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Lucas et al.

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(54) **CHILDREN'S RIDE-ON VEHICLES HAVING IMPROVED SHIFTER ASSEMBLIES**

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(73) Assignee: **Mattel, Inc.**, El Segundo, CA (US)

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(Continued)

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(51) **Int. Cl.**
G05G 9/00 (2006.01)

(57) **ABSTRACT**

(52) **U.S. Cl.** **180/65.1; 74/471 R**

(58) **Field of Classification Search** 180/65.1,
180/65.6, 65.8, 167, 169, 908; 74/469, 471 R,
74/473.1, 473.21, 473.28, 471 XY; 200/61.88,
200/61.85

See application file for complete search history.

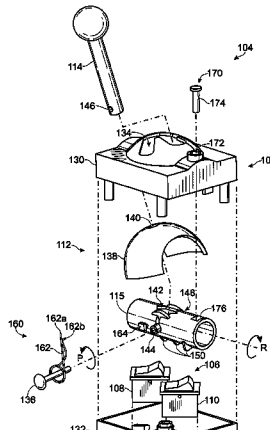
Children's ride-on vehicles having improved shifter assemblies. The vehicles include a drive assembly comprising a velocity control assembly that selectively configures the drive assembly within a plurality of drive configurations and which includes a switch assembly adapted to be selectively configured between a plurality of velocity settings. Each velocity setting configures the drive assembly to a predetermined drive configuration. The velocity control assembly may include an actuator assembly that receives user inputs via a shifter handle moveable between a plurality of shift positions along a plurality of shift paths. Each shift position configures the switch assembly to a particular velocity setting. At least two of the shift paths have non-linear relative orientations. In some embodiments, the actuator assembly includes a biasing mechanism, which urges the shifter handle towards a selected shift position, and/or a restraining mechanism, which selectively prevents the shifter handle from being moved to a selected shift position.

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38 Claims, 10 Drawing Sheets



