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(12) **United States Design Patent** (10) **Patent No.:** **US D946,150 S**
Ng et al. (45) **Date of Patent:** **** Mar. 15, 2022**

(54) **NASAL AIRWAY MEDICAL INSTRUMENT**
(71) Applicant: **AERIN MEDICAL, INC.**, Sunnyvale, CA (US)

5,718,702 A 2/1998 Edwards
5,728,094 A 3/1998 Edwards
5,730,719 A 3/1998 Edwards
(Continued)

(72) Inventors: **Gregory Ng**, San Lorenzo, CA (US);
Curtis Anderson, Loudon, TN (US);
Robert Gatehouse, Pleasanton, CA (US)

FOREIGN PATENT DOCUMENTS

WO 2013028998 A2 2/2013
WO 2014022436 A1 2/2014

(73) Assignee: **Aerin Medical Inc.**, Sunnyvale, CA (US)

OTHER PUBLICATIONS

Liu et al., China Journal of Endoscopy, vol. 14, No. 11, pp. 1127-1130, Nov. 2008, [English Translation of Title] "Impact of treatment of perennial rhinitis by radiofrequency thermo-coagulations to vidian and anterior ethmoidal nerves on mucociliary clearance," [also translated as] "Impact of radiofrequency thermocoagulation of bilateral vidian and anterior ethmoidal nerve cluster regions on nasal mucociliary transport function in perennial allergic rhinitis and vasomotor rhinitis." 12 pages.

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

Primary Examiner — Eliza Z Bennett-Hattan

(21) Appl. No.: **29/710,749**

(74) *Attorney, Agent, or Firm* — Merchant & Gould P.C.

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Related U.S. Application Data

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

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

(58) **Field of Classification Search**
USPC D24/138, 137, 133, 145, 146, 147, 108,
D24/113, 127; D8/300

CPC A61B 18/18
See application file for complete search history.

(57) **CLAIM**

The ornamental design for a nasal airway medical instrument, as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of the nasal airway medical instrument.

FIG. 2 is another perspective view thereof.

FIG. 3 is a front view thereof.

FIG. 4 is a rear view thereof.

FIG. 5 is a right side view thereof.

FIG. 6 is a left side view thereof.

FIG. 7 is a top view thereof; and,

FIG. 8 is a bottom view thereof.

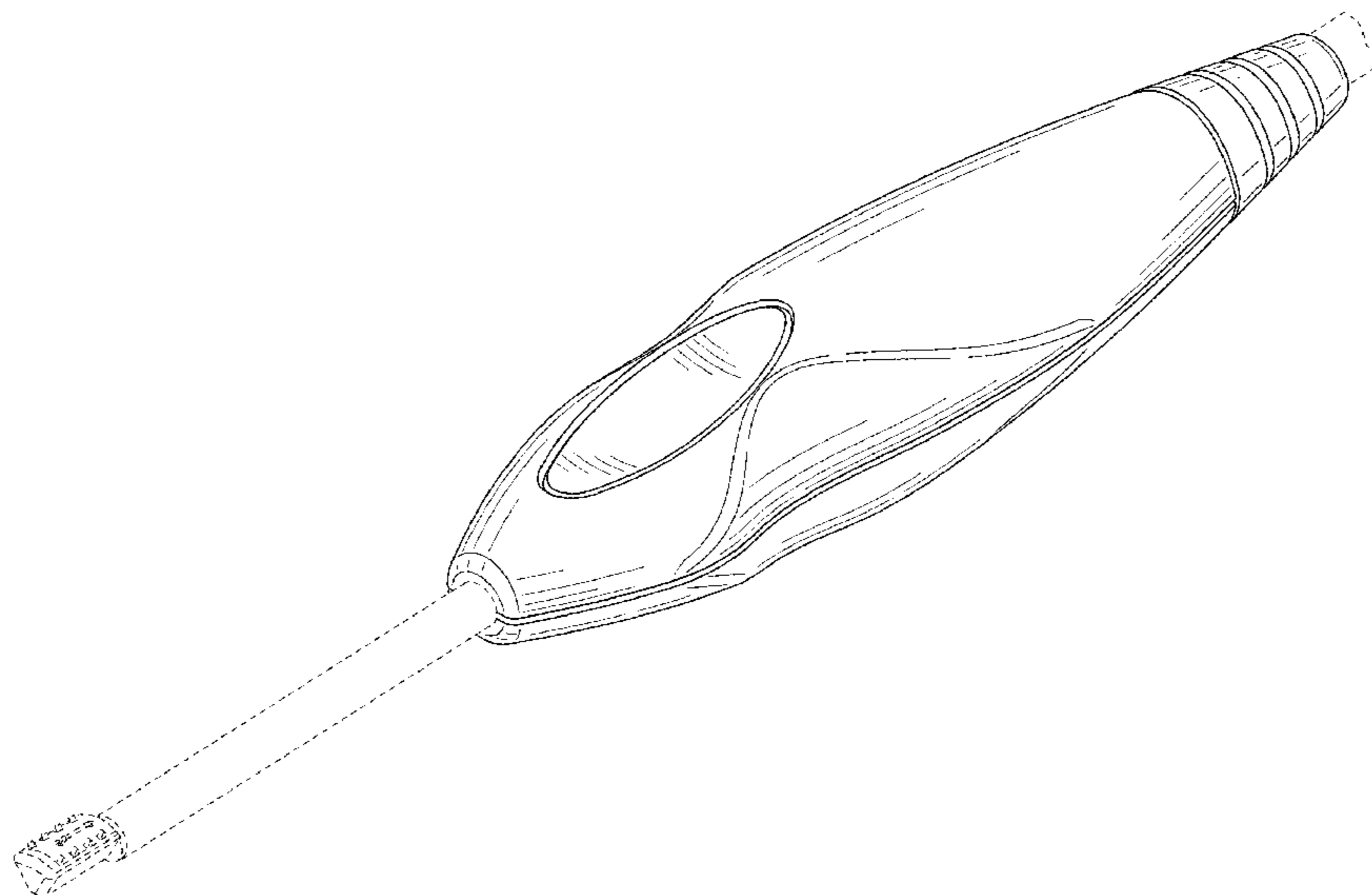
The broken lines represent portions of the nasal airway medical instrument that form no part of the claimed design.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,834,757 A 5/1989 Brantigan
4,887,605 A 12/1989 Angelsen et al.
5,348,008 A 9/1994 Bornn et al.
5,533,499 A 7/1996 Johnson
5,542,916 A 8/1996 Hirsch et al.
5,624,439 A 4/1997 Edwards et al.
5,674,191 A 10/1997 Edwards et al.
5,707,349 A 1/1998 Edwards

