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(54) Title: MOTION-IMPARTING APPARATUS

(57) Abstract

Apparatus for imparting motion to a load comprises means (25) for applying a force to the load and a compliant support (27) for the load, in which there are provided means (9, 10, 11) for effecting dynamic variation of the compliance of the support during operation of the apparatus so as to optimise the power efficiency. The apparatus may be capable of controlling relative motion in a plurality of degrees of freedom between a platform (42) and a reference plane (41) the compliant means (27) acting to support the weight of the platform, and the force-applying means (25) being one or more actuators for applying perturbing forces between the platform and the reference plane. Control means (11, 12) act to control the or each actuator (43) to move in one direction or the other whereby to displace the platform (42) with respect to the reference plane (41). At least part of the compliant support (27) may be a gas spring and in one embodiment this is in the form of a bellows (45) supporting the platform.

