United States Patent [19]

Glass et al.

[11] **3,748,780**

[45] **July 31, 1973**

[54] **TOY VEHICLE**

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[73] Assignee: **Martin Glass & Associates**, Chicago, Ill.

[22] Filed: **Mar. 3, 1972**

[21] Appl. No.: **231,517**

[52] **U.S. Cl.** **46/202**, 46/204, 46/206

[51] **Int. Cl.** **A63h 11/10**

[58] **Field of Search** ..... 46/202, 204, 206, 46/243 LV

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Assistant Examiner—Robert F. Cutting
Attorney—James F. Coffee et al.

[57] **ABSTRACT**

A toy vehicle including a body having a frame which supports rolling and driving wheels, with the frame being in two portions that move relative to each other and a motor means on one of the frame portions for moving the frame portions relative to each other and driving the driving wheels, with the body having portions interrelated to the frame, so as to move with respect to the frame as the frame components move with respect to each other, whereby the configuration of the vehicle is changed prior to, or as, the vehicle is driven.

16 Claims, 16 Drawing Figures

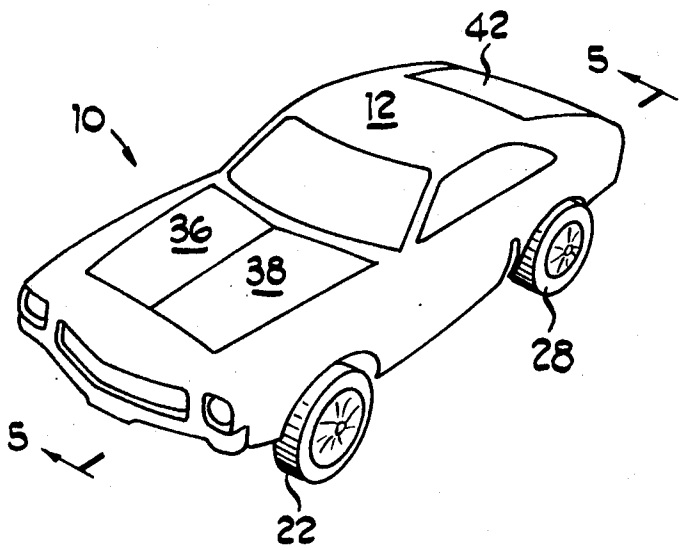


Fig 1

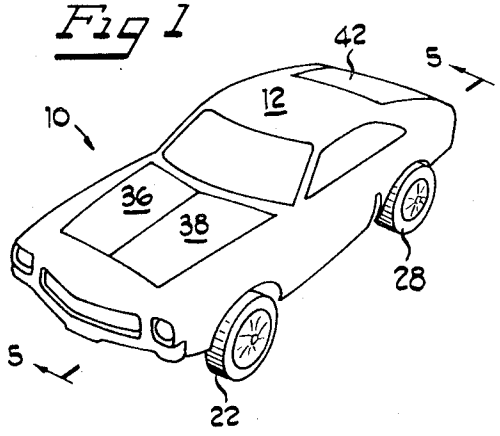
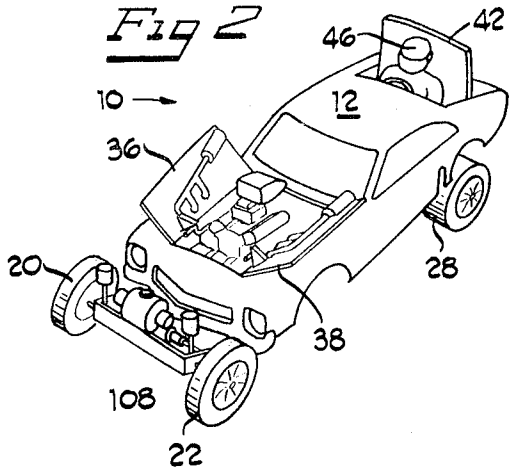


