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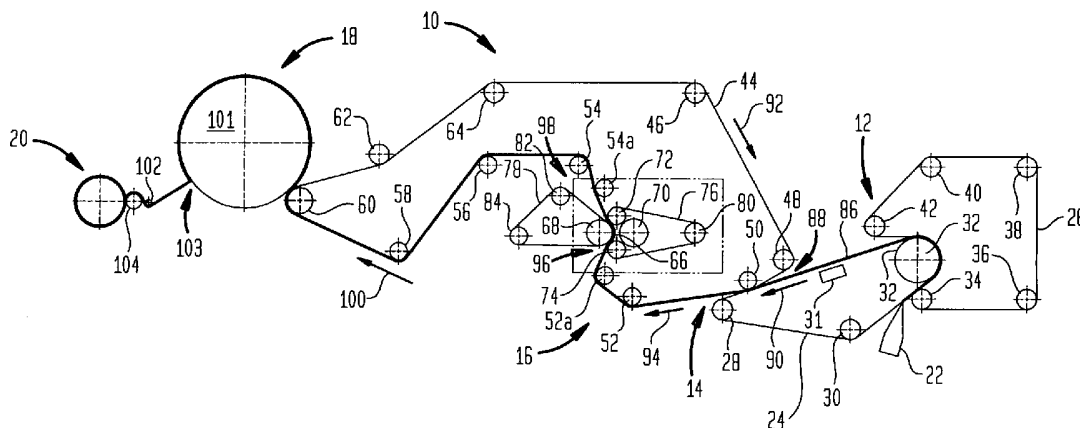
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(54) Title: LOW COMPACTION, PNEUMATIC DEWATERING PROCESS FOR PRODUCING ABSORBENT SHEET



(57) Abstract: A low-compaction method of making an absorbent cellulosic web includes: forming a nascent web from a papermaking furnish; dewatering the nascent web to a consistency of from about 10 to about 30 percent on a foraminous forming support traveling at a first speed; rush-transferring the web at a consistency of from 10 to about 30 percent to an open texture fabric traveling at a second speed slower than the first speed of the forming support; further dewatering the web on the impression fabric to a consistency of from about 30 to about 60 percent by way of (i) combining the open texture fabric bearing said web with a fluid distribution membrane and an anti-rewet felt as the three pass through a nip into a pressure chamber defined in part by a plurality of nip rolls, the fluid distribution membrane bearing against the side of the open texture fabric away from the web, with the anti-rewet felt bearing against the web, and (ii) applying a pneumatic pressure gradient from the distributor membrane through the web thereby dewatering the web; and drying the web. Preferably the process includes the steps of selecting the papermaking furnish and controlling the process such that the dried web has a void volume fraction of at least 0.7, a hydraulic diameter in the range of from about 3 to about 20 microns and a Wet Springback Ratio of at least about 0.65. Optionally provided is a high solids fabric crepe in a pressure nip.

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B. FIELDS SEARCHED
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 U.S. : 162/109-117, 204-207, 358.1, 358.3, 361, 362; 428/152-154; 34/397-400, 417, 419-422, 444, 445, 465

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 JPO Online, espacenet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y, P	US 6,855,227 A (BECK) 15 February 2005 (15.02.2005), entire document.	1-45
Y	US 6,287,426 A (EDWARDS et al) 11 September 2001 (11.09.2001), column 3, lines 47-52, column 7, lines 34-50.	1-33, 36-45
Y	US 6,350,349 A (HERMANS et al) 26 February 2002 (26.02.2002), column 3, line 52 to column 4, line 6.	1-33, 36-45
A	US 6,616,812 A (BECK) 09 September 2003 (09.09.2003), entire document.	1-51

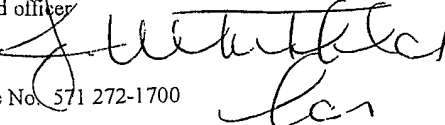
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