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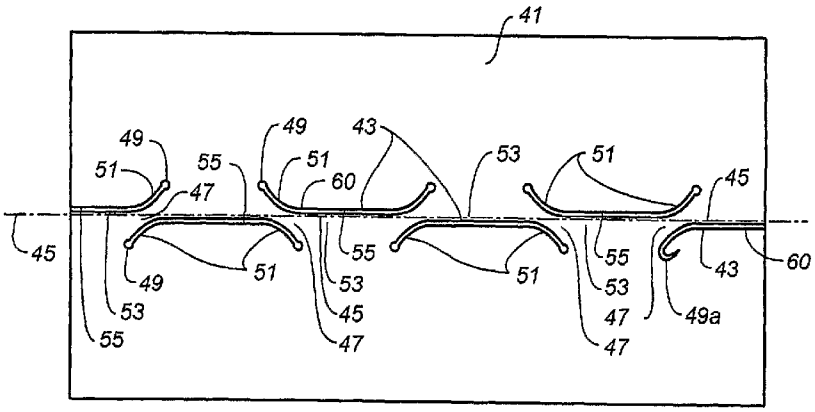
(54) Title: FATIGUE-RESISTANCE SHEET SLITTING METHOD AND RESULTING SHEET



(57) Abstract: A sheet of material (111) having a plurality of bend-inducing structures (113) configured and positioned to produce bending along a bend line (115). The bend-inducing structures (113) have arcuate return portions (122) extending from opposite ends (121) back along the bend-inducing structures (113) toward the other return portion (122) and each return portion (122) has a length dimension and a radius of curvature reducing stress concentrations. Preferably, the length dimension of the arcuate return portion (122) is in excess of twice the thickness. The lateral distance, LD, to which the bend-inducing structures (113) is formed in the sheet away from the bend line (115) is preferably minimized by small radius arcs (125) which connect the return portions (122) to the remainder of the bend-inducing structures (113). A method of forming a structure (131) from a sheet of material (111) to resist cyclical loading is also disclosed, as is a method to increase the fatigue resistance of a structure (131) formed by bending a sheet of material (111) along a bend line (115) having a plurality of bend-inducing structures (113).

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