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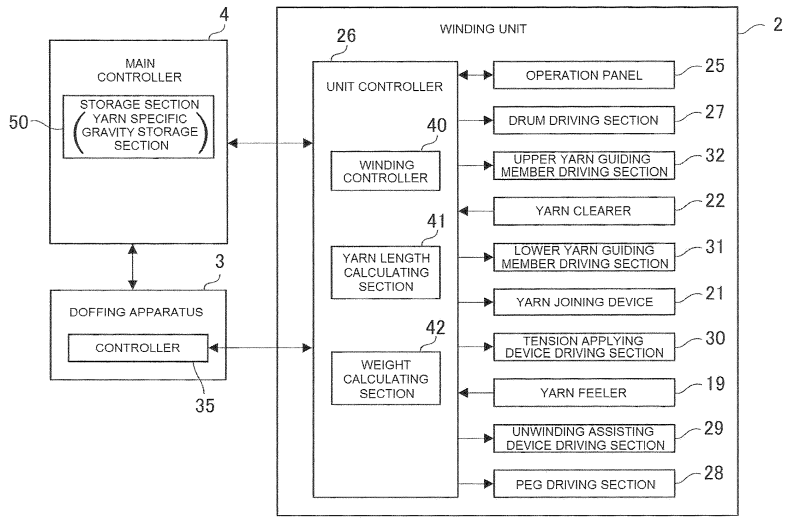
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(54) Yarn winding apparatus

(57) A winding unit (2) of an automatic winder (1) includes a yarn supplying section (11), a winding section (13) that winds a yarn Y supplied from the yarn supplying section (11) around a winding tube (17) into a package, a yarn clearer (22) that detects thickness of the yarn Y, and a unit controller (26). The unit controller (26) includes a yarn length calculating section (41) that calculates the length of the yarn Y wound around the winding tube (17) and a weight calculating section (42) that calculates a yarn weight of the package. The weight calculating section (42) calculates the yarn weight of the package based on the thickness of the yarn Y detected by the yarn clearer (22), the length of the yarn Y detected by the yarn length calculating section (41), and information on the specific gravity of the yarn Y.

FIG.3



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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 (IPC)
A,D	JP 2007 100235 A (MURATA MACHINERY LTD) 19 April 2007 (2007-04-19) * abstract *	1-6	INV. B65H63/08
A	EP 1 500 619 A2 (MURATA MACHINERY LTD [JP]) 26 January 2005 (2005-01-26) * paragraphs [0006], [0007] *	1-6	

TECHNICAL FIELDS SEARCHED (IPC)

B65H
D01H

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	28 April 2014	Pussemier, Bart

CATEGORY OF CITED DOCUMENTS

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2007100235 A	19-04-2007	NONE	
EP 1500619 A2	26-01-2005	CN 1576218 A	09-02-2005
		EP 1500619 A2	26-01-2005
		JP 4192746 B2	10-12-2008
		JP 2005053695 A	03-03-2005

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