1 Claim, 5 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

5,733,280 A	3/1998	Avitall	9,237,924 B2	1/2016	Wolf et al.
5,738,114 A	4/1998	Edwards	9,247,989 B2	2/2016	Truckai
5,743,870 A	4/1998	Edwards	9,415,194 B2	8/2016	Wolf et al.
5,743,904 A	4/1998	Edwards	9,433,463 B2	9/2016	Wolf et al.
5,746,224 A	5/1998	Edwards	9,452,010 B2	9/2016	Wolf et al.
5,800,429 A	9/1998	Edwards	9,452,087 B2	9/2016	Holm et al.
5,807,306 A	9/1998	Shapland et al.	9,486,278 B2	11/2016	Wolf et al.
5,816,095 A	10/1998	Nordell, II et al.	9,526,571 B2	12/2016	Wolf et al.
5,817,049 A	10/1998	Edwards	D780,919 S	3/2017	Sasayama et al.
5,820,580 A	10/1998	Edwards et al.	D782,657 S *	3/2017	Williams D24/111
5,823,197 A	10/1998	Edwards	D782,676 S	3/2017	Fink et al.
5,827,277 A	10/1998	Edwards	D783,166 S	4/2017	Champ et al.
5,843,021 A	12/1998	Edwards et al.	D784,538 S	4/2017	Georgi et al.
5,843,077 A	12/1998	Edwards	9,687,288 B2	6/2017	Saadat
5,846,235 A	12/1998	Pasricha et al.	9,687,296 B2	6/2017	Wolf et al.
5,879,349 A	3/1999	Edwards	9,763,723 B2	9/2017	Saadat
5,938,659 A	8/1999	Tu et al.	9,763,743 B2	9/2017	Lin et al.
5,980,522 A	11/1999	Koros et al.	9,788,886 B2	10/2017	Wolf et al.
6,045,549 A	4/2000	Smethers et al.	9,801,752 B2	10/2017	Wolf et al.
6,096,033 A	8/2000	Tu et al.	9,888,957 B2	2/2018	Wolf et al.
6,102,907 A	8/2000	Smethers et al.	D813,390 S	3/2018	Austria
6,109,268 A	8/2000	Thapliyal et al.	9,913,682 B2	3/2018	Wolf et al.
6,126,657 A	10/2000	Edwards et al.	9,943,361 B2	4/2018	Wolf et al.
6,131,579 A	10/2000	Thorson et al.	10,028,780 B2	7/2018	Wolf et al.
6,139,546 A	10/2000	Koenig et al.	10,028,781 B2	7/2018	Saadat
6,152,143 A	11/2000	Edwards	10,265,115 B2	4/2019	Wolf et al.
6,165,173 A	12/2000	Kamdar et al.	10,335,221 B2	7/2019	Wolf et al.
6,179,803 B1	1/2001	Edwards et al.	10,376,300 B2	8/2019	Wolf et al.
6,210,355 B1	4/2001	Edwards et al.	D860,315 S *	9/2019	Chen D19/180
6,228,079 B1	5/2001	Koenig	10,398,489 B2	9/2019	Wolf et al.
6,231,569 B1	5/2001	Bek et al.	10,456,185 B2	10/2019	Wolf et al.
6,293,941 B1	9/2001	Strul et al.	10,456,186 B1	10/2019	Wolf et al.
6,309,386 B1	10/2001	Bek	10,470,814 B2	11/2019	Wolf et al.
6,371,926 B1	4/2002	Thorson et al.	10,485,603 B2	11/2019	Wolf et al.
6,383,181 B1	5/2002	Johnston et al.	10,603,059 B2	3/2020	Dinger et al.
6,391,028 B1	5/2002	Fanton et al.	D880,694 S	4/2020	Ng et al.
6,416,491 B1	7/2002	Edwards et al.	D881,904 S	4/2020	Angeles et al.
6,425,151 B2	7/2002	Barnett	10,631,925 B2	4/2020	Wolf et al.
6,431,174 B1	8/2002	Knudson et al.	10,722,282 B2	7/2020	Wolf et al.
6,451,013 B1	9/2002	Bays et al.	D897,185 S *	9/2020	Perkins, Jr. D8/303