Fig 2



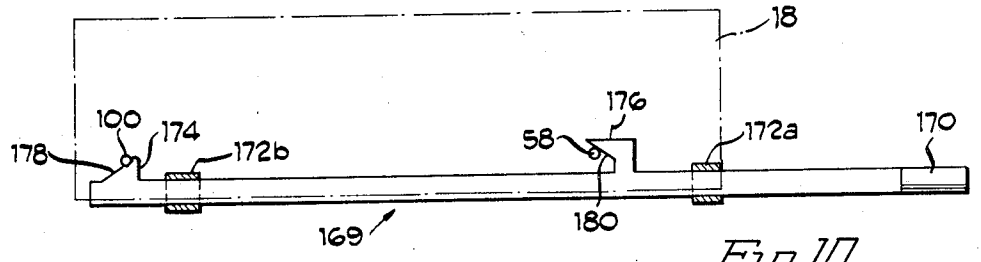


Fig 10

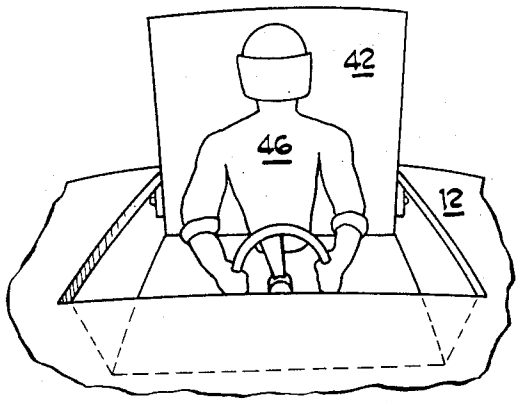


Fig 11

