

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 December 2004 (23.12.2004)

PCT

(10) International Publication Number
WO 2004/110189 A2

(51) International Patent Classification⁷: **A24D 1/00**

(21) International Application Number:
PCT/IB2004/002192

(22) International Filing Date: 14 June 2004 (14.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/477,922 13 June 2003 (13.06.2003) US

(71) Applicant (for all designated States except US): **PHILIP MORRIS PRODUCTS S.A.** [CH/CH]; Quai Jeanrenaud 3, CH-2000 Neuchâtel (CH).

(72) Inventors: **RASOULI, Firooz**; 1807 Gildenborough Court, Midlothian, VA 23113 (US). **LI, Ping**; 9109

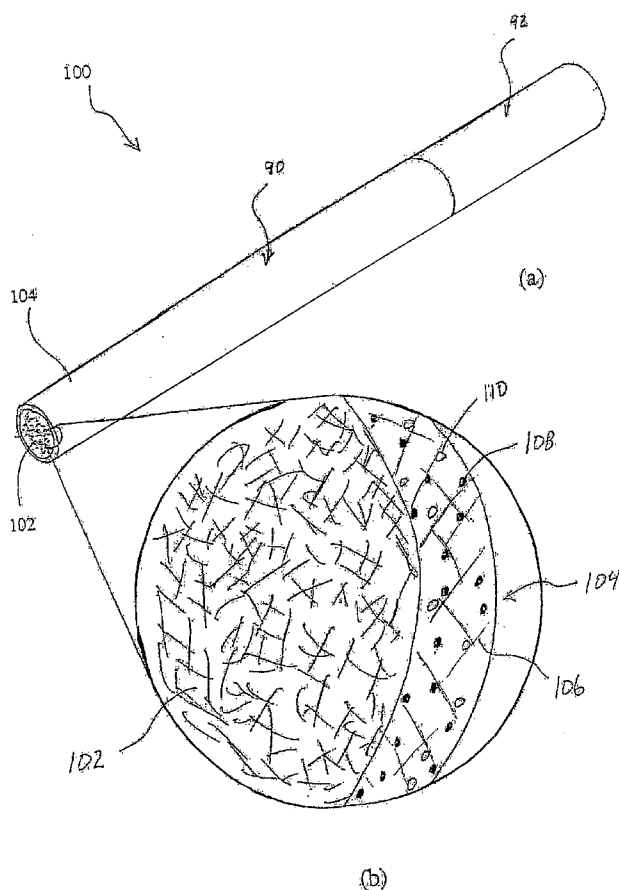
Cloisters East, Richmond, VA 23234 (US). **TAFUR, Susan**; 13100 Lauren Lane, Midlothian, VA 23114 (US). **ALLEN, Jeffrey**; 13010 West Countryline Road, Midlothian, VA 23112 (US). **GEDEVANISHVILI, Shalva**; 7303 Durwood Crescent, Richmond, VA 23229 (US). **HAJALIGOL, Mohammed, R.**; 5828 Spinnaker Cove Road, Midlothian, VA 23112 (US). **DWYER, Rowland, W.**; 400 Zionsville Road, Richmond, VA 23229 (US). **GLENN, Charles, E., B., Sr.**; 8708 Butterfield Avenue, Richmond, VA 23229 (US).

(74) Agent: **MARLOW, N., S.**; Reddie & Grose, 16 Theobalds Road, London WC1X 8PL (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, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,

[Continued on next page]

(54) Title: CIGARETTE WRAPPER WITH CATALYTIC FILLER AND METHODS OF MAKING SAME



(57) Abstract: A wrapper for a smoking article includes a web including cellulosic fibers and a catalyst modified web-filler incorporated into the web. The catalyst modified web-filler includes a web-filler supporting a nanoparticle carbon monoxide catalyst. The nanoparticle carbon monoxide catalyst can be a nanoparticle iron oxide catalyst. Also provided is a smoking article including a cigarette tobacco rod having a wrapper including a web, a web-filler, and a nanoparticle carbon monoxide catalyst, the webfiller supporting the nanoparticle catalyst. A method of making the wrapper and a method of making a smoking article utilizing the wrapper are also provided.



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.

SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

(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, IT, LU, MC, NL, PL, PT, RO, SE, SI,

Published:

— *without international search report and to be republished upon receipt of that report*

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.