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Krueger et al.

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(54) **IMPLANT DELIVERY TOOL**

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

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Related U.S. Application Data

(63) Continuation-in-part of application No. 10/665,941, filed on
Sep. 19, 2003, and a continuation-in-part of application No.
10/665,760, filed on Sep. 19, 2003, now Pat. No. 6,899,105.

(51) **LOC (8) Cl.** **24-02**

(52) **U.S. Cl.** **D24/147; D24/113; D24/133**

(58) **Field of Classification Search** D24/113,
D24/146, 141, 108, 112, 155, 133, 114; 606/185,
606/117, 184, 167, 181; 604/57, 59, 60, 64,
604/502, 506; 623/23.74; 128/897, 898, 848
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,643,188 A * 2/1987 Weiss 606/185
4,909,250 A 3/1990 Smith
4,946,035 A 8/1990 Grimm et al.
D320,270 S * 9/1991 Ball et al. D24/113

(Continued)

FOREIGN PATENT DOCUMENTS

DE 44 12 190 A1 10/1995
DE 199 20 114 A1 11/2000
EP 1 039 859 B1 12/2003
GB 2 355 936 A 5/2001
WO WO 2004/084709 A2 10/2004

OTHER PUBLICATIONS

Ersek et al., "Minimally Invasive Macro Implants," *World-
plast*, vol. I, No. 4, pp. 275-285 (1996).

Boudewyns, A. et al., "Temperature-controlled Radiofre-
quency Tissue Volume Reduction of the Soft Palate (Som-
noplasty®) in the Treatment of Habitual Snoring: Results of
a European Multicenter Trial," *Acta Otolaryngol*, vol. 120,
pp. 981-985 (2000).

Brietzke, S. et al., "Injection snoreplasty: How to treat
snoring without all the pain and expense," *Otolaryngology—
Head and Neck Surgery*, vol. 124, No. 5, pp. 503-510 (May
2001).

Cole, P. et al., "Snoring: A Review and a Reassessment," *The
Journal of Otolaryngology*, vol. 24, No. 5, pp. 303-306
(1995).

Coleman, S. et al., "Midline radiofrequency tissue reduction
of the palate for bothersome snoring and sleep-disordered
breathing: A clinical trial," *Otolaryngology—Head and Neck
Surgery*, vol. 122, No. 3, pp. 387-394 (Mar. 2000).

(Continued)

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(57) **CLAIM**

The ornamental design for an implant delivery tool, as
shown and described.

DESCRIPTION

FIG. 1 is a top and front side perspective view of an implant
delivery tool showing our new design, the broken line
showing is for illustrative purposes only and forms no part
of the claimed design;

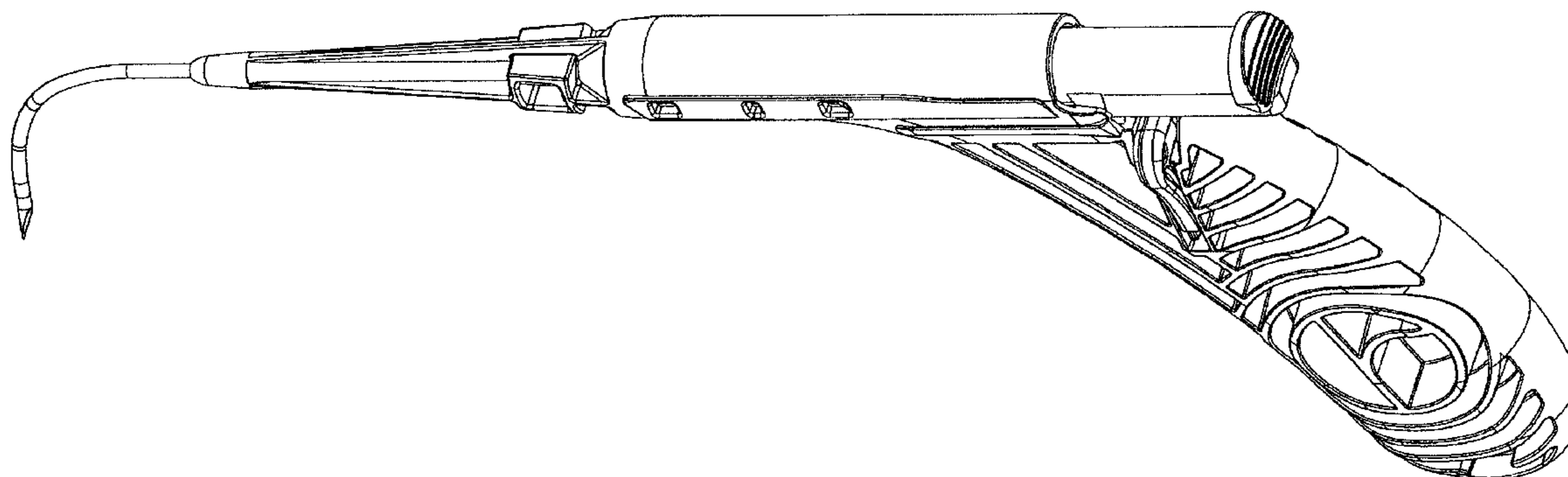
FIG. 2 is a front view of the embodiment of FIG. 1;

