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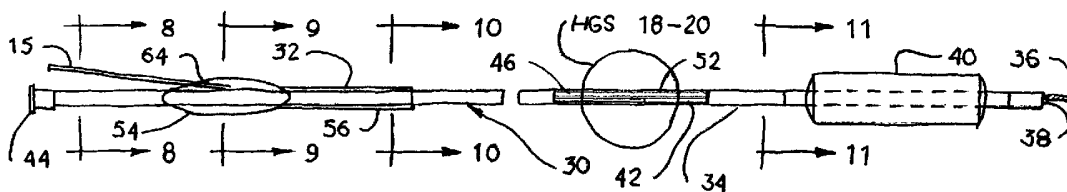
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(54) Title: CATHETER AND GUIDE WIRE EXCHANGE SYSTEM



(57) Abstract: A catheter and guide wire exchange system including a catheter (30) having a guide wire lumen (46) with a guide way (48) extending along the length of a stiffened proximal shaft portion, and a guide member (32) slidably disposed about the proximal shaft for directing a guide wire (15) into or out of the guide way (48) and the guide wire lumen (46). The guide member (32) may be slid along the proximal shaft portion and the guide wire (15) in zipper-like fashion so that the guide wire (15) is contained within the guide wire lumen (46) distal to the guide member (32) and with the guide wire (15) and catheter (30) being separated proximal of the guide member (32).

INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IE 03/00052

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61M25/01 A61M29/02 A61M25/10

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 A61M

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.
X	US 6 322 577 B1 (MCINNES PETER R ET AL) 27 November 2001 (2001-11-27)	1,2,4
Y	the whole document	3,5,10
Y	---	
Y	US 5 868 706 A (COX DANIEL L) 9 February 1999 (1999-02-09)	3,5,10
A	column 2, line 1 -column 4, line 59; figures 1,2	1,2,4, 6-9, 11-24
Y	---	
Y	US 4 988 356 A (BARBERE MICHAEL D ET AL) 29 January 1991 (1991-01-29)	12-24
A	cited in the application the whole document	1-11
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Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 389 087 A (MIRAKI MANOUCHEHR) 14 February 1995 (1995-02-14)	12-24
A	column 7, line 51 -column 8, line 53; figures 1,2,18,19 column 13, line 27 -column 14, line 15 -----	1-11
A	US 5 460 185 A (JOHNSON KIRK ET AL) 24 October 1995 (1995-10-24) the whole document -----	1-24

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IE 03/00052

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6322577	B1	27-11-2001	US 5516336 A 14-05-1996
			US 2003125763 A1 03-07-2003
			US 6451043 B1 17-09-2002
			CA 2035851 A1 08-08-1991
			DE 69131805 D1 05-01-2000
			DE 69131805 T2 25-05-2000
			EP 0441384 A2 14-08-1991
			JP 5084304 A 06-04-1993
US 5868706	A	09-02-1999	CA 2208795 A1 04-07-1996
			EP 0850084 A1 01-07-1998
			JP 10511295 T 04-11-1998
			WO 9620025 A1 04-07-1996
US 4988356	A	29-01-1991	CA 1328791 C 26-04-1994
			DE 3884020 D1 21-10-1993
			DE 3884020 T2 03-03-1994
			EP 0282143 A1 14-09-1988
			ES 2043796 T3 01-01-1994
			JP 2582837 B2 19-02-1997
			JP 63229066 A 22-09-1988
US 5389087	A	14-02-1995	US 5324269 A 28-06-1994
			WO 9305841 A1 01-04-1993
US 5460185	A	24-10-1995	NONE