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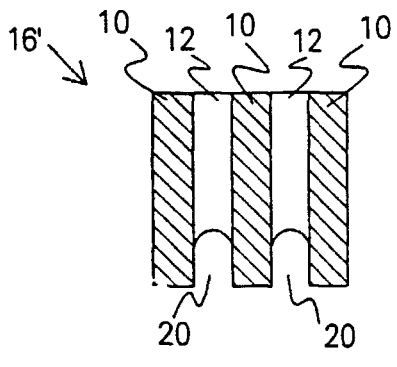
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(54) Title: NANOSCALE PATTERNING FOR THE FORMATION OF EXTENSIVE WIRES



(57) Abstract: A method for forming a platen (16') useful for forming nanoscale wires for device applications comprises: (a) providing a substrate (14) having a major surface (14a); (b) forming a plurality of alternating layers (10,12) of two dissimilar materials on the substrate to form a stack having a major surface parallel to that of the substrate; (c) cleaving the stack normal to its major surface to expose the plurality of alternating layers; and (d) etching the exposed plurality of alternating layers to a chosen depth using an etchant that etches one material at a different rate than the other material to thereby provide the surface with extensive strips of indentations (20) and form the platen useful for molding masters for nano-imprinting technology. The pattern of the platen is then imprinted into a substrate comprising a softer material (22) to form a negative of the pattern, which is then used in further processing to form nanowires (26').

WO 01/65600 A3