

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 November 2006 (30.11.2006)

PCT

(10) International Publication Number
WO 2006/125945 A1

(51) International Patent Classification:

A47L 9/16 (2006.01) B04C 5/24 (2006.01)

(21) International Application Number:

PCT/GB2006/001673

(22) International Filing Date: 9 May 2006 (09.05.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

0510863.4 27 May 2005 (27.05.2005) GB

(71) Applicant (for all designated States except US): **DYSON TECHNOLOGY LIMITED** [GB/GB]; Tetbury Hill, Malmesbury, Wiltshire SN16 0RP (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **COURTNEY, Stephen, Benjamin** [GB/GB]; 13 Dafford Street, Larkhall, Bath, Bath And South East Somerset BA1

6SW (GB). **DYSON, James** [GB/GB]; Dodington Park, Dodington, Gloucestershire BS37 6SF (GB). **GOMI-CIAGA-PEREDA, Ricardo** [GB/GB]; Wynyard Flat, Baskerville, Malmesbury, Wiltshire SN16 9BS (GB).

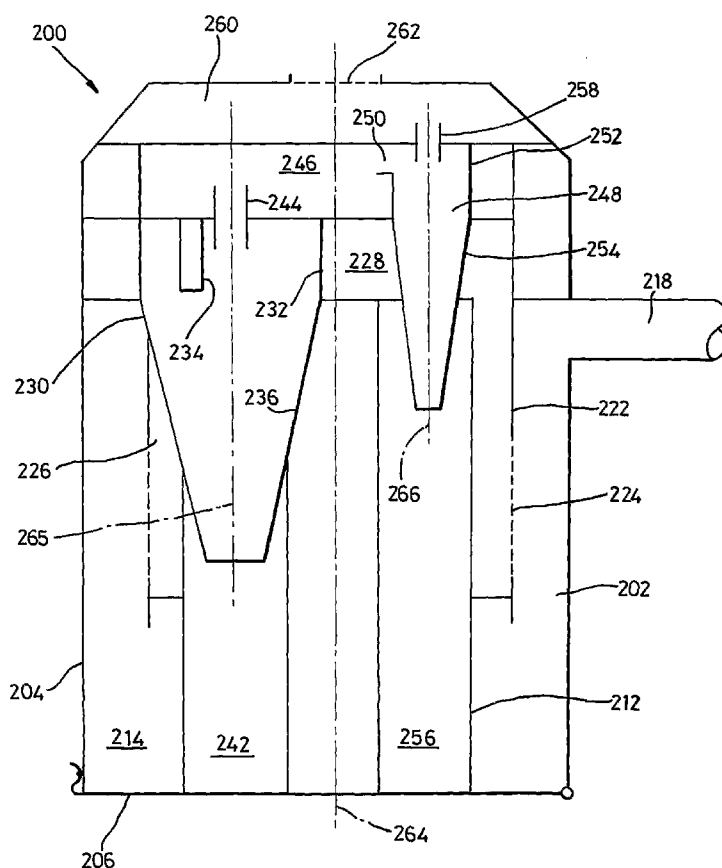
(74) Agents: **SMITH, Gillian** et al.; Dyson Technology Limited, Tetbury Hill, Malmesbury, Wiltshire SN16 0RP (GB).

(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),

[Continued on next page]

(54) Title: CYCLONIC SEPARATING APPARATUS



(57) Abstract: Cyclonic separating apparatus according to the invention comprises a first cyclonic separating unit (310; 410; 510) including at least one first cyclone (102; 202; 312; 412; 512), a second cyclonic separating unit (320; 420; 520) located downstream of the first cyclonic separating unit (310; 410; 510) and including a plurality of second cyclones (130; 230; 322; 422; 522) arranged in parallel, and a third cyclonic separating unit (330; 430; 530) located downstream of the second cyclonic separating unit (320; 420; 520) and including a plurality of third cyclones (148; 248; 332; 432; 532) arranged in parallel. The number of second cyclones (130; 230; 322; 422; 522) is higher than the number of first cyclones (102; 202; 312; 412; 512) and the number of third cyclones (148; 248; 332; 432; 532) is higher than the number of second cyclones (130; 230; 322; 422; 522). This provides an apparatus which achieves a higher separation efficiency than known separation apparatus.



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).

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.

Published:

— *with international search report*