(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
8 November 2007 (08.11.2007)

PCT

(10) International Publication Number
WO 2007/126677 A3

(51) International Patent Classification:
A61F 2/44 (2006.01)

(21) International Application Number:
PCT/US2007/007144

(22) International Filing Date: 22 March 2007 (22.03.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/390,515 27 March 2006 (27.03.2006) US

(71) Applicant *(for all designated States except US)*: **NOVARA LIMITED COMPANY** [US/US]; 4320 Via Presada, Santa Barbara, California 93110 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **RAY, Charles, D.** [US/US]; 4320 Via Presada, Santa Barbara, California 93110 (US).

(74) Agents: **CZAJA, Timothy, A.** et al.; DICKE, BILLIG & CZAJA, PLLC, 100 South Fifth Street, Suite 2250, Fifth Street Towers, Minneapolis, Minnesota 55402 (US).

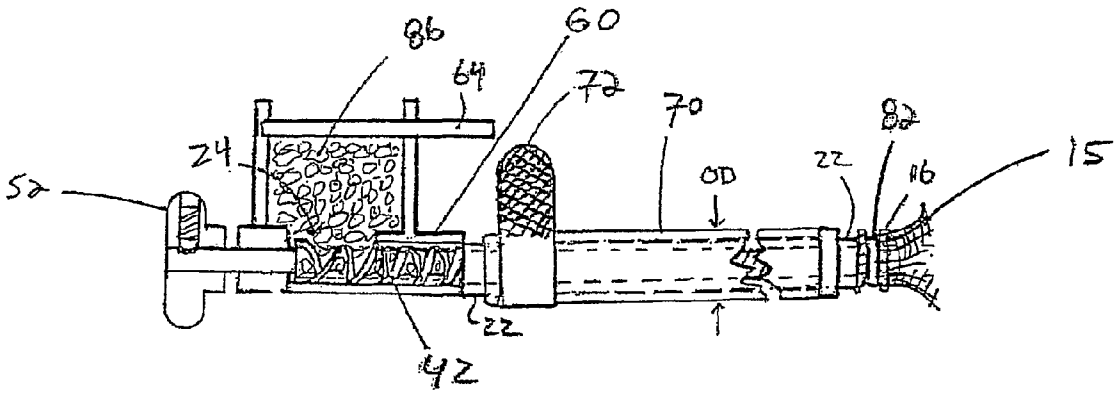
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
5 June 2008

(54) Title: SYSTEM AND DEVICE FOR FILLING A HUMAN IMPLANTABLE CONTAINER WITH A FILLER MATERIAL



(57) Abstract: A small, simple user-operated device for filling an implantable container or space inside a body structure or a void is disclosed. The device includes a delivery tube defining a load port at a proximal end and an ejection port at a distal end, an auger rod disposed within the delivery tube and extending from the load port to the ejection port, and means for rotating the auger rod. In this regard, rotation of the auger rod transports implantable filler material away from the load port and through the delivery tube and out of the ejection port to fill the container.

WO 2007/126677 A3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 07/07144

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - A61F 2/44 (2007.10)
USPC - 623/17.12
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8): A61F 2/44 (2007.10)
USPC: 623/17.12

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 623/11.11,17.12,17.16 ; 424/422,423,424 ; 604/131,891.1

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PubWEST(USPT,PGPB,EPAB,JPAB); Google, Google Scholar
Search Terms Used: auger, rode, tube, slid$, disengag$, implant, delivery tube, fill$, port, spinal, mix$, balloon

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2005/0065609 A1 (Wardlaw) 24 March 2005 (24.03.2005); para[0048, 0049, 0059, 0061]; Fig. 4a, 6B	1-20
Y	US 2004/0241146 A1 (Biscup) 2 December 2004 (02.12.2004); para[0059, 0061]	1-20
Y	US 7,001,431 B2 (Bao et al.) 21 February 2006 (21.02.2006); col 8, ln 38-52; col 7, ln 40-44	6 and 20
Y	US 2003/0199916 A1 (Yee et al.) 23 October 2003 (23.10.2003); Fig. 3; para[0040]	3, 4, 13, 14, 18
Y	US 6,878,141 B1 (Perkins et al.) 12 April 2005 (12.04.2005); col 11, ln 36-50; Fig. 7D	1-16
Y	US 2005/0216025 A1 (Chern Lin et al.) 29 September 2005 (29.09.2005); para[0032]; Fig. 32	2, 10, 19

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
31 December 2007 (31.12.2007)	27 MAR 2008
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (April 2007)