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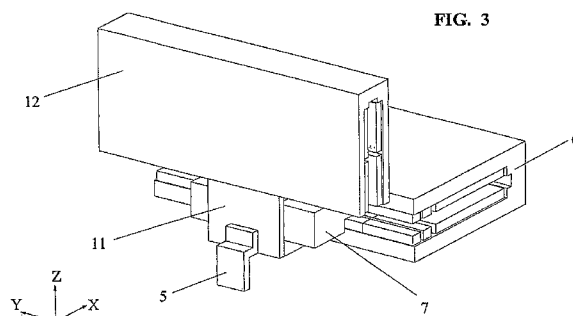
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(54) Title: DIRECT DRIVE XYZ POSITIONING SYSTEM WITH REDUCED MOVING PARTS



(57) Abstract: A direct drive XYZ positioning system comprising a planar motor; and a Z axis motor. The planar motor comprises an X voice coil motor and a Y linear brushless motor which provides motor force in the X direction and Y direction respectively, while the Z axis motor provides motor force in the Z direction. Its construction reduces the number of moving parts resulting also in lower mass and eliminates moving support structures for X and Y. The force from each motor coil is transmitted more directly to the load, resulting in a system with higher stiffness, less moment loads and lower moving mass, allowing higher accelerations and shorter settling times.

