

(43) International Publication Date  
5 July 2012 (05.07.2012)(10) International Publication Number  
**WO 2012/092508 A3**

## (51) International Patent Classification:

A61B 18/20 (2006.01) A61B 18/18 (2006.01)  
A61B 18/22 (2006.01)

## (21) International Application Number:

PCT/US2011/067938

## (22) International Filing Date:

29 December 2011 (29.12.2011)

## (25) Filing Language:

English

## (26) Publication Language:

English

## (30) Priority Data:

61/428,023 29 December 2010 (29.12.2010) US  
61/481,974 13 May 2011 (13.05.2011) US

## (71) Applicant (for all designated States except US):

CERAMOPTEC INDUSTRIES, INC. [US/US]; 515  
Shaker Road, East Longmeadow, MA 01028 (US).

## (72) Inventor; and

(75) Inventor/Applicant (for US only): FEMOPASE, Gabriel  
[AR/AR]; Bv. Mitre 517 P18 D G, Cordoba, 5000 (AR).(74) Agent: SKUTNIK, Bolesh, J.; CeramOptec Industries,  
Inc., 515 Shaker Road, East Longmeadow, MA 01028  
(US).(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,  
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,  
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, ME,  
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,  
OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD,  
SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ,  
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU,  
TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE,  
DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU,  
LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,  
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

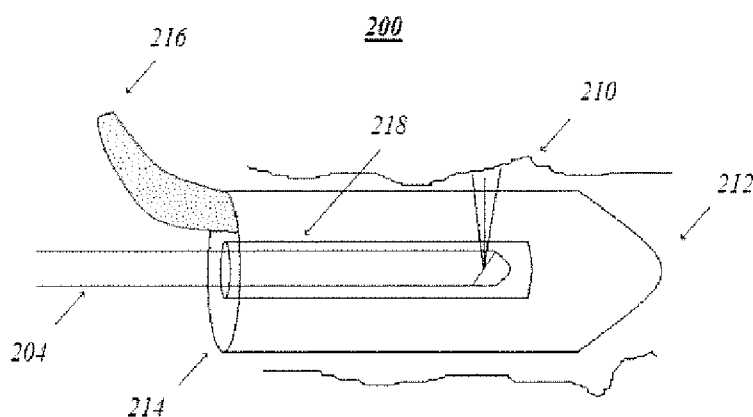
## Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments (Rule 48.2(h))

## (88) Date of publication of the international search report:

1 November 2012

## (54) Title: VAGINAL REMODELING/REJUVENATION DEVICE AND METHOD

**Fig. 2**

(57) **Abstract:** A device and method for treating a vagina's anatomic, functional and aesthetic conditions are disclosed. Device comprises a laser energy source which conveys laser energy through an optical fiber handpiece. A cylindrical/penis shaped device/applicator for insertion into the vagina is specially designed for safe and accurate irradiation of determined parts of vaginal mucosa. Applicator has an inner hollow path through which optical fiber is inserted to irradiate inner vaginal tissue. Irradiated mucous tissue contracts, thus vaginal radius is reduced and during penetration in sexual intercourse it embraces penis more tightly. Consequently, sensitivity is substantially improved and sexual intercourse is more pleasurable for both the woman and her partner. In an embodiment, the diode laser source emitting at 1470 nm is used. In another embodiment, vagina's outer dimensions are accurately measured and surgery is performed to achieve dimensions according to certain aesthetic and functional criteria. Present method and device cause minimum pain and risk of side effects. Procedure is ambulatory and can be carried out in a physician's office.



WO 2012/092508 A3

## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/US2011/067938****A. CLASSIFICATION OF SUBJECT MATTER*****A61B 18/20(2006.01)i, A61B 18/22(2006.01)i, A61B 18/18(2006.01)i***

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)

A61B 18/20; A61B 6/00; A61B 17/36; A61B 18/18

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) &amp; Keywords: laser, fiber optic, irradiation, genitalia, vagina,

