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B05B 1/26 (2006.01) *B65D 47/04* (2006.01)
B05B 3/04 (2006.01) *B05B 1/14* (2006.01)
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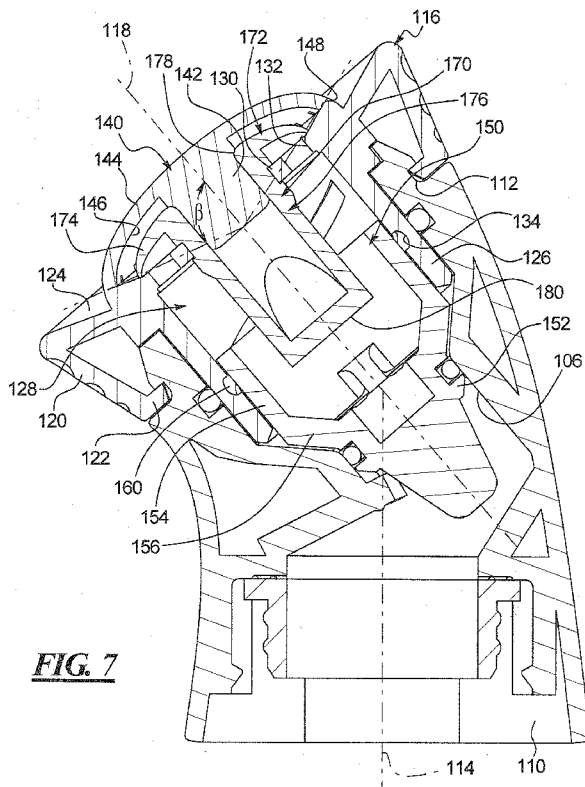
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,

[Continued on next page]

(54) Title: FLUID DISPENSING DEVICE FOR DISCHARGING FLUID SIMULTANEOUSLY IN MULTIPLE DIRECTIONS



(57) Abstract: A fluid dispensing device (100) is provided that is capable of discharging fluid in multiple different directions simultaneously. The device may include a deflector (140) which redirects an initial stream of fluid from the container into multiple sub-streams that are oriented in different directions. The device may create a spray pattern that substantially covers an entire 360 degree area surrounding the device, which may be advantageous for certain applications such as toilet bowl cleaner dispensers. A control valve (150) or flow restrictor may be provided for preventing unintended discharge of fluid when the container is inverted.





DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, 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
PCT/US2012/041271

A. CLASSIFICATION OF SUBJECT MATTER

INV. B05B1/06 B05B1/26 B05B3/04 B05B11/04 A47K5/12
 B65D47/04
 ADD. B05B1/14

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)
 B05B A47K B65D

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)

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 2004/050956 A1 (OGATA KEN [JP] ET AL) 18 March 2004 (2004-03-18)	1-4
A	paragraph [0063] figures 1,5,9	5-7
X	----- WO 2011/019030 A1 (SEKISUI MEDICAL CO LTD [JP]; SETOYUCHI YUJI [JP]; INOUE TOMONORI [JP]) 17 February 2011 (2011-02-17) figures 1,4,5,7	1-4
X	----- US 2 451 071 A (CLINE EARL E) 12 October 1948 (1948-10-12) page 1, line 1 - line 15 column 2, line 13 - line 20 -----	1,2

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 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

5 September 2012

Date of mailing of the international search report

05/12/2012

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/041271

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 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.:

1-7

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: 1-7

Dispensing closure with rotatable deflector disc.

2. claims: 8-23

Fluid dispensing device with fluid valve.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2012/041271

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2004050956 A1	18-03-2004	EP 1439005 A1	21-07-2004
		US 2004050956 A1	18-03-2004
		WO 03033166 A1	24-04-2003

WO 2011019030 A1	17-02-2011	CN 102470386 A	23-05-2012
		EP 2465614 A1	20-06-2012
		US 2012141672 A1	07-06-2012
		WO 2011019030 A1	17-02-2011

US 2451071 A	12-10-1948	NONE	
