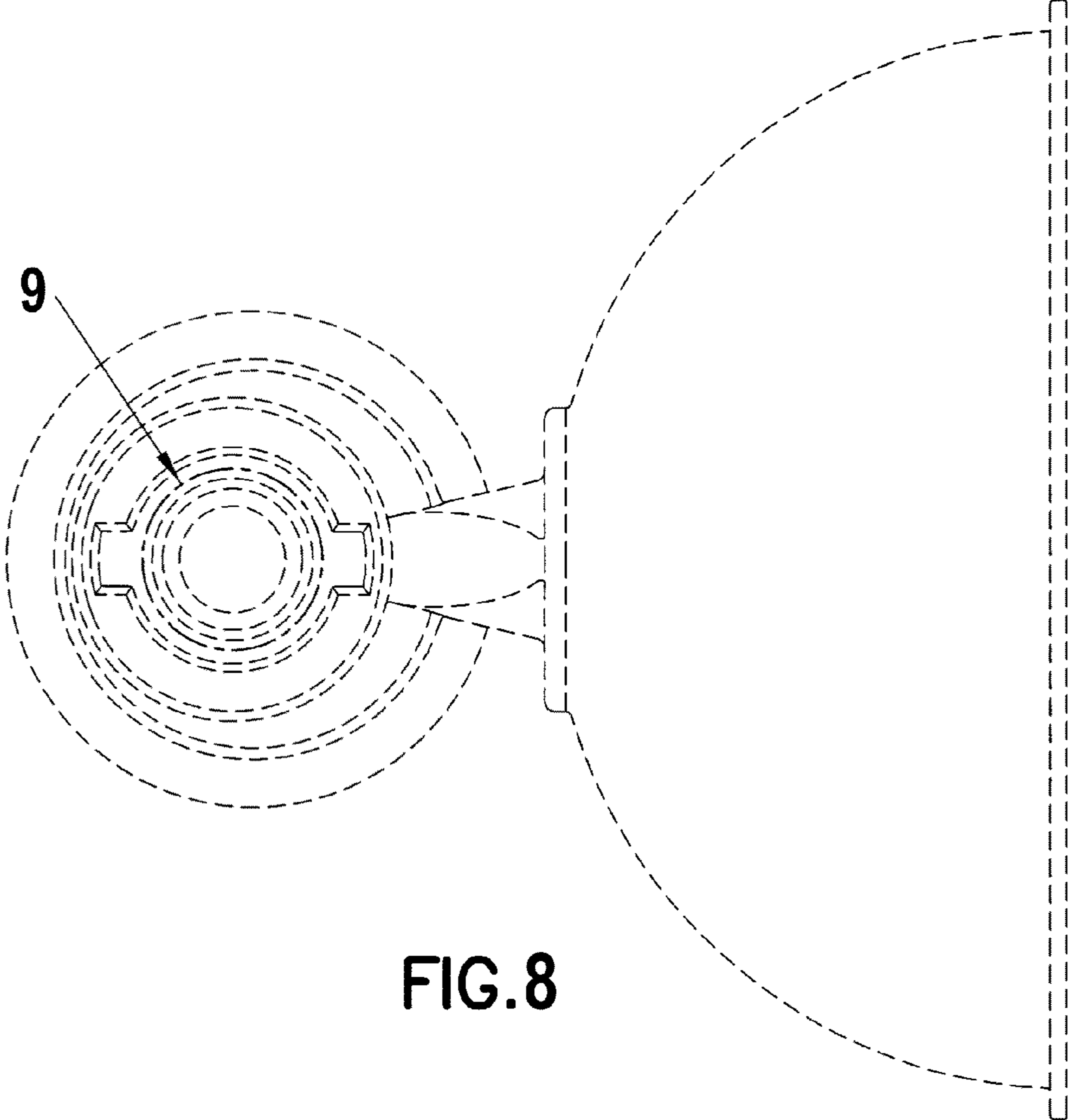


FIG. 8