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2008-0058783 A1 (GREGORY B. ALTSHULER et al.) 06 March 2008 See abstract; paragraphs 74, 80, 95, 96, 104-109, 112, 140, 141, 147, 148; claims 1-37; figures 3C, 12A.	1-3
X	US 05303719 A (PETER J. WILK et al.) 19 April 1994	1,2
Y	See column 2, lines 35-48; claims 1, 8, 10, 18.	3
X	US 05449354 A (ELLIE KONWITZ et al.) 12 September 1995	1,2
Y	See abstract; column 2, line 56-column 3, line 23; claims 1-19.	3
X	US 2010-0036259 A1 (PAUL DICARLO et al.) 11 February 2010	1,2
Y	See abstract; paragraphs 11, 14; claims 1-5.	3
X	US 2007-0100329 A1 (FRANCO MAGLIONE et al.) 03 May 2007	1,2
Y	See abstract; paragraphs 27-32; claim 1.	3

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

\* 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 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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

14 AUGUST 2012 (14.08.2012)

Date of mailing of the international search report

**17 AUGUST 2012 (17.08.2012)**

Name and mailing address of the ISA/KR

Korean Intellectual Property Office  
189 Cheongsa-ro, Seo-gu, Daejeon Metropolitan  
City, 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

YOO Min Jeong

Telephone No. 82-42-481-3463



**INTERNATIONAL SEARCH REPORT**

International application No.

**PCT/US2011/067938****Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 7, 12  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:  
  
Claims 7 and 12 are unclear since they refer to the multiple dependent claims which are not drafted in accordance with the second and third sentences of Rule 6.4(a).
3. ☒ Claims Nos.: 4-6, 8-11, 13, 14  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2011/067938**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2008-0058783 A1	06.03.2008	AU 1999-34507 A1	27.09.1999
		AU 2002-303863 B2	31.08.2006
		AU 2003-214151 A1	29.09.2003
		AU 2003-214151 B2	19.04.2007
		AU 2003-284972 A1	13.05.2004
		AU 2003-284972 B2	10.09.2009
		AU 2007-225308 A1	20.09.2007
		CA 2323479 A1	16.09.1999
		CA 2439882 A1	12.09.2002
		CA 2448385 A1	28.11.2002
		CA 2448385 C	13.03.2012
		CA 2484400 A1	25.09.2003
		CA 2501098 A1	06.05.2004
		CA 2646881 A1	20.09.2007
		CA 2656042 A1	03.01.2008
		CA 2763127 A1	28.11.2002
		CN 1535126 A	06.10.2004
		CN 1535126 C0	05.07.2006
		CN 1568163 A	19.01.2005
		CN 1652729 C0	10.08.2005
		CN 1708261 A	14.12.2005
		CN 1872007 A	06.12.2006
		CN 1872363 A	06.12.2006
		CN 1879573 A	20.12.2006
		CN 1966106 A	23.05.2007
		EP 0991372 A2	12.04.2000
		EP 0991372 B1	04.08.2004
		EP 1062001 A1	27.12.2000
		EP 1062001 B1	27.07.2005
		EP 1211999 A1	12.06.2002
		EP 1211999 B1	25.05.2005
		EP 1365699 A2	03.12.2003
		EP 1401347 A1	31.03.2004
		EP 1401347 B1	24.08.2011
		EP 1433430 A2	30.06.2004
		EP 1433430 A3	10.11.2004
		EP 1482848 A1	08.12.2004
		EP 1555948 A2	27.07.2005
		EP 1559378 A2	03.08.2005
		EP 1559378 A3	03.05.2006
		EP 1566149 A1	24.08.2005
		EP 1665996 A2	07.06.2006
		EP 1665996 A3	28.11.2007
		EP 1998697 A2	10.12.2008
		EP 2032064 A2	11.03.2009
		EP 2314245 A1	27.04.2011
		EP 2314246 A1	27.04.2011
		IL 196090 D0	22.09.2009
		JP 04-056091 B2	05.03.2008

