

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 May 2006 (18.05.2006)

PCT

(10) International Publication Number
WO 2006/052588 A3

(51) International Patent Classification:

B65B 1/08 (2006.01) B67D 5/40 (2006.01)
B05B 9/043 (2006.01) F04B 17/00 (2006.01)
B05B 1/34 (2006.01) A62C 11/00 (2006.01)

(21) International Application Number:

PCT/US2005/039622

(22) International Filing Date:

2 November 2005 (02.11.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/624,647 3 November 2004 (03.11.2004) US
11/153,831 15 June 2005 (15.06.2005) US

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(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, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, 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, IS, IT, LT, LU, LV, 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).

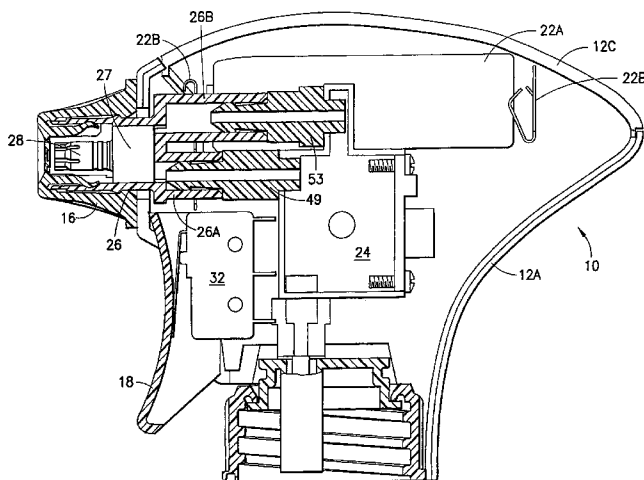
Published:

— with international search report

(88) Date of publication of the international search report:
1 March 2007

[Continued on next page]

(54) Title: FLUID SPRAYER EMPLOYING PIEZOELECTRIC PUMP



(57) Abstract: An electrically-powered fluid sprayer employs a piezoelectric fluid pump that includes an inlet port, an outlet port, a pump chamber, and a piezoelectric element that is deformed and displaced by electrical signals supplied thereto to vary the volume of the pump chamber. Such displacement pumps fluid into the inlet port and into the pump chamber and discharges fluid from the pump chamber out the outlet port. The inlet port is in fluid communication with a fluid reservoir. Spin mechanics may be disposed downstream from the outlet port of the fluid pump and upstream from the discharge nozzle. The piezoelectric fluid sprayer may be extended to include a dual chamber piezoelectric pump that pumps different fluids (e.g., a liquid and air). The output of the dual chamber pump is mixed in a manifold and supplied downstream to the discharge nozzle. Spin mechanics may be employed in the fluid stream upstream from the discharge nozzle after the mixing.



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(48) Date of publication of this corrected version:

5 July 2007

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.

(15) Information about Correction:

see PCT Gazette No. 27/2007 of 5 July 2007