



US006921870B2

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

(10) **Patent No.:** **US 6,921,870 B2**
(45) **Date of Patent:** **Jul. 26, 2005**

(54) **SHIFTING MECHANISM FOR ELECTRIC VEHICLES**

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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 0 days.

(21) Appl. No.: **10/673,387**

(22) Filed: **Sep. 30, 2003**

(65) **Prior Publication Data**

US 2004/0069557 A1 Apr. 15, 2004

(30) **Foreign Application Priority Data**

Oct. 9, 2002 (TW) 91216134 U

(51) **Int. Cl.**⁷ **H01H 3/00**

(52) **U.S. Cl.** **200/6 R; 200/6 B; 200/18**

(58) **Field of Search** **200/6 R, 6 B, 200/17 R, 18, 61.85, 88, 1 R, 5 B**

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Primary Examiner—Lincoln Donovan

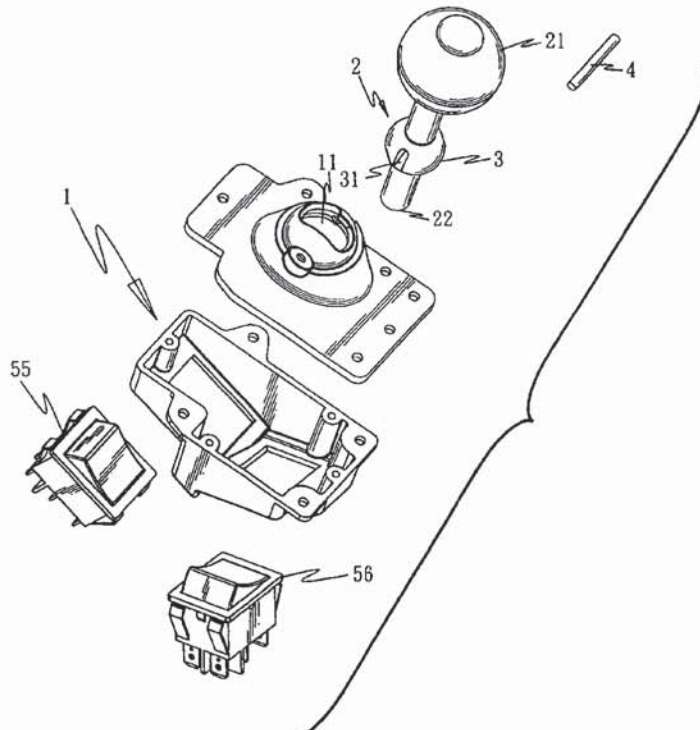
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(57) **ABSTRACT**

A shifting mechanism for electric vehicles includes an operation bar coupled with a universal joint mounting on an electric vehicle body. The operation bar may be turned and swiveled in multiple directions and has a free end movable according to preset paths of a guiding means. The operation bar may be swiveled in different directions or through the guiding means to switch circuits that control motor positive rotation and reverse rotation at high speed or low speed. Thereby a definite direction is provided to switch the direction and speed. The switches are located on different positions and arranged in low—high speed and forward (positive rotation)—backward (reverse rotation) fashion so that the backward movement can only be exercised at the low speed to avoid the risk of backward high speed condition to secure safety for children's ride-on electric vehicles.