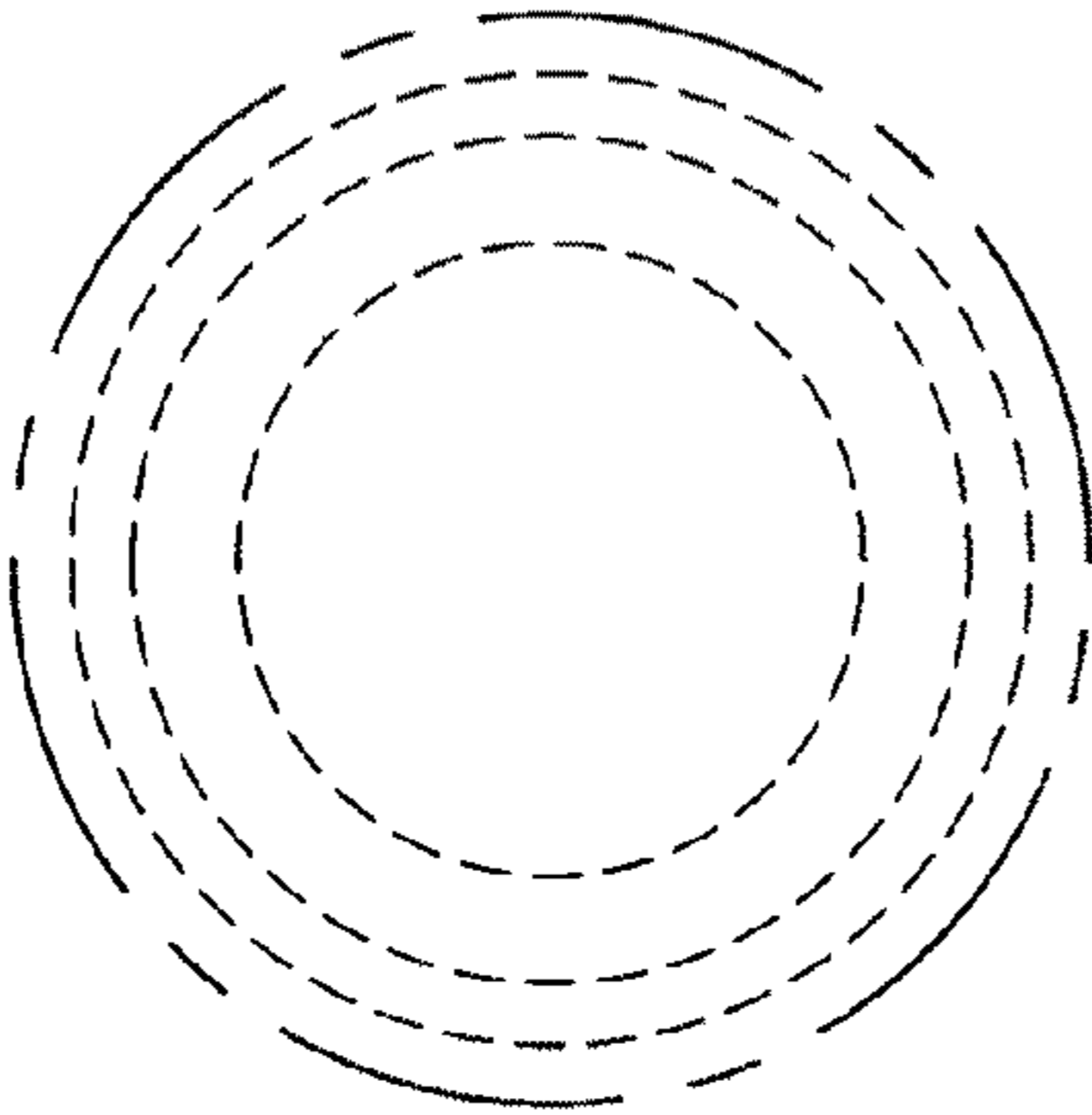
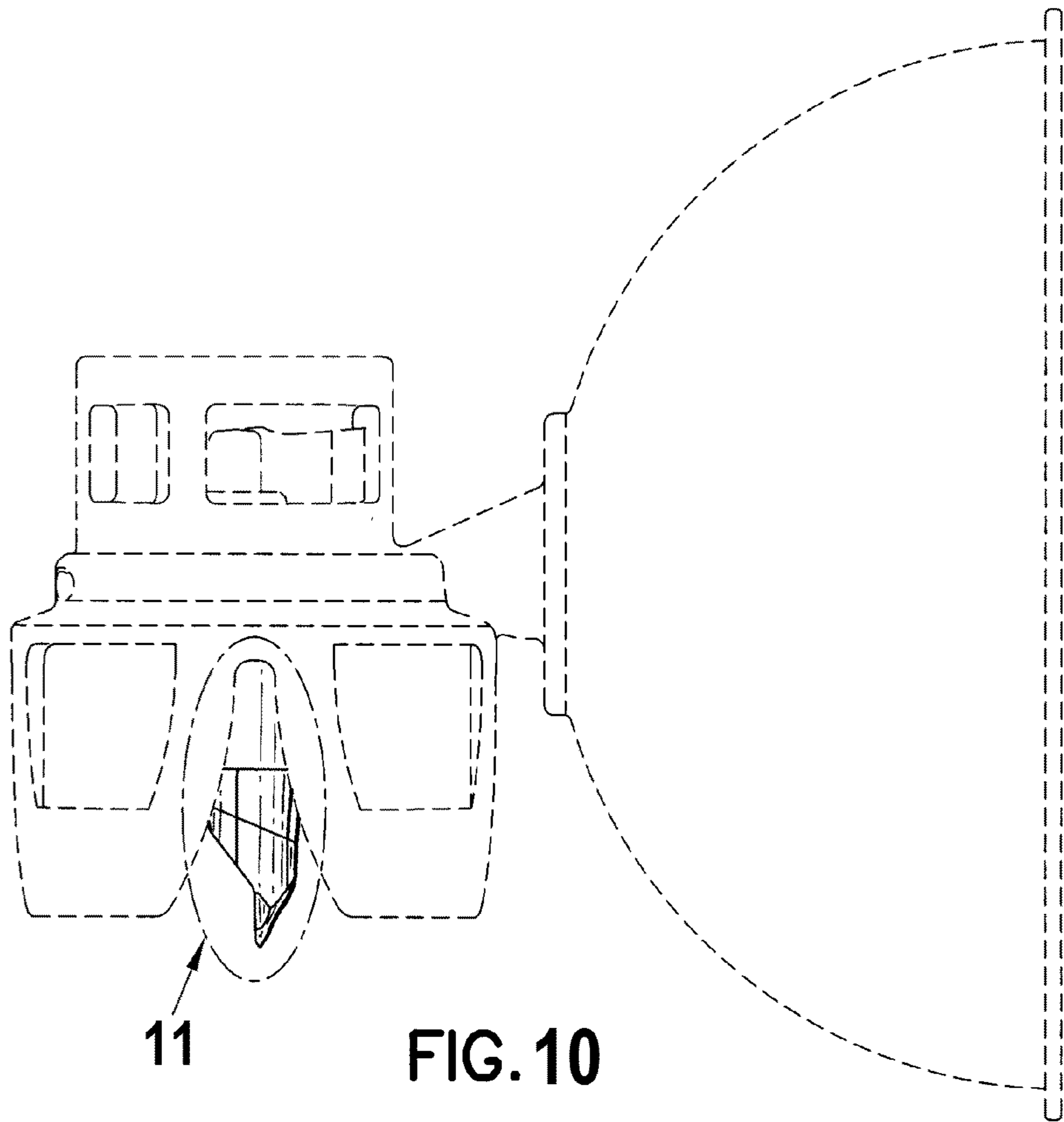


