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(12) **United States Patent**
Kakinuma et al.

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(54) **COAXIAL TWO-WHEEL VEHICLE**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 605 days.

This patent is subject to a terminal disclaimer.

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U.S. Appl. No. 12/533,755, filed Jul. 31, 2009, Kosaka, et al.

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Primary Examiner — J. Allen Shriver, II

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Assistant Examiner — Bridget Avery

(65) **Prior Publication Data**

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(30) **Foreign Application Priority Data**

(57) **ABSTRACT**

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A coaxial two-wheel vehicle on which a rider stably travels without the upper body being swayed left and right in a riding state of the center of gravity being positioned high is provided.

(51) **Int. Cl.**
B60K 1/02 (2006.01)
B62D 11/04 (2006.01)
B62D 61/00 (2006.01)

The coaxial two-wheel vehicle includes: a step plate for a driver to ride; a vehicle body that supports the step plate so as to be capable of changing a posture in a roll direction of rotating around a roll axis as the center, when a traveling direction is made the roll axis; a pair of wheels disposed on both sides on the same axis in the direction orthogonal to the traveling direction of the vehicle body and rotatably supported by the vehicle body; a pair of wheel drive means to drive and rotate the pair of wheels independently; and a handle for directly changing a posture of the step plate or indirectly changing the posture through the vehicle body.

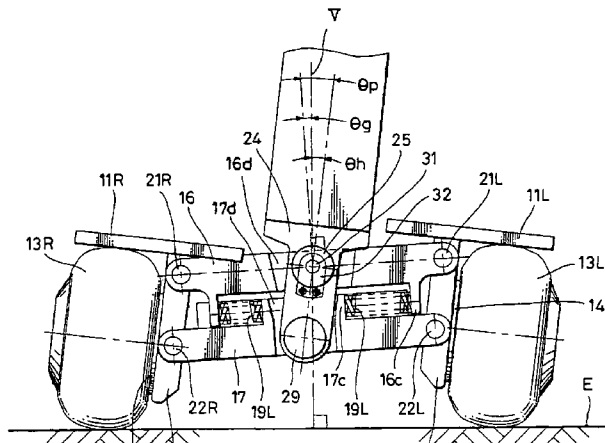
(52) **U.S. Cl.** **180/65.1**; 180/6.5; 180/218
(58) **Field of Classification Search** 180/65.1, 180/65.5, 180, 181, 218, 6.5, 21, 7.1; 280/652, 280/87.041, 33.992, 32.7, 63
See application file for complete search history.

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14 Claims, 12 Drawing Sheets



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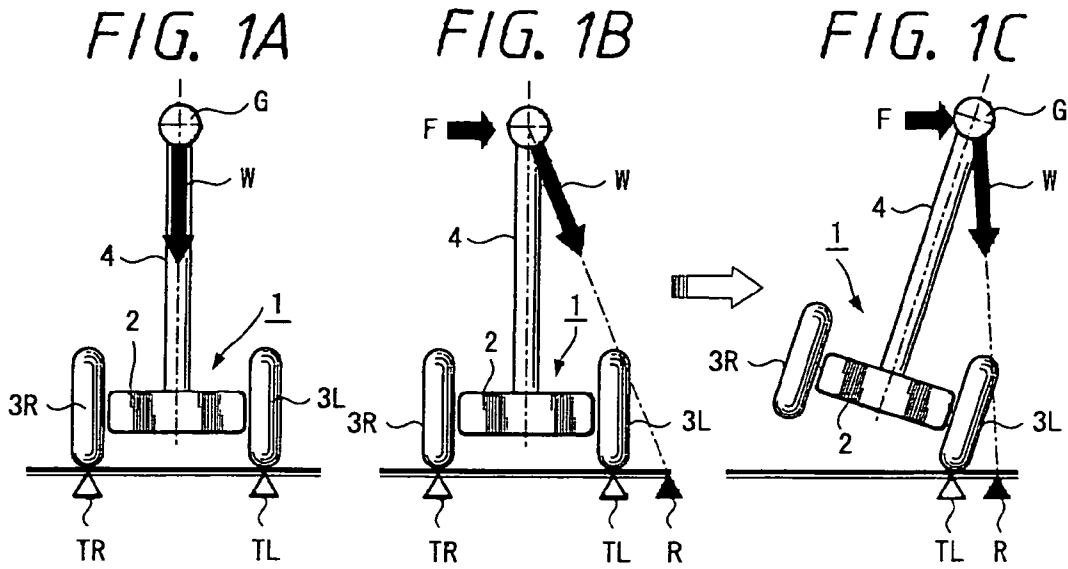


