Title: RETRACTABLE SAFETY SYRINGE

Abstract: A retractable safety syringe may have a ferrule and needle which are selectively removable from a distal end of a syringe body. In particular, the ferrule may have an annular flange. A wedge element may be frictionally engaged to the ferrule and a distal end of the syringe body. To retract the needle into the syringe body, a punch of a piston displaces the wedge element off of an annular flange of the ferrule. At about the same time, longitudinally offset tabs engage an annular flange and retract the needle into the syringe body via a retraction force created by a variable vacuum compartment or tension member. Alternatively, the ferrule and needle may be temporarily fixed to the distal end of the syringe body via a detent and/or o-ring which engages a lower undercut groove and an upper undercut groove of the ferrule.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
   IPC(8): A61 M 5/00; A61 M 5/32 (2007.01)
   USPC: 604/110; 604/192
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)
USPC: 604/110; 604/192

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 141/27; 604/218, 187, 181, 93.01, 48

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PubWest
retractable, syringe, needle, plunger, seal, spring

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category*</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 2003/0212371 A1 (SMITH et al.) 13 November 2003 (13.11.2003), para [0034]-[0037], Fig.2, Fig.6</td>
<td>1-6, 8-14, 17, 19</td>
</tr>
</tbody>
</table>

* 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 another 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
15 July 2007 (15.07.2007)

Date of mailing of the international search report
27 SEP 2007

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. 571-272-3201

Authorized officer: Lee W. Young
PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-9774

Form PCT/ISA/210 (second sheet) (April 2007)