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(71) Applicant (for all designated States except US): **ENTEGRIS, INC.** [US/US]; 3500 Lyman Boulevard, Chaska, MN 55318 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **EXTRAND, Charles, W.** [US/US]; 408 East Minnehaha Parkway, Minneapolis, MN 55419 (US).

(74) Agents: **CHRISTENSEN, Douglas, J.** et al.; Patterson, Thuente, Skaar & Christensen, P.A., 4800 IDS Center, 80 South Eighth Street, Minneapolis, MN 55402-2100 (US).

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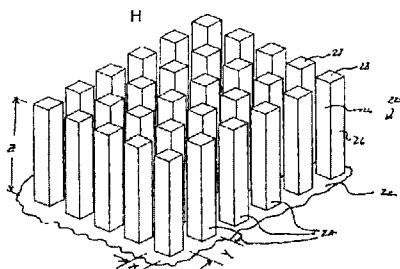
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(54) Title: FLUID HANDLING COMPONENT WITH ULTRAPHOBIC SURFACES

$$\Lambda_L = \frac{-10,239}{\gamma \cos(\theta_{a,0} + \omega - 90^\circ)} \quad (I)$$



(57) Abstract: A fluid handling component having a durable ultraphobic fluid contact surface that is capable of exhibiting ultraphobic properties at liquid pressures of one atmosphere and above. The surface generally includes a substrate portion with a multiplicity of projecting regularly shaped microscale or nanoscale asperities disposed so that the surface has a predetermined contact line density measured in meters of contact line per square meter of surface area equal to or greater than a contact line density value " Λ_L " determined according to the formula: where γ is the surface tension of the liquid in Newtons per meter, $\theta_{a,0}$ is the experimentally measured true advancing contact angle of the liquid on the asperity material in degrees, and ω is the asperity rise angle in degrees.