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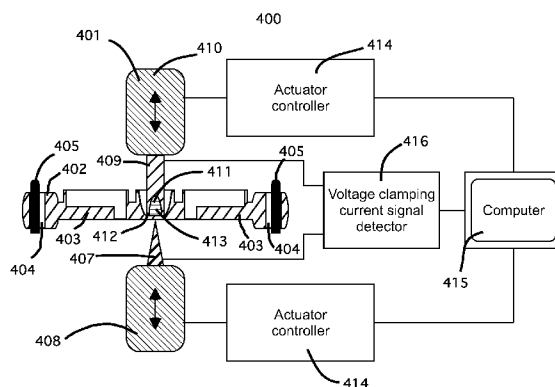
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(54) Title: PARTICLE SENSITIVE/RADIATION SENSITIVE DEVICES



(57) Abstract: A device (401) is provided for fabricating a deformable aperture in an injection- moulded cruciform polyurethane sheet (402) having four arms (403) containing the eyelets (404) for attachment of the sheet (402) to the aperture fabrication apparatus via the pins (405). The device (401) incorporates a sharpened probe (407) connected to a mechanical actuator (408) and an elastomer support component (409) connected to a mechanical actuator (410) and positioned directly opposite to the sharpened probe (407) on the opposite side of the sheet (402). The elastomer support component (409) comprises a metallic rod of stainless steel bearing a cavity (411) filled with an electrolyte fluid (413). The mechanical actuator (408) is configured to enable precise mechanical actuation of the sharpened probe (407) to and fro perpendicular to the plane of the sheet (402). Likewise the mechanical actuator (410) is configured to enable precise mechanical actuation of the elastomer support component (409) to and fro perpendicular to the plane of the sheet (402). Connected to each actuator (408) and (410) is an actuator controller (414) that is in turn connected to and controlled by a computer (415). The sharpened probe (407) and the elastomer support component (409) are both connected to a voltage clamping current signal detector (416). During fabrication of the aperture the elastomer support component (409) is used to modulate the degree of elastic recoil of the sheet (402), and can be adjusted one or more times to one or more prescribed positions to achieve a mechanical conditioning prior to, during or post fabrication of the aperture.

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