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- (74) Agents: RAVAL, Sunil et al.; Servilla Whitney LLC, 33 Wood Avenue South, Suite 830, Iselin, New Jersey 08830 (US).
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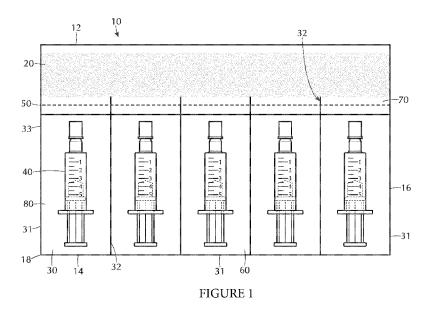
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Published:

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- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))
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12 January 2017

(54) Title: PACKAGING METHOD TO ENABLE RE-STERILIZATION OF MEDICAL DEVICE



(57) Abstract: A method of packaging pre-filled medical devices is disclosed. The method comprises producing a packaging having a front panel and a back panel defining a compartment capable of holding one or more medical devices wherein at least one of the front panel or top panel has a portion containing a gas permeable material while the remaining portion of the pouch is gas impermeable. This gas permeable material allows gas to pass through the material and contact the one or more articles contained within the compartment or allows gas to pass through the gas permeable material from the inside of the compartment to the outside of the container. Upon completion of sterilization, the pouch is sealed and the gas permeable portion is cut away leaving the sterilized medical device enclosed in a completely gas impermeable pouch.



INTERNATIONAL SEARCH REPORT

International application No PCT/US2016/034280

A. CLASSIFICATION OF SUBJECT MATTER INV. A61L2/07 A61L2/20

A61L2/07

B65D75/00

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ADD.

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)

A61L B65D

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)

EPO-Internal, WPI Data

C. DOCUM	ENTS CONSIDERED TO BE RELEVANT	
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2007/047028 A1 (ATRIUM MEDICAL CORP [US]; LABRECQUE ROGER [US]; CONROY SUZANNE [US]; F) 26 April 2007 (2007-04-26) abstract; figures page 1, lines 1-2,22-25 page 5, lines 10-14 page 6 page 13, lines 1-2 pages 16-17	1-23
X	US 4 660 721 A (MYKLEBY LAURIE G [US]) 28 April 1987 (1987-04-28) abstract; figures column 2 column 5, lines 54-62 column 6, lines 25-40 column 8, lines 45-50	1-10
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X	Further documents are listed in the	continuation of Box C
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See patent family annex.

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Date of mailing of the international search report

Date of the actual completion of the international search

24 November 2016

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European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2016/034280

		PC1/032010/034200
C(Continua	ation). DOCUMENTS CONSIDERED TO BE RELEVANT	
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Х	WO 2005/073091 A2 (AVANTEC VASCULAR CORP [US]) 11 August 2005 (2005-08-11) paragraphs [0006], [0009], [0033] - [0035]; figure 4	1-23
X	EP 1 520 795 A1 (CODMAN & SHURTLEFF [US]) 6 April 2005 (2005-04-06) paragraphs [0008] - [0010], [0014], [0025] - [0026]; figures	1,2,4
X	DE 10 2004 027923 A1 (ARTUSI RETO [CH]) 29 December 2005 (2005-12-29) paragraphs [0006], [0008]; figures	1,3
А	WO 99/32044 A1 (REXAM MEDICAL PACKAGING INC [US]) 1 July 1999 (1999-07-01) page 1, lines 17-26; figure 7 page 5, lines 3-12	1,4,8
A	US 3 472 369 A (SCHUSTER SAMUEL J) 14 October 1969 (1969-10-14) figures column 1, lines 35-38 column 2, lines 30-69	11-23

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International application No. PCT/US2016/034280

INTERNATIONAL SEARCH REPORT

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. X 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 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 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. X 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: 1-10

method of packaging chemically sensitive articles comprising a gas-permeable header

2. claims: 11-23

method of packaging chemically sensitive articles comprising a gas-impermeable header

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2016/034280

Patent document cited in search report		Publication date	Patent family member(s)			Publication date
WO 2007047028	A1	26-04-2007	US WO	2007084144 2007047028		19-04-2007 26-04-2007
US 4660721	A	28-04-1987	NONE			
WO 2005073091	A2	11-08-2005	US WO	2005268573 2005073091		08-12-2005 11-08-2005
EP 1520795	A1	06-04-2005	AT AU BR CA CO EP ES JP JP US US	2483219 5580147	A1 A1 A1 A1 T3 B2 A	15-12-2008 14-04-2005 24-05-2005 30-03-2005 30-11-2005 06-04-2005 16-04-2009 12-01-2011 26-05-2005 31-03-2005 03-11-2005
DE 102004027923	A1	29-12-2005	NONE			
WO 9932044	A1	01-07-1999	US US WO	6098800 6503183 9932044	B1	08-08-2000 07-01-2003 01-07-1999
US 3472369		14-10-1969	NONE			