

PATENT SPECIFICATION

DRAWINGS ATTACHED

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COMPLETE SPECIFICATION

Improvements in or relating to Toy Model Vehicles

- We, MECCANO LIMITED, of 236, Binns Road, Liverpool 13, Lancashire, a British company; do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—
- The present invention concerns toy vehicles.
- An object of the invention is to provide a construction of toy vehicles which will give a realistic spring suspension approximating in action to independent springing of the wheels.
- According to the present invention, a toy vehicle comprises a vehicle body and a base plate, and has at least one axle bar extending transversely of the longitudinal axis of the vehicle and passing through guide slots permitting movement of the axle bar towards and away from the base plate, and a single plate spring extending substantially at right angles to said axle bar and bearing thereagainst at two points spaced from the centre thereof towards opposite ends of the bar, in such a manner as to urge the bar in a direction towards the base plate.
- The axle bar may be guided in slotted lugs fixed relative to the vehicle body. The said slotted lugs may be fixed to or formed integral with the base plate of the vehicle in the form of upturned tabs disposed at opposite side edges of the base plate or may be fixed to or formed integral with the body.
- The plate spring may have a U-shaped cut-out at the end region thereby providing two separate spring portions adapted to act substantially independently upon the axle bar.
- The toy vehicle may be fitted with at least one pillar formed integral with or riveted to the vehicle body and attached to the base plate, said pillar passing through an aperture in the plate spring.
- The invention will be described further by way of example with reference to the accompanying drawing, in which the single figure is
- an exploded perspective view of one embodiment.
- A toy vehicle basically comprises a vehicle body and a base plate 16, and has two axle bars 11 extending transversely of the longitudinal axis of the vehicle and passing through guide slots 14, 14a. These slots are situated in lugs 15, 15a respectively, and permit movement of the axle bars 11 towards and away from the base plate 16. The lugs 14, 14a are substantially at 90° to the base plate 16.
- A single plate spring 17 extends substantially at right angles to the axle bars 11 and bears thereagainst at two points spaced from the centre thereof towards opposite ends of the bar. The spring 17 is fixed in a central position at 18 to the base plate 16. The plate spring 17 urges the axle bars 11 in a downward direction into the position shown in the figure.
- U-shaped cut-outs 22, 22a are provided at respective ends of the plate spring 17, each providing two separate spring portions 23, 23a which exert a substantially independent downward pressure on their respective axle bar 11.
- WHAT WE CLAIM IS:—**
1. A toy vehicle comprising a vehicle body and a base plate, and having at least one axle bar extending transversely of the longitudinal axis of the vehicle and passing through guide slots permitting movement of the axle bar towards and away from the base plate, and a single plate spring extending substantially at right angles to said axle bar and bearing thereagainst at two points spaced from the centre thereof towards opposite ends of the bar, in such a manner as to urge the bar in a direction towards the base plate.
 2. A toy vehicle as claimed in claim 1, in which the axle bar is guided in slotted lugs fixed relative to the vehicle body.
 3. A toy vehicle as claimed in claim 2, in

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- which the slotted lugs are fixed to or formed integral with the base plate of the vehicle.
4. A toy vehicle as claimed in claim 3, in which the slotted lugs are upturned tabs disposed at opposite edges of the base plate.
- 5 5. A toy vehicle as claimed in claim 2, in which the slotted lugs are fixed to or formed integral with the body of the vehicle.
- 10 6. A toy vehicle as claimed in any one of the preceding claims in which there is a U-shaped cut-out at the end region of the plate spring thereby providing two separate spring portions adapted to act substantially independently upon the axle bar.
- 15 7. A toy vehicle as claimed in any preceding claim, in which the base plate of the vehicle is attached to at least one pillar formed integral with or attached to the body of the vehicle.
8. A toy vehicle as claimed in claim 7, in which the pillar passes through an aperture in the plate spring.
9. A toy vehicle as claimed in any preceding claim, having two axle bars.
10. A toy vehicle as claimed in claim 4, in which the plate spring is attached to the base plate at a point between its ends and each end bears against one of said axles at the two said points.
11. A toy vehicle substantially as described herein with reference to and as illustrated in the accompanying drawing.
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COMPLETE SPECIFICATION

1 SHEET

*This drawing is a reproduction of
the Original on a reduced scale*

