(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
9 July 2009 (09.07.2009)

PCT

(10) International Publication Number
WO 2009/083795 A3

(51) International Patent Classification:
F28D 9/00 (2006.01) *F28F 13/08* (2006.01)

(21) International Application Number:
PCT/IB2008/003800

(22) International Filing Date:
22 December 2008 (22.12.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PV 2007-899 27 December 2007 (27.12.2007) CZ

(72) Inventor; and
(71) Applicant : **DINULESCU, Mircea** [NL/NL]; Groen van Prinstererlann 37, NL-2271 Voorburg (NL).

(74) Agent: **ZAK VITEZSLAV**; Lidická 51, 602 00 BRNO (CZ).

(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).

Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

— *with international search report (Art. 21(3))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

[Continued on next page]

(54) Title: EXCHANGER OF HEAT

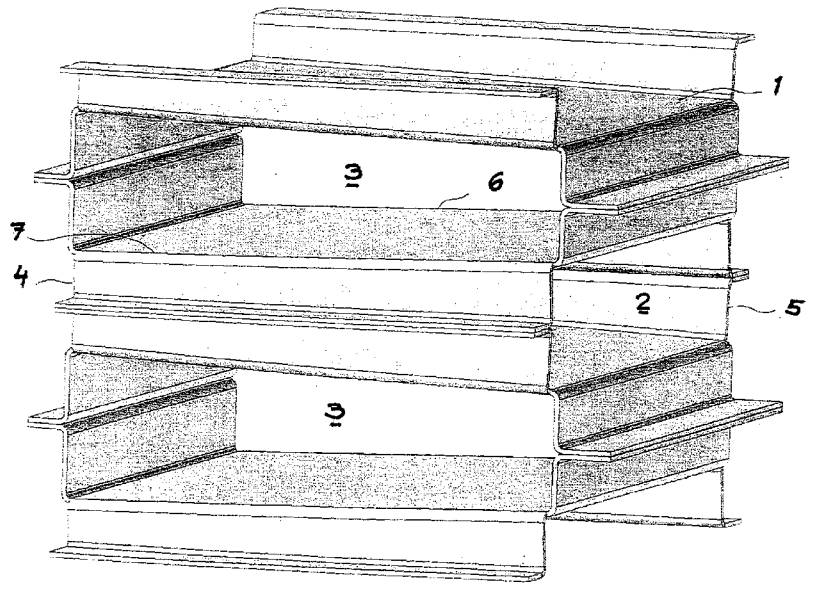

Fig. 5

(57) Abstract: For exchangers of heat, especially of a desk type, where adjacent desk define channels for hot and cold media flows there is designed a construction where a cross profile of channels (3) for hot media flow and/or longitudinal profile of channels (2) for cold media flow is variable along the respective media flow.

WO 2009/083795 A3

(88) Date of publication of the international search report:
22 April 2010

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2008/003800

A. CLASSIFICATION OF SUBJECT MATTER
INV. F28D9/00 F28F13/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
F28F F28D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004/200602 A1 (HUGILL JAMES ANTHONY [NL]) 14 October 2004 (2004-10-14) paragraph [0025] - paragraph [0030]; figures 2-4	1-4
X	US 2 872 165 A (JOHAN WENNERBERG FRITZ) 3 February 1959 (1959-02-03) column 3, line 12 - line 20; figure 5	1-4
X	FR 2 865 028 A (ZIEPACK [FR]) 15 July 2005 (2005-07-15) figures 14,15	1-5
X	SU 932 171 A1 (VNI PI PERERABOTKE GAZA [SU]) 30 May 1982 (1982-05-30) figure 2	1-4

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
23 February 2010	04/03/2010

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Fax: (+31–70) 340–3016	Martínez Rico, Celia

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/IB2008/003800

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2004200602 A1	14-10-2004	AT 286772 T	15-01-2005
		CN 1543372 A	03-11-2004
		DE 60202611 D1	17-02-2005
		DE 60202611 T2	29-12-2005
		EP 1412044 A1	28-04-2004
		ES 2235063 T3	01-07-2005
		JP 4125674 B2	30-07-2008
		JP 2004536701 T	09-12-2004
		WO 03011418 A1	13-02-2003
		NL 1018672 C2	06-02-2003
US 2872165 A	03-02-1959	NONE	
FR 2865028 A	15-07-2005	EP 1709380 A1	11-10-2006
		WO 2005073657 A1	11-08-2005
		JP 2007518053 T	05-07-2007
		US 2009183862 A1	23-07-2009
SU 932171 A1	30-05-1982	NONE	