



(11) **EP 1 684 045 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**19.09.2007 Bulletin 2007/38**

(51) Int Cl.:  
**F28F 21/06** <sup>(2006.01)</sup> **F28F 9/02** <sup>(2006.01)</sup>  
**F28F 9/26** <sup>(2006.01)</sup>

(43) Date of publication A2:  
**26.07.2006 Bulletin 2006/30**

(21) Application number: **05106995.3**

(22) Date of filing: **28.07.2005**

(84) Designated Contracting States:  
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR  
HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI  
SK TR**  
Designated Extension States:  
**AL BA HR MK YU**

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(30) Priority: **06.12.2004 IT FI20040251**

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(54) **Plastic modular radiator element for building heating systems**

(57) Plastic modular radiator element for building heating systems including two heat-carrier fluid distributor elements (1) at its ends. Said modular element is composed of two horizontal sleeves (6) and vertical ducts or branches (9), the ends of which are connected to said sleeves so as to enable the passage of the heat-carrier fluid, entering from one of these sleeves and exiting from the other, through said vertical branches. Ducts (8) branch radially from each sleeve to place the sleeve in communication with the vertical branches. The modular element offers a more uniform distribution of the flow of fluid, a homogeneous thermal output, a lighter weight, and more cost-effective transportation and installation.

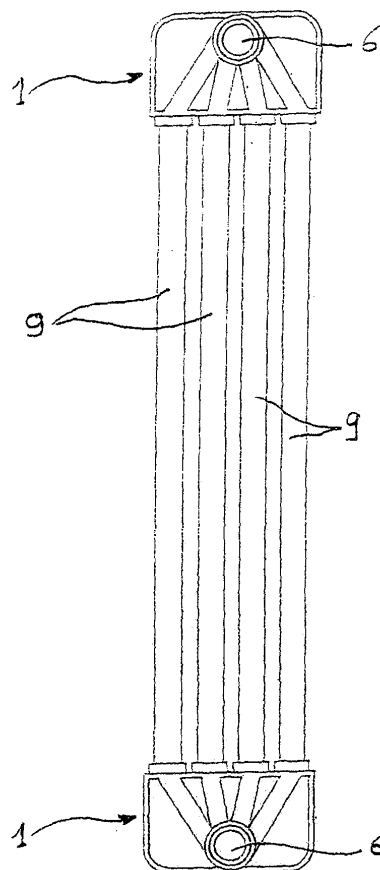


Fig. 7

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European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 05 10 6995

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	CH 510 245 A (VEBA CHEMIE AG [DE]) 15 July 1971 (1971-07-15)	1,7-10	INV. F28F21/06 F28F9/02 F28F9/26
Y	* the whole document *	2-6,11	
X	DE 14 54 435 A1 (KIRSCH BERNHARD) 13 February 1969 (1969-02-13) * the whole document *	1	
X	FR 2 134 147 A1 (IDEAL STANDARD IDEAL STANDARD [FR]) 8 December 1972 (1972-12-08) * claim 1 *	1	
Y	EP 1 030 122 A2 (SCHLUDERMANN ARNOLD [AT]; HAFNER GERNOT [AT]; GEIST FRIEDRICH [AT]) 23 August 2000 (2000-08-23) * paragraph [0007] *	2-6	
Y	US 5 582 241 A (YOHO ROBERT W [US] ET AL) 10 December 1996 (1996-12-10) * column 6, line 54 - line 59 *	2-6	
Y	FR 1 349 270 A (FORGES & ATELIERS DU PLAT DE G) 17 January 1964 (1964-01-17) * table 1 *	11	TECHNICAL FIELDS SEARCHED (IPC) F28F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 7 August 2007	Examiner Bain, David
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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07-08-2007

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
CH 510245	A	15-07-1971	NONE	
DE 1454435	A1	13-02-1969	NONE	
FR 2134147	A1		NONE	
EP 1030122	A2	23-08-2000	NONE	
US 5582241	A	10-12-1996	NONE	
FR 1349270	A	17-01-1964	NONE	