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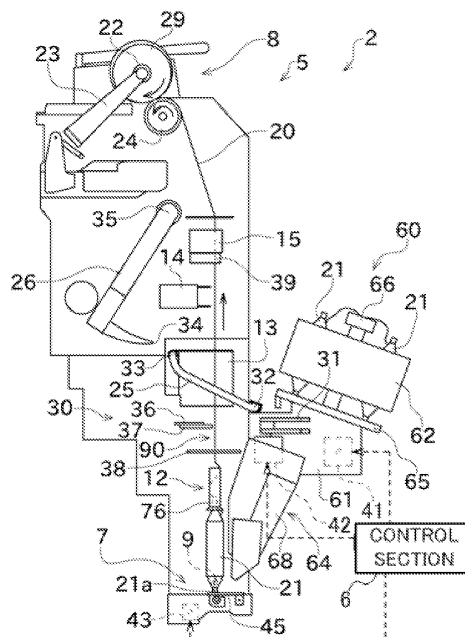
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(54) **Yarn winding machine and yarn guiding method**

(57) An automatic winder includes a bobbin supporting section 7, a lower yarn guiding pipe 25, a bobbin supplying device 60, a bobbin-supplying-device driving motor 41, a bobbin-supporting-section driving motor 43, a yarn end holding opening 66, a yarn handling lever 31, and a control section 6. The bobbin supporting section 7 supports a yarn supplying bobbin 21. The bobbin-supplying-device driving motor 41 drives the bobbin supplying device 60. The bobbin-supporting-section driving motor 43 drives the bobbin supporting section 7. The control section 6 controls driving of the yarn handling lever 31. The yarn handling lever 31 is driven by a yarn-handling-lever driving motor 42 which is a dedicated driving means provided separately from the bobbin-supplying-device driving motor 41 and the bobbin-supporting-section driving motor 43.

FIG. 2





EUROPEAN SEARCH REPORT

 Application Number
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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)
X	DE 10 2005 028760 A1 (SAURER GMBH & CO KG [DE]) 4 January 2007 (2007-01-04) * paragraphs [0068], [0069], [0074]; figure 1 *	1-5	INV. B65H54/71 B65H54/74 B65H67/02 B65H67/08
X	CH 369 051 A (REINERS WALTER DR ING [DE]) 30 April 1963 (1963-04-30) * page 2, lines 88-93; figures *	6,7	
A	DE 195 39 762 A1 (SCHLAFHORST & CO W [DE] SAURER GMBH & CO KG [DE]) 30 April 1997 (1997-04-30) * column 4, lines 11-17, 30-35; figures *	1,6	
A	DE 10 2006 044646 A1 (OERLIKON TEXTILE GMBH & CO KG [DE]) 3 April 2008 (2008-04-03) * paragraphs [0029] - [0036]; figures *	1,6	
A	DE 35 14 935 A1 (SCHLAFHORST & CO W [DE]) 30 October 1986 (1986-10-30) * pages 10-11; figures *	1,6	TECHNICAL FIELDS SEARCHED (IPC)
A	DE 36 44 432 A1 (SCHLAFHORST & CO W [DE]) 7 July 1988 (1988-07-07) * column 5, lines 13-19; figures *	1,6	B65H
A	DE 42 31 958 A1 (SCHLAFHORST & CO W [DE]) 31 March 1994 (1994-03-31) * column 7, line 68 - column 8, line 6; figures *	1,6	
A	US 2 769 599 A (STEFAN FURST) 6 November 1956 (1956-11-06) * figures *	1,6	
A,D	JP 2009 018930 A (MURATA MACHINERY LTD) 29 January 2009 (2009-01-29) * abstract; figures *	1,6	
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		16 March 2012	Lemmen, René
CATEGORY OF CITED DOCUMENTS 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 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			

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EPO FORM 1503 03.82 (P04C01)

**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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

16-03-2012

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 102005028760 A1	04-01-2007	NONE	
CH 369051 A	30-04-1963	CH 369051 A	30-04-1963
		CH 427603 A	31-12-1966
DE 19539762 A1	30-04-1997	CN 1151374 A	11-06-1997
		DE 19539762 A1	30-04-1997
		JP 3749768 B2	01-03-2006
		JP 9183571 A	15-07-1997
DE 102006044646 A1	03-04-2008	CN 101148232 A	26-03-2008
		DE 102006044646 A1	03-04-2008
DE 3514935 A1	30-10-1986	CH 669174 A5	28-02-1989
		DE 3514935 A1	30-10-1986
		IT 1204316 B	01-03-1989
		JP 1890124 C	07-12-1994
		JP 6017192 B	09-03-1994
		JP 61248872 A	06-11-1986
		US 4664326 A	12-05-1987
DE 3644432 A1	07-07-1988	CH 674213 A5	15-05-1990
		DE 3644432 A1	07-07-1988
		IT 1224912 B	24-10-1990
		JP 63171777 A	15-07-1988
		US 4801108 A	31-01-1989
DE 4231958 A1	31-03-1994	CN 1085869 A	27-04-1994
		CZ 9301941 A3	13-04-1994
		DE 4231958 A1	31-03-1994
		IT 1272605 B	26-06-1997
		JP 6199478 A	19-07-1994
		US 5484116 A	16-01-1996
US 2769599 A	06-11-1956	NONE	
JP 2009018930 A	29-01-2009	CN 101343003 A	14-01-2009
		EP 2014596 A2	14-01-2009
		JP 4492650 B2	30-06-2010
		JP 2009018930 A	29-01-2009

EPO FORM P0459

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