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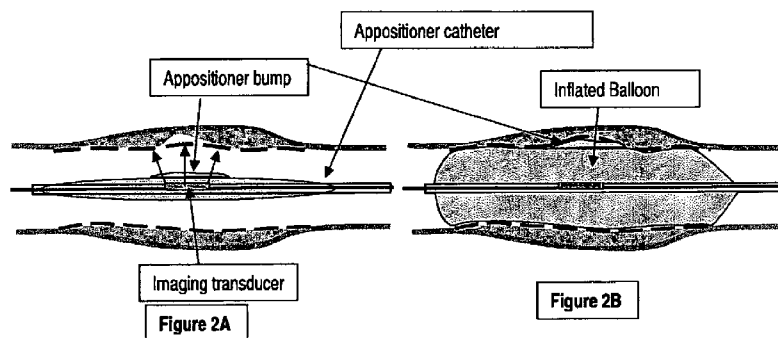
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(54) Title: STENT STRUT APPOSITIONER





(57) Abstract: Devices and procedures for treating malapposed or non apposed stent strut are disclosed. In general, an angioplasty balloon catheter coupled with a uniquely shaped bump is delivered within the stent and positioned to align the bump with the malapposed or non apposed stent strut. The balloon is inflated to drive the bump against the target strut to apposed it properly against the lumen wall.

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## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/US2010/024601**

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
<i>A61F 2/84(2006.01)i, A61M 29/02(2006.01)i, A61M 25/04(2006.01)i</i>		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) A61F 2/84; A61F 2/06		
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) & Keywords: stent, balloon, bump, strut, protrude, etc.		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2001-0044630 A1 (RICHARD S. STACK et al.) 22 November 2001 See abstract; Fig.1; page 1, [0012] - page 2, [0014]; and claims.	1-32
A	US 2008-0027528 A1 (KARL JAGGER et al.) 31 January 2008 See abstract; Fig.1; page 1, [0010]-[0012]; page 6, [0111]; and claims.	1-32
A	US 2008-0077229 A1 (BERNARD ANDREAS et al.) 27 March 2008 See abstract; Figs.1-3; page 3, [0025] - page 4, [0028]; and claims.	1-32
A	US 2007-0156221 A1 (BORIS VARSHITZKY et al.) 05 July 2007 See abstract; Figs.4-6; page 1, [0023]; and claims.	1-32
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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 19 OCTOBER 2010 (19.10.2010)		Date of mailing of the international search report <b>25 OCTOBER 2010 (25.10.2010)</b>
Name and mailing address of the ISA/KR  Korean Intellectual Property Office Government Complex-Daejeon, 139 Seonsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140		Authorized officer BAE, YEO WOOL Telephone No. 82-42-481-5568 

# INTERNATIONAL SEARCH REPORT

International application No.

**PCT/US2010/024601**

## 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.: 33-35  
because they relate to subject matter not required to be searched by this Authority, namely:  
Claims 33-35 pertain to methods and apparatus for treatment of the human by therapy, as well as diagnostic methods, 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 39.1(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.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

**PCT/US2010/024601**

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