

92. The method of claim 86, wherein the method further comprises a step of:

(D) prior to the step (B), selecting a substantially planar sheet of material as the principal element.

93. The method of claim 86, wherein the step (A) comprises disposing a predetermined substrate between the support surface and the principal element, and wherein the step (B) comprises a step of using the predetermined substrate to couple the at least one region of the principal element to the at least one region of the support surface.

94. In a force sensor, a method for separating a first capacitor plate from a second capacitor plate by a desired volume, the method comprising steps of:

(A) disposing a predetermined substrate containing particles of controlled size between a support surface and a principal element including the first capacitor plate to produce a separation of at least the desired volume between the first capacitor plate and the second capacitor plate; and

(B) coupling at least one region of the principal element to at least one region of the support surface to maintain the separation of at least the desired volume between the first capacitor plate and the second capacitor plate.

95. The method of claim 94, wherein the step (A) comprises a step of flowing the predetermined substrate in a fluid state between the principal element and the support surface, and wherein the step (B) comprises a step of allowing the predetermined substrate to transition into a solid state.

96. A method for manufacturing a force sensor, the method comprising steps of:

(A) selecting a principle element including a substantially flat surface and a first capacitive surface;

(B) disposing the first capacitive surface in opposition to a second capacitive surface; and

(C) forming an elevated elastic feature into the substantially flat surface, whereby transmission of a force through the elevated elastic feature contributes to a change in capacitance between the first capacitor plate and the second capacitor plate.

97. The method of claim 96, wherein the substantially flat surface and the first capacitive surface are integral.

98. The method of claim 96, wherein the step (A) comprises a step of selecting a sheet of electrically conductive material as the principal element.

99. The method of claim 96, further comprising a step of:

(D) placing the elevated elastic feature in communication with a touch surface to which the force is applied, whereby the elevated elastic feature provides a region of load transmission from the touch surface to the principal element.

100. In a force sensor, a method for separating a first capacitor plate from a second capacitor plate by a desired volume, the method comprising steps of:

(A) disposing a separator between the second capacitor plate and a substantially planar principal element including the first capacitor plate to maintain a sepa-

ration of at least the desired volume between the first capacitor plate and the second capacitor plate;

(B) coupling at least one region of the principal element to at least one region of the support surface that is substantially parallel to the principal element; and

(C) removing the separator, whereby the first capacitor plate and the second capacitor plate remain separated by at least the desired volume in an unloaded state of the capacitive force sensor.

101. A force sensing touch location device comprising:

a touch surface structure to which a touch force may be applied, the touch force including a perpendicular component that is perpendicular to a touch surface of the touch surface structure and a tangential component that is tangential to the touch surface of the touch surface structure;

a supporting structure;

at least one force sensor, in communication with the touch surface and the supporting structure, to measure properties of the touch force;

lateral restraint means, in contact with both the touch surface structure and the supporting structure, for impeding lateral motion of the touch surface structure without substantially impeding transmission of the perpendicular component of the touch force through the at least one force sensor.

102. The force sensing touch location device of claim **101**, wherein the lateral restraint means comprises a thin member in contact with both the touch surface structure and the supporting structure.

103. The force sensing touch location device of claim **102**, wherein the thin member joins the touch surface to a surrounding frame.

104. The force sensing touch location device of claim **103**, wherein the thin member comprises at least one strip of tape.

105. The force sensing touch location device of claim **102**, wherein the thin member is constructed of high-modulus material to be substantially stiff to tangential movement of the touch surface and substantially compliant to perpendicular motion of the touch surface.

106. The force sensing touch location device of claim **101**, wherein the touch surface comprises a display surface.

107. The force sensing touch location device of claim **101**, wherein the touch surface comprises a touch overlay overlaying a display surface.

108. The force sensing touch location device of claim **101**, wherein the lateral restraint means comprises a preload spring.

109. The force sensing touch location device of claim **108**, wherein the preload spring is fastened to an edge of the touch surface.

110. The force sensing touch location device of claim **108**, wherein the preload spring has a non-uniform unloaded curvature.

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