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United States Design Patent

Bell et al.

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(54) FERRULE

FOREIGN PATENT DOCUMENTS

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AU 2003267607 5/2004
CA 2339277 11/1999

(Continued)

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OTHER PUBLICATIONS

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SEA 20 Micro Cleaning Kit, SEA 20, stihlusa.com/, [Post date unknown], [Site seen: Feb. 26, 2025], Seen at URL: https://www.stihlusa.com/products/vacuums/vacuum-accessories/sea20microcleaningki (Year: 2025).*

(Continued)

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See application file for complete search history.

(57) CLAIM

The ornamental design for a ferrule as shown and described.

DESCRIPTION

FIG. 1 is a perspective view showing the new design for a ferrule;
FIG. 2 is a top view thereof;
FIG. 3 is a bottom view thereof;
FIG. 4 is a left side view thereof;
FIG. 5 is a right side view thereof;
FIG. 6 is a rear view thereof;
FIG. 7 is a front view thereof; and,
FIG. 8 is a perspective view of the new design for a ferrule illustrating one example of the environment in which the article embodying the design in use with a Microwave Tip Applicator.
The long dash-short dash broken lines depict the environment of the ferrule and form no part of the claimed design.

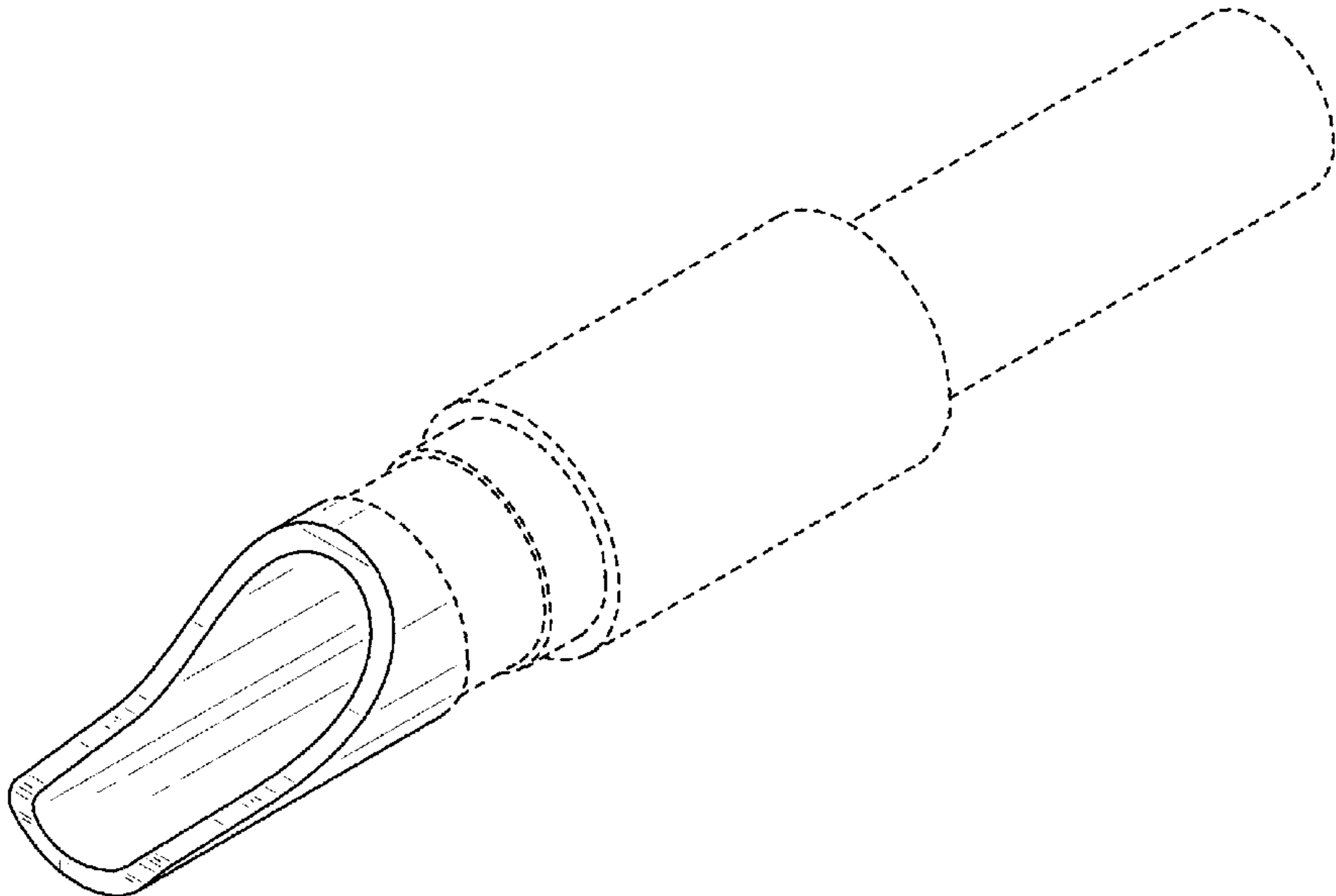
(56) References Cited

U.S. PATENT DOCUMENTS

3,065,752 A 11/1962 Potzl
3,461,261 A 8/1969 Lewis
3,871,359 A 3/1975 Pacela
D266,864 S * 11/1982 Parise D32/32
4,375,220 A 3/1983 Matvias
4,446,874 A 5/1984 Vaguine
4,476,363 A 10/1984 Berggren
4,676,258 A 6/1987 Inokuchi
4,810,963 A 3/1989 Blake-Coleman
4,891,483 A 1/1990 Kikuchi
4,907,601 A 3/1990 Frick

(Continued)

1 Claim, 7 Drawing Sheets



(56)