FIG. 9



11

FIG. 10

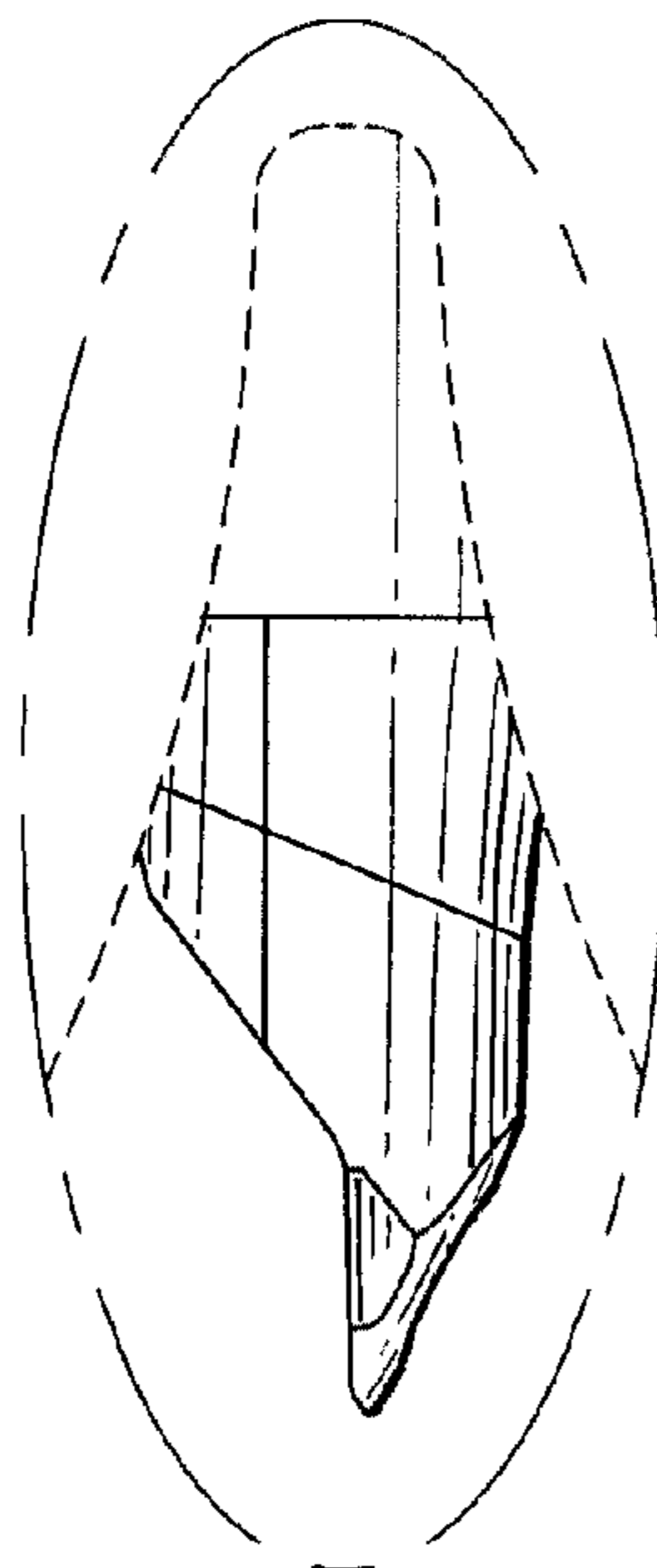
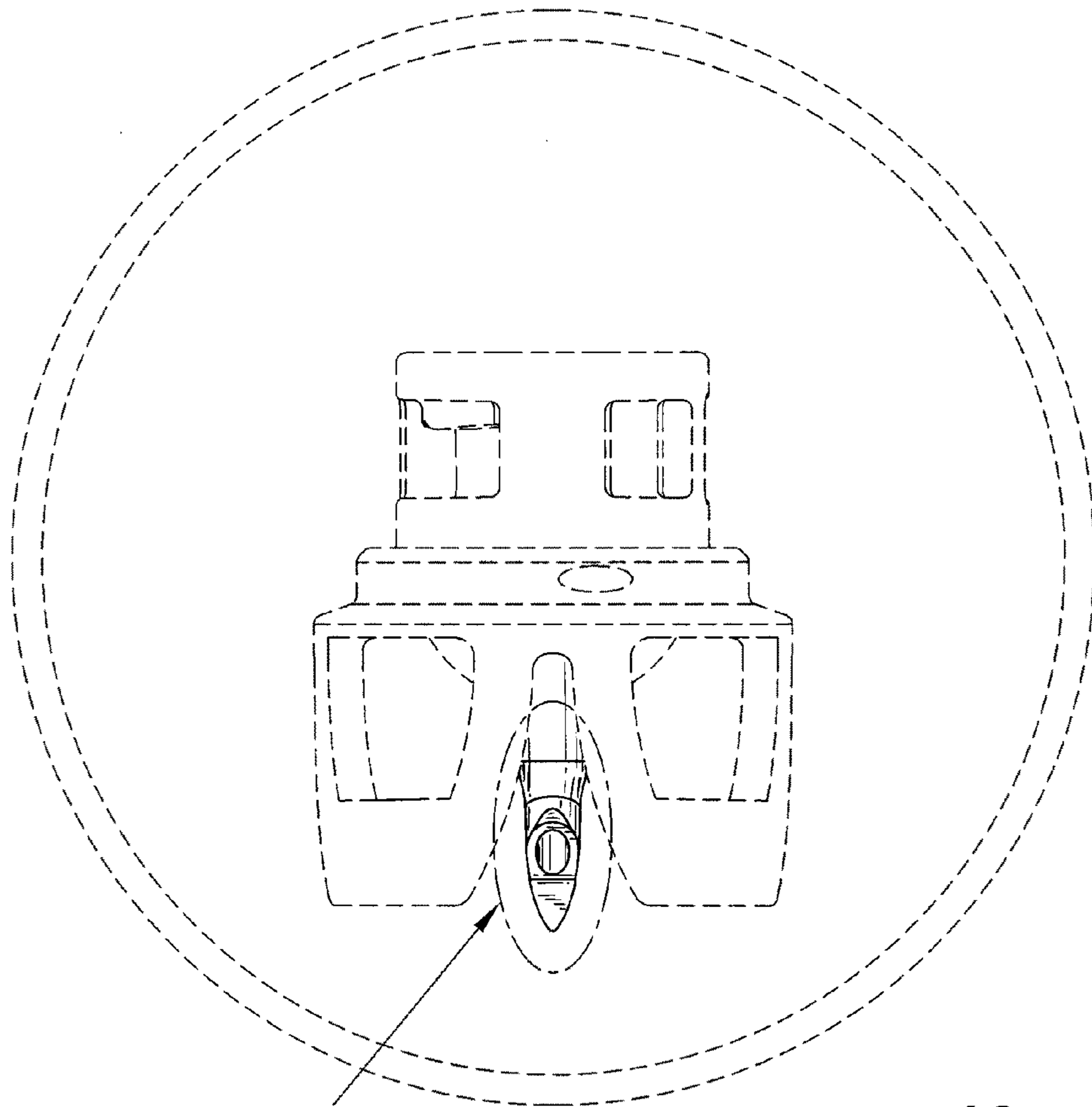