6,502,574 B2	1/2003	Stevens et al.	D897,186 S *	9/2020	Perkins, Jr. D8/303
6,551,310 B1	4/2003	Ganz et al.	D904,698 S *	12/2020	Moeller D30/158
6,562,036 B1	5/2003	Ellman et al.	D904,852 S *	12/2020	Levand D8/107
6,575,969 B1	6/2003	Rittman et al.	D906,782 S *	1/2021	Brinson D8/83
6,589,235 B2	7/2003	Wong et al.	D910,408 S *	2/2021	Lin B25G 1/105
6,659,106 B1	12/2003	Hovda et al.			D8/83
6,911,027 B1	6/2005	Edwards et al.	D911,140 S *	2/2021	Hyma D8/82
6,978,781 B1	12/2005	Jordan	D911,141 S *	2/2021	Panosian B25G 1/105
7,055,523 B1	6/2006	Brown			D8/83
7,097,641 B1	8/2006	Arless et al.	D927,687 S *	8/2021	Stoklund D24/133
7,114,495 B2	10/2006	Lockwood, Jr.	2002/0016588 A1	2/2002	Wong et al.
D545,432 S	6/2007	Watanabe	2002/0049464 A1	4/2002	Donofrio et al.
7,322,993 B2	1/2008	Metzger et al.	2002/0087155 A1	7/2002	Underwood et al.
7,361,168 B2	4/2008	Makower et al.	2002/0128641 A1	9/2002	Underwood et al.
7,416,550 B2	8/2008	Protsenko et al.	2003/0144659 A1	7/2003	Edwards
7,442,191 B2	10/2008	Hovda et al.	2003/0208194 A1	11/2003	Hovda et al.
7,655,243 B2	2/2010	Deem et al.	2003/0225403 A1	12/2003	Woloszko et al.
D612,050 S	3/2010	Baynham	2004/0193238 A1	9/2004	Mosher et al.
7,678,069 B1	3/2010	Baker et al.	2004/0215235 A1	10/2004	Jackson et al.
7,780,730 B2	8/2010	Saidi	2004/0220644 A1	11/2004	Shalev et al.
7,824,394 B2	11/2010	Manstein	2005/0020901 A1	1/2005	Belson et al.
7,850,683 B2	12/2010	Elkins et al.	2005/0119643 A1	6/2005	Sobol et al.
7,997,278 B2	8/2011	Utley et al.	2005/0222565 A1	10/2005	Manstein
8,114,062 B2	2/2012	Muni et al.	2005/0234439 A1	10/2005	Underwood
8,128,617 B2	3/2012	Bencini et al.	2005/0240147 A1	10/2005	Makower et al.
8,137,345 B2	3/2012	McNall, III et al.	2005/0288665 A1	12/2005	Woloszko
8,317,781 B2	11/2012	Owens et al.	2006/0129238 A1	6/2006	Paltzer
8,317,782 B1	11/2012	Ellman et al.	2006/0195169 A1	8/2006	Gross et al.
8,936,594 B2	1/2015	Wolf et al.	2006/0235377 A1	10/2006	Earley et al.
8,986,301 B2	3/2015	Wolf et al.	2006/0253117 A1	11/2006	Hovda et al.
9,027,597 B2	5/2015	Kubo	2006/0276817 A1	12/2006	Vassallo et al.
9,072,597 B2	7/2015	Wolf et al.	2007/0043350 A1	2/2007	Soltesz et al.
9,125,677 B2	9/2015	Sobol et al.	2007/0049999 A1	3/2007	Esch et al.
9,179,964 B2	11/2015	Wolf et al.	2007/0066944 A1	3/2007	Nyte
9,179,967 B2	11/2015	Wolf et al.	2007/0073282 A1	3/2007	McGaffigan et al.
			2007/0093710 A1	4/2007	Maschke
			2007/0219600 A1	9/2007	Gertner et al.
			2007/0244529 A1	10/2007	Choi et al.
			2008/0027423 A1	1/2008	Choi et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

