US00D966506S

(12) United States Design Patent

de la Rama et al.

(10) Patent No.: US D966,506 S
(45) Date of Patent: ** Oct. 11, 2022

(54) **HIGH DENSITY CATHETER TIP**

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

(21) Appl. No.: **29/837,647**

(22) Filed: **May 6, 2022**

Related U.S. Application Data

(60) Continuation of application No. 29/818,199, filed on Dec. 7, 2021, now Pat. No. Des. 952,843, which is a (Continued)

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

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

(58) **Field of Classification Search**
USPC D24/112–114, 108, 130, 127, 133, 186
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,963,128 A * 10/1990 Daniel A61N 5/1007 600/7
D840,027 S * 2/2019 Cochran D24/127
(Continued)

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(57) **CLAIM**

The ornamental design for a high density catheter tip, as shown and described.

DESCRIPTION

This application is related to U.S. provisional application No. 60/939,799, filed May 23, 2007; U.S. application Ser. No. 11/853,759, filed Sep. 11, 2007, now U.S. Pat. No. 8,187,267, issued May 29, 2012; U.S. provisional application No. 60/947,791, filed Jul. 3, 2007; U.S. application Ser. No. 12/167,736, filed Jul. 3, 2008, now U.S. Pat. No. 8,206,404, issued Jun. 26, 2012; U.S. application Ser. No. 12/667,338, filed Jan. 20, 2011 (371 date), published as U.S. patent application publication No. US 2011/0118582 A1, now U.S. Pat. No. 8,827,910, issued Sep. 9, 2014; U.S. application Ser. No. 12/651,074, filed Dec. 31, 2009, published as U.S. patent application publication No. US 2010/0152731 A1, now U.S. Pat. No. 8,979,837, issued Mar. 17, 2015; U.S. application Ser. No. 12/436,977, filed May 7, 2009, published as U.S. patent application publication No. US 2010/0286684 A1; U.S. application Ser. No. 12/723,110, filed Mar. 12, 2010, published as U.S. patent application publication No. US 2010/0174177 A**1**, now U.S. Pat. No. 8,734,440, issued May 27, 2014; U.S. provisional application No. 61/355,242, filed Jun. 16, 2010; U.S. application Ser. No. 12/982,715, filed Dec. 30, 2010, published as U.S. patent application publication No. US 2011/0288392 A1, now U.S. Pat. No. 8,974,454, issued Mar. 10, 2015; U.S. application Ser. No. 13/159,446, filed Jun. 14, 2011, published as U.S. patent application publication No. US 2011/0313417 A1; U.S. application Ser. No. 13/162,392, filed Jun. 16, 2011, published as U.S. patent application publication No. US 2012/0010490 A1; and U.S. application Ser. No. 13/704,619, filed Dec. 16, 2012 (371date).

FIG. **1** is a top plan view of a high density catheter tip showing our new design;

FIG. **2** is a side perspective view thereof; and,

FIG. **3** is a side elevation view thereof in a flexed position.

The dashed broken lines and stipple shading shown in the side elevation views in the drawings illustrates a surface that