References Cited

U.S. PATENT DOCUMENTS

4,946,793	A	8/1990	Marshall, III	6,994,706	B2	2/2006	Chornenky
5,027,502	A	7/1991	Sakamoto	7,008,421	B2	3/2006	Daniel
5,098,843	A	3/1992	Calvin	7,063,698	B2	6/2006	Whayne
5,173,158	A	12/1992	Schmukler	7,077,842	B1	7/2006	Cosman
5,227,730	A	7/1993	King	7,128,739	B2	10/2006	Prakash et al.
5,283,194	A	2/1994	Schmukler	7,147,632	B2	12/2006	Prakash
5,328,451	A	7/1994	Davis	7,211,083	B2	5/2007	Chornenky
5,344,435	A	9/1994	Turner	7,267,676	B2	9/2007	Chornenky et al.
5,348,554	A	9/1994	Imran	7,270,656	B2	9/2007	Gowda
5,364,392	A	11/1994	Warner	7,318,824	B2	1/2008	Prakash
5,370,644	A	12/1994	Langberg	7,344,533	B2	3/2008	Pearson
5,439,440	A	8/1995	Hofmann	7,488,292	B2	2/2009	Adachi
5,458,597	A	10/1995	Edwards	7,518,092	B2	4/2009	Purta
5,536,267	A	7/1996	Edwards	7,527,623	B2	5/2009	Prakash et al.
5,540,737	A	7/1996	Fenn	7,553,309	B2	6/2009	Buysse
5,620,479	A	4/1997	Diederich	7,594,313	B2	9/2009	Prakash et al.
5,630,426	A	5/1997	Eggers et al.	7,620,507	B2	11/2009	Richardson
5,647,871	A	7/1997	Levine	7,699,842	B2	4/2010	Buysse
5,683,384	A	11/1997	Gough et al.	7,763,018	B2	7/2010	DeCarlo
5,720,921	A	2/1998	Meserol	7,771,401	B2	8/2010	Hekmat
5,728,143	A	3/1998	Gough	7,776,035	B2	8/2010	Rick
5,735,847	A	4/1998	Gough et al.	7,846,108	B2	12/2010	Turovskiy
5,800,484	A	9/1998	Gough et al.	7,862,559	B2	1/2011	Prakash et al.
5,807,272	A	9/1998	Kun et al.	7,875,025	B2	1/2011	Cockburn
5,810,742	A	9/1998	Pearlman	7,879,031	B2	2/2011	Peterson
5,810,804	A	9/1998	Gough	8,012,148	B2	9/2011	Turovskiy et al.
5,873,849	A	2/1999	Bernard	8,035,570	B2	10/2011	Prakash et al.
5,983,131	A	11/1999	Weaver	8,052,604	B2	11/2011	Lau
6,009,347	A	12/1999	Hofmann	8,057,391	B2	11/2011	Lau
6,016,452	A	1/2000	Kasevich	8,059,059	B2	11/2011	Bonn
6,027,502	A	2/2000	Desai	8,062,290	B2	11/2011	Buysse
6,047,216	A	4/2000	Carl	8,069,553	B2	12/2011	Bonn
6,050,994	A	4/2000	Sherman	8,073,550	B1	12/2011	Spertell
6,059,780	A	5/2000	Gough	8,182,477	B2	5/2012	Orszulak
6,066,134	A	5/2000	Eggers et al.	8,187,270	B2	5/2012	Auth
6,090,105	A	7/2000	Zepeda et al.	8,192,423	B2	6/2012	Turovskiy et al.
6,090,106	A	7/2000	Goble	8,277,379	B2	10/2012	Lau
6,102,885	A	8/2000	Bass	8,292,880	B2	10/2012	Prakash
6,106,524	A	8/2000	Eggers et al.	8,346,370	B2	1/2013	Haley
6,132,419	A	10/2000	Hofmann	8,361,062	B2	1/2013	Bonn
6,134,460	A	10/2000	Chance	8,366,712	B2	2/2013	Bleich
6,134,476	A	10/2000	Arndt	8,377,057	B2	2/2013	Rick
6,142,931	A	11/2000	Kaji	8,394,078	B2	3/2013	Torrance
6,200,314	B1	3/2001	Sherman	8,394,092	B2	3/2013	Brannan
6,223,086	B1	4/2001	Carl	8,398,626	B2	3/2013	Buysse
6,287,302	B1	9/2001	Berube	8,401,668	B2	3/2013	Deem
6,296,636	B1	10/2001	Cheng	8,406,894	B2	3/2013	Johnson
6,298,726	B1	10/2001	Adachi	8,409,187	B2	4/2013	Bonn
6,347,247	B1	2/2002	Dev	8,417,328	B2	4/2013	Sarfaty
RE37,704	E	5/2002	Eshel	8,437,845	B2	5/2013	Sarfaty
6,436,072	B1	8/2002	Kullas	8,439,907	B2	5/2013	Auth
6,478,793	B1	11/2002	Cosman	8,469,951	B2	6/2013	Ben-Haim
6,485,487	B1	11/2002	Sherman	8,512,329	B2	8/2013	Paulus
6,488,678	B2	12/2002	Sherman	8,512,330	B2	8/2013	Epstein
6,497,704	B2	12/2002	Ein-Gal	8,535,302	B2	9/2013	Ben-Haim
6,500,173	B2	12/2002	Underwood	8,551,088	B2	10/2013	Falkenstein
6,558,378	B2	5/2003	Sherman	8,562,598	B2	10/2013	Falkenstein
6,613,211	B1	9/2003	McCormick et al.	8,568,401	B2	10/2013	Brannan
6,616,657	B2	9/2003	Simpson	8,568,411	B2	10/2013	Falkenstein
6,627,421	B1	9/2003	Unger et al.	8,579,894	B2	11/2013	Falkenstein
6,635,055	B1	10/2003	Cronin	8,579,902	B2	11/2013	Bleich
6,653,091	B1	11/2003	Dunn	8,585,704	B2	11/2013	Schmitz
6,673,070	B2	1/2004	Edwards et al.	8,586,897	B2	11/2013	Cronin
6,682,501	B1	1/2004	Nelson	8,608,739	B2	12/2013	Sartor
6,697,670	B2	2/2004	Chomenky	8,613,745	B2	12/2013	Bleich
6,712,811	B2	3/2004	Underwood	8,617,163	B2	12/2013	Bleich
6,723,094	B1	4/2004	Desinger	8,643,561	B2	2/2014	Prakash et al.
6,770,070	B1	8/2004	Balbierz	8,647,346	B2	2/2014	Bleich
6,795,728	B2	9/2004	Chornenky	8,652,138	B2	2/2014	Bleich
6,865,416	B2	3/2005	Dev	8,663,213	B2	3/2014	Turovskiy et al.
6,869,430	B2	3/2005	Balbierz	8,668,688	B2	3/2014	Rusin
6,878,147	B2	4/2005	Prakash et al.	8,672,937	B2	3/2014	DeCarlo
D509,332	S *	9/2005	White	8,688,228	B2	4/2014	Johnson
6,962,587	B2	11/2005	Johnson	8,740,893	B2	6/2014	Shiu
6,972,014	B2	12/2005	Eum	8,745,854	B2	6/2014	Bonn
				8,801,626	B2	8/2014	Sun
				8,825,176	B2	9/2014	Johnson
				8,845,559	B2	9/2014	Darlington
				8,853,600	B2	10/2014	Spertell

