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26 March 2009

(54) Title: VESSEL OCCLUSIVE DEVICE AND METHOD OF OCCLUDING A VESSEL

(57) Abstract: An implantable vessel occlusive device and method for occluding a vessel are described, for example to occlude the urethra or bladder neck. The devices and methods described utilize an occlusive member connected to a control mechanism. The occlusive member is reversibly changed from a non-occlusive condition to an occlusive condition, for example by depressing an activation button contained within a resilient, elastomeric cover surrounding the control mechanism. In the occlusive position, an initial tension is applied to the occlusive member through a tensioning suture. The tension is translated into an occlusive pressure applied to the urethra or bladder neck that is sufficient to prevent urinary leakage. The non-occlusive position can be obtained by depressing the de-activation button. The occlusive member is constructed to allow elution of drugs, such as may be required to combat infection or tissue encapsulation from its surface.



WO 2009/006574 A3

A. CLASSIFICATION OF SUBJECT MATTER***A61F 2/08(2006.01)i, A61F 2/48(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)

IPC A61F 2/08, A61F 2/00, A61F 2/02

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)

eKIPASS, NCBI PubMed database, Delphion Research Intellectual Property Network database

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,074,341 A (Anderson et al.) Jun. 13, 2000. See the the claim 1 ; the clip(28) and tap(54) in figure 3 ; the column 10, lines 17-33; figure 7; the column 6, lines 63-67 ; figure 1 ; the column 11, lines 11-14 ; and figure 7.	1 - 16
X A	US 2006-0264697 A1 (Timm et al.) Nov. 23, 2006. See the figure 1-2, claim 1 and 20 ; figure 1-2, claim 2.	1-3 and 16 4 - 15
A	US20050251182 A1 (Bachmann) Nov. 10, 2006. See the whole document.	1 - 16
A	US 4,118,805 A (Reimels) Oct. 10, 1978. See the whole document.	1 - 16



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

"&" document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2008/069155

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6074341 A	13.06.2000	AU 1999-45483 A1 AU 746023 B2 CA 2334387 A1 CN 1305357 A EP 1085841 A1 JP 2002-517277 WO 99-63907 A1	30.12.1999 11.04.2002 16.12.1999 25.07.2001 28.03.2001 18.06.2002 16.12.1999
US 2006-264697 A1	23.11.2006	- NONE -	
US 2005-0251182 A1	10.11.2005	- NONE -	
US 4118805 A	10.10.1978	JP 53-107197	18.09.1978

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2008/069155**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.: 17 - 20
because they relate to subject matter not required to be searched by this Authority, namely:
Claims 17-20 pertain to methods for treatment of the human or animal body by surgery, and thus relate to a subject matter which this International Searching Authority is not required, under Article 17(2)(a)(i) of the PCT and Rule 39(iv) of the Regulations under the PCT, to search.
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:

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.