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Fig. 1

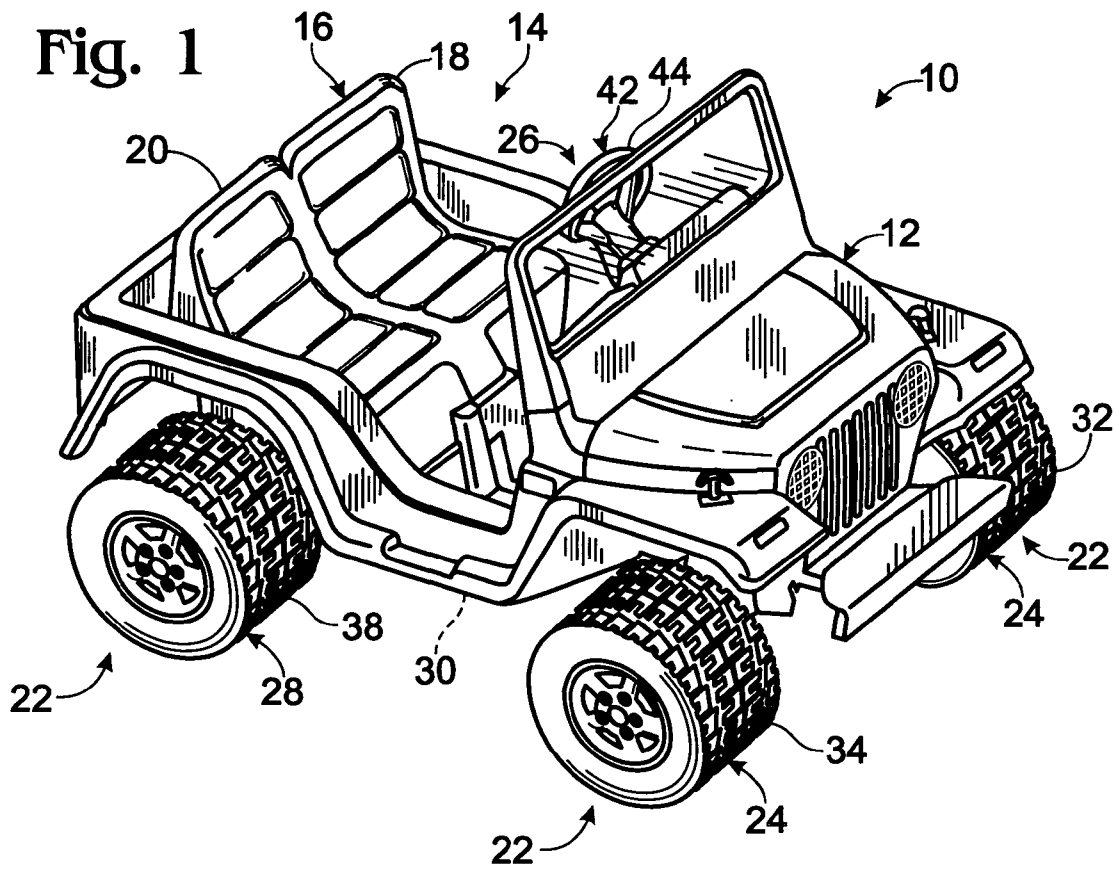


Fig. 2

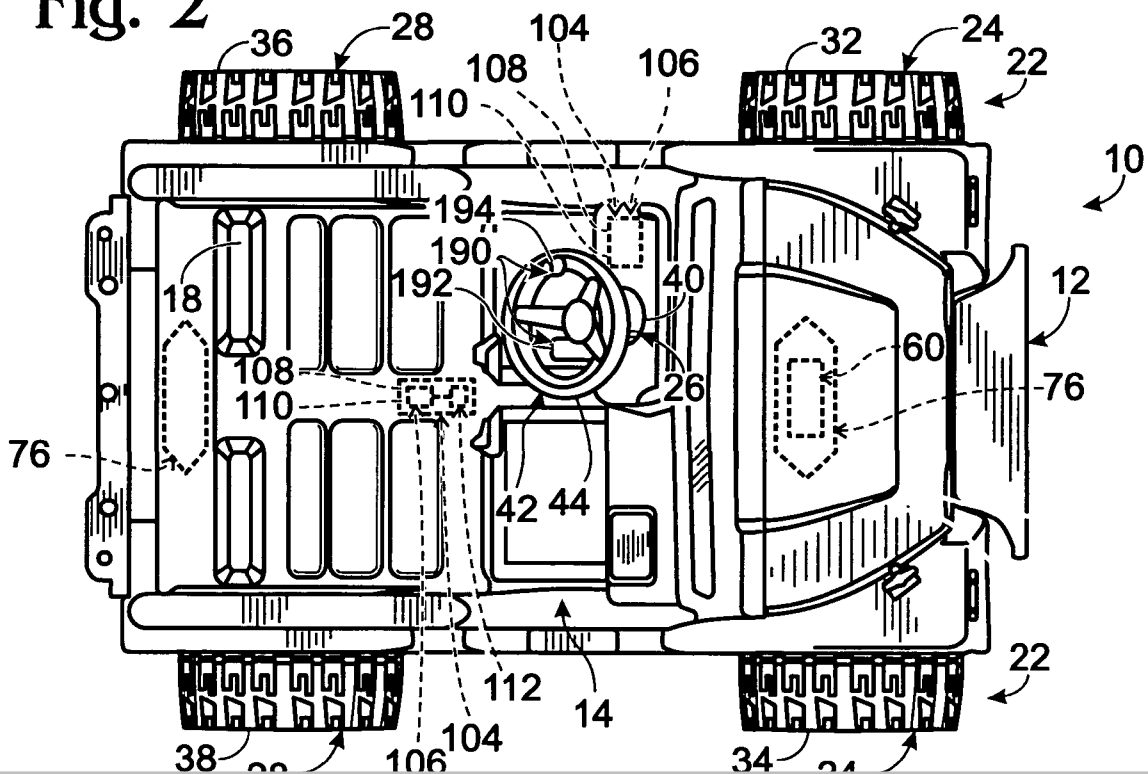


Fig. 3

