



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| <b>(51) International Patent Classification <sup>6</sup> :</b><br><b>D06C 11/00</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>A1</b> | <b>(11) International Publication Number:</b> <b>WO 99/49121</b><br><b>(43) International Publication Date:</b> 30 September 1999 (30.09.99)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>(21) International Application Number:</b> PCT/US99/05203<br><b>(22) International Filing Date:</b> 10 March 1999 (10.03.99)<br><b>(30) Priority Data:</b><br>09/045,094      20 March 1998 (20.03.98)      US<br><b>(71) Applicant:</b> MILLIKEN RESEARCH CORPORATION<br>[US/US]; 920 Milliken Road, Spartanburg, SC 29303 (US).<br><b>(72) Inventor:</b> DISCHLER, Louis; 252 West Park Drive, Spartanburg, SC 29306 (US).<br><b>(74) Agent:</b> PARKS, William, S.; Patent Counsel, P.O. Box 1927, Spartanburg, SC 29304 (US).                                                                                                                                            |           | <b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).<br><br><b>Published</b><br><i>With international search report.</i> |
| <b>(54) Title:</b> PROCESS AND APPARATUS FOR ANGULARLY SUEDED A TEXTILE WEB CONTAINING WARP AND FILL YARNS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>(57) Abstract</b><br><br>A process for angularly sueding a textile web containing fill (15a) and warp (13a) yarns with the steps of supplying the web, controlling the tension of the web, engaging the web with at least one abrasive covered treatment roll (16, 20, 24, 28) disposed at an abrasion angle, rotating the treatment roll at a surface speed different from that of the web, and taking up the supplied web. A preferred embodiment comprises a pair of spaced treatment rolls (16, 20 and 24, 28) disposed at an abrasion angle, and rotating in opposite directions relative to the web. The related apparatus for this specific process is also provided. |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