D32/32

(56)

References Cited

U.S. PATENT DOCUMENTS

8,865,076 B2	10/2014	Sarfaty	2005/0261672 A1	11/2005	Deem
8,894,641 B2	11/2014	Brannan	2005/0288730 A1	12/2005	Deem
8,915,910 B2	12/2014	Falkenstein	2006/0079883 A1	4/2006	Elmouelhi
8,926,605 B2	1/2015	McCarthy	2006/0106379 A1	5/2006	O'Brien
8,932,284 B2	1/2015	McCarthy	2006/0151485 A1	7/2006	Cronin
8,945,111 B2	2/2015	Brannan et al.	2006/0212078 A1	9/2006	Demarais
8,954,161 B2	2/2015	McCarthy	2006/0217703 A1	9/2006	Chornenky
8,961,506 B2	2/2015	McCarthy	2006/0217704 A1	9/2006	Cockburn
8,965,536 B2	2/2015	Bonn	2006/0293734 A1	12/2006	Scott
8,974,452 B2	3/2015	Turovskiy et al.	2007/0066971 A1	3/2007	Podhajsky
9,014,814 B2	4/2015	McCarthy	2007/0078453 A1	4/2007	Johnson
9,028,477 B2	5/2015	Ben-Haim	2007/0156136 A1	7/2007	Godara
9,041,616 B2	5/2015	Prakash	2007/0197895 A1	8/2007	Nycz
9,050,449 B2	6/2015	Darlington	2007/0203551 A1	8/2007	Cronin
9,084,619 B2	7/2015	Cronin	2008/0039790 A1	2/2008	Hasebe
9,095,350 B2	8/2015	Condie	2008/0233020 A1	9/2008	Purta
9,101,386 B2	8/2015	Wallace	2008/0275436 A1	11/2008	Cronin
9,113,888 B2	8/2015	Orszulak	2008/0294155 A1	11/2008	Cronin
9,113,924 B2	8/2015	Brannan	2008/0294358 A1	11/2008	Richardson
9,113,932 B1	8/2015	Willyard	2008/0314894 A1	12/2008	Cronin
9,149,331 B2	10/2015	Deem	2009/0030336 A1	1/2009	Woo
9,186,216 B2	11/2015	Turovskiy et al.	2009/0036773 A1	2/2009	Lau
9,247,952 B2	2/2016	Bleich	2009/0088636 A1	4/2009	Lau
9,549,779 B2	1/2017	Prakash	2009/0118725 A1	5/2009	Auth
9,579,152 B2	2/2017	Prakash et al.	2009/0118729 A1	5/2009	Auth
9,610,122 B2	4/2017	Brannan	2009/0179028 A1	7/2009	Purta
9,770,295 B2	9/2017	Cronin	2009/0198227 A1	8/2009	Prakash
9,788,896 B2	10/2017	Cronin et al.	2009/0204005 A1	8/2009	Keast
9,820,814 B2	11/2017	Turovskiy et al.	2009/0204112 A1	8/2009	Kleyman
9,861,439 B2	1/2018	Brannan et al.	2009/0209955 A1	8/2009	Forster
9,888,956 B2	2/2018	Model	2009/0240247 A1	9/2009	Rioux
9,901,398 B2	2/2018	Brannan et al.	2009/0270756 A1	10/2009	Gamache
9,907,613 B2	3/2018	Cronin et al.	2009/0295674 A1	12/2009	Bonn
9,925,004 B2	3/2018	Belluomo et al.	2010/0036291 A1	2/2010	Darlington
10,154,880 B2	12/2018	Prakash	2010/0057076 A1	3/2010	Behnke
10,342,614 B2	7/2019	van der Weide	2010/0079215 A1	4/2010	Brannan
10,405,921 B2	9/2019	Turovskiy et al.	2010/0082022 A1	4/2010	Haley
10,537,386 B2	1/2020	Turovskiy et al.	2010/0082023 A1	4/2010	Brannan
11,135,010 B2	11/2021	Pfannenstiel et al.	2010/0082024 A1	4/2010	Brannan
D939,164 S *	12/2021	Lee D32/32	2010/0082025 A1	4/2010	Brannan
11,266,464 B2	3/2022	Huang et al.	2010/0082083 A1	4/2010	Brannan
D948,147 S *	4/2022	Lee D32/32	2010/0082084 A1	4/2010	Brannan
D968,599 S *	11/2022	Campbell D24/129	2010/0090696 A1	4/2010	Deimling
D975,839 S *	1/2023	Kuo D24/129	2010/0106025 A1	4/2010	Sarfaty
D1,037,586 S *	7/2024	Leoni D32/33	2010/0106047 A1	4/2010	Sarfaty
D1,052,053 S *	11/2024	Alvarado D23/259	2010/0121173 A1	5/2010	Sarfaty
2002/0077627 A1	6/2002	Johnson	2010/0152725 A1	6/2010	Pearson
2002/0077676 A1	6/2002	Schroeppel	2010/0179436 A1	7/2010	Sarfaty
2002/0161361 A1	10/2002	Sherman	2010/0211061 A1	8/2010	Leyh
2002/0193831 A1	12/2002	Dewey	2010/0292686 A1	11/2010	Rick
2003/0009110 A1	1/2003	Tu	2011/0034886 A1 *	2/2011	Elbe A61M 39/0208 606/190
2003/0014047 A1	1/2003	Woloszko	2011/0098695 A1	4/2011	Brannan
2003/0060813 A1	3/2003	Loeb	2011/0112531 A1	5/2011	Landis
2003/0060856 A1	3/2003	Chornenky	2011/0118721 A1	5/2011	Brannan
2003/0088189 A1	5/2003	Tu	2011/0118723 A1	5/2011	Turner
2003/0100894 A1	5/2003	Mahon	2011/0208180 A1	8/2011	Brannan
2003/0109862 A1	6/2003	Prakash	2011/0230874 A1	9/2011	Epstein
2003/0130711 A1	7/2003	Pearson	2012/0150172 A1	6/2012	Ortiz
2003/0170898 A1	9/2003	Gundersen	2013/0072858 A1	3/2013	Watson
2003/0199860 A1	10/2003	Loeb	2013/0150674 A1 *	6/2013	Haig A61B 1/00135 600/155
2003/0225360 A1	12/2003	Eppstein	2013/0296679 A1	11/2013	Condie
2004/0059328 A1	3/2004	Daniel	2014/0042154 A1	2/2014	Cronin
2004/0133254 A1	7/2004	Sterzer	2014/0081255 A1	3/2014	Johnson
2004/0146877 A1	7/2004	Diss	2014/0207133 A1	7/2014	Model
2004/0153057 A1	8/2004	Davison	2015/0066020 A1	3/2015	Epstein
2004/0204679 A1	10/2004	Peter	2016/0000505 A1	1/2016	Cronin
2004/0215185 A1	10/2004	Truckai	2017/0143189 A1 *	5/2017	Frey A61B 1/0051
2004/0243107 A1	12/2004	Macoviak	2018/0153376 A1 *	6/2018	Begg A61B 1/00091
2004/0267340 A1	12/2004	Cioanta	2020/0113629 A1	4/2020	Turovskiy et al.
2005/0015081 A1	1/2005	Turovskiy	2021/0219832 A1 *	7/2021	Retailleau A61B 34/30
2005/0033276 A1	2/2005	Adachi	2021/0228069 A1 *	7/2021	Matsumoto A61B 1/00091
2005/0043726 A1	2/2005	McHale			
2005/0107781 A1	5/2005	Ostrovsky			
2005/0165393 A1	7/2005	Eppstein			
2005/0245920 A1	11/2005	Mtullo			