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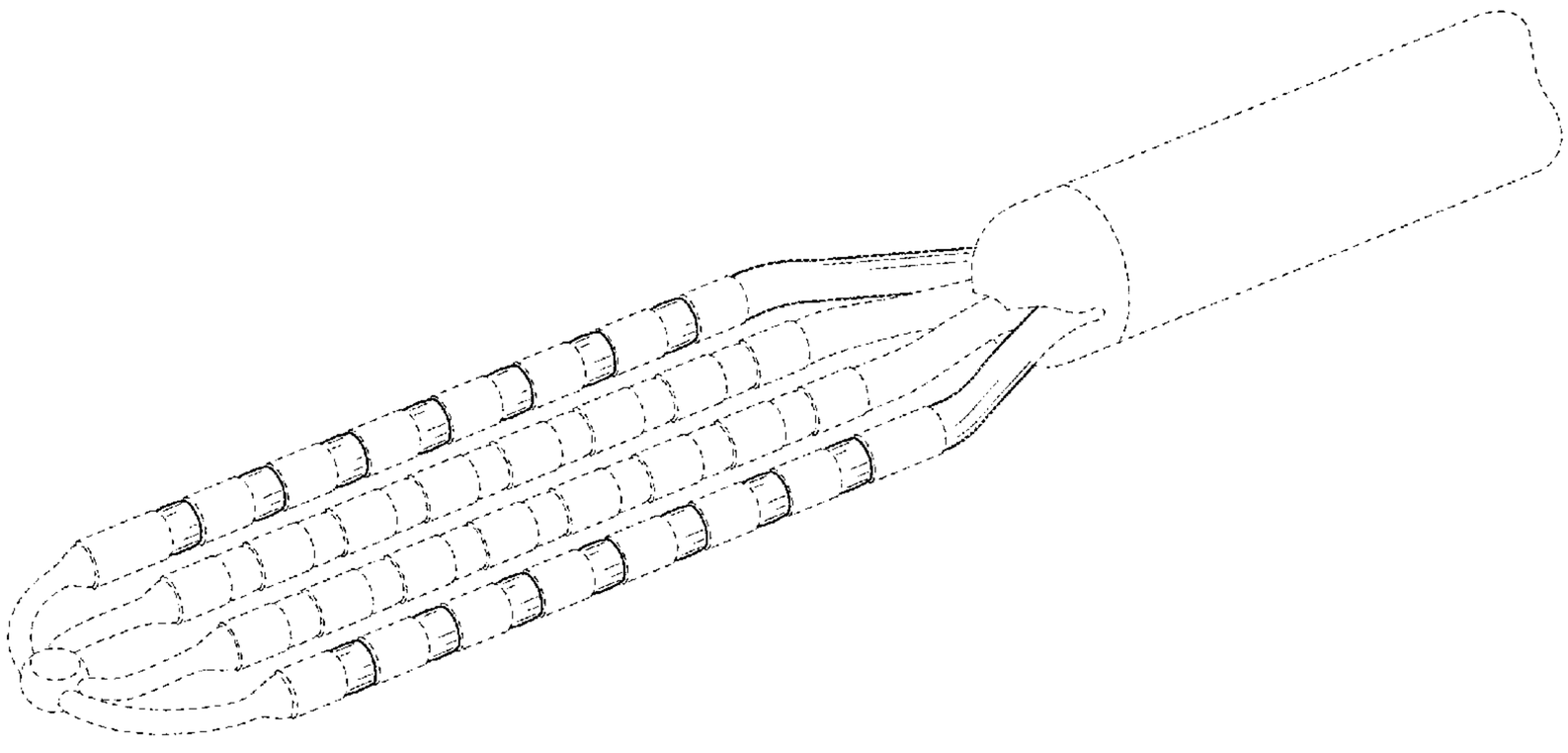

forms no part of the claimed design. The dot-dash broken lines in the drawings define the boundaries of the claimed design and form no part thereof. The remaining dashed broken lines in the figures depict portions of the catheter tip that form no part of the claimed design.

1 Claim, 3 Drawing Sheets

Related U.S. Application Data

division of application No. 29/759,859, filed on Nov. 25, 2020, now Pat. No. Des. 940,310, which is a continuation of application No. 16/670,678, filed on Oct. 31, 2019, which is a continuation of application No. 14/760,682, filed as application No. PCT/US2014/011940 on Jan. 16, 2014, now Pat. No. 10,492,729.

(58) **Field of Classification Search**

CPC .. A61M 25/065; A61M 5/42; A61M 25/0612; A61M 25/00; A61M 39/00; A61M 27/00; A61M 25/0043; A61M 25/0067; A61M 25/0097; A61F 2/958; A61B 2018/0016; A61B 5/24; A61B 5/6876

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

11,040,202	B2 *	6/2021	Marnfeldt	A61N 1/08
2002/0161361	A1 *	10/2002	Sherman	A61B 18/1492 606/41
2012/0296329	A1 *	11/2012	Ng	A61B 5/0215 606/41
2013/0041436	A1 *	2/2013	Ruse	A61B 18/1477 607/99
2017/0007158	A1 *	1/2017	Gross	A61B 5/7475
2017/0319269	A1 *	11/2017	Oliverius	A61M 39/12
2018/0056038	A1 *	3/2018	Aujla	A61B 5/287
2019/0009052	A1 *	1/2019	Oliverius	A61M 25/008
2019/0110750	A1 *	4/2019	Dahlen	A61B 5/6869
2019/0290206	A1 *	9/2019	Jung	A61B 5/6858
2020/0345262	A1 *	11/2020	Selkee	A61B 5/6856

