

Title (en)
DEFORMABLE STRUCTURAL ARRANGEMENT

Title (de)
VERFORMBARER STUKTURAUFBAU

Title (fr)
AGENCEMENT STRUCTURAL DEFORMABLE

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Abstract (en)
[origin: WO9636462A1] An actuator (10) develops a displacement from a force; the actuator employs active tension elements (20) which comprise a fiber or fibers which shorten under activation, for example, shape memory alloy fibers; the fiber or fibers are entrained between opposed, spaced apart support members (12, 26), typically a stack of spaced apart disks; the entrained fiber or fibers define a cage of crossing lengths of fiber in symmetrical array, typically a helicoidal array. Activation of the fibers shortens the fiber lengths producing a relative displacement of the support members which can be translated to a component which is to be displaced, and to which the actuator is operably connected, in another embodiment the active tension elements stretch under stress so that instead of an actuator there is formed a shock absorber which eliminates displacement with a force.

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