

(19) World Intellectual Property
Organization
International Bureau



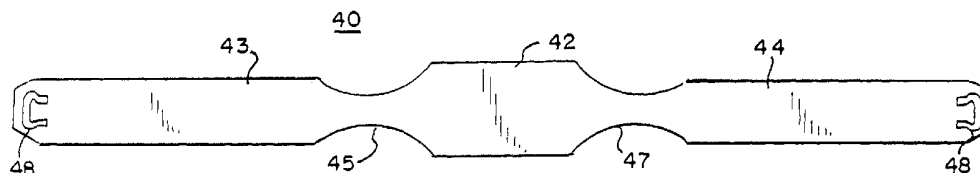
(43) International Publication Date
13 November 2003 (13.11.2003)

PCT

(10) International Publication Number
WO 2003/092546 A3

- (51) International Patent Classification⁷: **A61F 2/00**
 - (21) International Application Number: PCT/US2003/013584
 - (22) International Filing Date: 30 April 2003 (30.04.2003)
 - (25) Filing Language: English
 - (26) Publication Language: English
 - (30) Priority Data: 60/376,575 30 April 2002 (30.04.2002) US
 - (71) Applicants: **COOK UROLOGICAL INC.** [US/US]; 750 Daniels Way, Bloomington, IN 47404 (US). **COOK BIOTECH INCORPORATED** [US/US]; 3055 Kent Avenue, West Lafayette, IN 47906 (US).
 - (72) Inventors: **BOSLEY, Rodney, W., Jr.**; 4663 W. Harvest Lane, Bloomington, IN 47404 (US). **PATEL, Umesh, H.**; 1135 Kingswood Road S., West Lafayette, IN 47906 (US). **ANDREWS, Marvin, O.**; 3818 Laura Way, Bloomington, IN 47401 (US). **CHIN, Likang**; 2243 U.S. Highway 52, W#1231, West Lafayette, IN 47906 (US). **FISCHER, Frank, J., Jr.**; 4901 South Old State Road 37, Bloomington, IN 47401 (US). **RYAN, Walter, N.**; 9630 S. Lake Ridge Road, Bloomington, IN 47401 (US). **ROSENBLATT, Peter, L.**; 725 Concord Avenue, Suite 3300, Cambridge, MA 02138 (US). **JONES, Stephen, J.**; 18400 Shake Boulevard, Shaker Heights, OH 44120 (US).
 - (74) Agent: **OKEY, David, W.**; BRINKS HOFER GILSON & LIONE, P.O. Box 10087, Chicago, IL 60610 (US).
 - (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.
 - (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (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: 6 May 2004
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: SLING FOR SUPPORTING TISSUE



(57) Abstract: A sling for supporting a urethra in a patient has characteristics for resisting pull-out, roll-over and a combination of both pull-out and roll-over. To facilitate resistance to pull-out, sling material has protuberances or serrations to resist movement once placed in the patient by the surgeon. Improved resistance to roll-over or roll-up is achieved by providing relief on the sling in areas potentially subjected to roll-over forces by endopelvic fascia. The sling may be used on female or male patients, and may be used in conjunction with a wider support portion to support a bladder and a urethra, rather than a urethra alone. The sling may also be used to support other tissues within a patient.

WO 2003/092546 A3

INTERNATIONAL SEARCH REPORT

International Application No

PCT/S 03/13584

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61F2/00

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 7 A61F A61B

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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 110 101 A (RYDELL MARK A ET AL) 29 August 2000 (2000-08-29) column 3, lines 41,42; figure 1 -----	1-19, 43-51
A	US 5 934 283 A (WILLEM GERMAIN E ET AL) 10 August 1999 (1999-08-10) column 5, line 4 - line 8; figure 3 -----	1-19, 43-51
A	WO 00/74613 A (ETHICON INC) 14 December 2000 (2000-12-14) figure 2D -----	1
A	WO 98/35632 A (BOSTON SCIENT IRELAND LTD ;GELLMAN BARRY N (US); MARTIN WILLIAM (U) 20 August 1998 (1998-08-20) figure 1 -----	1

Further documents are listed in the continuation of box C.

Patent family members are listed in 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 document 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

8 October 2003

Date of mailing of the international search report

24.02.2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Korth, C-F

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 03/13584

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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.: 20, 40-42, 52, 53, 63, 64, 74-81
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery
2. Claims Nos.:
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:
3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

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

see additional sheet

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.:
1-19, 43-51

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Claims Nos.: 20,40-42,52,53,63,64,74-81

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-19,43-51

2. claims: 21-33,54-62

3. claims: 34-39

4. claims: 65-73

INTERNATIONAL SEARCH REPORT

International Application No

PCT/S 03/13584

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6110101	A	29-08-2000	US 6042536 A	28-03-2000
			EP 1065992 A1	10-01-2001
			WO 0009039 A1	24-02-2000
			TW 450800 B	21-08-2001

US 5934283	A	10-08-1999	NONE	

WO 0074613	A	14-12-2000	US 6475139 B1	05-11-2002
			AU 4710500 A	28-12-2000
			AU 5315300 A	28-12-2000
			AU 5465900 A	28-12-2000
			BR 0011726 A	05-08-2003
			CA 2376278 A1	14-12-2000
			CA 2376281 A1	14-12-2000
			CA 2376282 A1	14-12-2000
			CN 1409625 T	09-04-2003
			CN 1433288 T	30-07-2003
			EP 1200011 A1	02-05-2002
			EP 1194091 A1	10-04-2002
			JP 2003523786 T	12-08-2003
			JP 2003501144 T	14-01-2003
			JP 2004500152 T	08-01-2004
			WO 0074594 A1	14-12-2000
			WO 0074613 A1	14-12-2000
			WO 0074633 A2	14-12-2000
			US 2002188169 A1	12-12-2002
			US 2003023138 A1	30-01-2003
			US 2003149440 A1	07-08-2003
			US 6273852 B1	14-08-2001
			US 2002077526 A1	20-06-2002
			US 2001049467 A1	06-12-2001

WO 9835632	A	20-08-1998	AU 6329598 A	08-09-1998
			CA 2280814 A1	20-08-1998
			DE 69808614 D1	14-11-2002
			DE 69808614 T2	18-06-2003
			EP 0983033 A1	08-03-2000
			JP 2001511685 T	14-08-2001
			US 6042534 A	28-03-2000
			WO 9835632 A1	20-08-1998