* cited by examiner

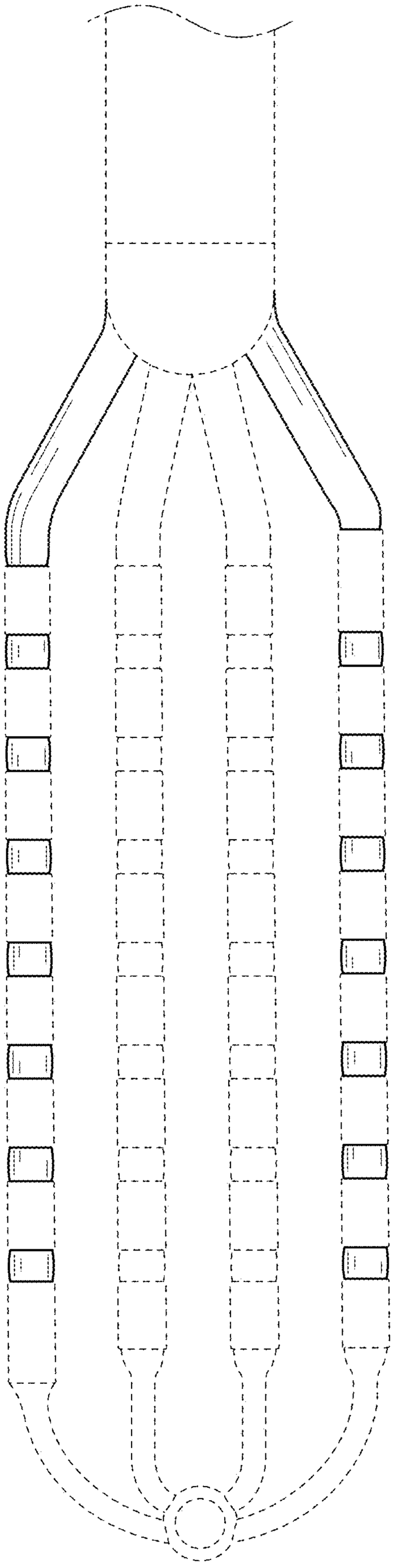

FIG.1

