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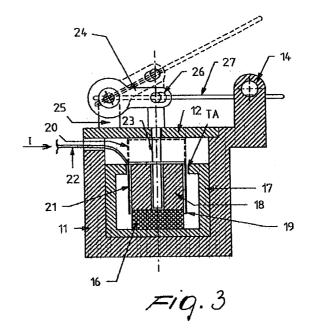
(11)

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(54)Modulated weft thread braking device for textile machines

A device (10) for the modulated braking of a weft thread, comprising a set of three fixed thread guiding eyelets (13,14,15) which trace a straight path of the thread through the device and at least one actuated braking element (27) adapted to engage the thread in the spaces between the thread guiding eyelets in order to deflect its path for braking. The braking element is actuated by a movable yoke (19) which is subjected to the interacting actions of a magnetic field (Φ) and of a current (I) which circulates in at least one excitation coil (21), and the movable yoke actuates a first oscillating lever (24) to which the braking element is rigidly coupled, the braking element being constituted by a second oscillating lever (27) which is U-shaped and is suitable to straddle the central thread guiding eyelet (14) in order to engage the thread (F) that slides within the eyelets, deflecting its path in the free portions that lie between the central eyelet (14) and the end eyelets (13,15).





EUROPEAN SEARCH REPORT

Application Number

EP 99 10 3942

Category	Citation of document with in of relevant pass	ndication, where appropriate, sages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.6) B65H59/32 D03D47/34		
Y,D	WO 97 49630 A (COVE GIORGIO (IT); ROJ E (IT)) 31 December 1 * page 7, line 32 - figures 2-5 *	LECTROTEX NUOVA SRL 997 (1997-12-31)	1			
Y	EP 0 467 059 A (VAM 22 January 1992 (19 * column 2, line 41 figure *	ATEX SPA) 92-01-22) - column 3, line 3;	1			
A	DE 195 44 202 A (SC 5 June 1997 (1997-0 * column 4, line 11 *		,3 1-3,6			
A	US 3 300 161 A (P. 24 January 1967 (19 * column 7, line 51	67-01-24)	1,7			
A	DE 43 35 089 A (MUR 21 April 1994 (1994 * column 5, line 5	-04-21)	1	TECHNICAL FIELDS SEARCHED (Int.CI.6 B65H D03D		
A,D	EP 0 527 510 A (PIC 17 February 1993 (1 * column 2, line 28 *		-5	0030		
A	EP 0 826 806 A (LGL 4 March 1998 (1998- * the whole documen	03-04)	1			
A,D	EP 0 326 784 A (LOE 9 August 1989 (1989 * the whole documen	-08-09)	1			
	The present search report has					
Place of search THE HAGUE		Date of completion of the search 22 October 199		Rebiere, J-L		
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with anoth document of the same category A: technological background		E : earlier paten after the filing her D : document cit L : document cit	nciple underlying the t document, but pub g date led in the applicatio ed for other reasons	e invention olished on, or n		
O : non-	written disclosure mediate document		ne same patent fam			

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

EP 99 10 3942

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.

22-10-1999

Patent document cited in search report		Publication Patent family date member(s)			Publication date		
WO	9749630	Α	31-12-1997	IT EP	MI961310 0918726		29-12-199 02-06-199
EP	0467059	A	22-01-1992	IT AT DE DE DK ES GR HK	1248716 118830 69107536 69107536 467059 2068430 3015168 46496	T D T T T	26-01-199 15-03-199 30-03-199 22-06-199 17-07-199 16-04-199 31-05-199 22-03-199
DE	19544202	Α	05-06-1997	CN JP US	1152536 9175736 5738295	Α	25-06-199 08-07-199 14-04-199
US	3300161	Α	24-01-1967	NON	<u> </u>		
DE 	4335089	A	21-04-1994	JP JP JP JP IT US	2936948 6247629 2936917 6127822 MI932195 5499772	A B A A,B	23-08-199 06-09-199 23-08-199 10-05-199 18-04-199 19-03-199
EP	0527510	Α	17-02-1993	BE DE DE JP US	1005173 69213135 69213135 7048760 5226459	D T A	11-05-199 02-10-199 03-04-199 21-02-199 13-07-199
EP	0826806	Α	04-03-1998	IT	T0960730	Α	03-03-199
EP	0326784	A	09-08-1989	CH DE JP US	676234 3838162 1314754 4927093	A A	28-12-199 03-08-198 19-12-198 22-05-199

FORM P0459

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