



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
17.05.2000 Bulletin 2000/20

(51) Int. Cl.⁷: **F24F 1/02, F24F 13/08**

(43) Date of publication A2:
21.01.1998 Bulletin 1998/04

(21) Application number: **97110490.6**

(22) Date of filing: **26.06.1997**

(84) Designated Contracting States:
**AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE**
Designated Extension States:
AL LT LV RO SI

- **Hongo, Ichiro**
Yokohama-shi, Kanagawa-ken (JP)
- **Yamashita, Tetsuji**
Sakae-ku, Yokohama-shi, Kanagawa-ken (JP)
- **Kageyama, Yasuhiro**
Ihara-gun, Shizuoka-ken (JP)
- **Nigo, Toshiro**
Fuji-shi, Shizuoka-ken (JP)
- **Kato, Shigeki**
Fuji-shi, Shizuoka-ken (JP)
- **Nukushina, Harunobu**
Fuji-shi, Shizuoka-ken (JP)

(30) Priority: **26.06.1996 JP 16560596**
26.06.1996 JP 16601896
26.06.1996 JP 16602396
27.09.1996 JP 25686196

(71) Applicant:
KABUSHIKI KAISHA TOSHIBA
Kawasaki-shi, Kanagawa-ken 210-8572 (JP)

(74) Representative:
Zangs, Rainer E., Dipl.-Ing. et al
Hoffmann Eitle,
Patent- und Rechtsanwälte,
Arabellastrasse 4
81925 München (DE)

(54) **Indoor unit for air conditioning system**

(57) This invention relates to an indoor unit for an air conditioning system. The indoor unit is characterised in that a louver (10) is turnable in two opposite directions from a closing position at which the louver substantially closes an outlet port(1). The louver has a curved cross section with a concave surface (10a) and an opposite convex surface (10b). Further, control means (27) is provided, and the control means controls the movement of the louver so that the concave surface is directed substantially upwards when the conditioned air is to be discharged forwards, and so that the concave surface is directed substantially backwards when the conditioned air is to be discharged downwards.

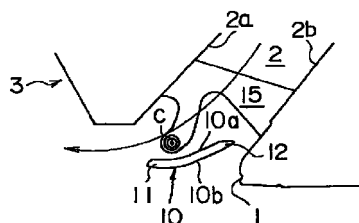


FIG. 4A

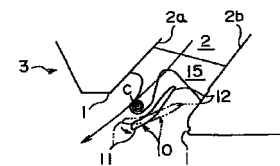


FIG. 4B

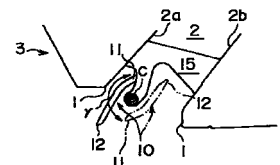


FIG. 4C

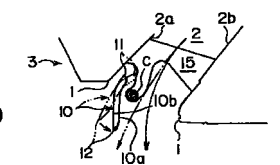


FIG. 4D



European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 97 11 0490

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	EP 0 657 701 A (FUJITSU GENERAL LTD) 14 June 1995 (1995-06-14) * column 1, line 39 - column 2, line 22; figures 13,14 *	1	F24F1/02 F24F13/08
A	* column 12, line 13 - line 51; figures 2-4 * * column 14, line 55 - column 15, line 1 *	2-16	
A	US 5 234 373 A (YAMAZAKI MASAYA ET AL) 10 August 1993 (1993-08-10) * column 5, line 8 - line 38; figures *	1,2	
A	PATENT ABSTRACTS OF JAPAN vol. 014, no. 228 (M-0973), 15 May 1990 (1990-05-15) -& JP 02 057856 A (TOSHIBA CORP), 27 February 1990 (1990-02-27) * abstract; figures *	1,2	
A	PATENT ABSTRACTS OF JAPAN vol. 009, no. 057 (M-363), 13 March 1985 (1985-03-13) & JP 59 191824 A (SANYO DENKI KK;OTHERS: 01), 31 October 1984 (1984-10-31) * abstract; figures *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.6) F24F
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 23 March 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 03.82 (P04C01)

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

EP 97 11 0490

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.

23-03-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0657701 A	14-06-1995	JP 7217985 A	18-08-1995
		AU 689150 B	26-03-1998
		AU 8030394 A	15-06-1995
		US 5547018 A	20-08-1996
		CN 1127346 A	24-07-1996
-----	-----	-----	-----
US 5234373 A	10-08-1993	JP 4139351 A	13-05-1992
		IT 1250784 B	21-04-1995
		KR 9501481 B	24-02-1995
-----	-----	-----	-----
JP 02057856 A	27-02-1990	NONE	
-----	-----	-----	-----
JP 59191824 A	31-10-1984	NONE	
-----	-----	-----	-----