

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
23 July 2009 (23.07.2009)

PCT

(10) International Publication Number  
**WO 2009/090510 A1**

(51) International Patent Classification:

**B01D 63/12** (2006.01) **C02F 1/44** (2006.01)

**B01D 65/00** (2006.01)

(21) International Application Number:

PCT/IB2008/054465

(22) International Filing Date: 29 October 2008 (29.10.2008)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0800774.2

16 January 2008 (16.01.2008)

GB

(71) Applicant and

(72) Inventor: **GRAHAM, William** [ZA/ZA]; 87 Suikerbossie Avenue, 7150 Gordon's Bay (ZA).

(74) Agent: **TRUTER, Kenneth Colin**; Brian Bacon and Associates, 2nd Floor Mareindahl House Newlands on, Main Newlands, 7700 Cape Town (ZA).

(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, BR, BW, BY, BZ, CA, CH, 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, KM, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(54) Title: A FLOW DISTRIBUTOR PLATE FOR THE TREATMENT OF WATER BY REVERSE OSMOSIS

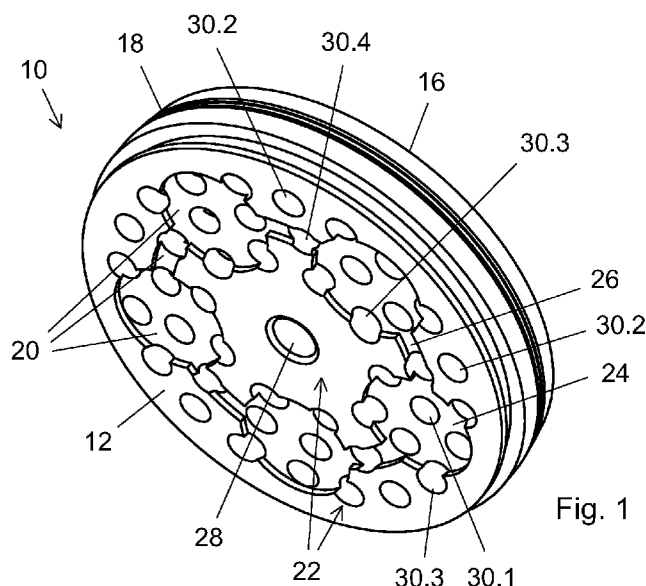


Fig. 1

(57) Abstract: In a reverse osmosis desalination plant a number of membranes (34, 36, 38, 40) are arranged end- to-end in a cylindrical outer casing (42). Each membrane comprises a sleeve, a permeate pipe (56) passing centrally through the sleeve, a plurality of leaves of permeable material (54) wound around the pipe and contained within the sleeve and an apertured plate (10, 58) at each end of the sleeve. According to the invention the flow distributor plate (10) at the inlet end of each membrane is a flow distributor and has a plurality of bores (30.1, 30.2 etc) through it from a front face (12) to a rear face (14). The front face (12) has a recessed area (20) which is set back from the remainder (22) of the front face (12). The entrances to at least some of the bores (30.1, 30.2 etc) are within the recessed area (20).