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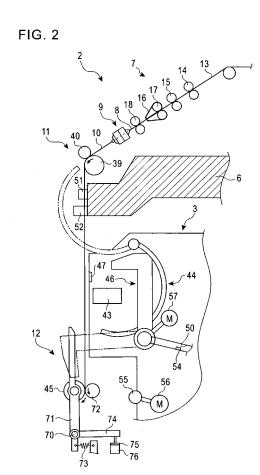


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EUROPEAN PATENT APPLICATION (12)(88) Date of publication A3: (51) Int Cl.: B65H 67/08^(2006.01) B65H 63/06^(2006.01) 04.07.2007 Bulletin 2007/27 B65H 54/26 (2006.01) (43) Date of publication A2: 24.05.2006 Bulletin 2006/21 (21) Application number: 05022608.3 (22) Date of filing: 17.10.2005 (84) Designated Contracting States: (72) Inventor: Susami, Hiroyuki AT BE BG CH CY CZ DE DK EE ES FI FR GB GR Otsu-shi HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI Shiga (JP) SK TR **Designated Extension States:** (74) Representative: Liedl, Christine et al AL BA HR MK YU c/o Hansmann & Vogeser, Albert-Rosshaupter-Strasse 65 (30) Priority: 19.11.2004 JP 2004335663 81369 München (DE) (71) Applicant: MURATA KIKAI KABUSHIKI KAISHA Minami-ku Kyoto-shi Kyoto 601 (JP)

(54) **Textile machine**

(57)The present invention allows a yarn splicing carriage to efficiently remove a yarn defect and perform a yarn splicing operation without a waste of a yarn, in accordance with the situation in which the yarn defect has occurred. A textile machine comprises a plurality of yarn processing units 2 and a yarn splicing carriage 3 that can run in the direction in which the yarn processing units 2 are arranged. Each of the yarn processing units 2 comprises a yarn clearer 52 that can detect a yarn defect and determine its type. The yarn splicing carriage 3 can acquire information on the presence or absence and type of a yarn defect and the diameter of a winding package 45 for each yarn processing unit 2. The yarn splicing carriage 3 performs a yarn end finding operation on the yarn processing unit 2 in which a yarn defect is occurring. In this case, depending on the type of the detected yarn defect and the diameter of the winding package 45 measured upon the occurrence of the yarn defect, the yarn splicing carriage 3 varies the amount of time from when a suction mouth 46 approaches to the winding package 45 and then starts suction until when the suction mouth 46 guides a yarn to a splicing device 43 as well as the speed of a reverse rotation roller 55 that rotates the winding package 45 in a yarn unwinding direction. Subsequently, the yarn splicing device 43 removes the yarn defect and splices the spun yarn (Fig.2).





European Patent Office

EUROPEAN SEARCH REPORT

Application Number EP 05 02 2608

	DOCUMENTS CONSIDER	vant			
Category	Citation of document with indica of relevant passages		to cla		CLASSIFICATION OF THE APPLICATION (IPC)
Y	US 5 052 173 A (FUJIW 1 October 1991 (1991- * column 2, line 9 - * column 2, line 48 - * column 6, line 16 - * column 7, line 1 - * column 8, line 19 - * column 8, line 60 - * figures 1,2 *	10-01) line 20 * column 3, line 30 * line 26 * line 11 * line 37 *			INV. B65H67/08 B65H63/06 B65H54/26
Y	US 5 765 770 A (HERMAI [DE] ET AL) 16 June 19 * column 2, line 38 - * column 2, line 66 - * column 3, line 62 - * column 6, line 27 - * claims 1,4,5,11 * * figure 1 *	998 (1998-06-16) line 55 * column 3, line 36 * column 4, line 38 *		4-7	
γ	US 5 862 660 A (HAASE		3		
A	26 January 1999 (1999 * column 2, line 51 - * column 4, line 5 - * column 7, line 24 - * column 7, line 46 - * column 8, line 28 - * figures 1,2 *	column 3, line 38 * line 28 * line 29 * line 52 *	6,7	TECHNICAL FIELDS SEARCHED (IPC) B65H	
A	US 2002/074445 A1 (OE AL OEHRL WILHELM [DE] 20 June 2002 (2002-06 * paragraphs [0016] - * figures 1,2 * -	ET AL) -20)	ET 1,2,4		
	The present search report has beer	ı drawn up for all claims			
	Place of search	Date of completion of the search			Examiner
	The Hague	31 May 2007		Guis	san, Thierry
X : parti Y : parti docu A : tech	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with another iment of the same category nological background	T : theory or princ E : earlier patent of after the filing D : document cite L : document cite	document, b date d in the appl d for other re	ut publish ication asons	
O : non	-written disclosure mediate document	& : member of the document			

EP 1 659 082 A3

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

EP 05 02 2608

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.

31-05-2007

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 5052173	A	01-10-1991	DE DE JP JP JP US	3824850 3844759 1026741 2093785 7091707 4939893	A1 A C B	09-02-1989 29-11-1990 30-01-1989 02-10-1996 04-10-1995 10-07-1990
US 5765770	A	16-06-1998	NONE			
US 5862660	A	26-01-1999	CN DE IT JP	1178188 19640184 MI971659 10109829	A1 A1	08-04-1998 02-04-1998 11-01-1999 28-04-1998
US 2002074445	A1	20-06-2002	CN DE EP	1358658 10062479 1215154	A1	17-07-2002 20-06-2002 19-06-2002

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 $\stackrel{\circ}{\overset{}_{\amalg}}$ For more details about this annex : see Official Journal of the European Patent Office, No. 12/82