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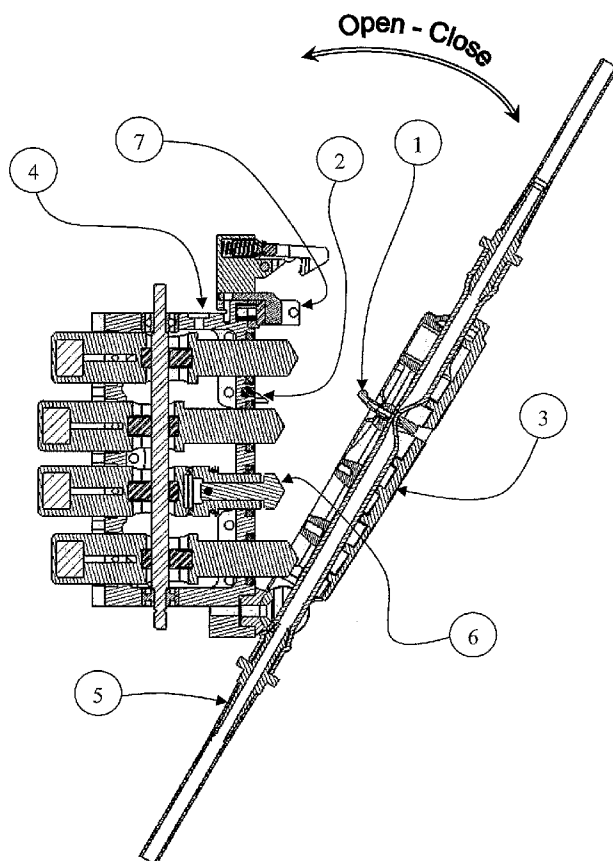
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[Continued on next page]

(54) Title: AN ANTI-FREE FLOW MECHANISM



(57) Abstract: The invention discloses an anti-free flow mechanism for a finger-type peristaltic infusion pump (DDS) comprising: a passive mechanical interface (MS) which integrally accommodates a portion of a flexible infusion-tube, and an anti-free flow valve (AFFV) which is a spring-activated latch incorporated with the (MS). The maneuverable latch is secured in the (MS) either in a closed or opened configuration: in its closed configuration no flow is provided and in its opened configuration, a free flow is facilitated. The anti-free flow is configured in a manner that when the (MS) is not properly mounted in the (DDS), the (AFFV) is automatically actuated to its closed configuration, and vice versa that when the (MS) is properly mounted in the (DDS), the latch is adapted to be automatically switched to the opened configuration. The invention also presents methods for avoiding anti-free flow in finger-type peristaltic infusion pumps.



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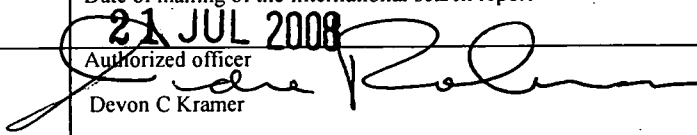
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23 April 2009

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL07/01405

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC: <b>F04B 43/12( 2006.01);F04B 45/08( 2006.01)</b>  USPC: <b>417/441,474,477.11,477.2,477.9,480</b> 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) U.S. : 417/441, 474,477.11,477.2,477.9,480  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)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,257,978 (HABER et al) 2 November 1993 (02.11.1993), abstract, column 2 lines 46-57, column 3 line 35 - column 4 line 27, Figures 1-2C.	1-3, 6
A	US 4,155,362 (JESS) 22 May 1979 (22.05.1979), column 4 lines 27-30, column 6 lines 33-41 and Figures 1-2 and 4-8.	1-3, 6
A	US 6,261,262 B1 (BRIGGS et al) 17 July 2001 (17.07.2001), abstract, column 2 lines 20-39, column 2 line 60 - column 3 line 18.	1-3, 6
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input 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	"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
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"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)	"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
"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search 21 May 2008 (21.05.2008)		Date of mailing of the international search report <b>21 JUL 2008</b>
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized officer  Devon C. Kramer Telephone No. (571) 272-3700

# INTERNATIONAL SEARCH REPORT

International application No. .

PCT/IL07/01405

## 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.: 4-5  
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 any 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.
  - ☐ No protest accompanied the payment of additional search fees.