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2011/067938**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		JP 04-314353 B2	29.05.2009
		JP 04-790268 B2	29.07.2011
		JP 2002-506362 A	26.02.2002
		JP 2003-126277 A	07.05.2003
		JP 2004-527330 A	09.09.2004
		JP 2004-530464 A	07.10.2004
		JP 2005-519692 A	07.07.2005
		JP 2006-334438 A	14.12.2006
		JP 2006-512941 A	20.04.2006
		JP 2008-023355 A	07.02.2008
		JP 2009-101183 A	14.05.2009
		JP 2009-532079 A	10.09.2009
		JP 2009-542330 A	03.12.2009
		JP 2011-104387 A	02.06.2011
		JP 2011-120935 A	23.06.2011
		JP 2011-156413 A	18.08.2011
		JP 2011-212451 A	27.10.2011
		KR 10-2005-0071618 A	07.07.2005
		KR 2009-0034925 A	08.04.2009
		US 06015404 A	18.01.2000
		US 2002-0005475 A1	17.01.2002
		US 2002-0128635 A1	12.09.2002
		US 2002-0161357 A1	31.10.2002
		US 2002-0173780 A1	21.11.2002
		US 2003-0032950 A1	13.02.2003
		US 2003-0055414 A1	20.03.2003
		US 2003-0065314 A1	03.04.2003
		US 2003-0195494 A1	16.10.2003
		US 2004-0093042 A1	13.05.2004
		US 2004-0133251 A1	08.07.2004
		US 2004-0162549 A1	19.08.2004
		US 2005-0038418 A1	17.02.2005
		US 2005-0171517 A1	04.08.2005
		US 2006-0004306 A1	05.01.2006
		US 2006-0004347 A1	05.01.2006
		US 2006-0009750 A1	12.01.2006
		US 2006-0020309 A1	26.01.2006
		US 2006-0058712 A1	16.03.2006
		US 2006-0122668 A1	08.06.2006
		US 2006-0149343 A1	06.07.2006
		US 2006-0161143 A1	20.07.2006
		US 2006-0194164 A1	31.08.2006
		US 2006-0206103 A1	14.09.2006
		US 2006-0287646 A1	21.12.2006
		US 2007-0027440 A1	01.02.2007
		US 2007-0038206 A1	15.02.2007
		US 2007-0067006 A1	22.03.2007
		US 2007-0073308 A1	29.03.2007
		US 2007-0078501 A1	05.04.2007
		US 2007-0129711 A1	07.06.2007

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2011/067938**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
		US 2007-0198004 A1	23.08.2007
		US 2007-0213696 A1	13.09.2007
		US 2007-0213698 A1	13.09.2007
		US 2007-0239142 A1	11.10.2007
		US 2007-0239143 A1	11.10.2007
		US 2008-0009842 A1	10.01.2008
		US 2008-0132886 A1	05.06.2008
		US 2008-0139901 A1	12.06.2008
		US 2008-0172047 A1	17.07.2008
		US 2008-0183162 A1	31.07.2008
		US 2008-0214988 A1	04.09.2008
		US 2009-0137995 A1	28.05.2009
		US 2010-0145321 A1	10.06.2010
		US 2010-0228326 A1	09.09.2010
		US 2011-0172651 A1	14.07.2011
		US 6273884 B1	14.08.2001
		US 6508813 B1	21.01.2003
		US 6511475 B1	28.01.2003
		US 6517532 B1	11.02.2003
		US 6653618 B2	25.11.2003
		US 6663620 B2	16.12.2003
		US 6878144 B2	12.04.2005
		US 6974451 B2	13.12.2005
		US 6976985 B2	20.12.2005
		US 6997923 B2	14.02.2006
		US 7077840 B2	18.07.2006
		US 7135033 B2	14.11.2006
		US 7204832 B2	17.04.2007
		US 7351252 B2	01.04.2008
		US 7431719 B2	07.10.2008
		US 7758621 B2	20.07.2010
		US 7763016 B2	27.07.2010
		US 7935107 B2	03.05.2011
		US 7942915 B2	17.05.2011
		US 7942916 B2	17.05.2011
		US 8109924 B2	07.02.2012
		US 8182473 B2	22.05.2012
		WO 01-34048 A1	17.05.2001
		WO 02-069825 A2	12.09.2002
		WO 02-094116 A1	28.11.2002
		WO 03-077783 A1	25.09.2003
		WO 2004-037287 A2	06.05.2004
		WO 2007-106339 A2	20.09.2007
		WO 2008-002625 A2	03.01.2008
		WO 2008-002625 A3	08.05.2008
		WO 98-24514 A1	11.06.1998
		WO 98-51235 A1	19.11.1998
		WO 99-46005 A1	16.09.1999
US 05303719 A	19.04.1994	None	

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2011/067938**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 05449354 A	12.09.1995	IL 104100 A	20.11.1997
US 2010-0036259 A1	11.02.2010	None	
US 2007-0100329 A1	03.05.2007	US 2005-0070886 A1 US 2011-0166561 A1	31.03.2005 07.07.2011