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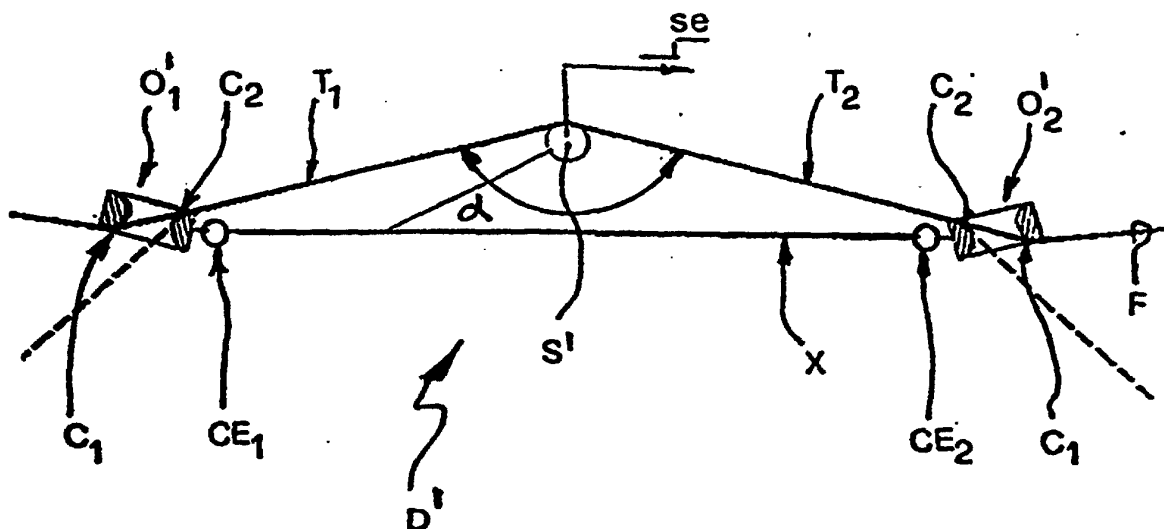
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(54) **Improved device for measuring the mechanical tension of the yarn in weaving systems and the like**

(57) The device comprises a couple of thread guide eyelets that are spaced on a rectilinear support (X) and a sensor (S) placed between said eyelets, external to the rectilinear support, under the pressure of the yarn running from one eyelet to the other, thereby defining two path segments reciprocally inclined at a predetermined angle (α). The thread guide eyelets (O'1-O'2) are inclined in opposite directions with respect to the recti-

linear support (X), so that the yarn (F) passes diagonally through the eye of each thread guide eyelet; and the inclination of the eyelets with respect to the support (X) is chosen so that contact arises between the yarn and two points (C1-C2) of each eyelet, whereby the inclination of the path segments (T1-T2) of the yarn in the spans between the eyelets and the sensor (S') is kept constant.

Fig. 2





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 02 00 7814

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	GB 2 149 822 A (TRIPLITE LTD) 19 June 1985 (1985-06-19) * page 2, line 21 - line 31; figure 1 *	1,2	B65H59/40
A	DE 43 00 633 A (BARMAG BARMER MASCHF) 22 July 1993 (1993-07-22)		
A	EP 0 574 062 A (TE STRAKE B V) 15 December 1993 (1993-12-15)		
A	EP 0 475 001 A (ATOCHEM NORTH AMERICA) 18 March 1992 (1992-03-18)		
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B65H D04B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		24 July 2003	Van Gelder, P
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 02 00 7814

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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24-07-2003

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
GB 2149822	A	19-06-1985	US	4558834 A	17-12-1985
DE 4300633	A	22-07-1993	DE	4300633 A1	22-07-1993
EP 0574062	A	15-12-1993	NL	9201019 A	03-01-1994
			EP	0574062 A1	15-12-1993
			JP	6094552 A	05-04-1994
EP 0475001	A	18-03-1992	US	5136202 A	04-08-1992
			CA	2047407 A1	01-03-1992
			EP	0475001 A2	18-03-1992
			JP	3187471 B2	11-07-2001
			JP	4273031 A	29-09-1992