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(21) International Application Number: PCT/CA96/00358 (22) International Filing Date: 31 May 1996 (31.05.96) (30) Priority Data: 08/457,680 1 June 1995 (01.06.95) US (71) Applicant (for all designated States except US): DKW INTERNATIONAL INC. [CA/CA]; 482 Millway Avenue, Vaughan, Ontario L4K 3V5 (CA). (72) Inventor; and (75) Inventor/Applicant (for US only): KRAUSE, Hans, W. [CA/CA]; 527 Sandbrook Road, Oakville, Ontario L6L 4M6 (CA). (74) Agents: VASS, William, B. et al.; Ridout & Maybee, Suite 2400, One Queen Street East, Toronto, Ontario M5C 3B1 (CA).		(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>Without international search report and to be republished upon receipt of that report.</i>
(54) Title: MODULAR AND LOW POWER IONIZER (57) Abstract An apparatus for ionizing air to remove particulate matter. The apparatus comprising an ionizer and a bracket for mounting the ionizer in a duct or enclosure. The ionizer includes a series of electrodes which span a portion of the duct. The electrodes are energized by a high voltage circuit and an ionic wind is created between the electrode and duct. The ionic wind sweeps particles in the air to the duct which provides a collector electrode. In another embodiment, a ring collector electrode is also provided for spanning the inner portion of the duct. The high voltage circuit comprises a DC power supply, a high voltage transformer, a high voltage multiplier stage and a push-pull switching circuit. The DC power supply receives AC power and generates a DC output which is coupled to the primary of the transformer. The push-pull switching circuit produces a controlled and efficient AC output in the transformer by alternately switching the primary winding. The output voltage from the secondary winding is further increased by the multiplier stage to a level sufficient to energize the electrodes and produce the ionic wind. The apparatus also comprises a high voltage multiplier stage.		