20 Claims, 12 Drawing Sheets



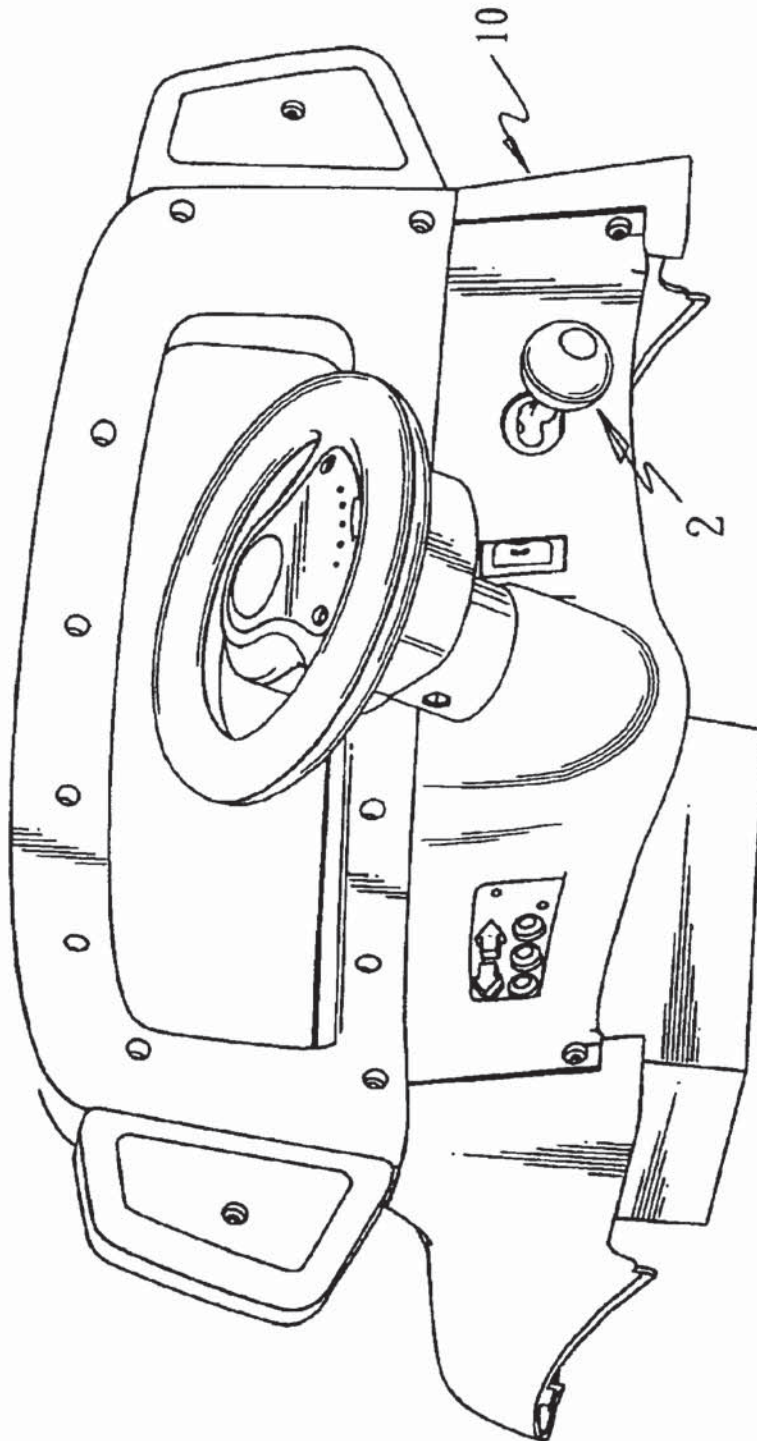


FIG.1

