

(51) International Patent Classification:
B67D 1/00 (2006.01)(21) International Application Number:
PCT/US2013/045455(22) International Filing Date:
12 June 2013 (12.06.2013)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant: NESTEC S.A. [CH/CH]; Avenue Nestle 55,
CH-1800 Vevey (CH).

(72) Inventors; and

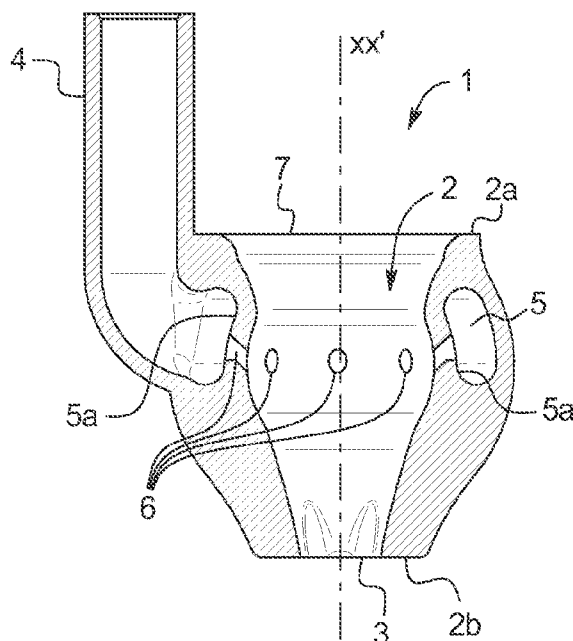
(71) Applicants (for US only): HARRISON, David J.
[US/US]; 262 Pumkin Hill, New Milford, Connecticut
06776 (US). MORA, Robert [US/US]; 214 East Dublin
Granville Rd., Worthington, Ohio 43085 (US).(74) Agents: BARRETT, Robert M. et al.; K & L GATES
LLP, P.O. Box 1135, Chicago, Illinois 60690-1135 (US).(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, 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, PA, 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.(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
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,
KM, ML, MR, NE, SN, TD, TG).

Published:

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

(54) Title: MIXING NOZZLE

FIG. 4



(57) Abstract: The invention concerns a mixing nozzle (1) for mixing a concentrate and a diluent and dispensing the mixture comprising : - a mixing chamber comprising an input end with an inlet opening for the concentrate and a discharge opening at an output end thereof, said mixing chamber having an axial bore extending from the input end to the discharge opening, - a toroidal chamber around said mixing chamber having a diluent inlet conduit to introduce diluent in said toroidal chamber, said toroidal chamber presenting multiple openings in the internal lateral wall of the toroidal chamber for directing the diluent from said toroidal chamber concentrically about the axial bore, wherein : - the mixing chamber inlet opening is opened so that a flow of concentrate can freely be directed through the input end along the mixing chamber axial bore and collide with the diluent emerging from the multiple openings of the toroidal chamber, and - the mixing chamber section surface narrows at its output end.