2008/0027480 A1	1/2008	van der Burg et al.	2013/0158536 A1	6/2013	Bloom
2008/0082090 A1	4/2008	Manstein	2013/0218158 A1	8/2013	Danek et al.
2008/0125626 A1	5/2008	Chang et al.	2014/0088463 A1	3/2014	Wolf et al.
2008/0154237 A1	6/2008	Chang et al.	2014/0114233 A1	4/2014	Deem et al.
2008/0183251 A1	7/2008	Azar et al.	2015/0202003 A1	7/2015	Wolf et al.
2008/0255642 A1	10/2008	Zarins et al.	2016/0045277 A1	2/2016	Lin et al.
2008/0312644 A1	12/2008	Fourkas et al.	2016/0121112 A1	5/2016	Azar
2009/0018485 A1	1/2009	Krespi et al.	2017/0231651 A1	8/2017	Dinger et al.
2009/0124958 A1	5/2009	Li et al.	2017/0252089 A1	9/2017	Hester et al.
2009/0143821 A1	6/2009	Stupak	2018/0042618 A1	2/2018	Victor et al.
2009/0192505 A1	7/2009	Askew et al.	2018/0177542 A1	6/2018	Wolf et al.
2009/0292358 A1	11/2009	Saidi	2018/0177546 A1	6/2018	Dinger et al.
2010/0144996 A1	6/2010	Kennedy et al.	2018/0185085 A1	7/2018	Wolf et al.
2010/0152730 A1	6/2010	Makower et al.	2018/0228533 A1	8/2018	Wolf et al.
2010/0160906 A1	6/2010	Jarrard	2018/0228551 A1*	8/2018	Moe A61B 17/32002
2010/0174283 A1	7/2010	McNall, III et al.	2018/0263678 A1	9/2018	Saadat
2010/0204560 A1	8/2010	Salahieh et al.	2018/0317997 A1	11/2018	Dinger et al.
2010/0241112 A1	9/2010	Watson	2018/0344378 A1	12/2018	Wolf et al.
2010/0260703 A1	10/2010	Yankelson et al.	2019/0076185 A1	3/2019	Dinger et al.
2011/0009737 A1	1/2011	Manstein	2019/0175242 A1	6/2019	Wolf et al.
2011/0118726 A1	5/2011	De La Rama et al.	2019/0201069 A1	7/2019	Wolf et al.
2011/0282268 A1	11/2011	Baker et al.	2019/0231409 A1	8/2019	Wolf et al.
2011/0288477 A1	11/2011	Ressemann et al.	2019/0282289 A1	9/2019	Wolf et al.
2012/0039954 A1	2/2012	Cupit et al.	2019/0282290 A1	9/2019	Wolf et al.
2012/0078377 A1	3/2012	Gonzales et al.	2019/0321090 A1	10/2019	Wolf et al.
2012/0298105 A1	11/2012	Osorio	2019/0328406 A1	10/2019	Lu et al.
2012/0316473 A1	12/2012	Bonutti et al.	2019/0336196 A1	11/2019	Wolf et al.
2012/0316557 A1	12/2012	Sartor et al.	2019/0343577 A1	11/2019	Wolf et al.
2012/0323227 A1	12/2012	Wolf et al.	2020/0100829 A1	4/2020	Wolf et al.
2012/0323232 A1	12/2012	Wolf et al.	2020/0129223 A1	4/2020	Angeles et al.
			2020/0170699 A1	6/2020	Wolf et al.
			2020/0205884 A1	7/2020	Wolf et al.

