PORTABLE SPA INSULATION METHOD AND APPARATUS

An uninsulated portable spa unit is inverted, and a seal plate having a flat interior surface and a plurality of doors is lowered onto the bottom surface of the inverted spa. The doors are successively opened and glass wool insulation apparatus is successively inserted through the door openings and operated to install glass wool insulation into the interior of the spa unit.
A. **CLASSIFICATION OF SUBJECT MATTER**

A47K 3/02(2006.01)i, E04H 4/06(2006.01)1, A47K 3/00(2006.01)1

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)

A47K 3; E04B 1; B32B 19

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords:glass wool, spa, insert, and similar terms.

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>JP 2008-092965 A (YAMAHA LIVINGTEC. CORP.) 24 April 2008</td>
<td>8</td>
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<tr>
<td>A</td>
<td>See paragraphs 13-27, and figure 9.</td>
<td>1-7</td>
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<tr>
<td>A</td>
<td>JP 2000-355074 A (SHIMIZU TOSHIKAZU) 26 December 2000</td>
<td>1-8</td>
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<tr>
<td>A</td>
<td>US 04829738A A (MOSS; ROBERT L.) 16 May 1989</td>
<td>1-8</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C. 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
  "E" earlier application or patent but published on or after the international filing date
  "L" document which may throw doubt on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
  "O" document referring to 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: 31 January 2013 (31.01.2013)

Date of mailing of the international search report: 01 February 2013 (01.02.2013)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
189 Cheongsa-ro, Seo-gu, Daejeon Metropolitan City, 302-701, Republic of Korea

Authorized officer

Lee Byung Kyul

Facsimile No. 82-42-472-7140

Telephone No. 82-42-481-8436

Form PCT/ISA/210 (second sheet) (July 2009)
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.: 9
   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:
   
   Claim 9 states the apparatus instead of the method claimed in claim 6. Hence, claim 9 is unclear and leaves the reader in doubt as to the subject matter claimed and the category of the claimed subject matter (PCT Article 6).

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:

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 an additional fee, this Authority did not invite payment of any additional fee.

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.
## INTERNATIONAL SEARCH REPORT

### Information on patent family members

<table>
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<tr>
<th>Patent document cited in search report</th>
<th>Publication date</th>
<th>Patent family member(s)</th>
<th>Publication date</th>
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<td>JP 2008-092965 A</td>
<td>24.04.2008</td>
<td>None</td>
<td></td>
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<tr>
<td>KR 10-2007-0005467 A</td>
<td>10.01.2007</td>
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<td>US 04829738A A</td>
<td>16.05.1989</td>
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**International application No.**
PCT/US2012/047068

Form PCT/ISA/210 (patent family annex) (July 2009)