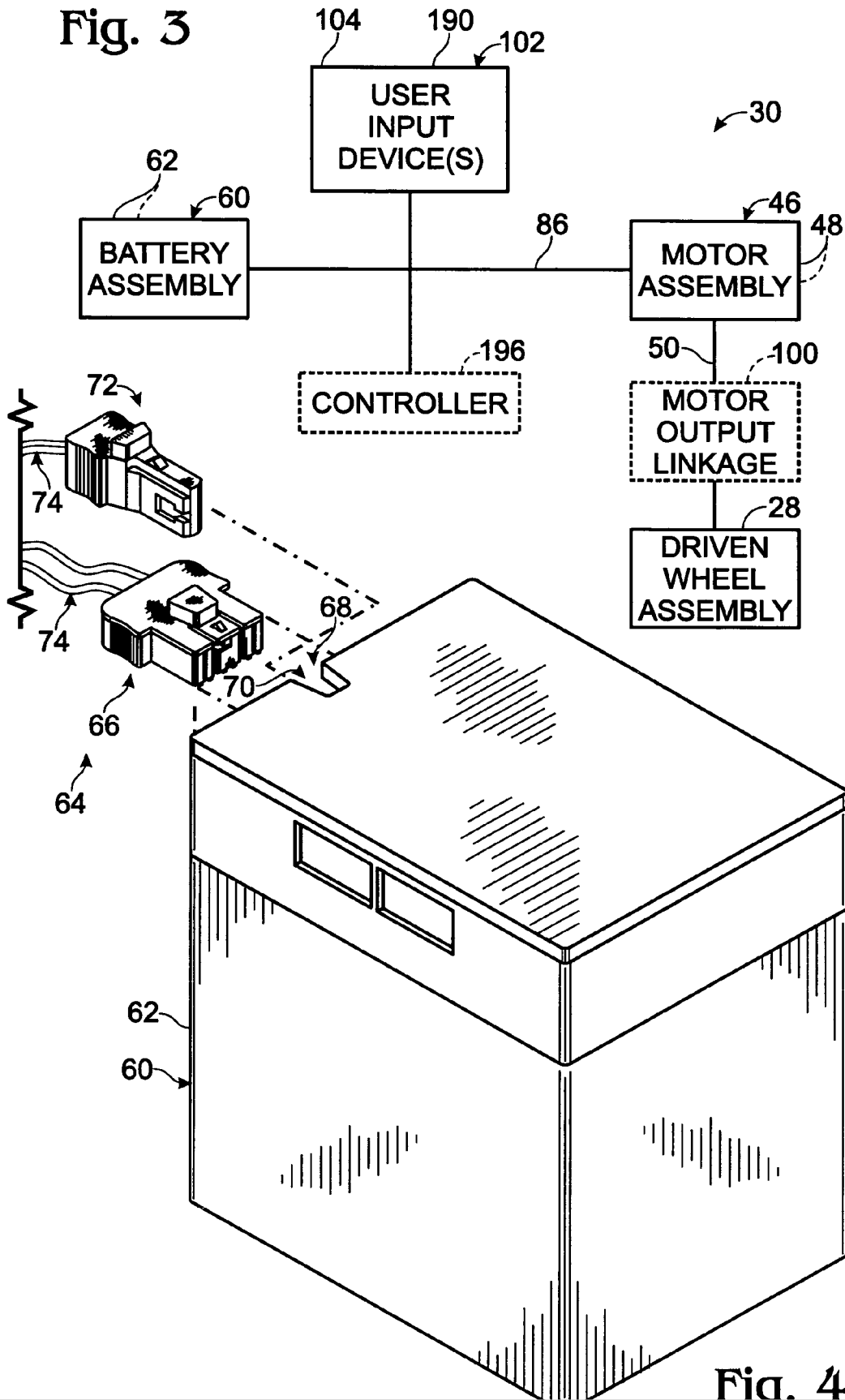


Fig. 4

Fig. 5

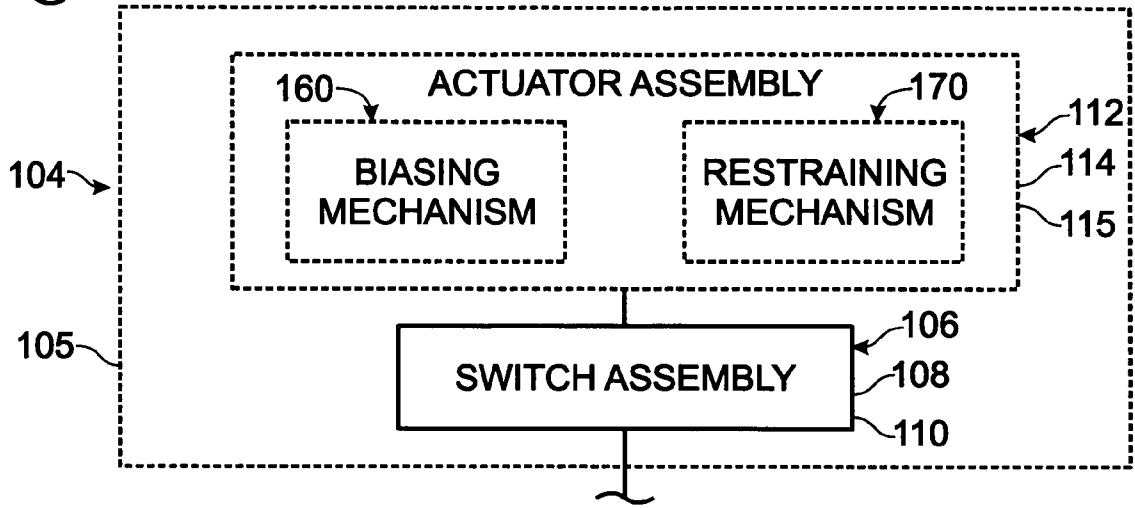


Fig. 6

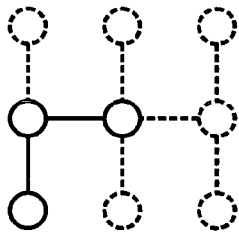


Fig. 7

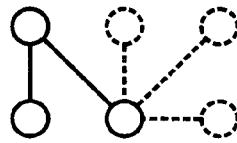