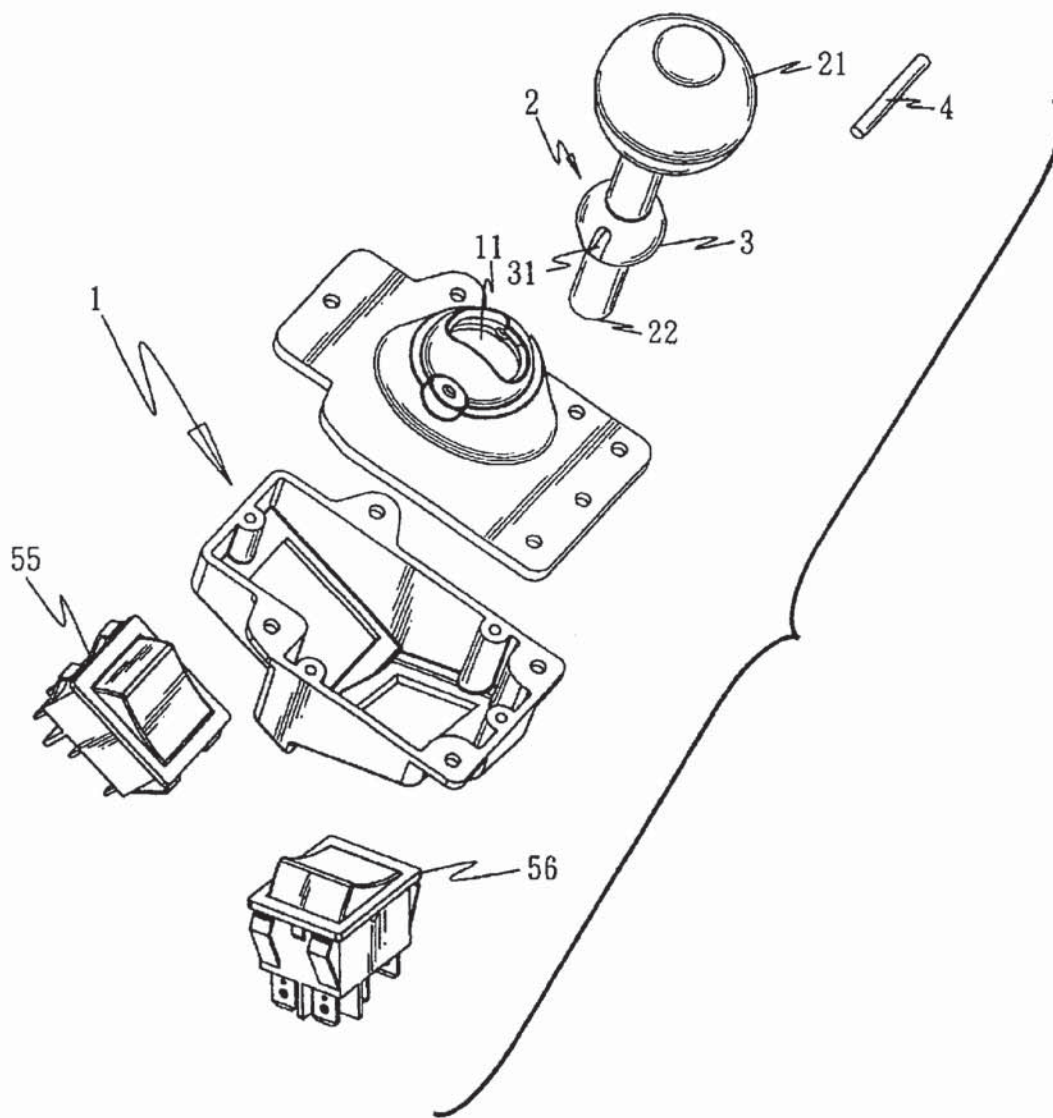


FIG.2

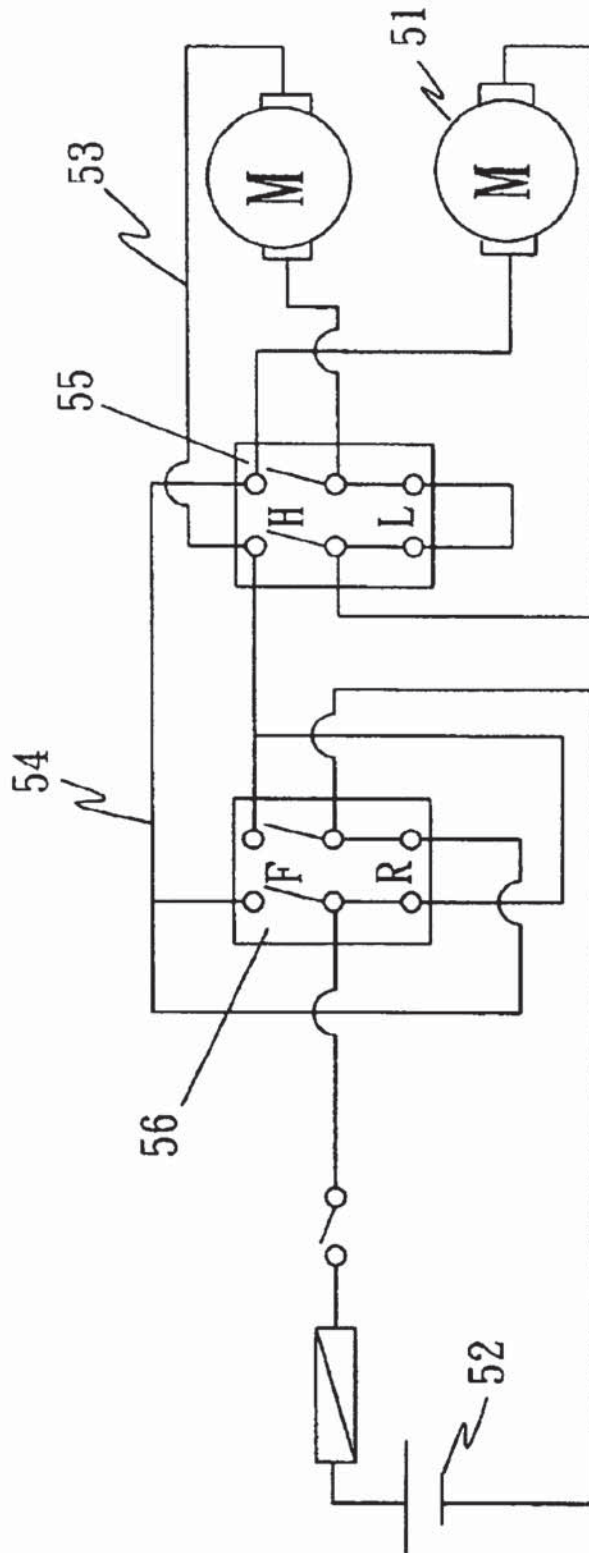


FIG. 3