FIG. 11



13

FIG. 12

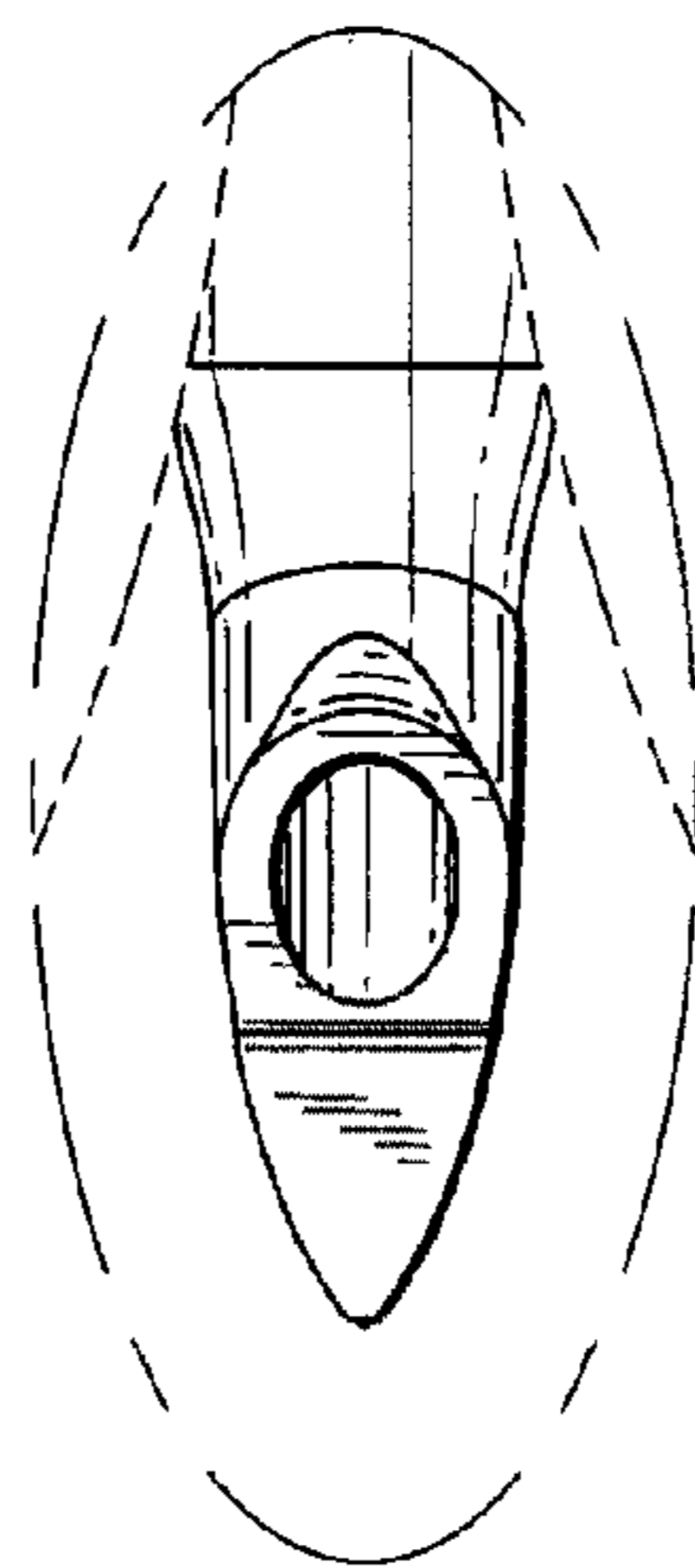


FIG. 13

