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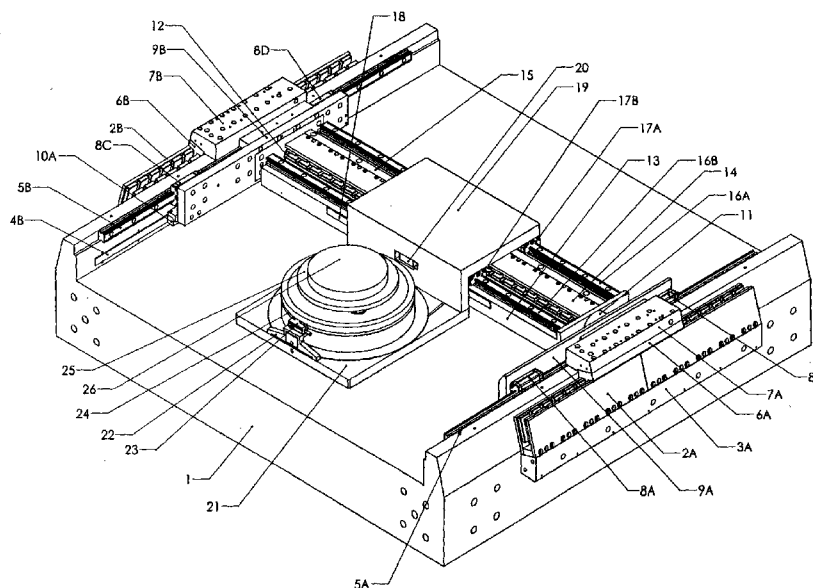
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(54) Title: A PLANAR POSITIONING SYSTEM AND METHOD OF USING THE SAME



(57) Abstract: A positioning system having a flat base comprising (i) a X-axis assembly having a X-axis linear actuator means ar-
ranged orthogonal to the Y-axis; (ii) a Y-axis assembly having a pair of Y-axis linear actuator means mounted onto the flat base
forming a H-configuration; (iii) a Z-axis assembly having an aerostatic bearing mechanism that floats on thin film of externally pres-
surized air on top of the flat base; and a θ -axis actuator anchored from the X-axis to drive the Z-axis assembly which carries a work-
piece, wherein the Z-axis assembly is rotated with the rotary axis for the θ -axis perpendicular to the flat base.