* cited by examiner

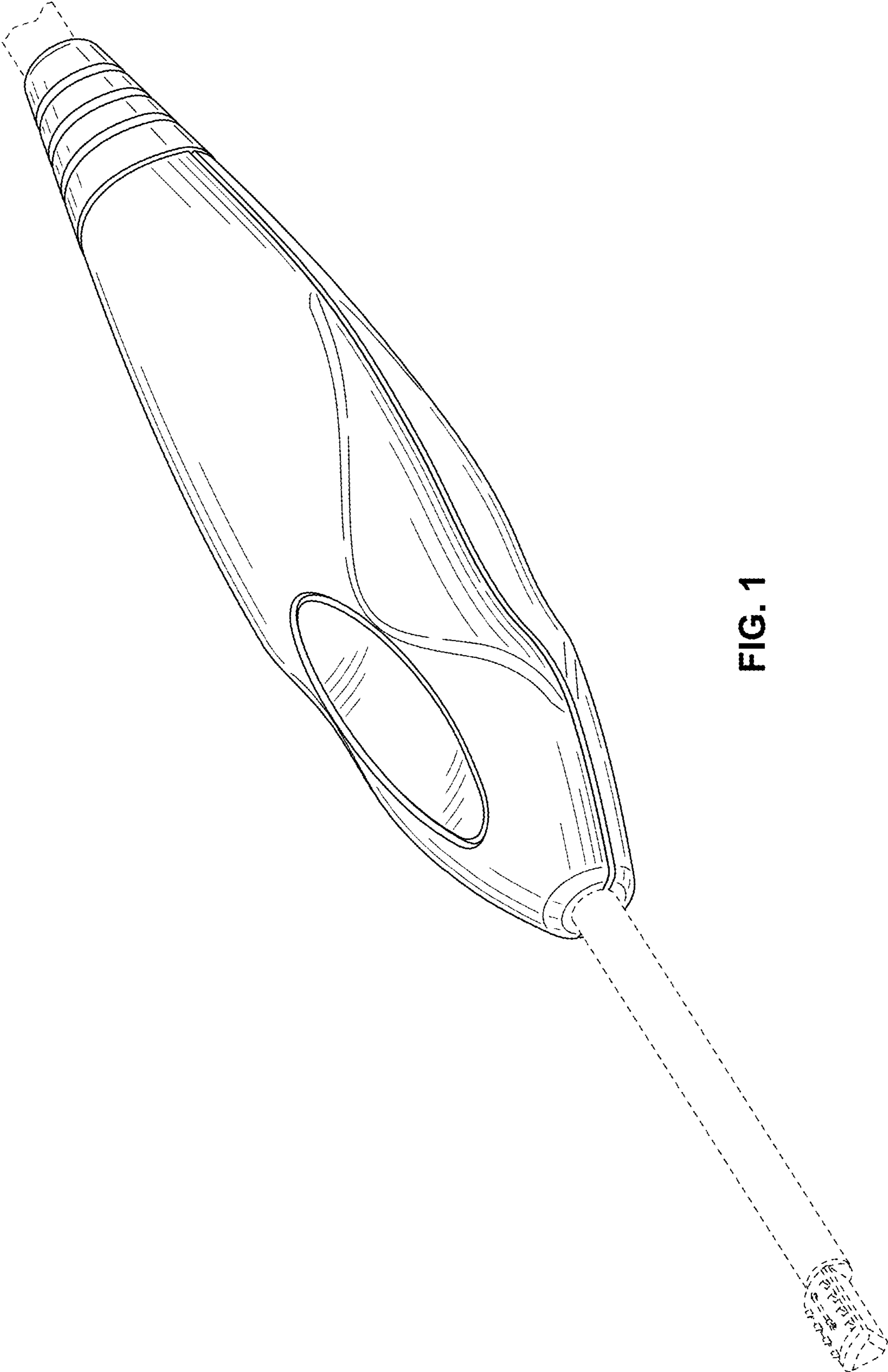


FIG. 1

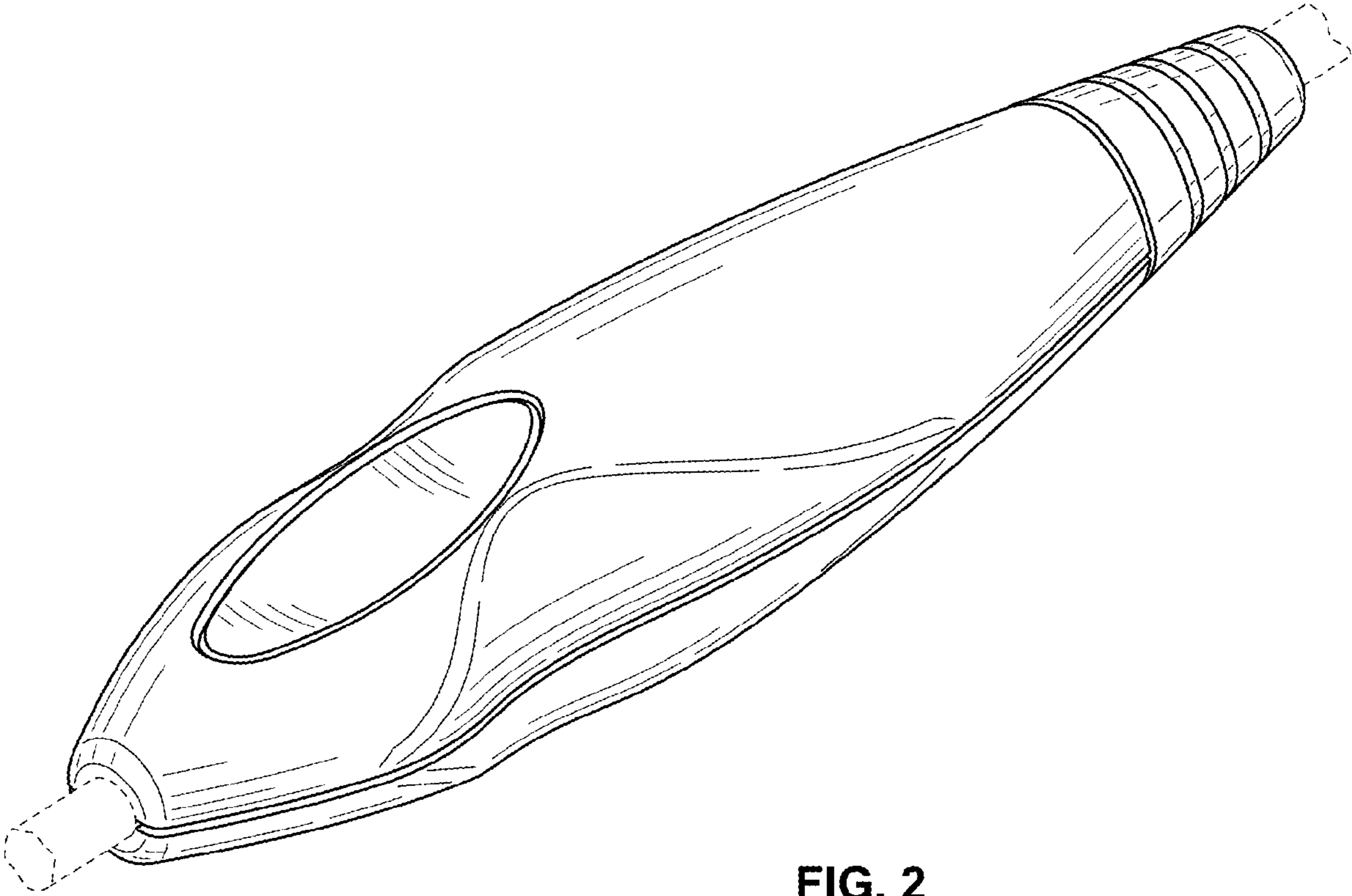