(56)

References Cited

U.S. PATENT DOCUMENTS

2021/0393328 A1 12/2021 Pfannenstiel et al.
2022/0151697 A1 5/2022 Brannan et al.

FOREIGN PATENT DOCUMENTS

DE	2407559	8/1975
EP	0294854	12/1988
EP	0378132 A2	7/1990
EP	0558297	9/1993
EP	2008604 A2	12/2008
EP	2161967	3/2010
EP	2286754	2/2011
EP	2299540	3/2011
EP	2303172	4/2011
GB	2074826	11/1981
GB	2387544	10/2003
GB	2406521	4/2005
GB	2415630 A	1/2006
GB	2457299 A	8/2009
JP	H03286775	12/1991
JP	H07120444	5/1995
JP	H10309314	11/1998
JP	2002109971	4/2002
JP	2002510979	4/2002
JP	2002541884	12/2002
JP	2004187703	7/2004
JP	2006507865	3/2006
JP	2007535370	12/2007
JP	2011511538	4/2011
KR	3020210000149 *	1/2021
WO	9639531 A1	12/1996
WO	0020554 A1	4/2000
WO	0049957 A1	8/2000
WO	0121060	3/2001
WO	02061880	8/2002
WO	03039385	5/2003
WO	2004037341 A2	5/2004
WO	2004047659 A2	6/2004
WO	2004064624	8/2004
WO	2005011049	2/2005
WO	2006002943 A1	1/2006
WO	2007112081	10/2007
WO	2009098513	8/2009
WO	2010085765	7/2010
WO	2011042720	4/2011
WO	2012006533 A1	1/2012
WO	2015110938	7/2015

OTHER PUBLICATIONS

Depstech endoscope accessory set, Depstech, [post date unknown], [Site seen Feb. 26, 2025], seen at url: <https://depstech.com/products/endoscope-accessory-set-wfpj-8-5mm-5pcs> (Year: 2025).*

Angiovac cannula and circuit, angiodynamics, [Post date unknown], [Site seen Feb. 26, 2025], Seen at URL: <https://www.angiodynamics.com/product/angiovac/> (Year: 2025).*

Bruners, et al, A Newly Developed Perfused Umbrella Electrode for RF Ablation: An Ex Vivo Evaluation Study in Bovine Liver, Cardiovasc Intervent Radiol, 2007, pp. 992-998.

