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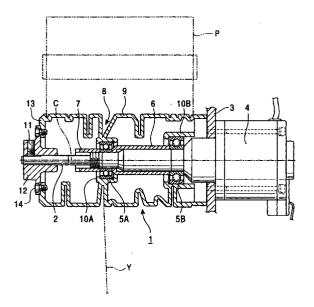
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(54) Traversing drum

(57) The present invention provides a traversing drum used in an automatic winder or the like, the traversing drum being made of ceramics and thus having a small mass. A drum main body of a traversing drum 1 used in an automatic winder or the like is composed of a double cylinder including inner cylinders 5A, 5B and an outer cylinder 9. The inner cylinders 5A, 5B and the outer cylinder 9 are integrally molded of a ceramic burned member. Consequently, a traversing drum can be manufactured which is rigid and light even if it is thin. It is thus possible to significantly reduce the power consumption of a rotative driving source for the traversing drum 1 and to extend the lifetime of the rotative driving source (Fig. 1).







EUROPEAN SEARCH REPORT

Application Number

EP 03 01 4622

Category	Citation of document with indica	tion, where appropriate,	Relevant	CLASSIFICATION OF THE
Jalegury	of relevant passages		to claim	APPLICATION (Int.CI.7)
X	GB 531 595 A (W. REINE		1	B65H54/48
Y	7 January 1941 (1941-0 * page 1, line 50 - page 1		2-5	
1	* page 1, Time 50 - pa		2 3	
A	US 4 854 516 A (S. YAM 8 August 1989 (1989-08 * column 7, line 6 - c	i–08)	1	
Y	GB 992 268 A (PAUL FAL 19 May 1965 (1965-05-1 * page 2, line 18 - li	9)	1-5	
A	US 3 128 957 A (P. FAL 14 April 1964 (1964-04 * column 1, line 59 -	l -14)	1	
Υ	US 2 214 703 A (H. THU		1	
A	10 September 1940 (194 * the whole document *		2-5	
A	PATENT ABSTRACTS OF JA vol. 1998, no. 09, 31 July 1998 (1998-07- & JP 10 087170 A (MURA 7 April 1998 (1998-04- * abstract *	-31) NTA MACH LTD),		TECHNICAL FIELDS SEARCHED (Int.CI.7) B65H C04B
	The present search report has been	n drawn up for all claims		
	Place of search	Date of completion of the search		Examiner
	The Hague	24 February 2004	D'H	lulster, E
X : par Y : par doc	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with another ument of the same category inological background	T: theory or principle E: earlier patent doc after the filing date D: document cited in L: document cited fo	ument, but puble the application	ished on, or

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

EP 03 01 4622

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.

24-02-2004

	Patent document ed in search report	ļ	Publication date		Patent family member(s)		Publication date
GB	531595	A	07-01-1941	NONE			·
US	4854516	Α	08-08-1989	JP CH DE IT US	61069670 669948 3532432 1181730 4951732	A5 A1 B	10-04-198 28-04-198 20-03-198 30-09-198 28-08-199
GB	992268	Α	19-05-1965	DE CH	1246482 394897		03-08-196 30-06-196
US	3128957	A	14-04-1964	NONE			· — — — — — — — — — -
US	2214703	Α	10-09-1940	NONE			
JP	10087170	Α	07-04-1998	NONE			

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