FIG. 2

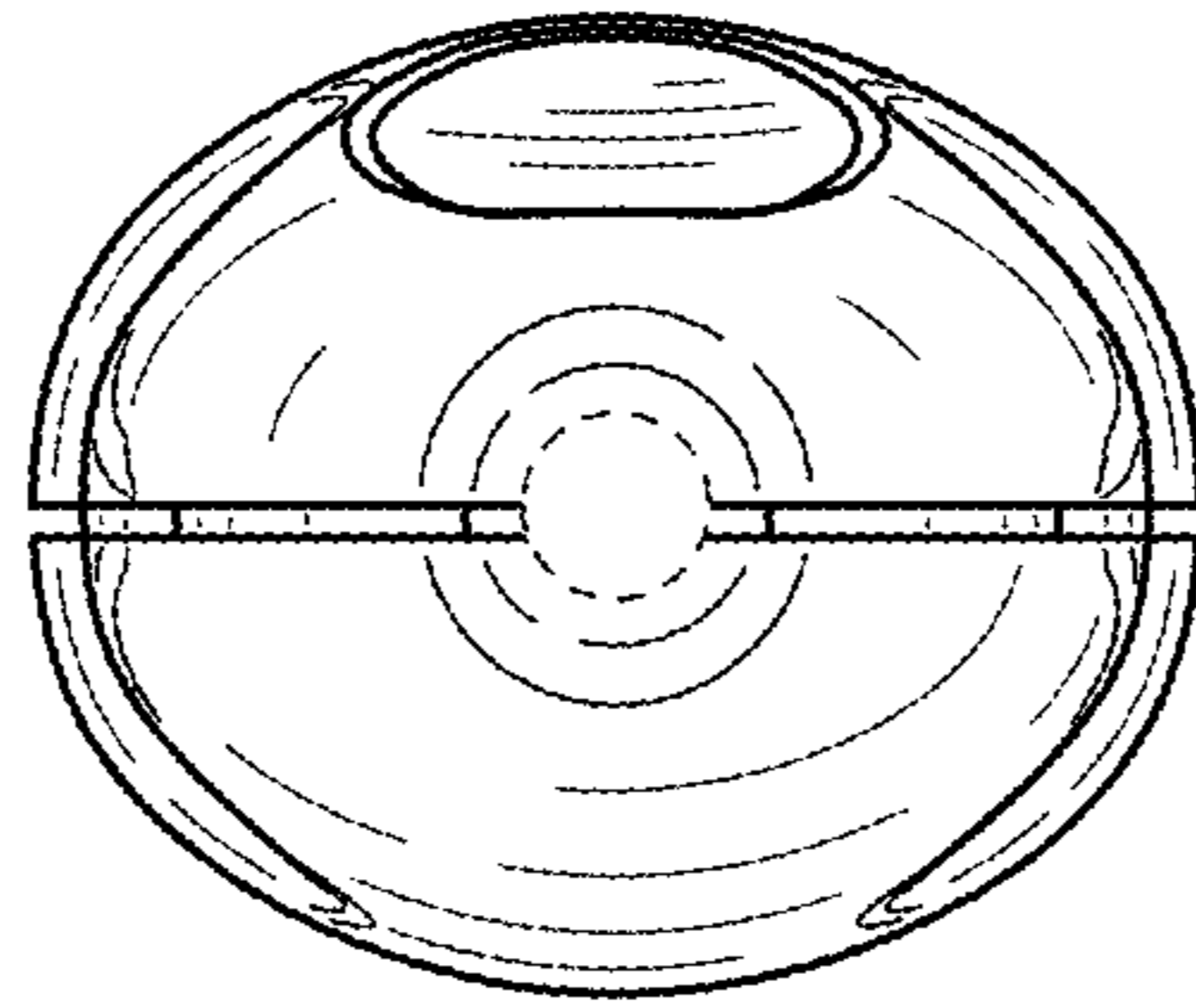


FIG. 3

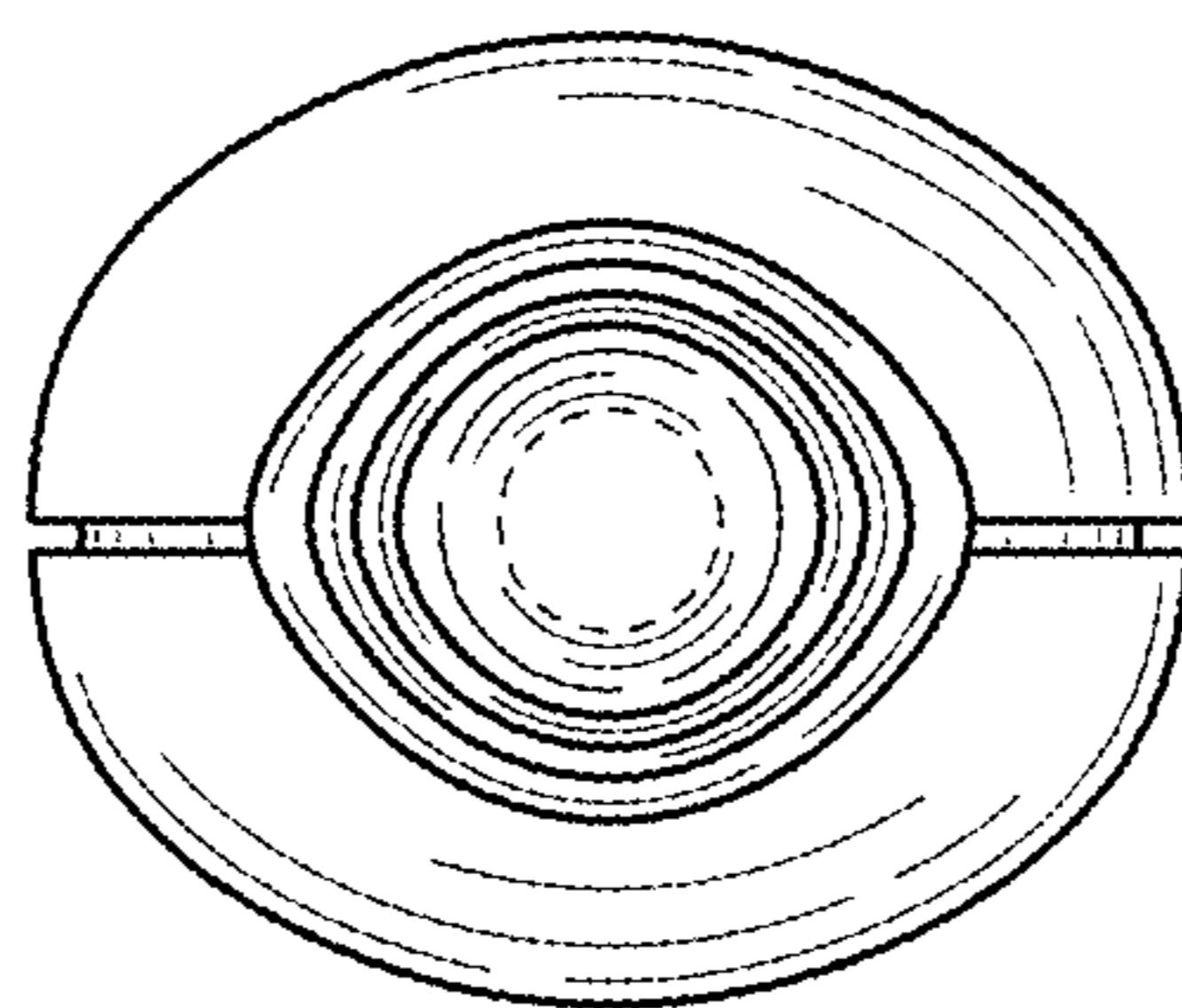


