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(71) Applicant:
Tokushu Paper Manufacturing Co. Ltd
Suntou-gun, Shizuoka-ken (JP)

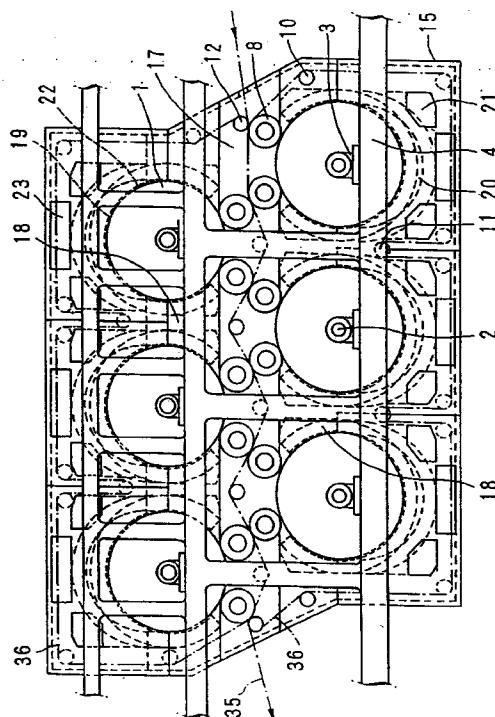
(72) Inventor: **Hanaya, Morimasa**
Mishima-shi, Shizuoka-ken (JP)

(74) Representative: **Dealtry, Brian**
Nottingham NG1 1LE (GB)

(54) **Process and apparatus for drying sheet materials**

(57) An apparatus and method for drying a wet sheet material such as a paper web is presented. The apparatus is provided with a suitable number of dryer cylinders operating in conjunction with a plurality of steam blast ports disposed adjacent to the dryer cylinders. A vertically movable canopy hood and a middle hood having sheet entry/exit opening and a door opening device are provided. The wet sheet material is held between two endless fabric belt, and passed through the dryer cylinders alternatively by means of suction fabric rolls, fabric rolls and fabric tension rolls. The drying process is carried out in an atmosphere of superheated steam of over 100°C inside the canopy hood and the middle hood, and the steam generated from the wet sheets is recirculated through an exhaust screen, a super heated steam circulating fan, an adiabatic compressor and a supply duct. Another atmosphere of heated moist air having a dew point of at least 80°C is also employed. The dried paper product manufactured has high dimensional stability and exhibits superior printing characteristics and substantially increased paper strength, and the process is highly energy conserving.

FIG. 3



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EUROPEAN SEARCH REPORT

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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.6)
X	US-A-4 242 808 (O. LUTHI)	1, 3, 13, 14	D21F5/04 D21F5/00
Y	* the whole document *	4-6, 15, 16, 23-25	
Y	FR-A-2 304 719 (AB SVENSKA FLAKTFABRIKEN) * the whole document *	4-6, 15, 16, 23-25	
X	US-A-5 210 958 (J.F. BOND; R.H. CROTOGINO; M. DOUGLAS)	1, 3, 13, 14, 23-26	
A	* the whole document *	2, 15, 18, 27	
A	US-A-3 751 822 (E.E. CRIST) * figures *	1, 6-10, 15, 16	
A	DE-A-39 22 361 (J.M. VOITH GMBH) * the whole document *	1, 6-10, 15-17, 23-26, 34, 35	TECHNICAL FIELDS SEARCHED (Int.CL.6) D21F
A	GB-A-1 344 301 (HI-FLUX CORPORATION) * the whole document *	11, 21, 22	
A	US-A-3 576 078 (S.G. HOLT)		
A	US-A-4 523 390 (R.A. MCCARTHY)		
A	PATENT ABSTRACTS OF JAPAN vol. 17 no. 446 (C-1098), 17 August 1993 & JP-A-05 098590 (MITSUBISHI HEAVY IND LTD) 20 April 1993, * abstract *		
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 14 December 1995	Examiner D Hulster, E
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