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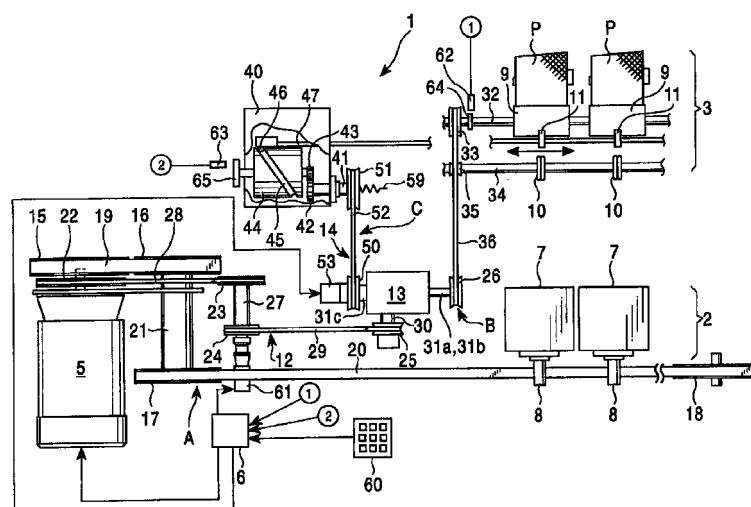
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(54) **Multiple twister**

(57) To prevent an end missing or a straight winding of a twisted yarn during stoppage by driving a traverse device and a drum by common driving means and synchronizing the traverse device with driving of the drum. A drum driving system B of a drum 9 rotating a winding

package P is coupled with a traverse device 11 traversing the twisted yarn around the winding package P via a non-step transmission 14 so as to be driven by means of a common driving motor 5.

**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)
A	PATENT ABSTRACTS OF JAPAN vol. 005, no. 206 (M-104), 26 December 1981 (1981-12-26) & JP 56 122766 A (MURATA MACH LTD), 26 September 1981 (1981-09-26) * abstract *	1-4	D01H1/10 B65H54/38 D01H1/34
A	US 5 174 102 A (MATSUI ISAMU ET AL) 29 December 1992 (1992-12-29) * column 3, line 45 - column 4, line 39; figures 1-4 *	1-4	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B65H D01H
The present search report has been drawn up for all claims			
Place of search <b>THE HAGUE</b>		Date of completion of the search <b>1 December 1999</b>	Examiner <b>Henningsen, O</b>
<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 &amp; : 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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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  
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