FIG. 3 is a right side elevation view of the embodiment of
FIG. 1;

FIG. 4 is a left side elevation view of the embodiment of
FIG. 1;

FIG. 5 is a top plan view of the embodiment of FIG. 1; and,
FIG. 6 is a bottom plan view of the embodiment of FIG. 1.

1 Claim, 2 Drawing Sheets



U.S. PATENT DOCUMENTS

RE34,086 E	*	10/1992	George	606/185
5,284,161 A		2/1994	Karell	
5,456,662 A		10/1995	Edwards et al.	
5,514,131 A		5/1996	Edwards et al.	
5,674,191 A		10/1997	Edwards et al.	
5,718,702 A		2/1998	Edwards	
5,792,067 A		8/1998	Karell	
D402,757 S	*	12/1998	Davis et al.	D24/133
5,843,021 A		12/1998	Edwards et al.	
5,988,171 A		11/1999	Sohn et al.	
6,098,629 A		8/2000	Johnson et al.	
6,216,702 B1		4/2001	Gjersøe	
6,250,307 B1		6/2001	Conrad et al.	
6,387,113 B1		5/2002	Hawkins et al.	
6,431,174 B1		8/2002	Knudson et al.	
6,432,035 B1		8/2002	Ravins et al.	
6,513,530 B2		2/2003	Knudson et al.	
6,523,542 B2		2/2003	Knudson et al.	
6,530,896 B1		3/2003	Elliott	
6,578,580 B2		6/2003	Conrad et al.	
6,626,916 B1		9/2003	Yeung et al.	
6,748,950 B2		6/2004	Clark et al.	
D497,990 S	*	11/2004	Jutila	D24/146
2004/0045556 A1		3/2004	Nelson et al.	
2004/0134491 A1		7/2004	Pflueger et al.	
2005/0065615 A1		3/2005	Krueger et al.	

OTHER PUBLICATIONS

Harries, P. et al., "Review Article, The surgical treatment of snoring," *The Journal of Laryngology and Otology*, vol. 110, pp. 1105–1106 (Dec. 1996).

Huang, L. et al., "Biomechanics of snoring," *Endeavour*, vol. 19, No. 3, pp. 96–100 (1995).

LaFrentz et al., "Palatal Stiffening Techniques for Snoring in a Novel Canine Model," *Abstracts of the Twenty-Second Annual Mid Winter Research Meeting of the Association for Research in Otolaryngology*, Abstract No. 299, vol. 22, p. 125–126 (Feb. 13–18, 1999).

Lorenz, C., "If he Snores—what can you do about it," *Today's Woman*, 2 pgs. (Jul. 1948).

Parker, J., "Clinical Scientific Feature, An Overview of Snoring and Obstructive Sleep Apnea, Part One: Evaluation and Diagnosis," *Northwest Dentistry*, pp. 17–22 (Jan.–Feb. 1995).

Swartz, R. et al., "Effects of electrical stimulation to the soft palate on snoring and obstructive sleep apnea," *The Journal of Prosthetic Dentistry*, vol. 76, No. 3, pp. 273–281 (Sep. 1996).

