



(11)

EP 2 597 381 A3

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
18.06.2014 Bulletin 2014/25

(51) Int Cl.:
F24F 1/00 (2011.01) **F24D 11/02** (2006.01)
F24F 5/00 (2006.01)

(43) Date of publication A2:
29.05.2013 Bulletin 2013/22

(21) Application number: **12191271.1**

(22) Date of filing: **05.11.2012**

(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 RS SE SI SK SM TR
 Designated Extension States:
BA ME

(72) Inventors:

- **Isayama, Yasuhiko**
OSAKA, 540-6207 (JP)
- **Aoyama, Shigeo**
OSAKA, 540-6207 (JP)

(74) Representative: **Eisenführ Speiser
Patentanwälte Rechtsanwälte PartGmbH
Postfach 31 02 60
80102 München (DE)**

(30) Priority: 14.11.2011 JP 2011248328

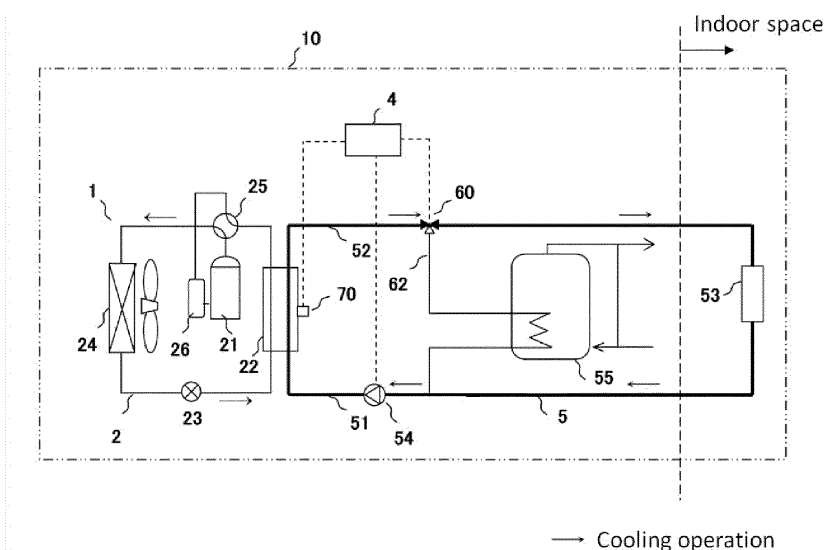
(71) Applicant: **Panasonic Corporation**
Kadoma-shi
Osaka 571-8501 (JP)

(54) **Cold/hot water supply apparatus**

(57) According to a cold/hot water supply apparatus 10 of the present invention, when it is requested to change the operation mode from the cooling operation mode to the heat-accumulation operation mode and the fluid temperature detected by the temperature sensor 70 is lower than a predetermined temperature, the control apparatus 4 continues the cooling operation mode, and when the fluid temperature detected by the temperature

sensor is equal to or higher than the predetermined temperature, the control apparatus switches the operation mode from the cooling operation mode to the heat-accumulation operation mode. It is possible to suppress the reduction in a temperature (accumulated heat amount) of the heat accumulator tank 55 caused by low temperature fluid, and energy loss can be reduced.

[Fig. 1]





EUROPEAN SEARCH REPORT

Application Number
EP 12 19 1271

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	WO 2011/104877 A1 (HITACHI LTD) 1 September 2011 (2011-09-01) * abstract; figure 10 *	1-3	INV. F24F1/00 F24D11/02 F24F5/00
A	US 4 809 516 A (JONES RICHARD D [US]) 7 March 1989 (1989-03-07) * column 6 - column 8; figure 1 *	1-3	
A	WO 96/00370 A1 (STORE HEAT AND PRODUCE ENERGY [US]) 4 January 1996 (1996-01-04) * page 31 - page 35; figure 1 *	1-3	
A	US 2 224 629 A (BORSE FELIX W ET AL) 10 December 1940 (1940-12-10) * the whole document *	1-3	
			TECHNICAL FIELDS SEARCHED (IPC)
			F24F F24D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 8 May 2014	Examiner Vuc, Arianda
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			

1
EPO FORM 1503 03.82 (P04C01)

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

EP 12 19 1271

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.

08-05-2014

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2011104877 A1	01-09-2011	CN 102753916 A	24-10-2012
		EP 2541170 A1	02-01-2013
		JP 5335131 B2	06-11-2013
		WO 2011104877 A1	01-09-2011
US 4809516 A	07-03-1989	NONE	
WO 9600370 A1	04-01-1996	AU 2908595 A	19-01-1996
		BR 9508122 A	12-08-1997
		CA 2193688 A1	04-01-1996
		CN 1158158 A	27-08-1997
		EP 0763183 A1	19-03-1997
		US 5497629 A	12-03-1996
		WO 9600370 A1	04-01-1996
US 2224629 A	10-12-1940	NONE	

EPO FORM P0459

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