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(54) **Device for turning paper sheets into a desired orientation in a paper sheet folding machine**

(57) A device for turning paper sheets to a desired orientation in a paper sheet folding machine which comprises an entraining system (14) for feeding a sheet to be folded and a side turning means engageable with and apt to cause the turning of said sheet in combination with the sheet entraining motion (18) thereof, wherein said side turning means comprises a wheel (20) which is rotatively driven to apply to the sheet (10) an entraining force in a direction (22) opposite to the

direction (18) of the feeding motion applied to the sheet (10) by the entraining system (14). On a side of the system (14) entraining the sheet (10), a vertically movable abutment pin member (24) is provided for engaging an edge of the sheet (10) in order to stop the turning movement thereof in its lying plane, once the sheet (10) has reached a desired amount of turning.

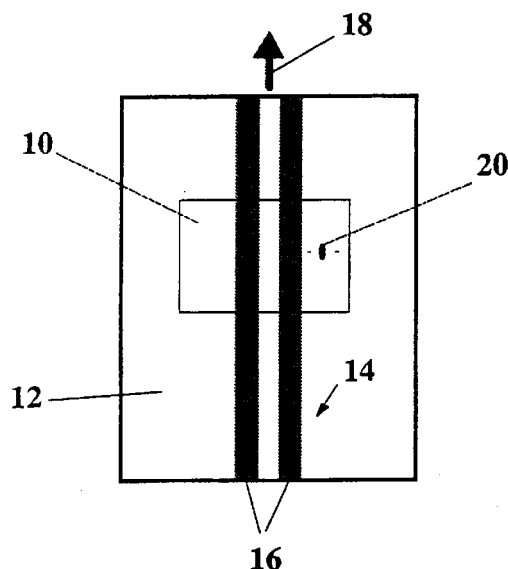


Fig. 1

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EUROPEAN SEARCH REPORT

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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	US 5 090 683 A (VENKATESH H. KAMATH ET AL.) 25 February 1992 * column 5, line 45 - column 11, line 61; figures *	1-3,8	B65H9/10 B65H5/02 B65H45/00
X	EP 0 512 827 A (MOORE BUSINESS FORMS, INC.) 11 November 1992 * column 3, line 11 - column 7, line 4; figures *	1-3,8	
A	PATENT ABSTRACTS OF JAPAN vol. 12, no. 179 (M-701) '3026!, 26 May 1988 & JP 62 290658 A (FUJI XEROX CO LTD), 17 December 1987 * abstract *	1,5,6,8	
A	DE 30 48 298 A (BAY, OTTO) 22 July 1982 * page 15, line 4 - page 16, line 4; figure 1 *	1,8	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B65H
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
BERLIN		10 December 1998	Fuchs, H
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

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

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The members are as contained in the European Patent Office EDP file on
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10-12-1998

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5090683 A	25-02-1992	JP 4226240 A	14-08-1992
EP 0512827 A	11-11-1992	US 5282614 A	01-02-1994
		AU 656769 B	16-02-1995
		AU 1608592 A	12-11-1992
		CA 2068257 A	11-11-1992
		DE 69204896 D	26-10-1995
		DE 69204896 T	04-04-1996
		JP 2723420 B	09-03-1998
		JP 5221563 A	31-08-1993
		MX 9202138 A	01-11-1992
		NZ 242672 A	26-07-1994
		US 5172907 A	22-12-1992
DE 3048298 A	22-07-1982	CH 650221 A	15-07-1985
		JP 57121552 A	29-07-1982
		NL 8105417 A	16-07-1982
		US 4445679 A	01-05-1984