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(54) Title: SYSTEM AND METHOD FOR STAIR CLIMBING IN A CLUSTER-WHEEL VEHICLE

(57) Abstract

A system and method for operating a device in ascending or descending stairs. The device has a plurality of wheels rotatable about axes that are fixed with respect to a cluster arm, where the cluster arm itself is rotated about an axis so that wheels rest on successive stairs. The wheels and cluster arms are controlled according to separate control laws by a controller. Whether the device ascends or descends the stairs is governed by the pitch of the device relative to specified front and rear angles. Shifting the center of gravity of the combination of device and payload governs the direction of motion of the device.

