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Wilmington, DE 19808 (US)
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(54) **Stretch break method and product**

(57) A method for stretch breaking fibers to produce a staple yarn and operating a staple fiber spinning machine that enables the production of a plurality of products of lot size smaller than a large denier tow product. The

process includes at least two break zones and a consolidation zone downstream from a second break zone to form a staple yarn. The filaments are broken in a second break zone downstream from the first break zone by increasing the speed of the fiber fed into the process.

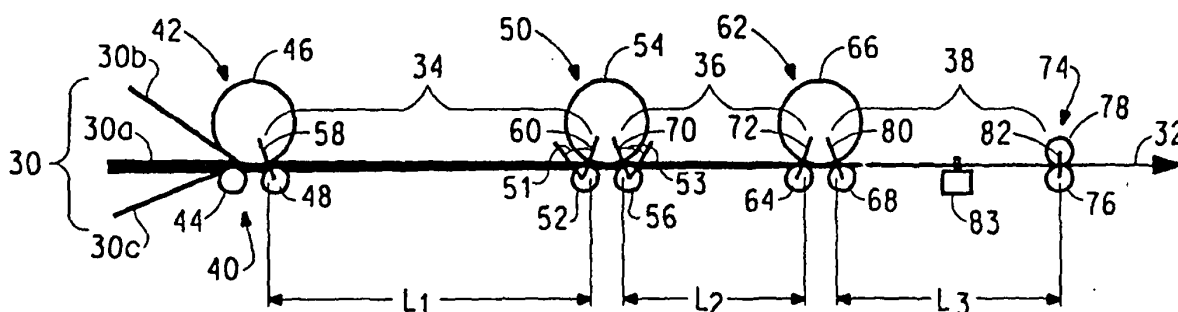


FIG. 1



European Patent
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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)
Y	WO 89/01999 A (HELTRA INCORPORATED) 9 March 1989 (1989-03-09) * page 8; claim 1 *	1,2,4,5,8	INV. D01G1/08 D02G3/34
D,Y	US 4 080 778 A (ADAMS ET AL) 28 March 1978 (1978-03-28) * example 1 *	1,2,4,5,8	
A	GB 689 054 A (HENRY VON KOHORN) 18 March 1953 (1953-03-18) * claims 1,2,5 *	1,9	
A	US 4 477 526 A (LAUTERBACH ET AL) 16 October 1984 (1984-10-16) * example 1 *	1,2	
A	US 4 698 956 A (CLARKE ET AL) 13 October 1987 (1987-10-13) * example 1 *	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			D01G D02G
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 16 January 2007	Examiner D'Souza, Jennifer
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 05 07 7201

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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16-01-2007

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 8901999	A	09-03-1989	EP 0327600 A1	16-08-1989
			JP 2500605 T	01-03-1990

US 4080778	A	28-03-1978	AU 1239076 A	29-09-1977
			BE 840245 A1	30-09-1976
			CA 1048764 A1	20-02-1979
			CH 606542 A5	15-11-1978
			DE 2614116 A1	14-10-1976
			FR 2306283 A1	29-10-1976
			GB 1501337 A	15-02-1978
			IT 1063400 B	11-02-1985
			JP 51119851 A	20-10-1976
			LU 74668 A1	28-01-1977
			NL 7603355 A	05-10-1976

GB 689054	A	18-03-1953	NONE	

US 4477526	A	16-10-1984	CA 1216410 A1	13-01-1987
			DE 3379207 D1	23-03-1989
			DK 280583 A	19-12-1983
			EP 0097335 A2	04-01-1984
			GR 77549 A1	24-09-1984
			IE 54594 B1	06-12-1989
			JP 2530802 B2	04-09-1996
			JP 59009231 A	18-01-1984

US 4698956	A	13-10-1987	AT 396487 B	27-09-1993
			AT 136187 A	15-01-1993
			CA 1299357 C	28-04-1992
			CH 677679 A5	14-06-1991
			DE 3717263 A1	10-12-1987
			FR 2599387 A1	04-12-1987
			GB 2191218 A	09-12-1987
			IT 1204652 B	10-03-1989

EPO FORM P0459

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