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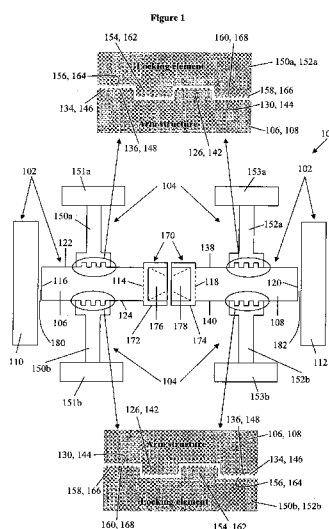
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(54) Title: MICROELECTROMECHANICAL SYSTEM (MEMS) DEVICE, METHOD OF OPERATING THE SAME, AND METHOD OF FORMING THE SAME



(57) Abstract: A microelectromechanical system (MEMS) device, method of operating the MEMS device, and a method of forming the MEMS device are provided. The MEMS device includes a positioning mechanism and a locking mechanism. The positioning mechanism includes a first arm structure having a first surface and a second surface; a second arm structure having a first surface and a second surface; wherein the first surface of the first arm structure faces the first surface of the second arm structure. The positioning mechanism also includes a first actuator disposed adjacent to the second surface of the first arm structure facing away from the second arm structure; and a second actuator disposed adjacent to the second surface of the second arm structure facing away from the first arm structure. The locking mechanism includes a first pair of locking elements arranged such that each locking element is disposed at two opposite side surfaces of the first arm structure between the first and second surfaces of the first arm structure; and a second pair of locking elements arranged such that each locking element is disposed at two opposite side surfaces of the second arm structure between the first and second surfaces of the second arm structure. The first and second pairs of locking elements are configured to engage with and disengage from the first and second arm structures respectively.



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