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(71) Applicant (for all designated States except US): **PROTECTRON NANOCOMPOSITES PTE LTD** [SG/SG];
24 Raffles Place #27-06, Clifford Centre, Singapore
048621 (SG).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **LIM, Chee Seng, Norman** [SG/SG]; c/o: No. 246 MacPherson Road, #06-02
Betime Building, Singapore 348578 (SG).

(74) Agent: **POH, Chee Kian, Daniel**; Lloyd Wise, Tanjong
Pagar, P.O. Box 636, Singapore 910816 (SG).

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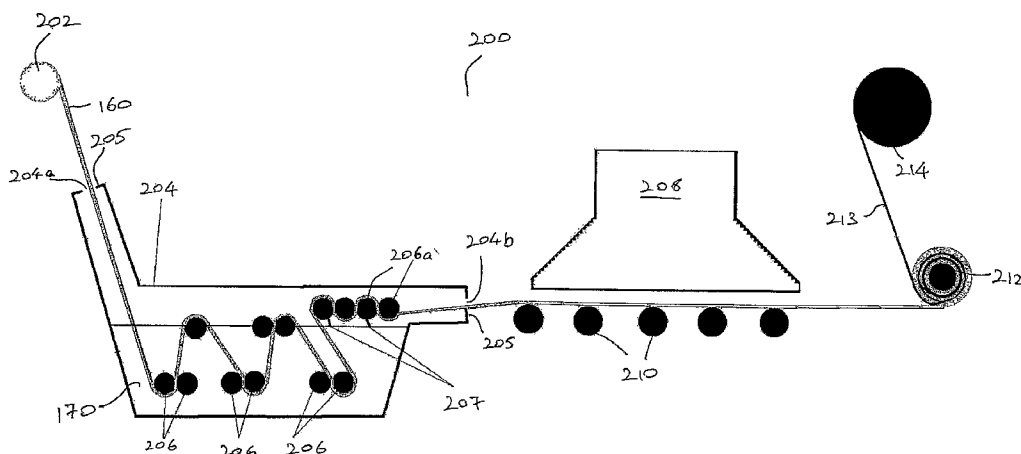
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(54) Title: IMPROVED COLLOIDAL GEL FOR PROTECTIVE FABRIC, IMPROVED PROTECTIVE FABRIC AND METHOD OF PRODUCING BOTH



(57) Abstract: An improved protective fabric impregnated with colloidal gel (170) having colloidal particles suspended in a liquid medium that has an increased particle count is disclosed herein. In a described method, fabric to be impregnated (160) is wet by a diluted colloidal gel (170) produced by shearing the liquid medium and the colloidal particles at varying speeds with the aid of a co-solvent to disperse the particles. The co-solvent allows more colloidal particles to be dispersed in the liquid medium. After wetting, the shear thickening fluid is dried by a hot air blower (208) to produce the protective fabric. The protective fabric can also be made hydrophobic by treating the particles with dimethyl silicone fluid prior to adding of the particles into the liquid medium or coating the fabric with the same after impregnating with the colloidal gel.

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