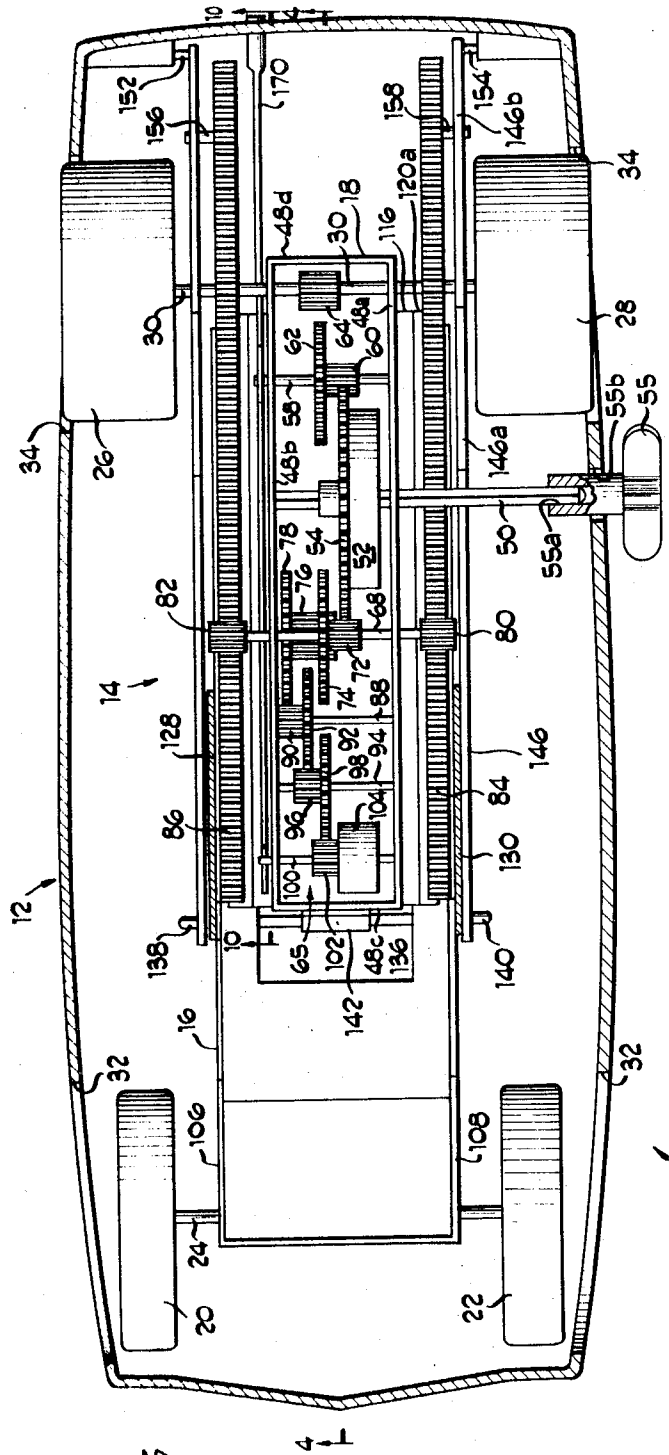


Fig 3

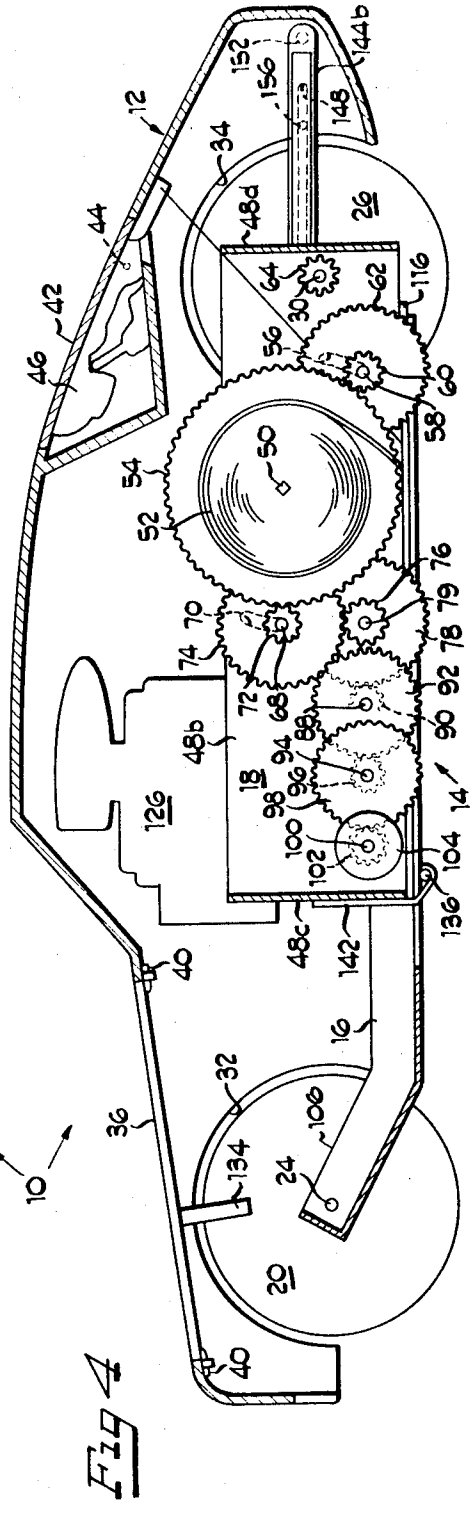


Fig 4

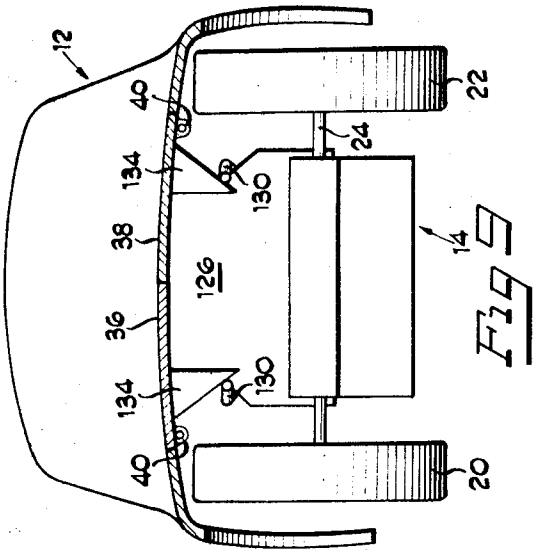


