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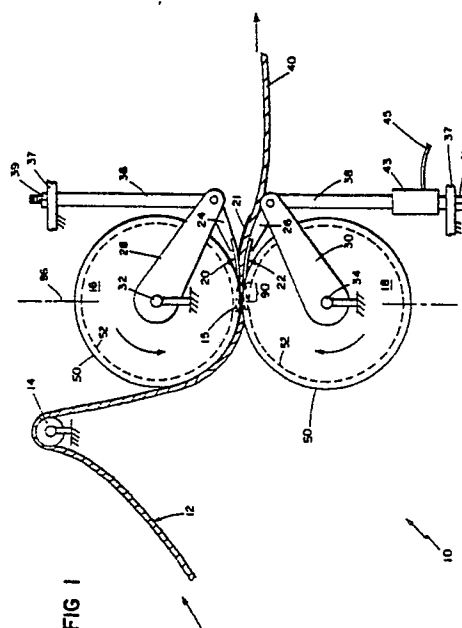
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54 **Machines and method for web processing by longitudinal compression.**

57 A machine and method for longitudinally compressing a web (12) under the influence of driving forces provided at a nip line defined by spaced-apart pairs of matched rotating disks (16,18) and under the influence of retarding forces provided by sets of retarding fingers (20,22) inserted in the spaces between the disks. In the region close to the nip line, web-contacting surfaces of sets of the fingers diverge in the direction of travel of the web whereby the longitudinally compressed web is subjected to tightest constraint of its thickness at a point longitudinally close to the nip line and downstream therefrom, while still confined, the corresponding sections of web are released from tightest constraint, the diverging surfaces promoting uniform movement of the corresponding oncoming sections of compressed web while enabling relatively steady retarding forces to be transmitted laterally through the web to retard the adjacent sections of the web that are in line with the disks, whereby the longitudinal compressive treatment of both the sections of the web in line with the fingers and the sections in line with the disks can be substantially regular. The retarding fingers extend as cantilevers upstream toward the nip line and are

integral extensions of a continuous metal sheet that engages the treated web in its outward movement. A dwell cavity that lightly confines the web can aid in the setting of the treatment, and enable high speed throughout.



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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 (Int. Cl.4)
D, Y	US-A-1 764 676 (CAMPBELL) * Page 3, lines 23-124; figure 1 *	1-3, 8- 12, 20- 25, 33, 28-31	B 31 F 1/12
Y	DE-C- 127 110 (JAGENBERG) * Whole document *	1-3, 8- 12, 20- 25, 33	
Y	US-A-1 601 633 (LORENZ) * Whole document *	1, 8, 33	
Y	US-A-1 751 471 (CAMPBELL) * Whole document *	1-3, 8- 12, 20- 25, 28- 31, 33	
A	DE-C- 846 061 (R. MEHLHORN) * Page 2, lines 92-123 *	13, 15- 17	
A	US-A-2 409 997 (L.A. STRAUBEL)		
A	DE-C- 130 463 (F. BERNHARDT)		
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			B 31 F D 06 C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 29-06-1989	Examiner KORTH C-F.F.A.
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			