FIG. 2

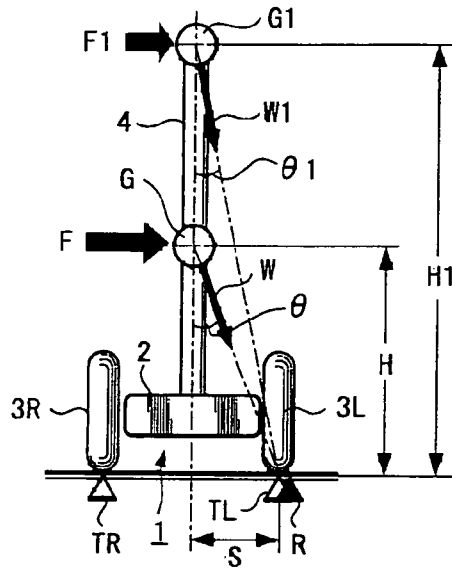


FIG. 3

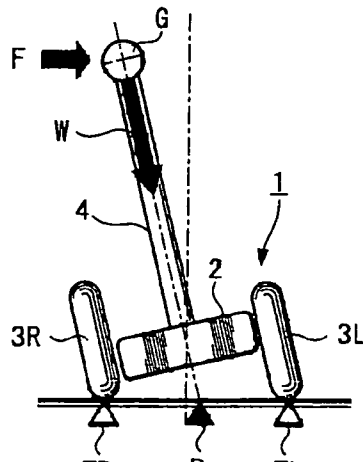


FIG. 4A

FIG. 4B

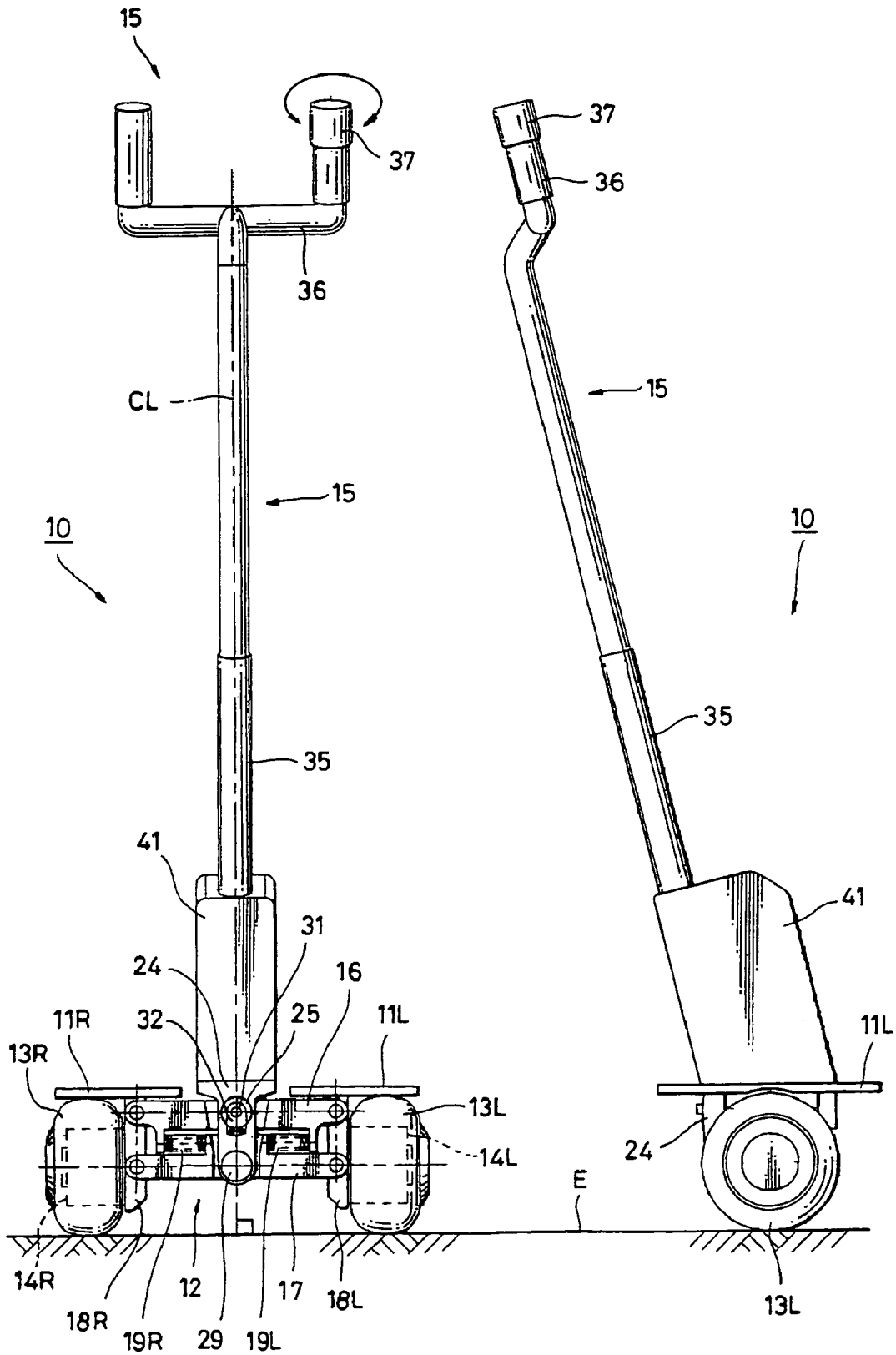


