Title: SYSTEMS AND METHODS FOR MONITORING AND CONTROLLING THE DISPENSE OF A PLURALITY OF PRODUCT FORMING INGREDIENTS

Abstract: Systems and methods for dispensing a product are provided. A plurality of product ingredients are associated with a product dispenser (100) that is operable to form a plurality of selectable products from the plurality of products ingredients. Input for a selected product is received and a recipe that defines the ratio of product ingredients for forming the selected product is identified. The dispense of each of the respective product ingredients is commenced based at least in part on the identified recipe, and the dispense of each of the respective product ingredients is independently monitored during the dispense of the selected product.

FIG. 2C
Published:

— with international search report (Art. 21(3))

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2Qi))

Date of publication of the international search report: 13 August 2009
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
INV. B67D1/00 B67D1/08 B67D1/12

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)
B67D

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 practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<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 5 731 981 A (SIMARD GILBERT [CA]) 24 March 1998 (1998-03-24) column 1, line 53 - line 67 column 3, line 1 - line 59</td>
<td>1, 9</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
  - C' earlier document but published on or after the international filing date
  - D' document which may throw doubts on prior art claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
  - O' document refering 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
  - Z' document member of the same patent family

Date of the actual completion of the international search
10 March 2009

Date of mailing of the international search report
26/06/2009

Name and mailing address of the ISA/
European Patent Office, P B 5818 Patentlaan 2
NL- 2280 HV RISWijk
Tel (+31-70) 340-2040, 340-2041
Fax (+31-70) 340-3016

Authorized officer
Desittere, Michiel
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<td>X</td>
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<td>claim 1</td>
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</table>
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).

This International Searching Authority found multiple inventions in this international application, as follows.

see additional sheet

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 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. 1, 2, 9.

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.
This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1, 2, 9
   method for dispensing a product based on an input for a cup size

2. claims: 3, 4, 10, 11
   method for dispensing a product comprising monitoring a flow rate

3. claims: 5-8, 12-15
   method for dispensing a product comprising determining that one of the product ingredients is not being dispensed properly

4. claims: 16-20
   dispenser apparatus comprising an ingredient matrix and one or more control nodes associated with each of the ingredients
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<tr>
<td>US 5731981 A</td>
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