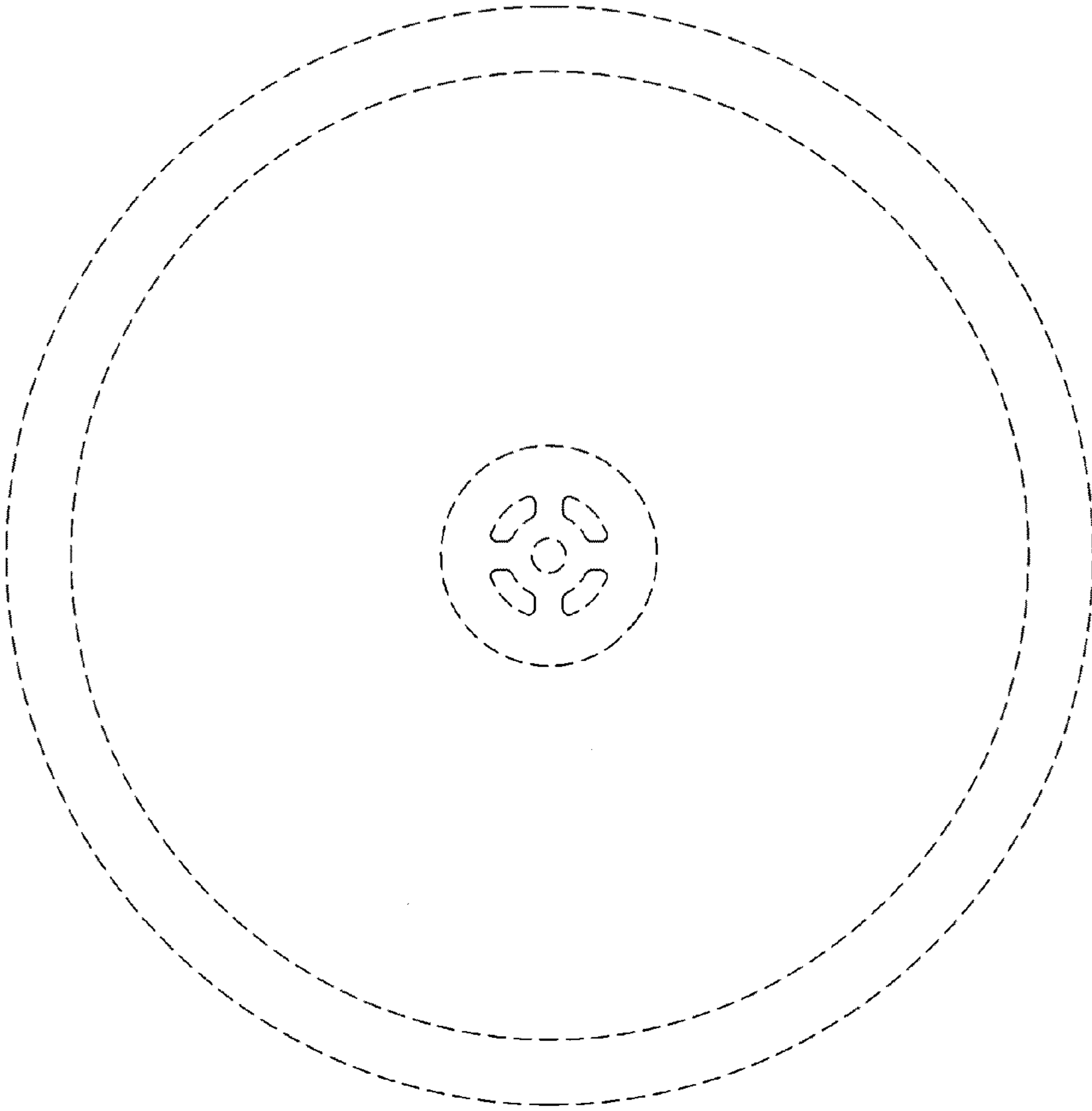


FIG. 14

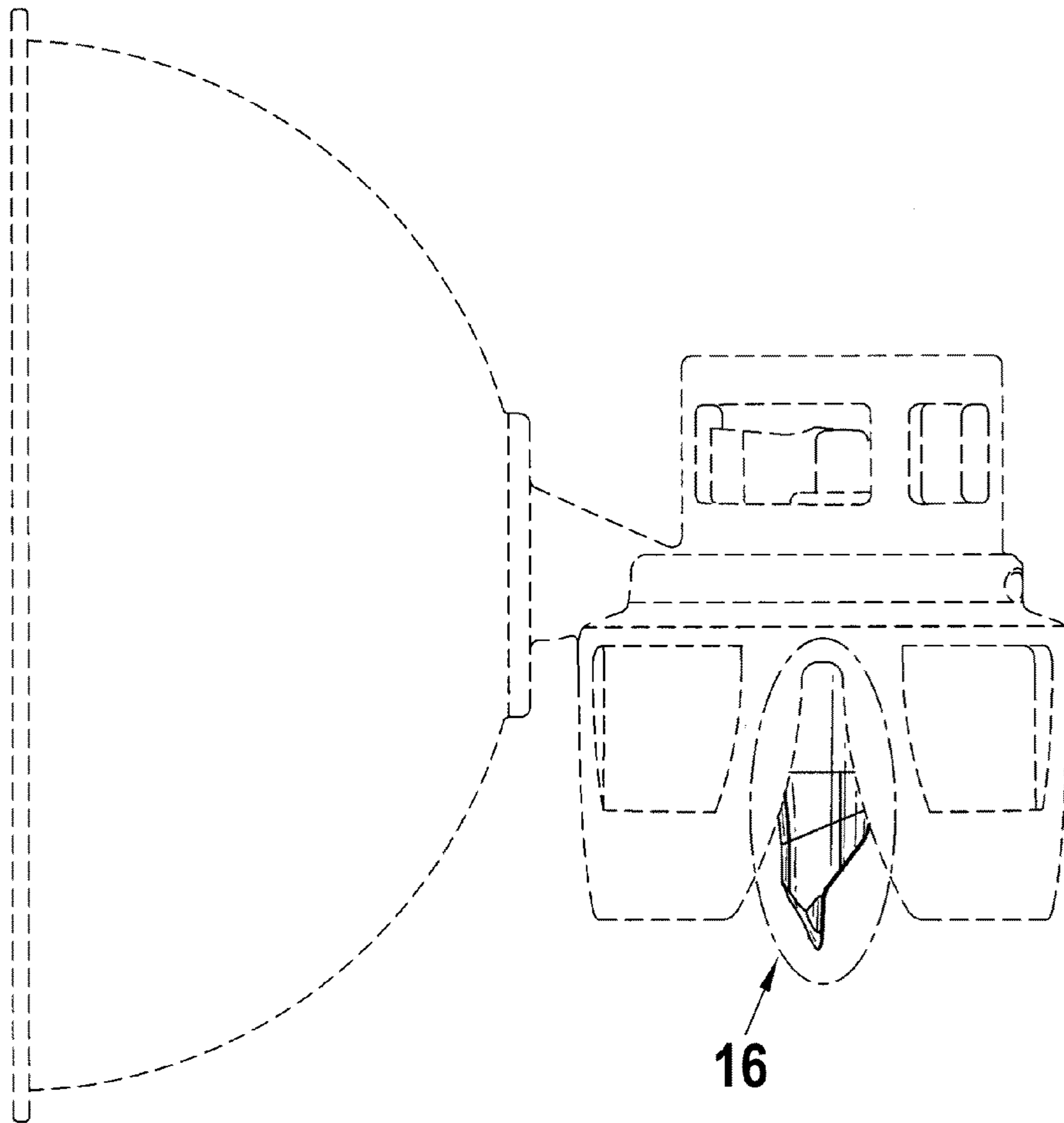