Carmi, and Georgiades, Combination percutaneous and intraarterial therapy for the treatment of hepatocellular carcinoma: A review, Seminars in Interventional Radiology, 2010, vol. 27, No. 3, pp. 296-301.

Carrafiello, et al, Ultrasound-Guided RF Thermal Ablation of Uterine Fibroids: Medium-Term Follow-Up, Cardiovasc Intervent Radiol, 2010, pp. 113-119.

Carson, et al, Improving patient satisfaction, BPH management strategies, Supplement to Urology Times, May 2001, Vo. 29, Suppl. 1, pp. 1-22.

Cha et al, RF Ablation Using a New Type of Internally Cooled Electrode With an Adjustable Active Tip: An Experimental Study in Ex Vivo Bovine and In Vivo Porcine Livers, European Journal of Radiology, 2011, pp. 516-521.

Chandrasekar, et al., Transurethral Needle Ablation of the Prostate (TUNA)—a Propsective Study, Six Year Follow Up, (Abstract), Presented at 2001 National Meeting, Anaheim, CA, Jun. 5, 2001. 1 page.

Chang, Finite Element Analysis of Hepatic RF Ablation Probes using Temperature-Dependent Electrical Conductivity, BioMedical Engineering OnLine 2003,2:12.

The International Search Report for PCT/GB2004/002620; Filed Jun. 18, 2004; Date of Completion Sep. 24, 2004; Date of Mailing Oct. 1, 2004, 4 pages.

DeBenedictis, et al, Utility of Iodinated Contrast Medium in Hydrodissection Fluid when Performing Renal Tumor Ablation, J Vase Interv Radiol 2010, pp. 745-747.

Dulucq, et al, Virtually Bloodless Laparoscopic Liver Resection of Recurrent Hepatoma With a New Laparoscopic Sealer Device, Surg Laparosc Endosc Percutan Tech, 2007, pp. 413-415.

Dupuy, et al, Current Status of Thermal Ablation Treatments for Lung Malignancies, Semin Intervent Radiol 2010, pp. 268-275.

Foster RS, “High-intensity focused ultrasound in the treatment of prostatic disease”, European Urology, 1993, vol. 23 Suppl 1, pp. 29-33.

Foster, R.S., et al., Production of Prostatic Lesions in Canines Using Transrectally Administered High-Intensity Focused Ultrasound. Eur. Urol., 1993; 23: 330-336.

Howenstein, et al., Complications of RF Ablation of Hepatic, Pulmonary, and Renal Neoplasms, Semin Intervent Radiol 2010, pp. 285-295.

International Search Report 04815540 SESR dated Jan. 21, 2010, 4 pages.

International Search Report 09155664 ESR dated Jun. 9, 2009, 2 pages.

International Search Report PCT-EP-05-007103 IPRP dated Jan. 9, 2007, 6 pages.

International Search Report PCT-EP-05-007103 ISR dated Oct. 11, 2005, 3 pages.

International Search Report PCT-EP-05-007103 ISR, dated Jan. 12, 2006.

International Search Report PCT-EP-05-007103 WOSA dated Oct. 7, 2005, 5 pages.

International Search Report PCT-EP-05-007103 WOSA, dated Oct. 11, 2005.

International Search Report PCT-EP-05-007553 IPRP dated Nov. 2, 2006, 16 pages.

International Search Report PCT-EP-05-007553 IPRP, dated Feb. 11, 2006.

International Search Report PCT-EP-05-007553 ISR dated Oct. 4, 2005, 6 pages.

International Search Report PCT-EP-05-007553 ISR, dated Apr. 10, 2005.

International Search Report PCT-EP-06-012144 IPRP dated May 2, 2008, 8 pages.

International Search Report PCT-EP-06-012144 IPRP, dated Feb. 5, 2008.

International Search Report PCT-EP-06-012144 ISR dated Jul. 3, 2007, 3 pages.

International Search Report PCT-EP-06-012144 ISR, dated Mar. 7, 2007.

International Search Report PCT-GB-00-00682 IPRP dated May 21, 2001, 8 pages.

International Search Report PCT-GB-00-00682 ISR dated May 24, 2000, 3 pages.

International Search Report PCT-GB-03-004082 ISR dated Feb. 2, 2004, 4 pages.

International Search Report PCT-GB-03-004082 ISR, dated Apr. 22, 2004.

International Search Report PCT-GB-03-04082 IPER dated Nov. 12, 2004, 11 pages.

International Search Report PCT-GB-04-002620 IPRP dated Jul. 21, 2005, 14 pages.

International Search Report PCT-GB-04-002620 ISR, dated Jan. 10, 2004.

International Search Report PCT-GB-09-050113 IPRP dated Aug. 10, 2010, 11 pages.

(56)

References Cited

OTHER PUBLICATIONS

International Search Report PCT-GB-09-050113 ISR dated May 25, 2009, 3 pages.

International Search Report PCT-GB-10-051625 IPRP dated Apr. 11, 2012, 10 pages.

International Search Report PCT-GB-10-051625 ISR dated May 3, 2011, 6 pages.

International Search Report PCT-GB-10-051625 ISR, dated Mar. 5, 2011.

International Search Report PCT-GB-10-051625 WOSA dated Apr. 6, 2012, 9 pages.

International Search Report PCT-GB-10-051625 WOSA, dated Mar. 5, 2011.

International Search Report PCT-GB-11-051735 IPRP dated May 7, 2013, 8 pages.

International Search Report PCT-GB-11-051735 IPRP, dated Dec. 15, 2011.

International Search Report PCT-GB-11-051735 ISR dated Dec. 15, 2011, 5 pages.

International Search Report PCT-GB-11-051735 WOSA dated May 4, 2013, 7 pages.

International Search Report PCT-GB-11-051735 WOSA, dated Apr. 5, 2013.

International Search Report PCT-GB-94-01565 IPER dated Nov. 2, 1995, 1 page.

