

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
10 July 2003 (10.07.2003)

PCT

(10) International Publication Number
WO 03/056269 A1

(51) International Patent Classification⁷: **F28F 13/08**

(21) International Application Number: PCT/AU03/00006

(22) International Filing Date: 3 January 2003 (03.01.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PR 9825 3 January 2002 (03.01.2002) AU

(71) Applicant (for all designated States except US): **PAX SCIENTIFIC, INC.** [US/US]; 93 Crestwood Drive, San Rafael, CA 94901 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **HARMAN, Jayden,**

David [AU/AU]; Research Vessel "PAX", Fremantle Fishing Boat Harbour, South Fremantle, Western Australia 6162 (AU).

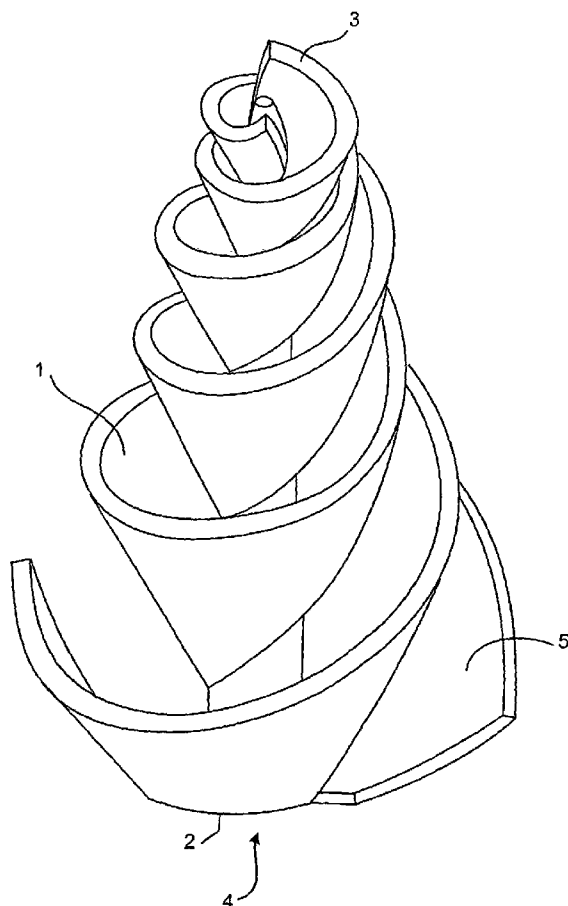
(74) Agent: **WRAY & ASSOCIATES**; Level 4, The Quadrant, 1 William Street, Perth, Western Australia 6000 (AU).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, 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, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

[Continued on next page]

(54) Title: HEAT EXCHANGER



(57) Abstract: A heat exchanger having an active surface (1) over which a fluid flows to effect an exchange of heat between the active surface (1) and the fluid. The active surface (1) having a curvature which conforms substantially with at least one logarithmic curve conforming to the Golden Section.



WO 03/056269 A1



ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK,
TR), OAPI patent (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*