FIG. 15

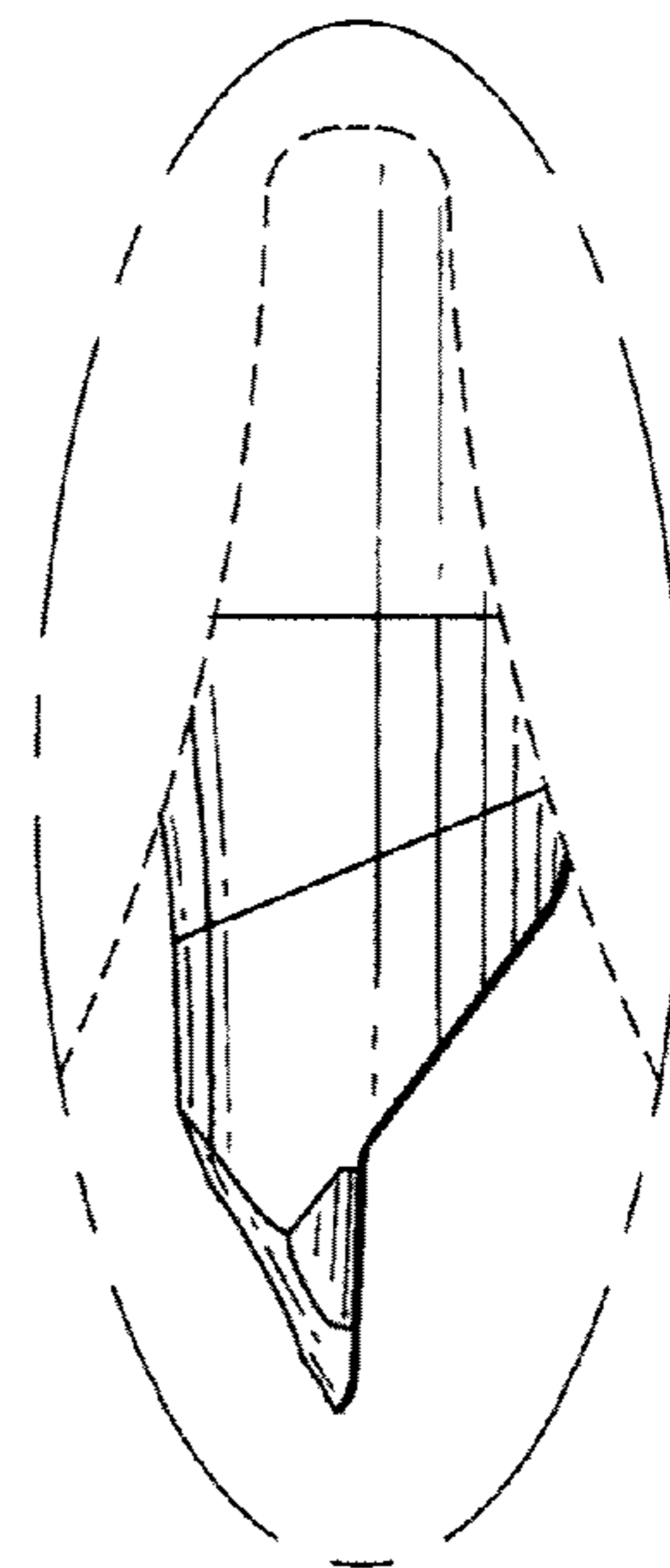


FIG. 16