FIG. 5

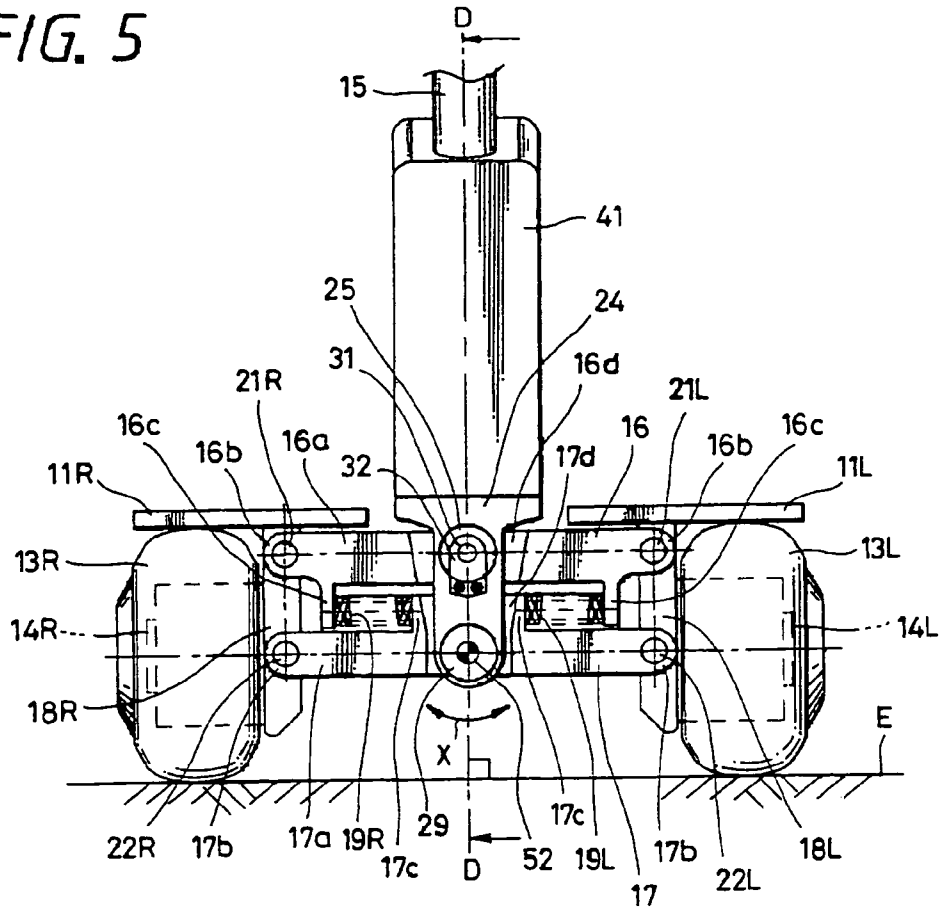
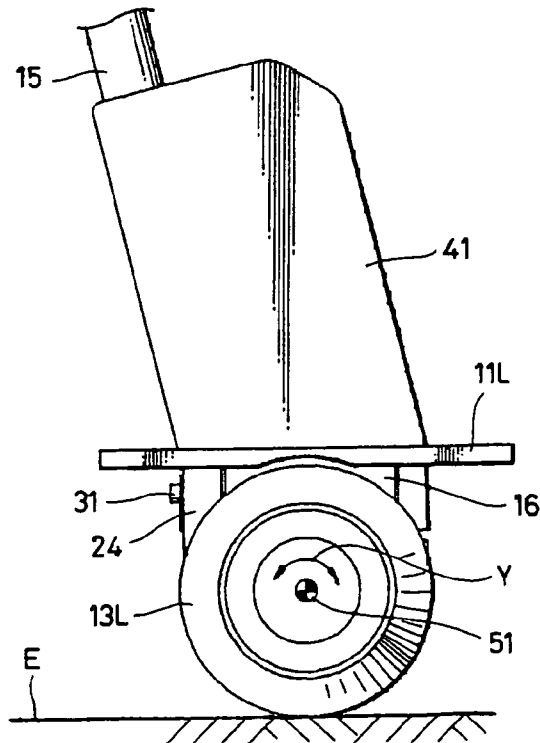


FIG. 6



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