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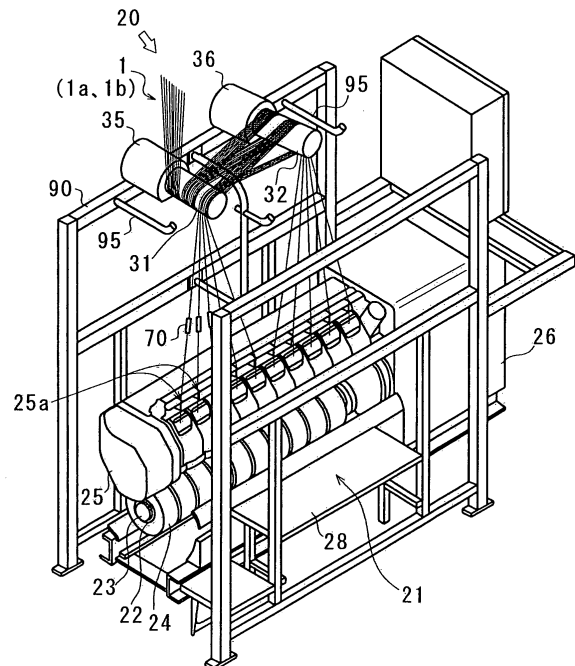
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(54) **Take-up winding facility**

(57) An object of the present invention is to provide a take-up winding facility having a simple structure and which can be miniaturized. The present invention provides a take-up winding facility feeding a plurality of filament yarns 1 spun out by a spinning machine 10, from above to below to simultaneously wind the plurality of filament yarns 1 around respective plural bobbins 22 installed on a bobbin holder shaft 23 in one take-up winding machine, wherein a plurality of yarn feeding rollers 31, ... are arranged above the take-up winding machine 21, and one of the plurality of yarn feeding rollers 31, ... takes off all of the plurality of filament yarns and winds around the respective bobbins 22 via the said yarn feeding roller and other yarn feeding rollers.

FIGURE 2



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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	WO 2006/126413 A1 (TMT MACHINERY INC [JP]; WEN RUIMING; NAKAGAWA OSAMU) 30 November 2006 (2006-11-30) * the whole document * -----	1-4,8-14	INV. B65H51/015 B65H51/12 B65H54/20 B65H71/00 B65H54/28 D01D10/00 D01D13/00
X	DE 102 35 936 A1 (BARMAG BARMER MASCHF [DE]) 19 February 2004 (2004-02-19) * figure 5 *	1	
X	WO 2007/085274 A1 (SAURER GMBH & CO KG [DE]; SCHROETER MICHAEL [DE]; WEIGEND HELMUT [DE]) 2 August 2007 (2007-08-02) * figure 5 *	1	
X	WO 2004/074155 A1 (SAURER GMBH & CO KG [DE]; KIRCHHOFF BERND [DE]; ARETZ BERND [DE]) 2 September 2004 (2004-09-02) * figure 5 *	1	
X	DE 16 60 311 A1 (KARL FISCHER APP & ROHRLEITUNG) 30 March 1972 (1972-03-30) * figure 3 *	1	
A	US 5 339 503 A (SUSSMAN MARTIN V [US]) 23 August 1994 (1994-08-23) * figures 11,12 * -----	7	TECHNICAL FIELDS SEARCHED (IPC) B65H D01D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 18 February 2011	Examiner Pussemier, Bart
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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ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 09 01 3809

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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18-02-2011

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2006126413 A1	30-11-2006	CN 101166851 A	23-04-2008
		JP 4491017 B2	30-06-2010
DE 10235936 A1	19-02-2004	AU 2003266247 A1	25-02-2004
		CN 1671894 A	21-09-2005
		WO 2004015173 A1	19-02-2004
		EP 1527217 A1	04-05-2005
		JP 4204548 B2	07-01-2009
		JP 2005534825 T	17-11-2005
		KR 20050048591 A	24-05-2005
		MX PA05001020 A	23-11-2005
		US 2005129799 A1	16-06-2005
		WO 2007085274 A1	02-08-2007
EP 1979513 A1	15-10-2008		
JP 2009524746 T	02-07-2009		
KR 20080090533 A	08-10-2008		
US 2009022833 A1	22-01-2009		
WO 2004074155 A1	02-09-2004	CN 1764585 A	26-04-2006
		EP 1594785 A1	16-11-2005
		US 2006003037 A1	05-01-2006
DE 1660311 A1	30-03-1972	DE 1955042 U	09-02-1967
US 5339503 A	23-08-1994	NONE	