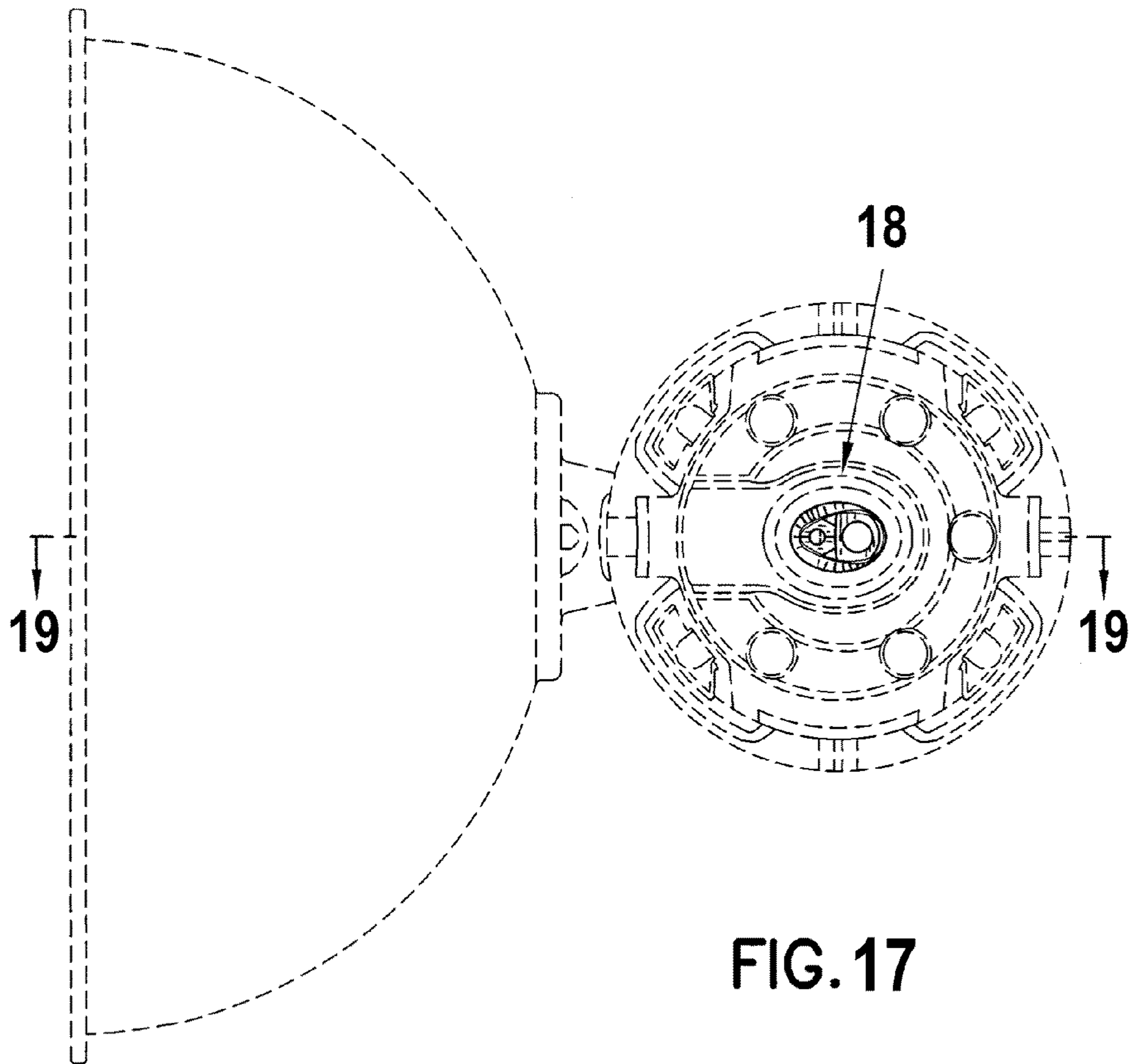


FIG. 17

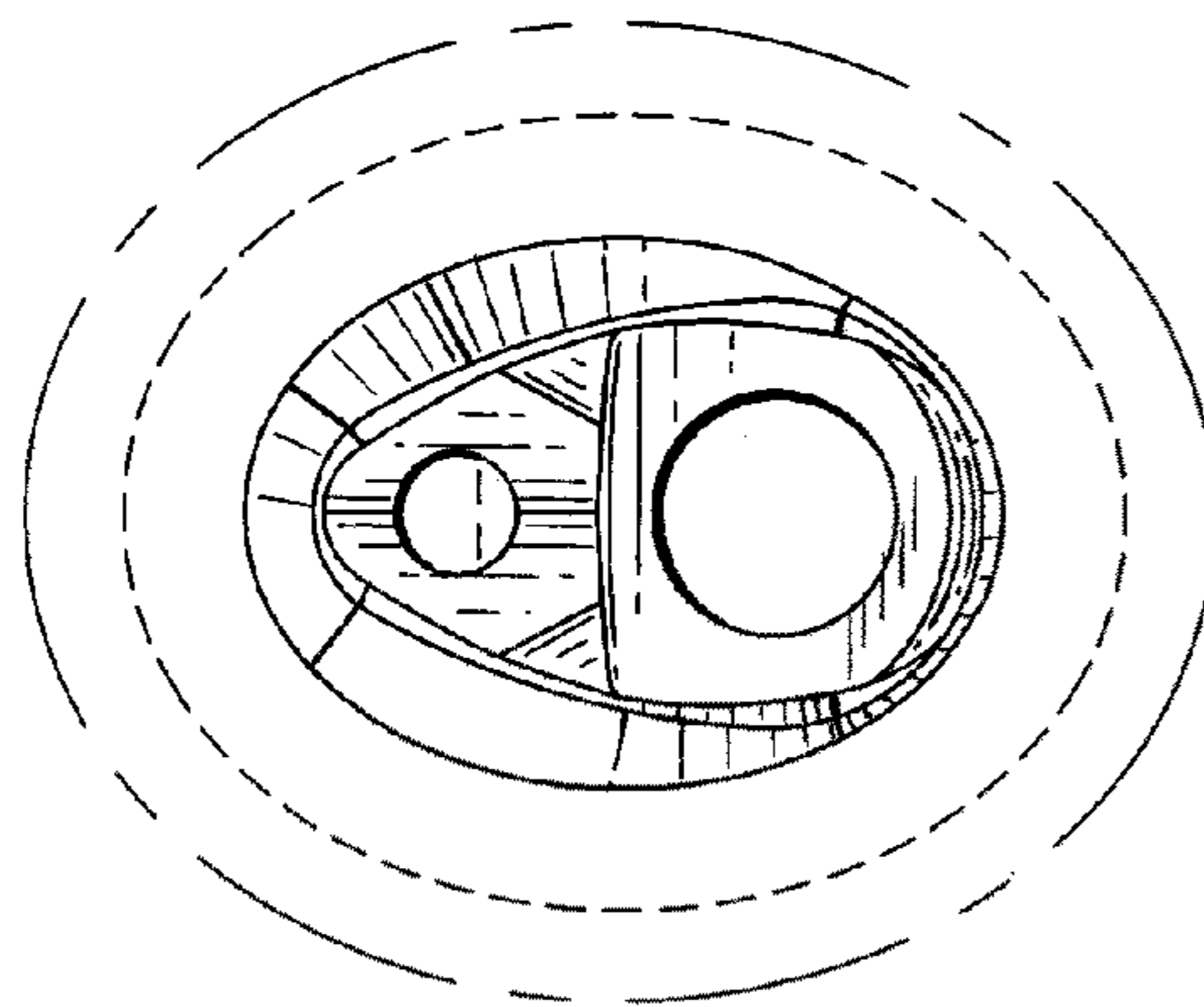


