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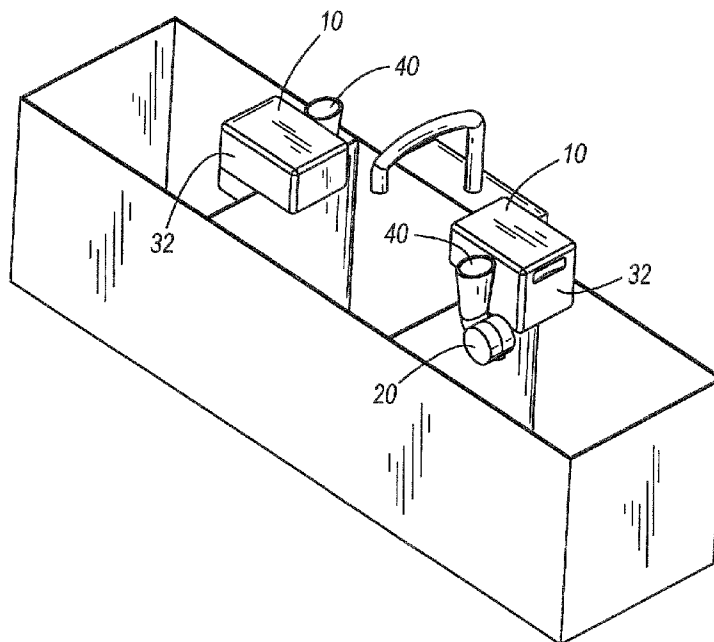
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60/871,296 21 December 2006 (21.12.2006) US
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[Continued on next page]

(54) Title: DEVICE AND METHOD FOR DILUTION CONTROL



(57) Abstract: A dilution control device and method of operating the same. The dilution control device can include a structure for dispensing concentrate and diluent fluid in a desired dilution ratio utilizing volumetric dosing. In some embodiments, diluent fluid drives a wheel or compresses a pliable concentrate bag in order to dispense concentrate in the desired ratio with the diluent fluid. In some embodiments, one or more floats can be used to drive a pump or actuate a valve to dispense concentrate at a particular rate proportional with the flow rate of the diluent fluid. In some embodiments, a rocker is responsive to the flow of diluent fluid to pump concentrate. In some embodiments, the dilution control device can be operable to automatically modulate the dispense rate of concentrate when the diluent fluid flow rate is varied in order to maintain a predetermined dilution ratio.

WO 2007/109727 A3



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No  
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A. CLASSIFICATION OF SUBJECT MATTER  
INV. G05D11/00

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)  
G05D B01F

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, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 029 688 A (KAUFMAN MICHAEL J [US]) 29 February 2000 (2000-02-29)  column 4, line 63 - column 7, line 46; figures 1-28	1, 2, 4-10, 12, 27-29, 32
Y		3
X	FR 1 060 506 A (BEL FROMAGERIES) 2 April 1954 (1954-04-02) the whole document	13-20
X	US 3 642 171 A (ERNST FRANZ) 15 February 1972 (1972-02-15) column 1, line 56 - column 4, line 2; figures 1-3	21-27, 30, 31
Y		3
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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 document 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

7 November 2007

Date of mailing of the international search report

27/11/2007

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Helot, Henri

## INTERNATIONAL SEARCH REPORT

International application No  
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2006/043738 A1 (ROOS PAUL W [US]) 2 March 2006 (2006-03-02) abstract	21-26, 30,31
X	DE 40 26 283 A1 (WAGNER ULRICH [DE]) 28 February 1991 (1991-02-28) column 5, line 56 - column 8, line 21 figure 1	33-39
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X	US 6 079 871 A (JONAS KONRAD H [DE] ET AL) 27 June 2000 (2000-06-27) column 9, line 38 - column 10, line 21; figure 3 column 14, line 66 - column 15, line 37; figure 10	33-39
X	GB 777 043 A (CHARLES ERNEST ST JOHN EVERS; ERIC WALL) 19 June 1957 (1957-06-19) page 1, line 73 - page 2, line 15; figure	33,39
X	EP 0 098 419 A (BODE BACILLOLFAB [DE]) 18 January 1984 (1984-01-18) page 2, line 32 - page 6, line 32; figure 1	40-46
X	US 4 538 919 A (BOEHNENSIEKER FRANZ [DE]) 3 September 1985 (1985-09-03) abstract column 3, line 1 - column 4, line 36; figure 2	40-46
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A	GB 974 211 A (GEN MILLS INC) 4 November 1964 (1964-11-04) page 5, line 31 - line 64; figure 2	50

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2007/064524

## 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.:  
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:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable 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.:

### 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.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

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

1. claims: 1-32

Chemical dispensing apparatus comprising a wheel driven by a fluid  
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2. claims: 33-46

Dilution control device comprising a deformable container  
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3. claims: 47-52

Dilution control device comprising a float  
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## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/064524

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Information on patent family members

International application No

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