US005611555A

United States Patent [19]

Vidal

[11] **Patent Number:** 5,611,555

[45] **Date of Patent:** Mar. 18, 1997

[54] **ARTICULATED BALANCER WITH AN OSCILLATING AXLE AND HAVING LOCKING POSSIBILITIES**

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[21] Appl. No.: **177,082**

[22] Filed: **Jan. 3, 1994**

[30]   **Foreign Application Priority Data**

Jan. 4, 1993 [ES] Spain 9300004

[51] **Int. Cl.⁶** **B60G 5/00**

[52] **U.S. Cl.** **280/113**; 280/112.2; 280/62; 280/97; 180/215

[58] **Field of Search** 280/112.2, 113, 280/62, 282, 111, 126, 97, 772; 180/210, 211, 215

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[57]   **ABSTRACT**

An articulated balancer with an oscillating axle and having locking possibilities provides dynamic stability and static balance to a vehicle having a high center of gravity in rounding curves. This vehicle has three wheels, one in front and two in the rear. It rivals the maneuverability of a motorcycle, yet offers a higher level of safety and convenience than conventional motorcycles. The stability in curves is obtained by enhancing the lateral tilting of the vehicle. For this, each rear wheel must allow an up or down motion; each of these motions is opposite to the other but to the same extent. By means of "ball-and-socket" hinged joints, two connecting rods connect the balancer with the rear swinging forks, converting the balancer's rotation to an up-and-down motion. The balancer's axle allows an oscillation motion controlled by a shock absorber, that provides the rear suspension of the vehicle. The static balance and certain characteristics of its dynamic behavior are obtained by locking the rotation of the balancer.

5 Claims, 14 Drawing Sheets