

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
12 July 2007 (12.07.2007)

PCT

(10) International Publication Number
WO 2007/079227 A3

(51) International Patent Classification:
A61N 5/00 (2006.01)

(74) Agent: FREIBURGER, Thomas, M.; P.O. Box 1026,
Tiburon, CA 94920 (US).

(21) International Application Number:
PCT/US2006/049579

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, 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, LV, 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.

(22) International Filing Date:
29 December 2006 (29.12.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/323,346 30 December 2005 (30.12.2005) US

(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, 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).

(71) Applicant (for all designated States except US): XOFT, INC. [US/US]; 49000 Milmont Drive, Fremont, CA 94538 (US).

(72) Inventors; and

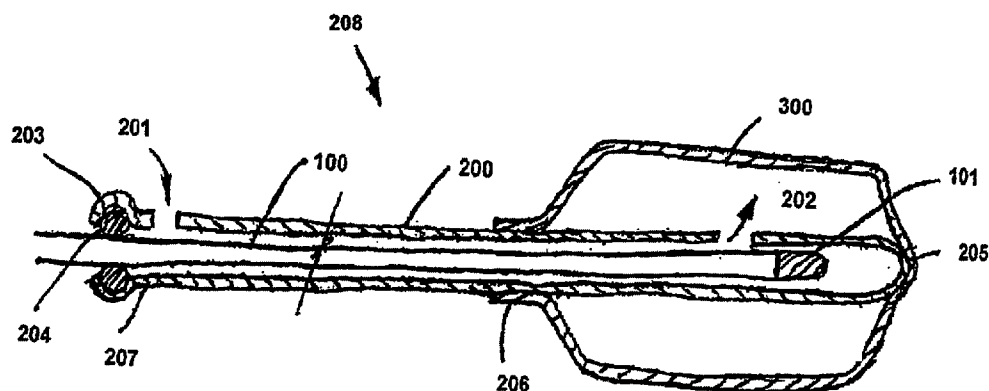
(75) Inventors/Applicants (for US only): LIM, Alex [US/US]; 3257 San Juan Avenue, Santa Clara, CA 95051 (US). LOVOL, Paul, A. [US/US]; 19152 DeHavilland Drive, Saratoga, CA 95070 (US). HAUSEN, Heike [US/US]; 1024 Mallet Court, Menlo Park, CA 94025 (US). STEWART, Daren, L. [US/US]; 2013 Notre Dame Avenue, Belmont, CA 94002 (US).

Published:

— with international search report

(88) Date of publication of the international search report:
13 March 2008

(54) Title: GYNECOLOGICAL BRACHYTHERAPY APPLICATOR AND SYSTEM



(57) Abstract: A vaginal brachytherapy applicator is versatile to different anatomies and more comfortable to the patient than prior applicators. An inflatable balloon on a shaft may be inelastic or elastic. In one embodiment the shaft is rotatable relative to the balloon for enabling a ring or band of dose delivery, for versatility in radiation placement. Alternatively, the source can be rotated and pulled back within a stationary shaft. An adjustment is provided for reducing the length of balloon that inflates, to accommodate different anatomies and positions. Although isotope radiation sources can be used in the applicator, an electronic source is preferred, and the system and method include procedures for using the applicator with an electronic source.

WO 2007/079227 A3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US06/49579

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61N 5/00 (2007.01)

USPC - 600/1, 3

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) - A61N 5/00,5/02; A61F 2/02; A61M 25/00 (2007.01)

USPC - 600/1, 2, 3, 4, 5, 9, 7, 30, 31; 604/508, 509

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/0080340 A1 (STEWART et al) 14 April 2005 (14.04.2005) see entire document	30-31, 33-35, 39-40
Y		1-29, 32, 36-38, 41-42
Y	US 2005/0251108 A1 (FRASSICA) 10 November 2005 (10.11.2005) see entire document	1-13
Y	US 6338709 B1 (GEOFFRION et al) 15 January 2002 (15.01.2002) see entire document	5-7, 12-29, 32, 36-37
Y	US 2001/0016725 A1 (VALLEY et al) 23 August 2001 (23.08.2001) see figures	22-23, 25
Y	US 5720717 A (D'ANDREA) 24 February 1998 (24.02.1998) see figures	38, 41-42
Y	US 2005/0101824 A1 (STUBBS) 12 May 2005 (12.05.2005) see figures	27



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

20 July 2007

Date of mailing of the international search report

12 SEP 2007

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:

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774