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(54) Title: BALANCE-ASSISTIVE DEVICE AND SYSTEM

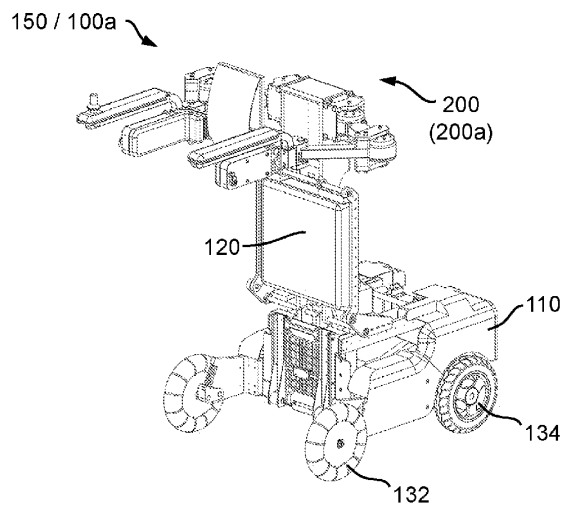


FIG. 2A

(57) Abstract: A device having a support interface and one or more sensors disposed to sense forces exerted on the support interface. The device includes a linkage structure having a plurality of lower- pair joints and a plurality of linkages. The support interface is coupled to one of the plurality of linkages. Each of the plurality of lower-pair joints couples two of the plurality of linkages such that the linkage structure defines a closed kinematic chain. A selected plurality of the lower- pair joints is a plurality of lockable lower-pair joints. Each of the plurality of lockable lower- pair joints has a locally actuatable braking mechanism that is actuatable independently of any other of the plurality of lower-pair joints.

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