



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 0 962 737 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
15.11.2000 Bulletin 2000/46

(51) Int. Cl.⁷: **F28F 1/40**

(43) Date of publication A2:
08.12.1999 Bulletin 1999/49

(21) Application number: **99109352.7**

(22) Date of filing: **01.06.1999**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**

Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **01.06.1998 IT VI980109**

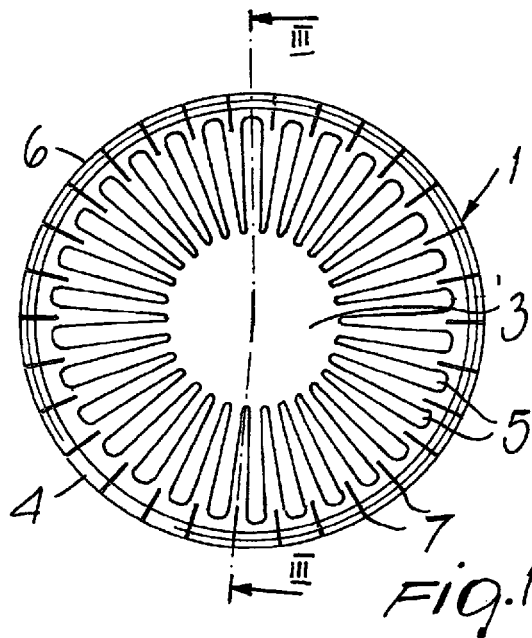
(71) Applicant: **Falci, Renzo**
I-36075 Montecchio Maggiore Vicenza (IT)

(72) Inventor: **Falci, Renzo**
I-36075 Montecchio Maggiore Vicenza (IT)

(74) Representative:
Modiano, Guido, Dr.-Ing. et al
Modiano & Associati SpA
Via Meravigli, 16
20123 Milano (IT)

(54) **Heat exchanger with inner fin**

(57) A wall for exchanging heat between a relatively warm fluid, which flows through a tubular passage (3) delimited within a heat-conducting wall (4), and a relatively cold fluid, which externally surrounds and encircles the exchange wall (4), characterized in that the exchange wall (4) is internally provided with a plurality of fins which protrude radially inside the tubular passage and delimit, between them, a plurality of slots (5) for the flow of a fluid.



EP 0 962 737 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 99 10 9352

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	GB 735 964 A (HEURTEY & CIE) 31 August 1955 (1955-08-31) * page 2, line 112 - page 3, line 1; figures *	1,6,7	F28F1/40
X	DE 94 09 348 U (VIESSMANN WERKE KG) 11 August 1994 (1994-08-11) * claims 1-3; figures *	1,6,7	
X	US 4 263 878 A (SEARIGHT EDWARD F ET AL) 28 April 1981 (1981-04-28) * column 2, line 29 - column 3, line 46; figures 1,2 *	1,6,12	
Y		13,14	
A		10,11	
Y	US 5 313 914 A (WOOLLEN DONALD E) 24 May 1994 (1994-05-24) * abstract; figures *	13,14	
X	FR 854 120 A (JEAN FRANCISQUE PANGAUD) 5 April 1940 (1940-04-05) * the whole document *	1,6	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
X	EP 0 497 224 A (VIESSMANN HANS) 5 August 1992 (1992-08-05) * abstract; figures *	1,6	F28F F24H
A		11	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 22 September 2000	Examiner Mootz, F
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			

EPO FORM 1503 03.92 (P04C01)

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

EP 99 10 9352

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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

22-09-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 735964 A		NONE	
DE 9409348 U	11-08-1994	NONE	
US 4263878 A	28-04-1981	CA 1116961 A	26-01-1982
		CH 644199 A	13-07-1984
		DE 2917759 A	15-11-1979
		FR 2425035 A	30-11-1979
		GB 2019986 A,B	07-11-1979
		IT 1112842 B	20-01-1986
		JP 1431985 C	24-03-1988
		JP 54146046 A	14-11-1979
		JP 62040626 B	28-08-1987
US 5313914 A	24-05-1994	US 5207212 A	04-05-1993
FR 854120 A	05-04-1940	NONE	
EP 0497224 A	05-08-1992	DE 4102417 A	06-08-1992
		AT 108537 T	15-07-1994
		DE 59200268 D	18-08-1994