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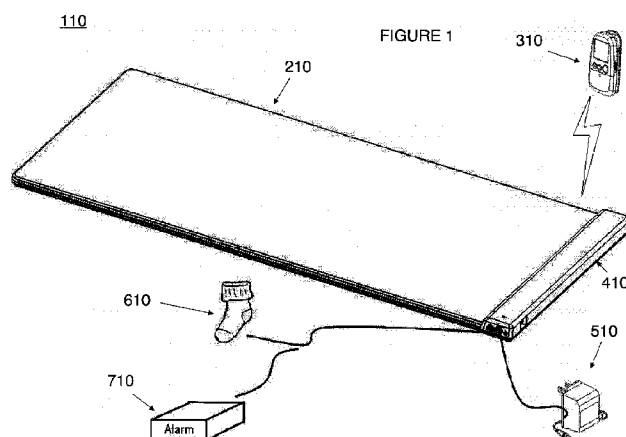
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(54) Title: A BABY MONITORING MAT BASED ON FIBER OPTIC SENSOR



(57) Abstract: The present invention provides a Baby Monitoring Mat having a sensor mat having a top mesh layer, a bottom mesh layer, and two flexible sheets and an optical cable, wherein the optical cable is routed across and sandwiched in between the top mesh layer and the bottom mesh layer, and the flexible sheets further sandwiched the top mesh layer and the bottom mesh layer in between forming sensing area across the flexible sheet surface; a light source for feeding light from one side of the optical cable; a photodiode for detecting light attenuation at the other end of the optical cable; a printed circuit board having a processor connected to the light source and the photodiode, wherein the processor operationally receives signals from the photodiode, the signals are processed to determine movements and breath counts. The signals are generated based on the light attenuation changes along the optical fiber cable detected by photodiode, the light attenuation changes are operationally caused by the optical fiber bending lost caused by the movements and breath. A method for monitoring baby on a mat is also provided.

