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**Declarations under Rule 4.17:**

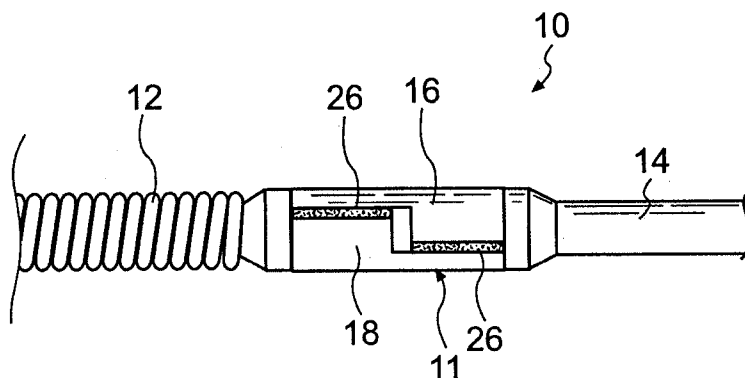
- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

**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 November 2008

(54) Title: SYSTEMS AND METHODS FOR DELIVERING A DETACHABLE IMPLANTABLE DEVICE



**FIG. 1**

(57) Abstract: Disclosed herein are various systems and methods for delivering implantable devices, such as, for example detachable embolic coils. The systems can include an embolic coil mated to a pusher wire via a detachable link comprising first and second engaging members and an expandable member or a sleeve. The expandable member or sleeve can reduce relative movement between the engaging members to inhibit premature detachment and/or jamming of the detachable link as the embolic coil is delivered through a catheter.

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## INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2008/055418

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. A61B17/12

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

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, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 829 236 A (TARGET THERAPEUTICS INC [US]) 18 March 1998 (1998-03-18) column 1, line 31 - column 4, line 7; figures 1-18 column 5, line 40 - column 8, line 36	1-16
X	WO 93/11719 A (TARGET THERAPEUTICS INC [US]) 24 June 1993 (1993-06-24) page 3, line 18 - page 4, line 14; figures 1-3	9-16
A	page 5, line 3 - page 8, line 31	1-8
X	WO 93/11825 A (TARGET THERAPEUTICS INC [US]) 24 June 1993 (1993-06-24) page 3, line 17 - page 4, line 8; figures 1-3	9-13
A	page 5, line 17 - page 7, line 35	1-8, 14-16

☐ 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 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.

\*Z\* document member of the same patent family

Date of the actual completion of the international search

23 June 2008

Date of mailing of the international search report

04/09/2008

Name and mailing address of the ISA/

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2008/055418

## 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:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
  
2. ☐ As all searchable claims could be searched without effort justifying an 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 reportcovers 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.:

1-8, 9-13, 14-16

### 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.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

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

1. claims: 1-8,9-13,14-16

implant delivery system with elongated medical device,  
implantable device mated to a pusher wire via a link with  
first and second mating engaging members and with an  
expandable member positioned between engaging members,  
adjacent to one engaging member or between engaging members,  
implant and pusher wire  
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2. claims: 17-20

implant delivery system with an implant device mated to a  
pusher wire via a detachable link with first and second  
mating engaging members and a sleeve extending around the  
outer surface of the link, such that sleeve inhibits  
movement between the engaging members  
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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