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- (81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
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BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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(54) Title: ARM IMMOBILIZATION DEVICE AND ASSOCIATED METHODS

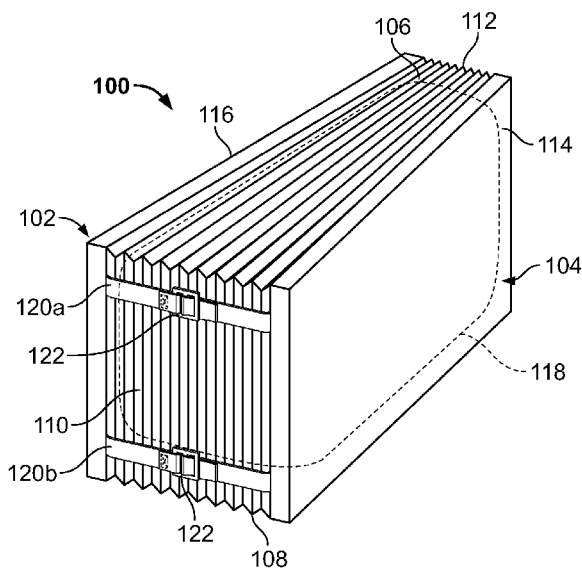


FIG. 11A

(57) Abstract: The present disclosure provides exemplary arm immobilization devices for a person and associated methods of use. Thus, in one aspect, the disclosure provides a device including or comprising an outer shell including an internal cavity and a configurable structure disposed within the internal cavity of the outer shell. The outer shell can be configured and dimensioned to accommodate an arm of a person thereon. Expansion or contraction of the configurable structure can drive expansion or contraction of the outer shell. In another aspect, the disclosure provides methods for immobilizing an arm of a person that include providing an arm immobilization device and supporting the arm of the person with the outer shell and the configurable structure.



## INTERNATIONAL SEARCH REPORT

International application No.

**PCT/IB2014/002552**

A. CLASSIFICATION OF SUBJECT MATTER IPC: <b>A61F 5/05</b> (2006.01), <b>A61F 5/37</b> (2006.01)		
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: <b>A61F 5/05</b> (2006.01), <b>A61F 5/37</b> (2006.01)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched None		
Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used) Questel Orbit (FamPat database) Keywords: immobiliz+ or sling; arm or shoulder; adjust+; abduction; adduction; bolster; inflat+ or bladder; accordion or bellows		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2011/063155 A1 (GOLDEN ET AL.) 26 May 2011 (26-05-2011) * Fig. 18 embodiment; [0108] – [0111] *	1, 5 - 9, 13, 16 – 18
X – Y	US 8,016,780 B1 (SICKLES) 13 September 2011 (13-09-2011) * Whole document *	1, 5, 6, 13, 16 – 18 – 2 - 4, 14, 15
Y	US 5,665,058 A (YOUNG) 9 September 1997 (09-09-1997) * Figs. 3 & 7; column 7, line 59 - column 8, line 3; column 12, lines 45-56; 12, 20, 34, 35, 38, 40 & 120 *	2 - 4, 14, 15
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* “A” “E” “L” “O” “P”	Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance earlier application or patent but published on or after the international filing date 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) document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed	“T” “X” “Y” “&”
Date of the actual completion of the international search 05 May 2015 (05-05-2015)		Date of mailing of the international search report 07 May 2015 (07-05-2015)
Name and mailing address of the ISA/CA Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 001-819-953-2476		Authorized officer  Jason Fisher (819) 953-9384

## INTERNATIONAL SEARCH REPORT

International application No.

**PCT/IB2014/002552****Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of the 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.  Claim Nos.: 13 - 20

because they relate to subject matter not required to be searched by this Authority, namely:

Claims 13 - 20 are directed to a method for treatment of the human or animal body by surgery or therapy, which the International Searching Authority is not required to search under Rule 39.1(iv) of the PCT. However, this Authority has carried out a search based on the alleged effect or purpose/use of the product defined in claim 1.

2.  Claim 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.  Claim 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 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 claim 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 claim 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

International application No.

**PCT/IB2014/002552**

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1645251 A2 (TURRINI ET AL) 12 April 2006 (12-04-2006) * Fig. 6; [0044] & [0038]; claim 1 *	1, 5, 6, 9, 13, 17, 18
A	US 7,300,410 B1 (WEBER) 27 November 2007 (27-11-2007) * Figs. 5 - 14; column 3, lines 63-67; claim 9 *	1, 5, 9, 13, 17, 18
A, P	US 2013/0317401 A1 (JOSLIN) 28 November 2013 (28-11-2013) * Fig. 10; [0034] & [0042]; 20, 29 & 36 *	1 - 3, 5, 9, 12, 13, 17, 18
<b>End of Items</b>		

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.  
**PCT/IB2014/002552**

Patent Document Cited in Search Report	Publication Date	Patent Family Member (s)	Publication Date
WO2011063155A1	26 May 2011 (26-05-2011)	WO2011063155A1 EP2501345A1 US2011155148A1 US8109273B2 US2013131568A1	26 May 2011 (26-05-2011) 26 September 2012 (26-09-2012) 30 June 2011 (30-06-2011) 07 February 2012 (07-02-2012) 23 May 2013 (23-05-2013)
US8016780B1	13 September 2011 (13-09-2011)	None	
US5665058A	09 September 1997 (09-09-1997)	US5665058A DE69616629D1 DE69616629T2 EP0737455A2 EP0737455A3 EP0737455B1 ES2168438T3 GB9507724D0	09 September 1997 (09-09-1997) 13 December 2001 (13-12-2001) 12 September 2002 (12-09-2002) 16 October 1996 (16-10-1996) 27 December 1996 (27-12-1996) 07 November 2001 (07-11-2001) 16 June 2002 (16-06-2002) 31 May 1995 (31-05-1995)
EP1645251A2	12 April 2006 (12-04-2006)	EP1645251A2 EP1645251A3 ITVR20040130A1	12 April 2006 (12-04-2006) 05 July 2006 (05-07-2006) 25 November 2004 (25-11-2004)
US7300410B1	27 November 2007 (27-11-2007)	US7300410B1 US7189213B1	27 November 2007 (27-11-2007) 13 March 2007 (13-03-2007)
US2013317401A1	28 November 2013 (28-11-2013)	None	