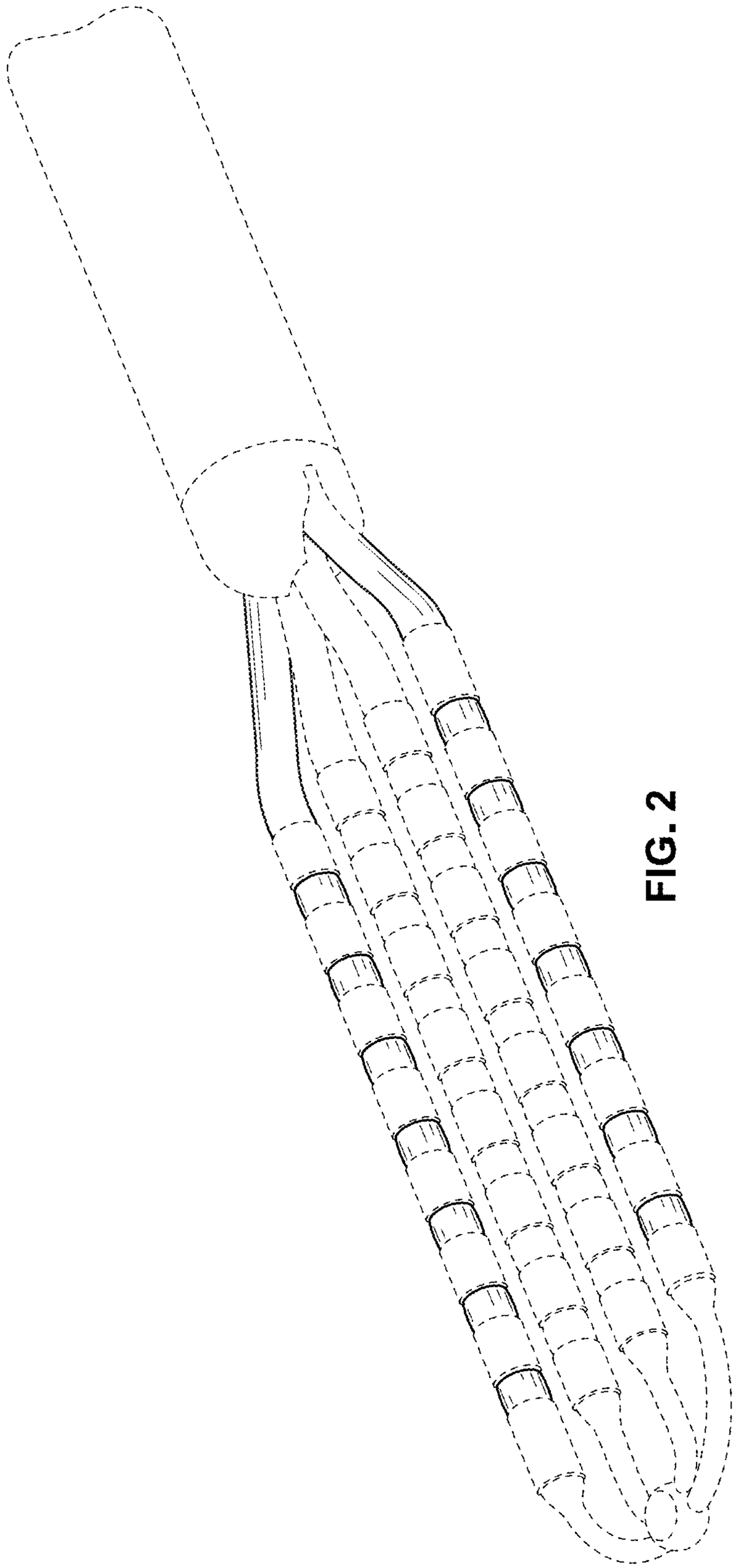

FIG. 2

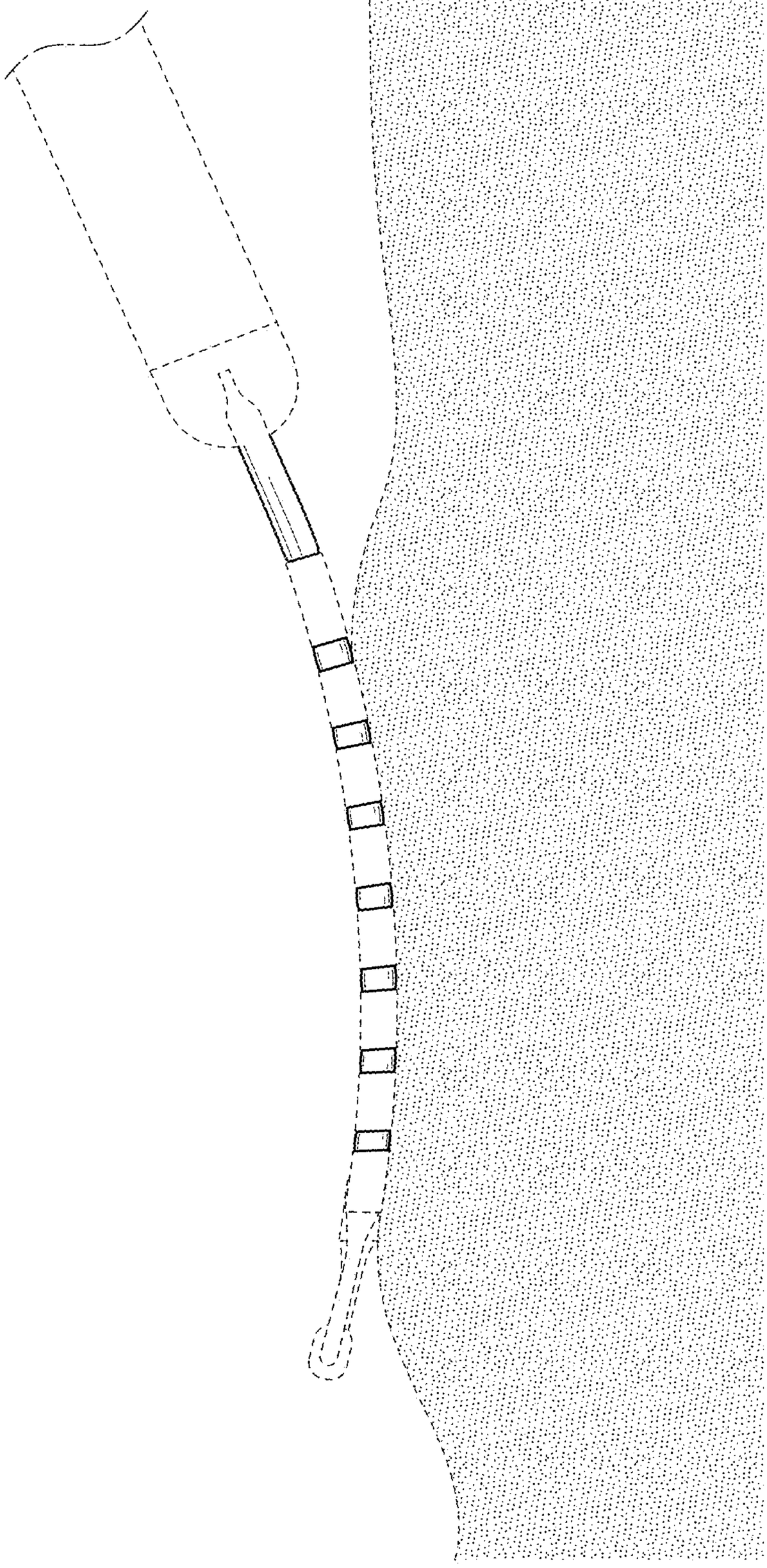

FIG. 3