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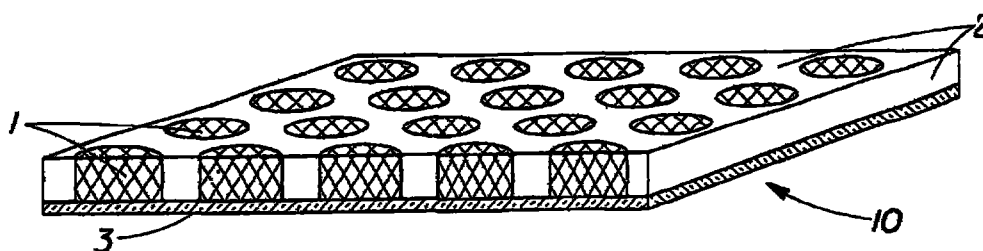
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(54) Title: FLEXIBLE, CUT RESISTANT, AND ABSORBENT FIBROUS SHEET MATERIALS



(57) Abstract: The present invention provides a liquid absorbent fibrous substrate (2) having a plurality of discontinuous cells in which a second material is disposed. This second material is selected from a broad variety of organic or inorganic solids which may provide a reinforcing effect such that a sharp instrument is prevented from passing through the new composite structure. The reinforcing materials (1) are disposed in a discontinuous array, in a cellular form in the fibrous substrate (2) thus providing a path for liquids to be absorbed into said fibrous substrate (2), while said reinforcing materials (1) provide resistance to penetration by sharp edged instruments. When disposed in this manner, flexibility is maintained since the reinforcing materials (1) are not disposed in a continuous pattern. Preferably, the pattern disposed is free of linear regions that provide a continuous line of penetration for sharp edges. More preferably, the pattern is designed with a pattern of interlocking shapes which constrain said linear regions to essentially short lengths. The reinforcing cellular pattern may be embossed above said absorbent fibrous substrate or may be substantially co-planar with said fibrous substrate. The composite substrate may also be backed with a liquid impervious layer (3), either as a separate layer applied thereto to the bottom surface, or as an applied coating. The liquid impervious surface (3) may be usefully selected with a high co-efficient of friction to provide a non-skid surface.

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