Wiltfang, J. et al., "First results on daytime submandibular electrostimulation of suprahyoidal muscles to prevent night-time hypopharyngeal collapse in obstructive sleep apnea syndrome," *International Journal of Oral & Maxillofacial Surgery*, vol. 28, pp. 21–25 (1999).

Dec. 18, 2005 510k clearance K011723 from the U.S. Food and Drug Administration.

Jul. 28, 2004 510k clearance K040417 from the U.S. Food and Drug Administration.

* cited by examiner

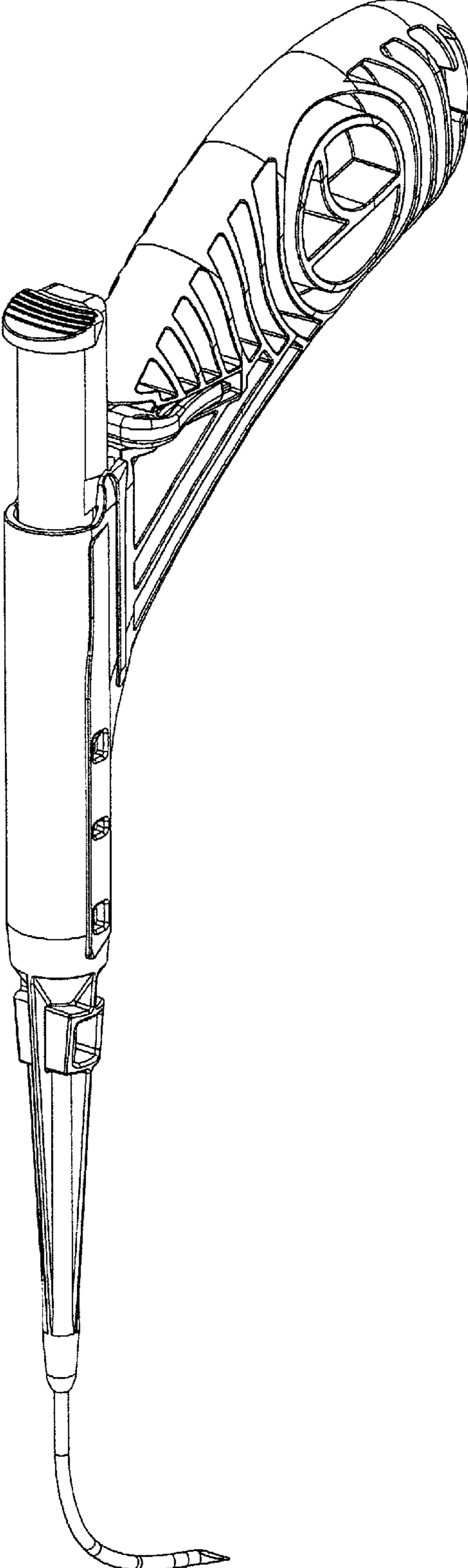


FIG.1