International Search Report PCT-GB-94-01565 IPER, dated Feb. 11, 1995.

International Search Report PCT-GB-99-001398 ISR, dated Nov. 11, 1999.

International Search Report PCT-GB-99-001400 ISR dated Sep. 3, 1999, 4 pages.

International Search Report PCT-GB-99-001400 ISR, dated Nov. 11, 1999.

International Search Report PCT-GB-99-01398 IPER dated Aug. 7, 2000, 5 pages.

International Search Report PCT-GB-99-01398 IPER, dated Jul. 8, 2000.

International Search Report PCT-GB-99-01398 ISR dated Sep. 3, 1999, 4 pages.

International Search Report PCT-GB-99-01398 ISR, dated Mar. 9, 1999.

International Search Report PCT-GB-99-01398 WOSA dated Feb. 2, 2000, 5 pages.

International Search Report PCT-GB-99-01400 ISR, dated Mar. 9, 1999.

International Search Report PCT-US-04-043477 IPRP dated Jun. 26, 2006, 4 pages.

International Search Report, PCT-GB-94-01565 ISR, dated Nov. 28, 1994, 4 pages.

Issa, et al, Recent Reports: The TUNA procedure for BPH: Review of the technology, *Infections in Urology*, Jul. 1998, 8 pages.

Knight, et al, Direct imaging of transvenous radiofrequency cardiac ablation using a steerable fiberoptic infrared endoscope, *Heart Rhythm Society*, Oct. 2005, vol. 2, No. 10, pp. 1116-1121.

Kurup, Callstrom, Image-guided percutaneous ablation of bone and soft tissue tumors, *Seminars in Interventional Radiology*, 2010, vol. 27, No. 3, pp. 276-284.

Lee, et al, Multiple-Electrode RF Ablation of in Vivo Porcine Liver, *Investigative Radiology*, pp. 676-683.

Lee, Radio Frequency Ablation of Uterine Leiomyomata: A New Minimally Invasive Hysterectomy Alternative, *Tuesday Papers*, vol. 99, No. 4 (Supplement), 2002, pP. 9S.

Lorentze, A Cooled Needle Electrode for RF Tissue Ablation: Thermodynamic Aspects of Improved Performance Compared with Conventional Needle Design, *Acad Radiol*, pp. 556-563.

Lorentze, et al, RF Tissue Ablation with a Cooled Needle in Vitro: Ultrasonography, Dose Response and Lesion Temperature, *Acad Radiol*, pp. 292-297.

Lorentze, The Loop Electrode: In Vivo Evaluation of a Device for Ultrasound-Guided Interstitial Tissue Ablation Using RF Electrosurgery, *Acad Radiol*, pp. 219-224.

Maybody, An Overview of Image-Guided Percutaneous Ablation of Renal Tumors, *Seminars in Interventional Radiology*/vol. 27, No. 3, 2010, pp. 261-267.

McCall, NanoKnife, Liposomal Doxorubicin Show Efficacy Against Liver Cancer, *European Congress of Radiology* 2011.

McCarley, and Soulen, Percutaneous ablation of hepatic tumors, *Seminars in Interventional Radiology*, 2010, vol. 27, No. 3, pp. 255-260.

McWilliams, et al, Image-guided tumor ablation: Emerging technologies and future directions, *Seminars in Interventional Radiology*, 2010, vol. 27, No. 3, pp. 302-313.

Naslund, Cost-Effectiveness of Minimally Invasive Treatments and Transurethral Resection (TURP) in Benign Prostatic Hyperplasia (BPH), (Abstract), Presented at 2001 AUA National Meeting,, Anaheim, CA, Jun. 5, 2001. 1 page.

Naslund, Michael J., Transurethral Needle Ablation of the Prostate, *Urology*, vol. 50, No. 2, Aug. 1997, 6 pages.

Onik, et al., Sonographic Monitoring of Hepatic Cryosurgery in an Experimental Animal Model, *AJR American J. of* vol. 144, pp. 1043-1047, May 1985.

Organ, L.W., Electrophysiological principles of radiofrequency lesion making, *Apply. Neurophysiol.*, 1976. 39: p. 69-76.

Park, et al., Prognostic Factors Influencing the Development of an Iatrogenic Pneumothorax for CT-Guided RF Ablation of Upper Renal Tumor, *Acta Radiologica*, 2008, pp. 1200-1206.

PCT Application No. PCT/US2004/043477, International Search Report (Aug. 26, 2005), Written Opinion (Aug. 26, 2005), and International Preliminary Report on Patentability (Jun. 26, 2006). 10 pages.

Recaldini, Percutaneous Sonographically Guided RF Ablation of Medium-Sized Fibroids: Feasibility Study, *AJR*: 189, 2007, pp. 1303-1306.

Rubinsky, B., ed, Cryosurgery. *Annu Rev. Biomed. Eng.* vol. 2 2000. 157-187.

Saldanha, et al, Current tumor ablation technologies: Basic science and device review, *Seminars in Interventional Radiology*, 2010, vol. 27, No. 3, pp. 247-254.

Schmedt, et al, Evaluation of Endovenous RF Ablation and Laser Therapy with Endoluminal Optical Coherence Tomography in an Ex Vivo Model, *Journal of Vase Surg*, 2007, pp. 1047-1058.

Viamed, Inc. Office TUNA System clinical trail summary, 2001.

Viamed, Inc. Office TUNA System Patient Brochure, 2001.

Zlotta, et al., Long-Term Evaluation of Transurethral Needle Ablation of the Prostate (TUNA) for Treatment of Benign Prostatic Hyperplasia (BPH): Clinical Outcome After 5 Years. (Abstract) Presented at 2001 AUA National Meeting, Anaheim, CA—Jun. 5, 2001. 1 page.

