

**INTERNATIONAL SEARCH REPORT**

International application No. PCT/JP2018/048112
--

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> Int.Cl. F24F1/18 (2011.01) i  According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) Int.Cl. F24F1/18  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Published examined utility model applications of Japan 1922-1996 Published unexamined utility model applications of Japan 1971-2019 Registered utility model specifications of Japan 1996-2019 Published registered utility model applications of Japan 1994-2019		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 9-310940 A (HITACHI, LTD.) 02 December 1997, paragraphs [0002]-[0009], fig. 13 (Family: none)	1-11
Y	WO 2017/126019 A1 (MITSUBISHI ELECTRIC CORP.) 27 July 2017, paragraphs [0016]-[0067], fig. 1-12 & US 2018/0372429 A1, paragraphs [0036]-[0127], fig. 1-12 & EP 3406996 A1 & CN 108474623 A	1-11
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 21 February 2019 (21.02.2019)		Date of mailing of the international search report 05 March 2019 (05.03.2019)
Name and mailing address of the ISA/ Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan		Authorized officer  Telephone No.

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/JP2018/048112

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2012-26615 A (MITSUBISHI ELECTRIC CORP.) 09 February 2012, paragraphs [0038]-[0049], fig. 12-14 (Family: none)	9-11
A	JP 2012-37154 A (MITSUBISHI ELECTRIC CORP.) 23 February 2012, entire text, all drawings (Family: none)	1-11