

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 October 2004 (07.10.2004)

PCT

(10) International Publication Number
WO 2004/086731 A3

(51) International Patent Classification⁷: B67D 5/06

(21) International Application Number:
PCT/US2004/007893

(22) International Filing Date: 16 March 2004 (16.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/456,794 21 March 2003 (21.03.2003) US

(71) Applicant (for all designated States except US): KANFER, Joseph [US/US]; 4445 Everitt Road, Richfield, OH 44286 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): REYNOLDS,

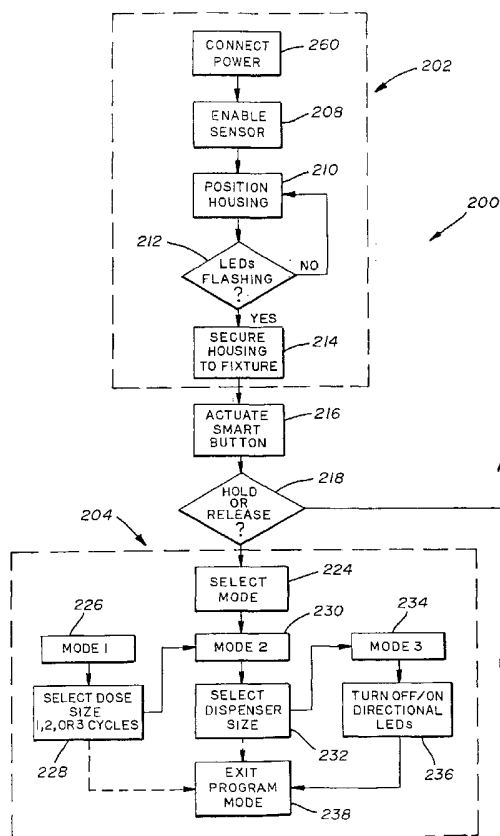
Aaron [US/US]; 106 Cherry Drive N.W., North Canton, OH 44720 (US). VAN DEMAN, Bruce [US/US]; 19101 Van Aken Blvd. #217, Shaker Hts., OH 44122 (US). WATERHOUSE, Peter [CA/CA]; 2145 Governors Road, Hamilton, Ontario (CA). OTOOLE, Martin [US/US]; 100 Foxhall Drive, Chagrin Falls, OH 44022 (US).

(74) Agents: WEBER, Ray et al.; Renner, Kenner, Greive, Bobak, Taylor & Weber, 106 S. Main Street, First National Tower, Fourth Floor, Akron, Ohio 44308 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: APPARATUS FOR HANDS-FREE DISPENSING OF A MEASURED QUANTITY OF MATERIAL



(57) Abstract: An apparatus for automatically dispensing a fluid includes a container adapted to carry a supply of fluid, and a valve connected to said container, wherein actuation of said valve dispenses the fluid. Also included is an apparatus position indicator proximally associated with the container and an object sensor positioned near the valve. The object sensor monitors an area below where the valve dispenses when open and upon detection of an object opens said valve. Initial positioning of the apparatus triggers the apparatus position indicator to generate an appropriate signal until said object sensor is properly positioned. Once positioned the device may be permanently secured. A control circuit within the apparatus also allows programming of lighting indicators, dispense cycle size, and dispense quantities. The control circuit also provides for overload protection, motor braking and RF shielding.

WO 2004/086731 A3



(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, 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).

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*

(88) Date of publication of the international search report:

28 October 2004

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

International application No.

PCT/US04/07893

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B67D 5/06
 US CL : 222/25, 1, 2, 23, 52, 63, 113, 207, 214, 333; 33/348.2

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)
 U.S. : 222/25, 2, 23, 52, 63, 113, 207, 214, 333

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,390,329 B1 (MADDOX) 21 May 2002 (21.05.2002), See Figure 1.	7,16-17,20
---		-----
Y		18-19
A	US 6,206,238 B1 (OPHARDT) 27 March 2001 (27.03.2001), See Figures 1-4.	1-24
A	US 5,761,818 A (HOPKINS et al) 09 June 1998 (09.06.1998), See Figures 1-4.	1-24
A	US 6,036,056 A (LEE et al) 14 March 2000 (14.03.2000), See Figures 1-2.	1-24

Further documents are listed in the continuation of Box C.

See patent family annex.

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

Date of the actual completion of the international search

21 July 2004 (21.07.2004)

Date of mailing of the international search report

14 SEP 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450

Facsimile No. (703)305-3230

Authorized officer

Frederick C. Nicolas

Telephone No. (703)-308-0861