Zlotta, et al., Possible Mechanisms of Action of Transurethral Needle Ablation of the Prostate on Benign Prostatic Hyperplasia Symptoms: a Neurohistochemical Study, Reprinted from *Journal of Urology*, vol. 157, No. 3, Mar. 1997, pp. 894-899.

* cited by examiner

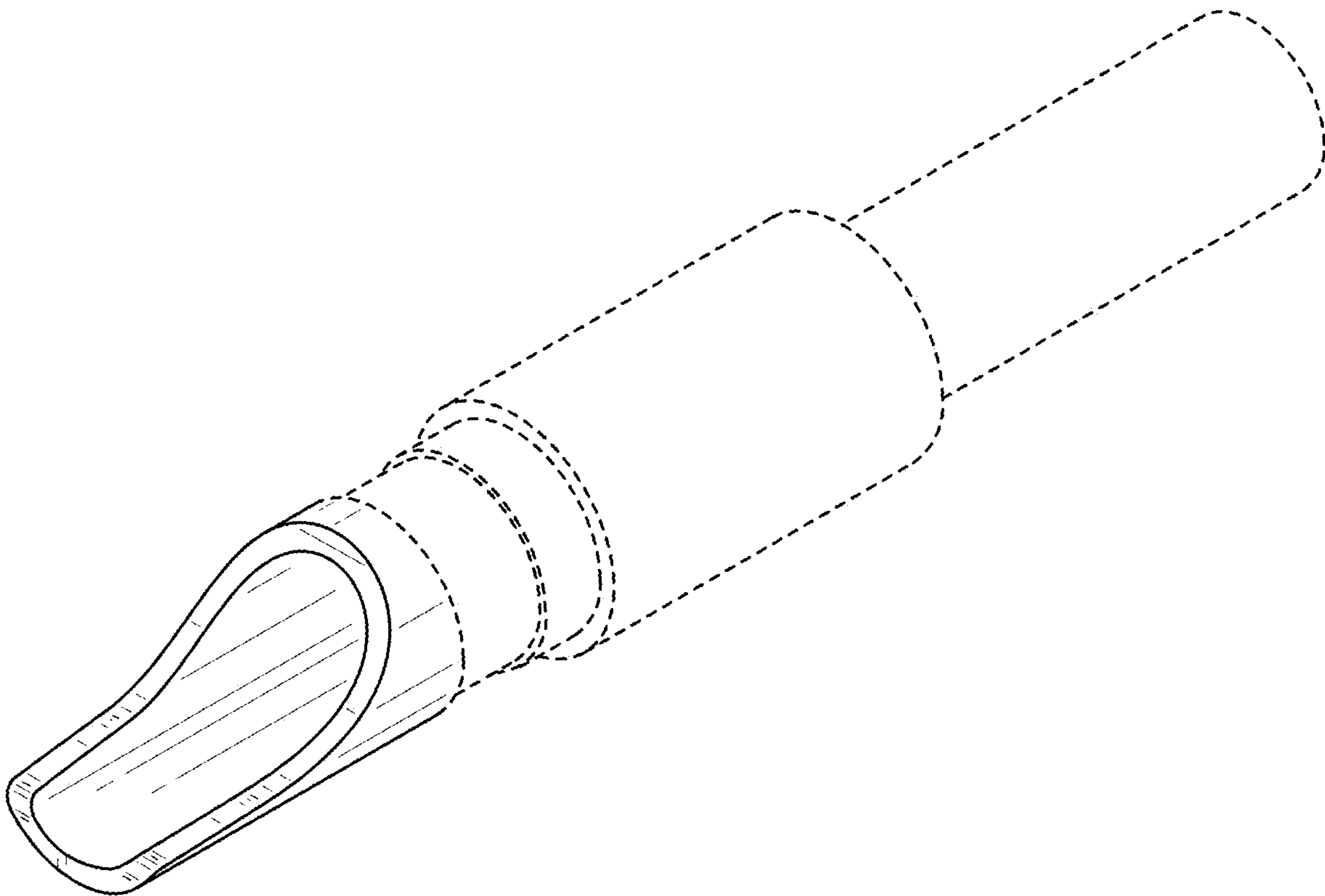


FIG. 1



FIG. 2



FIG. 3



FIG. 4



FIG. 5

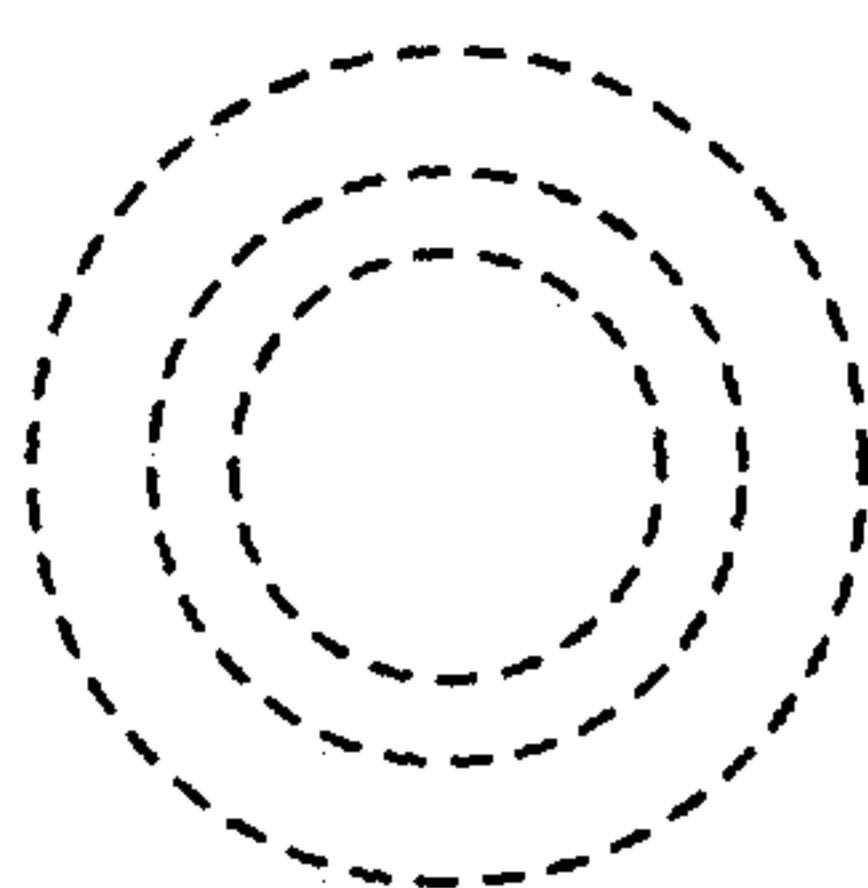


FIG. 6

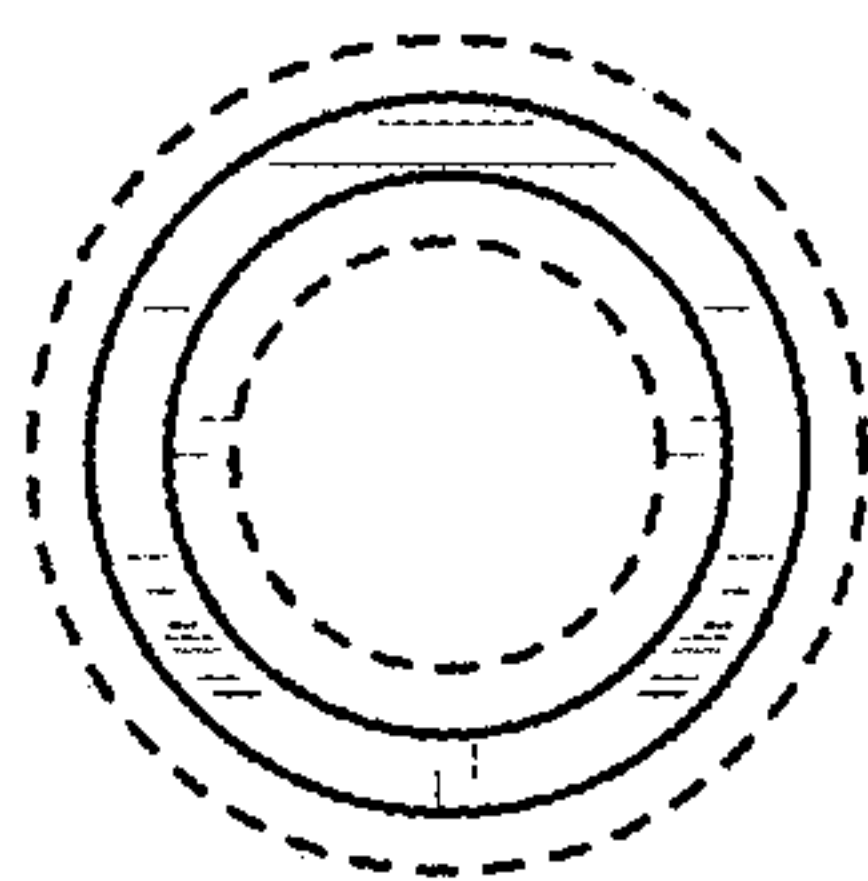


FIG. 7

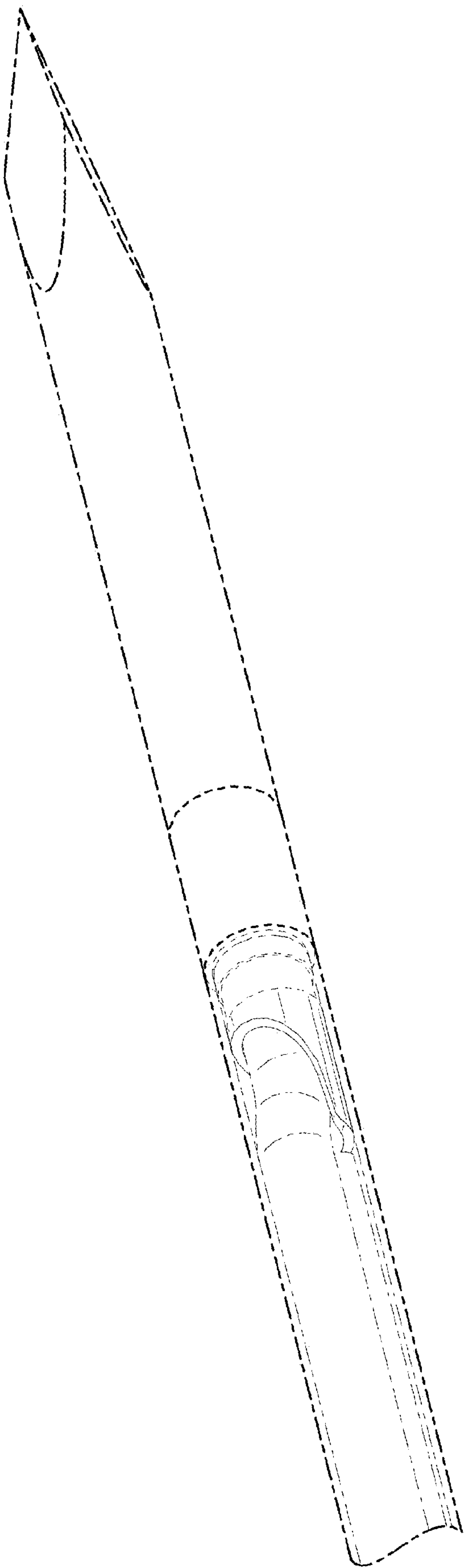


FIG. 8