FIG. 4

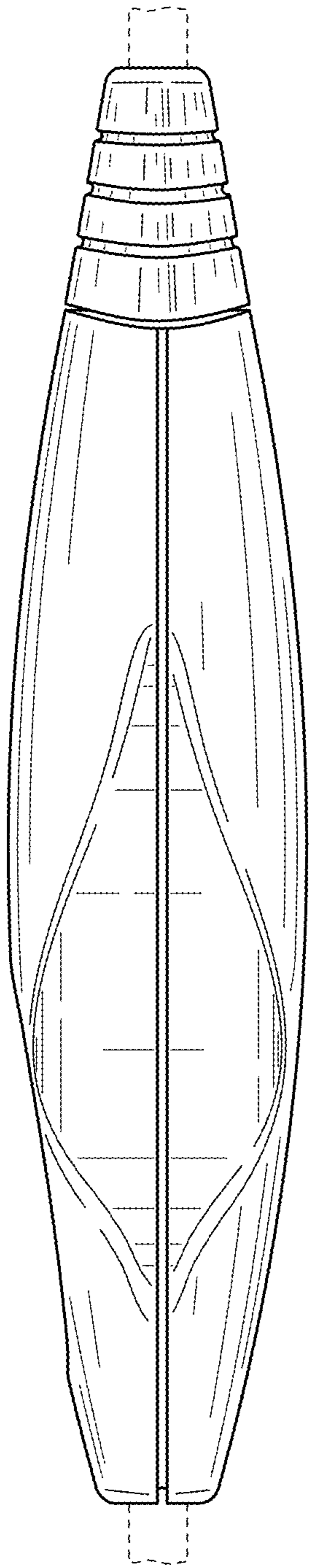


FIG. 5

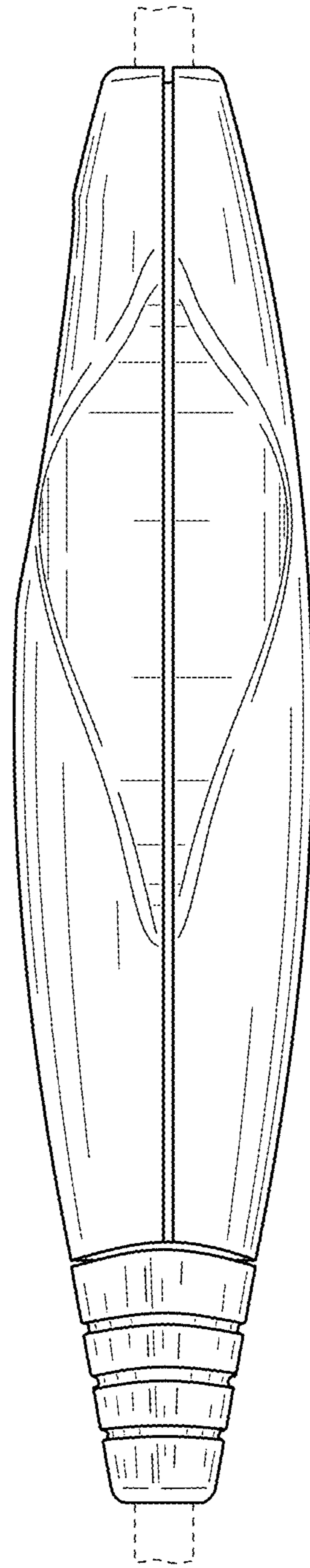


