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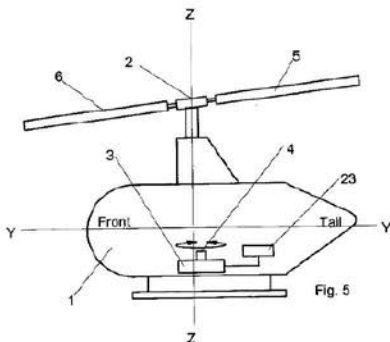
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(54) Title: TORQUE AMPLIFYING APPARATUS AND SYSTEM



(57) Abstract: A torque amplifying device that is of centrifugal or gyroscopic type and has a unidirectional drive or drives. This device is used to control the body of a controlled object. The controlled object can be an airplane, helicopter, land vehicle, cargo handling mechanism, earth moving machine or maritime device or vehicle. The torque amplifying devices are designed so that they supply a torque (momentum) to the body of the controlled object where it is connected. Thereby, the orientation or weight distribution of the body is controlled. The orientation is achieved without resorting to the physical properties of the surrounding environment (ground, water or air). Thus, it can apply a torque to this body in pitch, roll and/or yaw, so that it achieves the position or weight distribution the control system is calling for. The duration of the torque can be unlimited, until the conditions that produce it are intentionally changed.