Title: URETHRAL SLINGS, AND METHODS FOR THE IMPLANTATION AND ADJUSTMENT THEREOF

Abstract: The present invention relates to a urethral sling for treating incontinence, including methods of manufacturing the sling; methods of implanting the sling and methods of adjusting the sling both during and after installation. More specifically, the sling includes a collapsible tubular mesh of fibers designed to support the urethra and allow for tissue growth while easily conforming to the patient. The sling is pre-sized to eliminate the need for cutting to width during manufacture or installation and, thereby, eliminating the risk of creating rough or sharp edges. It is further equipped with one or more installation features for facilitating installation and securing the sling within the patient.
**INTERNATIONAL SEARCH REPORT**

**International application No**

PCT/US 09/55489

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(8) - A61 F 5/48 (2009.01 )

USPC - 128/885

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)

USPC- 128/885

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

USPC. 128/846, 869; 600/29, 30; 606/1, 1, 10, 13, 14, 27, 28

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

PubwJet (USPAT, PG PUB, JPO, EPO), Google: urethra, bladder, urinary, incontinence, mesh, woven, bioabsorbable, biocompatible, polypropylene, applicator, heat.

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

<table>
<thead>
<tr>
<th>Category*</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 6,808,486 B1 (O'Donnell) 26 October 2004 (26.10.2004) entire document especially col 7, in 36-37; col 8, in 25-29; and Figure 1.</td>
<td>1-6</td>
</tr>
<tr>
<td>Y</td>
<td>US 2007/0043255 A1 (O'Donnell) 22 February 2007 (22.02.2007) entire document especially para [0033]-[0034] and Figure 1.</td>
<td>7-17</td>
</tr>
<tr>
<td>Y</td>
<td>US 3,762,983 A (Osborn) 02 October 1973 (02.10.1973) entire document especially col 1, in 63 through col 2, in 2</td>
<td>21-33</td>
</tr>
<tr>
<td>Y</td>
<td>US 5,980,534 A (Gimpelson) 09 November 1999 (09.11.1999) entire document especially Fig. 1, 4, col 2, in 23-34; col 3, in 8-25; col 3, in 48-50</td>
<td></td>
</tr>
</tbody>
</table>

**D. Further documents are listed in the continuation of Box C.**

* Special category 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

**K** document member of the same patent family

**Date of the actual completion of the international search**


**Date of mailing of the international search report**

03 MAR 2010

**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 off cer' Lee W. Young

PCT Helpdesk 371-272-4300

PCT OSP, 371-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)
INTERNATIONAL SEARCH REPORT

International application No
PCT/US 09/55489

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 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 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

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13 1. In order for all inventions to be examined, the appropriate additional examination fees must be paid:

Group I Claims 1-20, directed to a tubular mesh urethral sling and method for implantation or adjustment thereof

Group II Claims 21-37, directed to means and methods for adjusting urethral slings utilizing an energy source.

The inventions listed as Groups I - II do not relate to a single general inventive concept under PCT Rule 13 1 because, under PCT Rule 13 2, they lack the same or corresponding special technical features for the following reasons. The special technical feature of Group I is a tubular mesh comprising a urethral sling, which is not present in Group II. The special technical feature of Group II is an energy source, which is not present in Group I. The sole element of commonality between the groups is that of an adjustable urethral sling, which is known in the prior art (ref: US 7,395,822 B1 to Burton et al., Abstract, Claims 7, 9, 11). Accordingly, unity of invention is lacking under PCT Rule 13 1.

1  □ 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 additional fees, this Authority did not invite payment of additional fees

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

Form PCT/ISA/210 (continuation of first sheet (2)) (July 2009)