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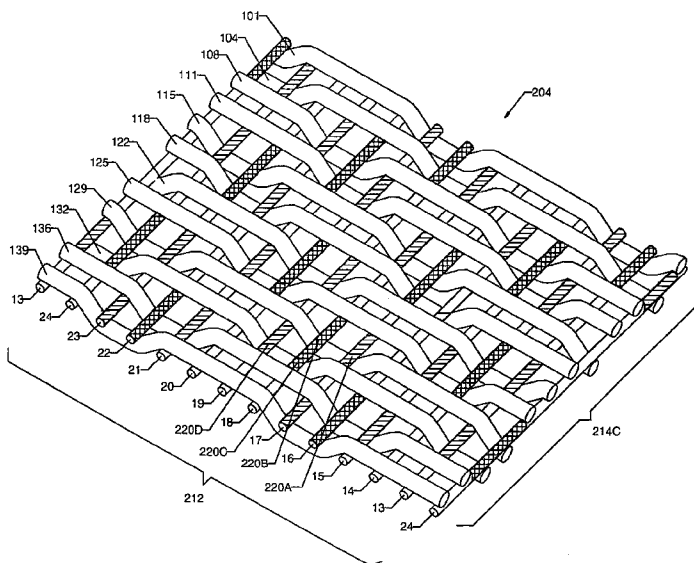
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(54) Title: MACHINE SIDE LAYER WEAVE DESIGN FOR COMPOSITE FORMING FABRICS



(57) Abstract: A machine side layer weave design for use in woven composite papermakers forming fabrics. The composite fabric has two sets of weft yarns interwoven with at least one system of warp yarns. In each repeat of the machine side layer weave design, at least 50% of the warp yarns pass under two adjacent weft yarns on the machine side of the fabric to form a double warp knuckle, and each double warp knuckle is bounded on either side by a single warp knuckle formed on each of the first and second weft passed under by the double warp knuckle. Further, in each repeat of the weave, each weft yarn is passed under by two adjacent warp yarns to form two adjacent single warp knuckles. The knuckles are evenly distributed across the machine side surface. The machine side layer weave design is effective in minimizing or eliminating fabric edge curl.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 07/25083

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - D03D 13/00 (2008.04)

USPC - 442/203

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC (8) - D03D 13/00 (2008.04)

USPC - 442/203

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)

PUBWEST (PGPB,USPT,USOC,EPAB,JPAB) Terms - double warp knuckle machine side paper forming fabrics Astenjohnson Barrett curl

Google - machine side layer weave design for composite forming fabrics double-knuckle; paper forming fabrics warp-knuckle

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	US 6,158,478 A (LEE, ET AL.) 12 Dec 2000 (12.12.2000), col 1, ln 11-15; col 1, ln 43-47; col 2, ln 1-8; FIG. 5	1-4, 6-7, 10, 12, 17, 19 — 5, 8-9, 11, 13-16, 18
Y	US 4,437,496 A (THOMPSON) 20 Mar 1984 (20.03.1984), 3, ln 12-26; FIG. 2	5, 8-9, 11, 13-14, 16, 18
Y	US 7,059,357 B2 (WARD) 13 Jun 2006 (13.06.2006), abstract	15

☐ Further documents are listed in the continuation of Box C.

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

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