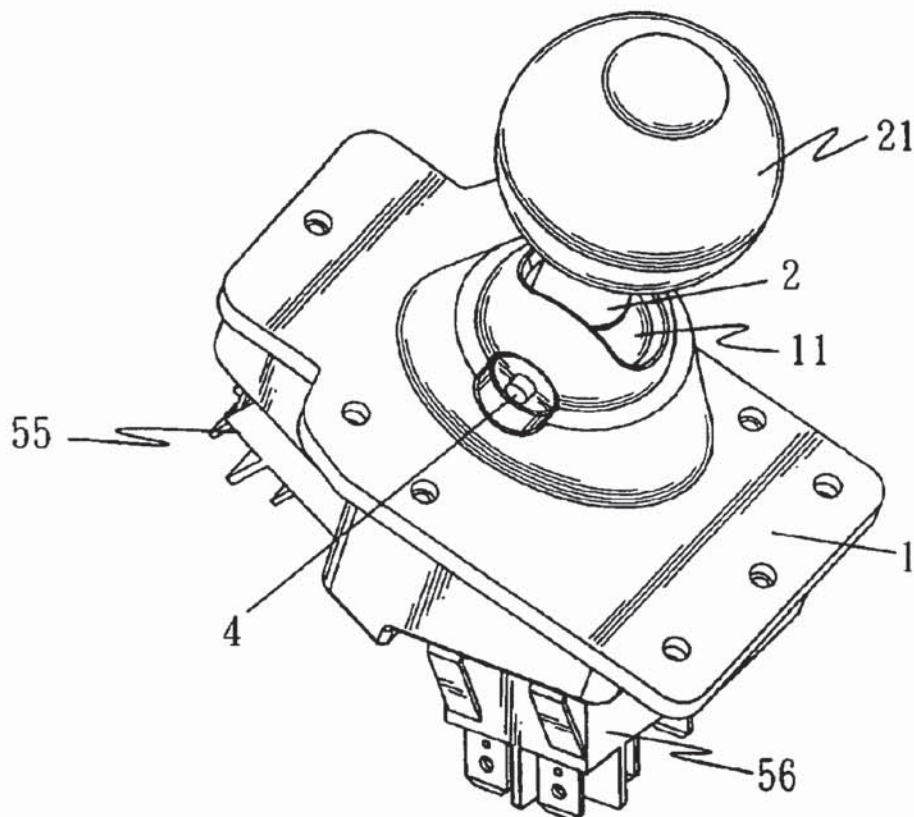


FIG.4

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