



EP 1 923 339 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:  
09.09.2009 Bulletin 2009/37

(51) Int Cl.:  
**B65H 1/26 (2006.01)**  
**A47B 88/10 (2006.01)**

(43) Date of publication A2:  
21.05.2008 Bulletin 2008/21

(21) Application number: 07021109.9

(22) Date of filing: 29.10.2007

(84) Designated Contracting States:  
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR  
HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE  
SI SK TR**  
Designated Extension States:  
**AL BA HR MK RS**

(30) Priority: 15.11.2006 JP 2006309611

(71) Applicant: **Murata Machinery, Ltd.**  
**Kyoto-shi,**  
**Kyoto 6018326 (JP)**

(72) Inventors:  

- Tanaka, Satoshi**  
**Kyoto-shi**  
**Kyoto 612-8686 (JP)**
- Shimamoto, Hideatsu**  
**Kyoto-shi**  
**Kyoto 612-8686 (JP)**

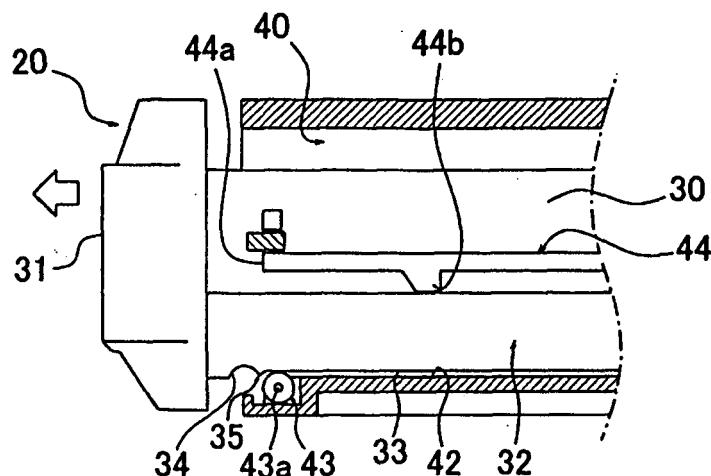
(74) Representative: **Schoppe, Fritz et al**  
**Schoppe, Zimmermann, Stöckeler & Zinkler**  
**Patentanwälte**  
**Postfach 246**  
**82043 Pullach bei München (DE)**

(54) **Paper feeder and image forming device**

(57) A paper feeder includes a guide surface (33) arranged on a paper feed cassette (20) and a roller (43) arranged on a cassette storage unit (40). When the paper feed cassette (20) is moved along a storing direction thereof inside the cassette storage unit (40), the guide surface (33) placed on the roller (43) is slidably moved by rotation of the roller. In the paper feeder, since the

cassette storage portion includes a placement surface (42) on which the guide surface is placed by surface contact at a storage position where the paper feed cassette is stored in the cassette storage unit (40), the stored paper feed cassette (20) can be maintained in a stable condition, and oscillation of the paper feed cassette (20) generated when the papers are transported can be reduced.

**FIG. 6A**





## EUROPEAN SEARCH REPORT

Application Number  
EP 07 02 1109

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	JP 09 240849 A (RICOH KK) 16 September 1997 (1997-09-16) * abstract; figures 1-8 *	1-11	INV. B65H1/26 A47B88/10
X	US 5 413 409 A (ARAI KIYOTAKA [JP]) 9 May 1995 (1995-05-09) * the whole document *	1-5,11	
X	JP 2004 131211 A (RICOH KK) 30 April 2004 (2004-04-30) * abstract; figures 1-7 *	1-5,11	
			TECHNICAL FIELDS SEARCHED (IPC)
			B65H
The present search report has been drawn up for all claims			
1	Place of search	Date of completion of the search	Examiner
	The Hague	3 August 2009	Athanasiadis, A
CATEGORY OF CITED DOCUMENTS		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	
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			

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

EP 07 02 1109

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.

03-08-2009

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
JP 9240849	A	16-09-1997	NONE			
US 5413409	A	09-05-1995	JP JP	2666104 B2 6092485 A	22-10-1997 05-04-1994	
JP 2004131211	A	30-04-2004	NONE			