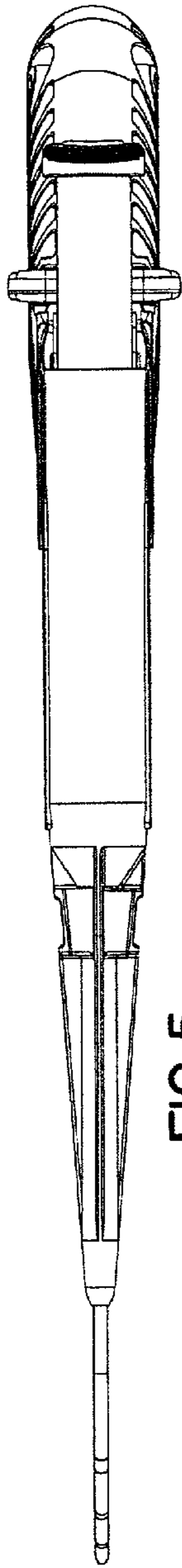


FIG. 5

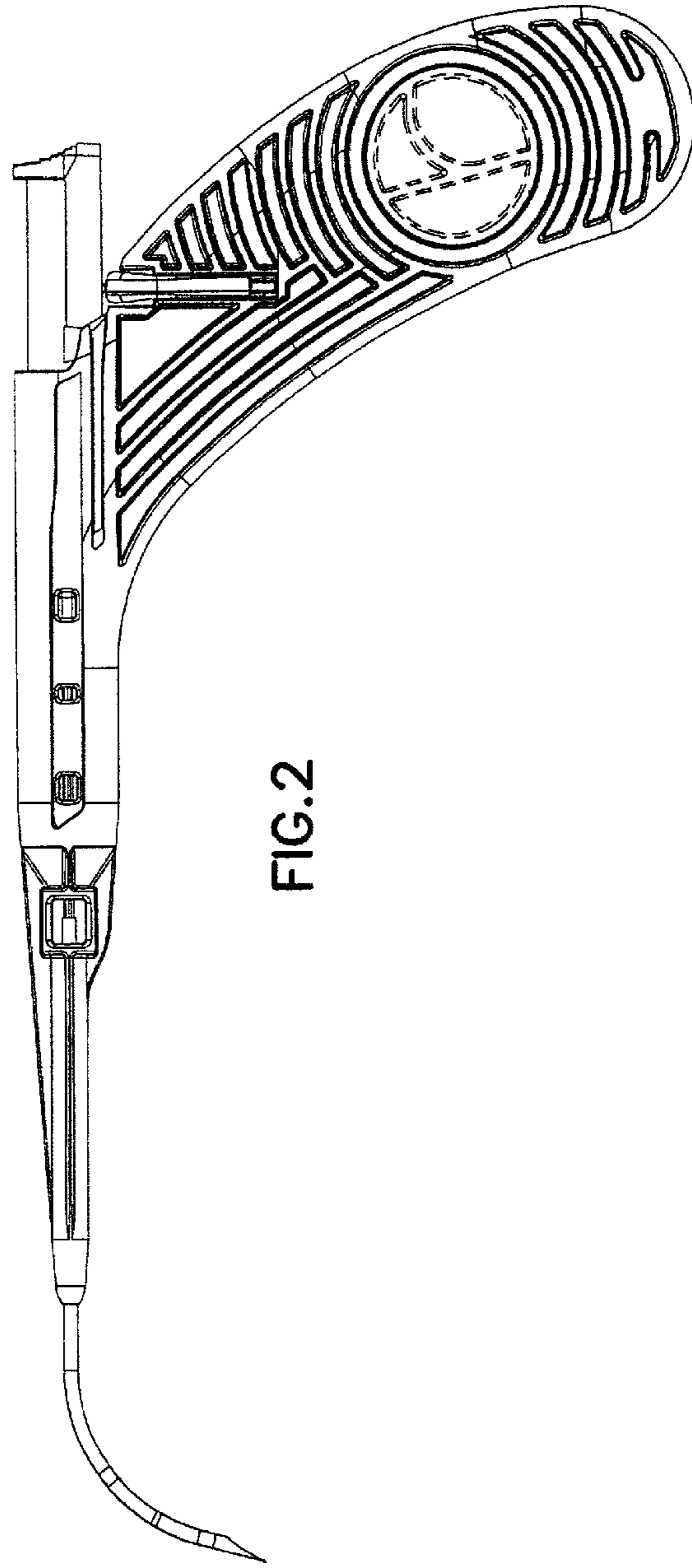


FIG. 2

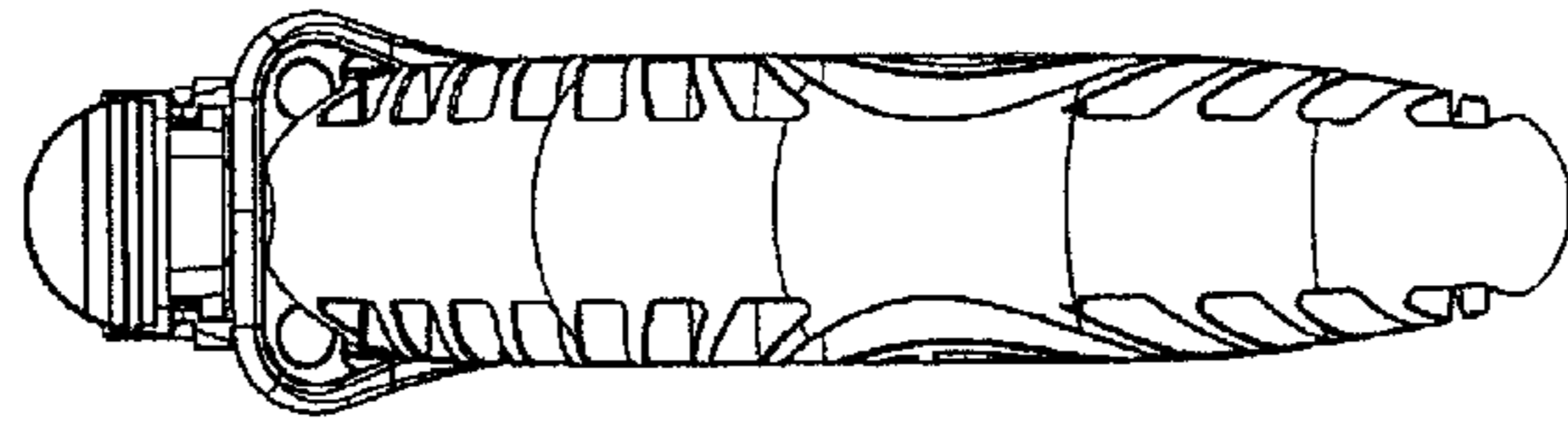


FIG. 3

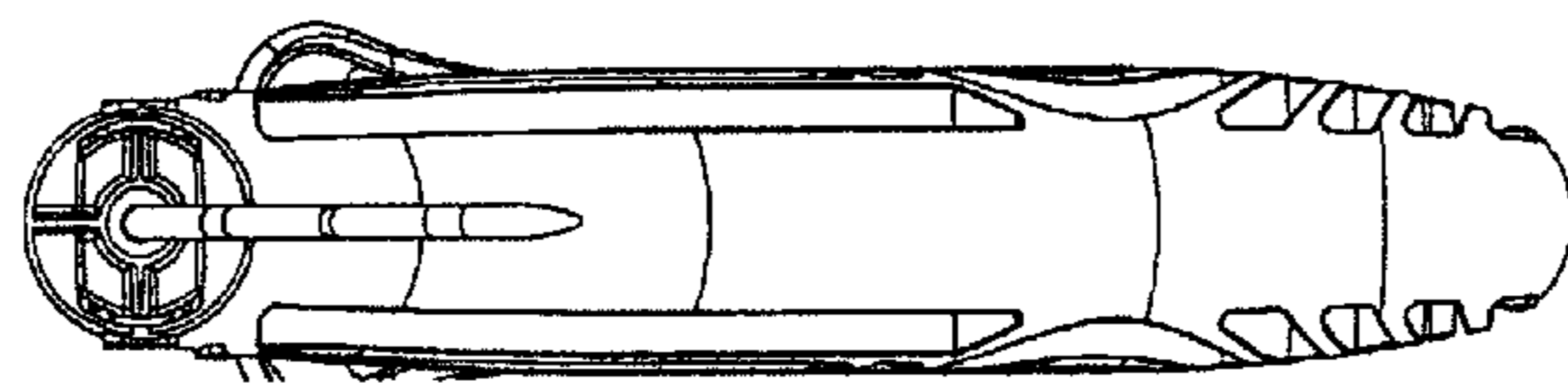


FIG. 4

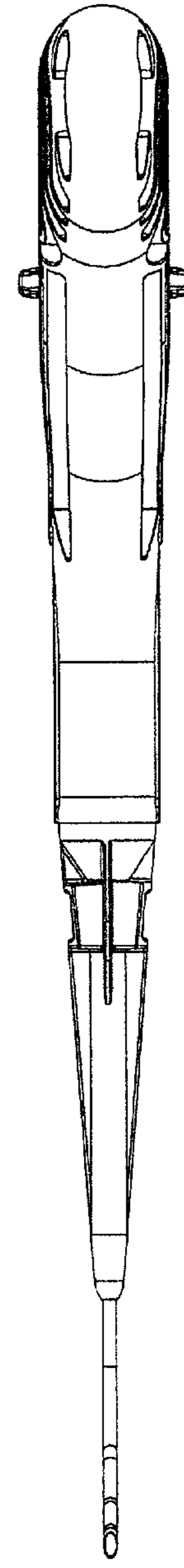


FIG. 6