Fig. 8

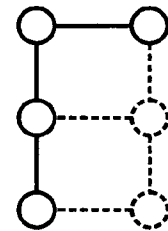
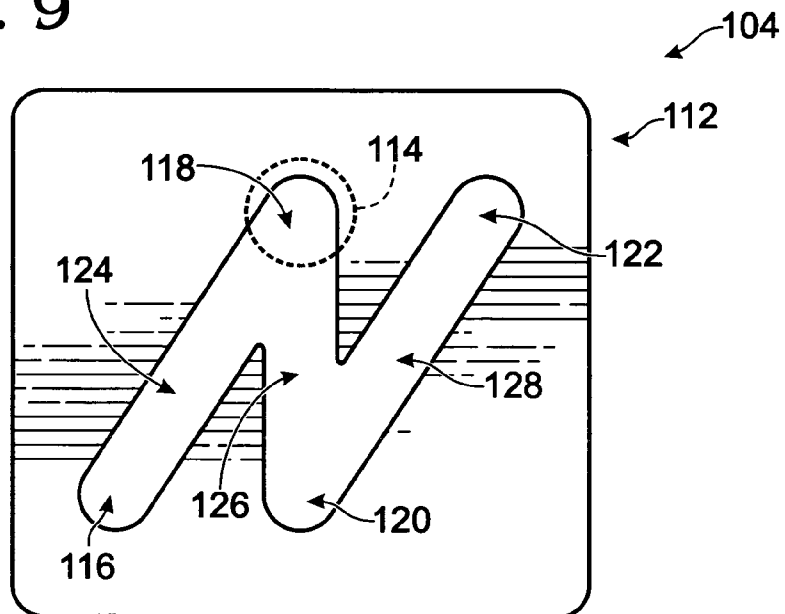


Fig. 9



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