FIG. 6

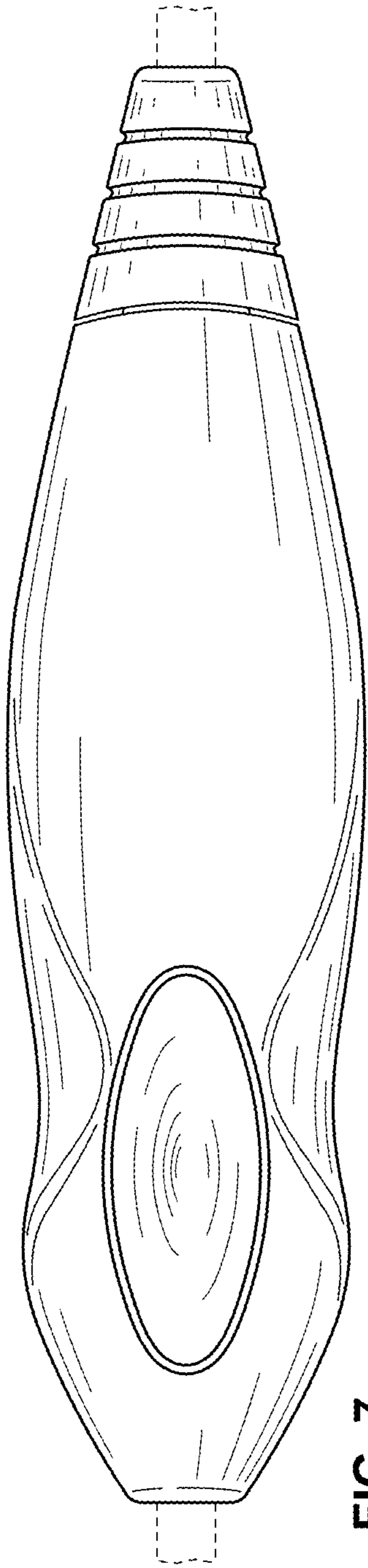


FIG. 7

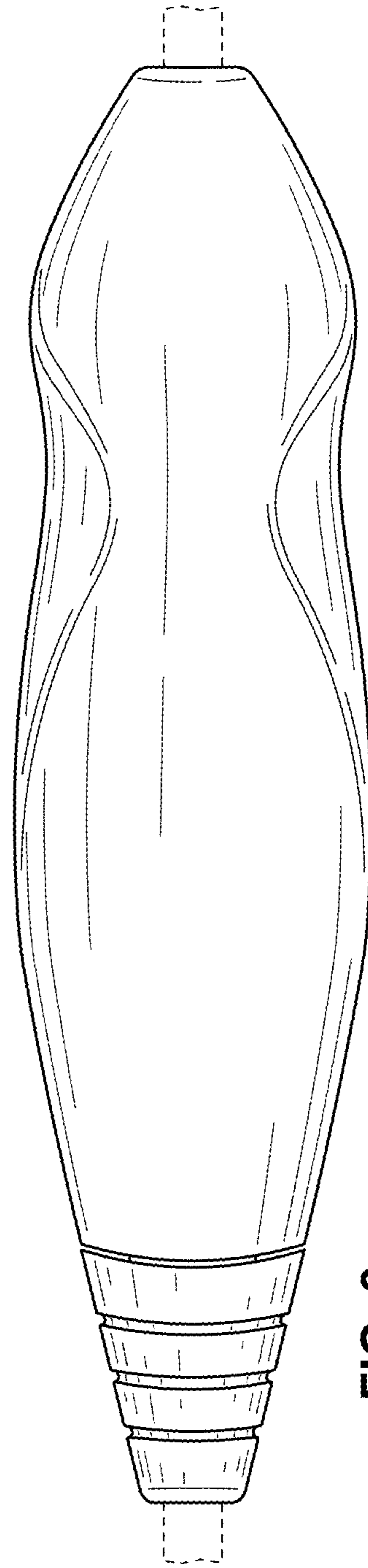


FIG. 8