FIG. 18

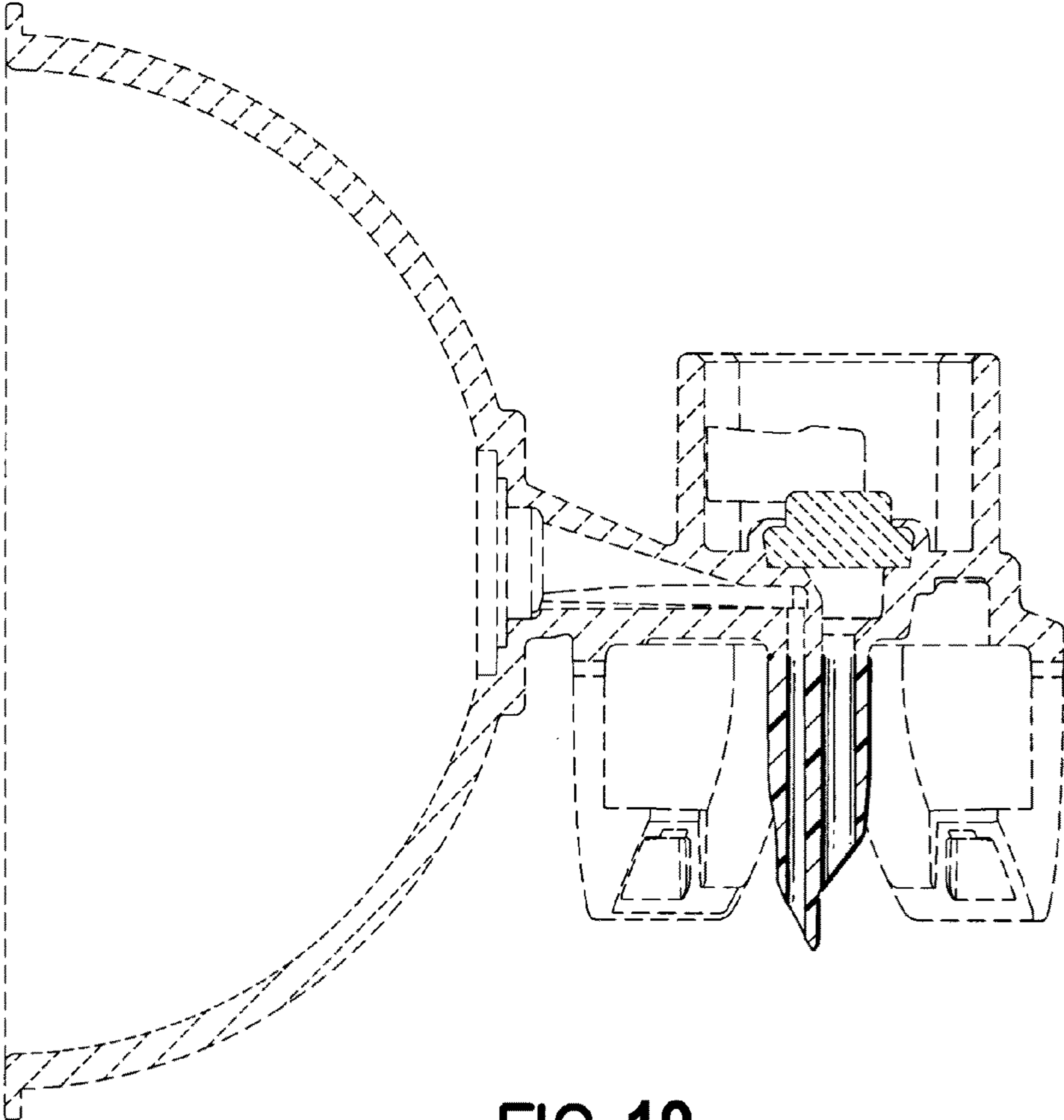


FIG. 19