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(21) International Application Number: PCT/CA99/00916 (22) International Filing Date: 4 October 1999 (04.10.99) (30) Priority Data: 09/168,864 9 October 1998 (09.10.98) US (71) Applicant (for all designated States except US): UNIVERSITY TECHNOLOGIES INTERNATIONAL INC. [CA/CA]; Suite 204, 609 - 14th Street N.W., Calgary, Alberta T2N 2A1 (CA). (72) Inventor; and (75) Inventor/Applicant (for US only): MANZ, David, H. [CA/CA]; 2703 Cannon Road N.W., Calgary, Alberta T2L 1C5 (CA). (74) Agents: OYEN, Gerald, O., S. et al.; Oyen Wiggs Green & Mutala, #480 - The Station, 601 West Cordova St., Vancouver, British Columbia V6B 1G1 (CA).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, 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, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
(54) Title: SLOW SAND FILTER FOR USE WITH INTERMITTENTLY FLOWING WATER SUPPLY AND METHOD OF USE THEREOF		
(57) Abstract This invention relates to a novel intermittent slow sand filter and a method of using the intermittent filter. More particularly, this invention pertains to a novel slow sand filter which remains effective, even when intermittently operated, and which can be periodically cleaned without disturbing the action of the intermittent filter. A slow sand filter apparatus comprising: a container having an upper portion and a lower portion; a water inlet in the upper portion of the container, the water inlet being connected to a supply of water; a filter material filling at least the lower portion of the container, the filter material having a top surface below the water inlet; a schmutzdeuke layer on the top surface of the filter material; a water outlet in the lower portion of the container below the top surface of the filter material; and a water level maintenance device in the upper portion which maintains water in the upper portion of the container at a maintenance level above the top surface of the filter material, the maintenance level being a balance between (1) a water maintenance level that is sufficiently deep that water falling from the water inlet onto the top of the water in the container does not significantly disturb the schmutzdeuke layer; and (2) a water maintenance level that is sufficiently shallow that oxygen from the air above the water level can diffuse through the water and reach the schmutzdeuke layer so that the schmutzdeuke layer is maintained in living condition even when there is no flow of water through the water inlet.		

