(11) **EP 2 312 231 A3**

(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3: 14.05.2014 Bulletin 2014/20

(51) Int Cl.: **F24H** 9/20 (2006.01)

G08C 23/04 (2006.01)

(43) Date of publication A2: **20.04.2011 Bulletin 2011/16**

(21) Application number: 10183388.7

(22) Date of filing: 30.09.2010

(84) Designated Contracting States:

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated Extension States:

BA ME RS

(30) Priority: 02.10.2009 IT MI20090306 U

(71) Applicant: **DL Radiators S.p.A. 31100 Treviso (IT)**

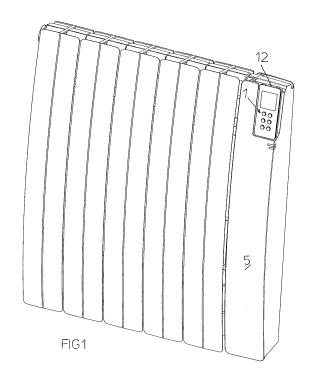
(72) Inventor: **De' Longhi, Giuseppe** 31100, Treviso (IT)

(74) Representative: Ligi, Stefano et al GLP S.r.l.
Viale Europa Unita, 171
33100 Udine (IT)

(54) Control device of a radiator for heating a room

(57) A control device of a radiator for heating a room, comprising a portable remote controller (1) having at least a first emitter (2) of an infrared control signal and a receiver (4) of the control signal present in an element of the radiator, the first emitter (2) being oriented in direction of the receiver (4) when the remote controller (1)

is into its own housing (3) present in the element of the radiator, the remote controller (1) having a second emitter (12) of the control signal oriented in a different direction with respect to that of the first emitter (2) for controlling the radiator when the remote controller (1) is placed outside the housing (3).





EUROPEAN SEARCH REPORT

Application Number EP 10 18 3388

	DOCUMENTS CONSID	ERED TO BE REI	EVANT		
Category	Citation of document with in of relevant pass:		ate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y A	EP 1 258 689 A2 (BS AIR C [ES]) 20 Nove * paragraphs [0003] [0012], [0018] - [2-11-20) 911], 6	1-5,7, 10-13 5,8	INV. F24H9/20 G08C23/04	
Α	FR 2 592 945 A1 (NO 17 July 1987 (1987- * abstract; figures	07-17)])	1-9	
Y A	US 2006/222368 A1 (OSUNA CARLOS 5 October 2006 (2006-10-05) * abstract; figures 2,4 *		1	1-5,7, 10-13 5,8	
Α	US 2007/139172 A1 (ET AL) 21 June 2007 * the whole documer	(2007-06-21)	HIRO [GB]	1-9	
Α	US 2007/015457 A1 (AL KRAMPF STEVEN [U 18 January 2007 (20 * paragraph [0015];	S] ET AL) 07-01-18)		1	TECHNICAL FIELDS SEARCHED (IPC)
Υ	JP 2000 346355 A (M CO LTD) 15 December Paragraphs 42-44 of * abstract; figures	2000 (2000-12) the translatio	-15)	10-13	F24H G08C
	The present search report has	oeen drawn up for all clai	ms		
	Place of search	Date of completion	n of the search		Examiner
Munich 2 Apr		2 April	2014	von	Mittelstaedt, A
X : part Y : part docu A : tech O : non	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with anot ument of the same category inological backgroundwritten disclosure rmediate document	E: her D: L: &:	theory or principle u earlier patent docun after the filing date document cited in the document cited for commember of the same focument	nent, but publis ne application other reasons	hed on, or



Application Number

EP 10 18 3388

CLAIMS INCURRING FEES						
The present European patent application comprised at the time of filing claims for which payment was due.						
Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):						
No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.						
LACK OF UNITY OF INVENTION						
The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:						
see sheet B						
All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.						
As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.						
Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:						
None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:						
The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).						



LACK OF UNITY OF INVENTION SHEET B

Application Number

EP 10 18 3388

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-9

A control device of a radiator with a remote controller having a receiver comprising an infrared lens, said lens being included in a control safety pushbutton. The resulting effect is, that manufacturing of the radiator housing is eased and production cost are reduced.

2. claims: 10-13

A control device of a radiator with a remote controller, the radiator housing having magnetic fixing means for the remote controller.

The resulting effect is, that the remote controller is held at the radiator housing.

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

EP 10 18 3388

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.

02-04-2014

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
EP 1258689	A2	20-11-2002	DE EP ES	20221914 U1 1258689 A2 2200638 A1	26-02-2009 20-11-2002 01-03-2004
FR 2592945	A1	17-07-1987	NONE	 -	
US 2006222368	A1	05-10-2006	NONE	<u> </u>	
US 2007139172	A1	21-06-2007	JP US	2007142618 A 2007139172 A1	07-06-2007 21-06-2007
US 2007015457	A1	18-01-2007	AT EP US US US US US US US US US	445262 T 1929638 A2 2107685 A2 2007015457 A1 2011069433 A1 2011069844 A1 2011070757 A1 2011070777 A1 2011070853 A1 2011071658 A1 2011072050 A1 2011072347 A1 2007022297 A2	15-10-2009 11-06-2008 07-10-2009 18-01-2007 24-03-2011 24-03-2011 24-03-2011 24-03-2011 24-03-2011 24-03-2011 24-03-2011 24-03-2011 24-03-2011 24-03-2011
	Α	15-12-2000	JP	4081925 B2	30-04-2008

FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82