PORTABLE HAND PUMP FOR EVACUATION OF FLUIDS

A manually operable pump (10) for the effective removal of fluids to include blood, blood clots, fluid, and air from a body cavity of a subject is provided. The manually operable pump is adapted to be connect to a range of fluid conduits (12, 14) and is equipped with one-way valves (16, 20) that effectively permit flow of fluid through the pump in only one direction. The sensitivity of the one-way valves is such that when properly positioned, fluid can flow through the valves (16, 20) and out of the pump (10) without manual compression of the pump and with the aid of gravity power alone.

Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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For two-letter codes and other abbreviations, refer to the “Guidance Notes on Codes and Abbreviations” appearing at the beginning of each regular issue of the PCT Gazette.
### INTERNATIONAL SEARCH REPORT

**A. CLASSIFICATION OF SUBJECT MATTER**
- **IPC(7)**: A61M 1/00
- **US CL**: 604/540, 319

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)

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)
- Eastman, portable, pump, medical, surgical, human, suction, aspiration, breast, gravity, hand, foot, negative

**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 5,112,323 A (WINKLER et al) 12 May 1992 (12.05.1992), see Figures.</td>
<td>1-14 and 16</td>
</tr>
<tr>
<td>Y</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>X</td>
<td>US 4,029,095 A (PENA) 14 June 1977 (14.06.1977), see Figure 2.</td>
<td>1-8, 10-14 and 16</td>
</tr>
<tr>
<td>Y</td>
<td>US 3,572,340 A (LLOYD et al) 23 March 1971 (23.03.1971), see col. 9, lines 60-63 and col. 10, lines 56-75.</td>
<td>15</td>
</tr>
</tbody>
</table>

**Box C**

- Further documents are listed in the continuation of Box C.

- See patent family annex.

- **"A"**: Special categories of cited documents:
- **"X"**: Document defining the general state of the art which is not considered to be of particular relevance.
- **"E"**: Earlier application or patent published on or after the international filing date.
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- **"&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.
- **"&K"**: Document member of the same patent family.

**Date of the actual completion of the international search**
- 23 May 2005 (23.05.2005)

**Date of mailing of the international search report**
- 05 JUL 2005

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