Fig 7

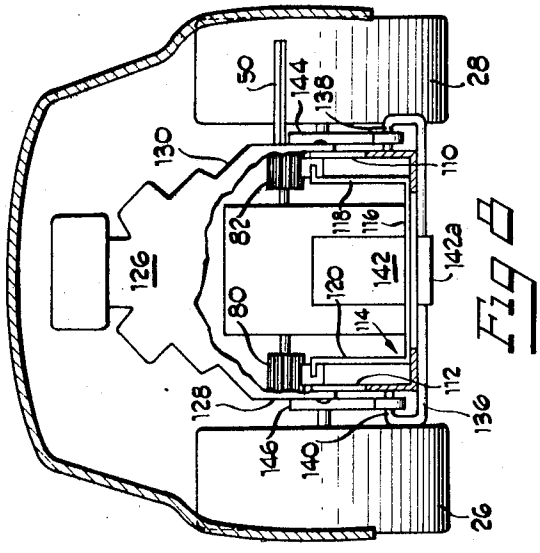


Fig 8

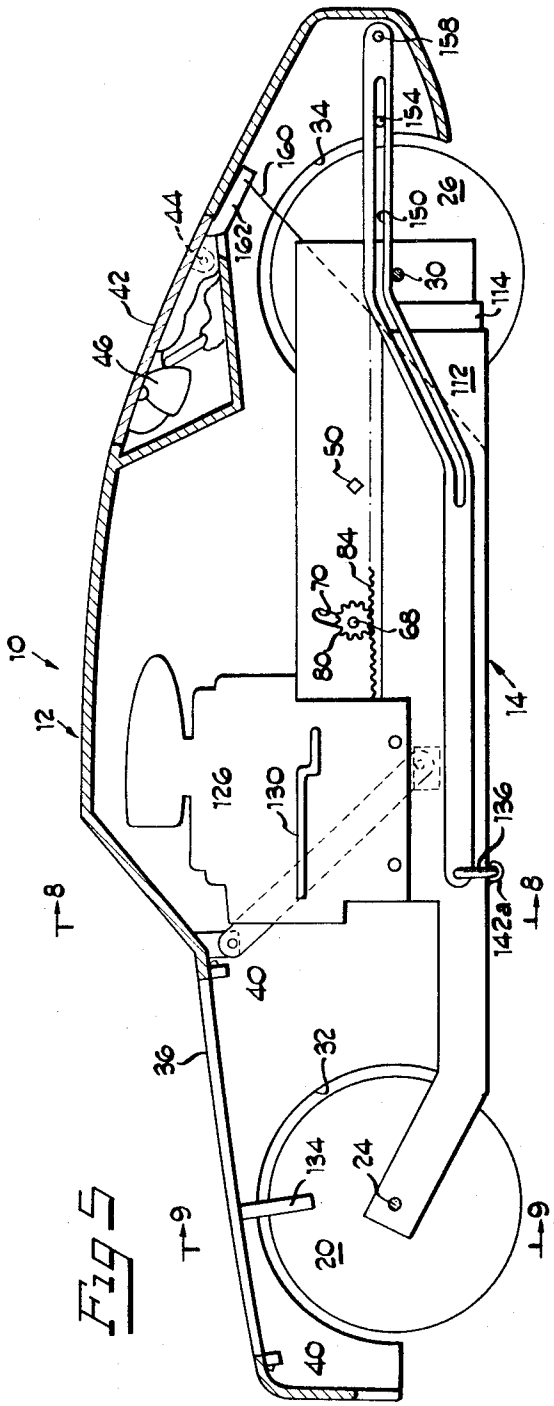


Fig 5

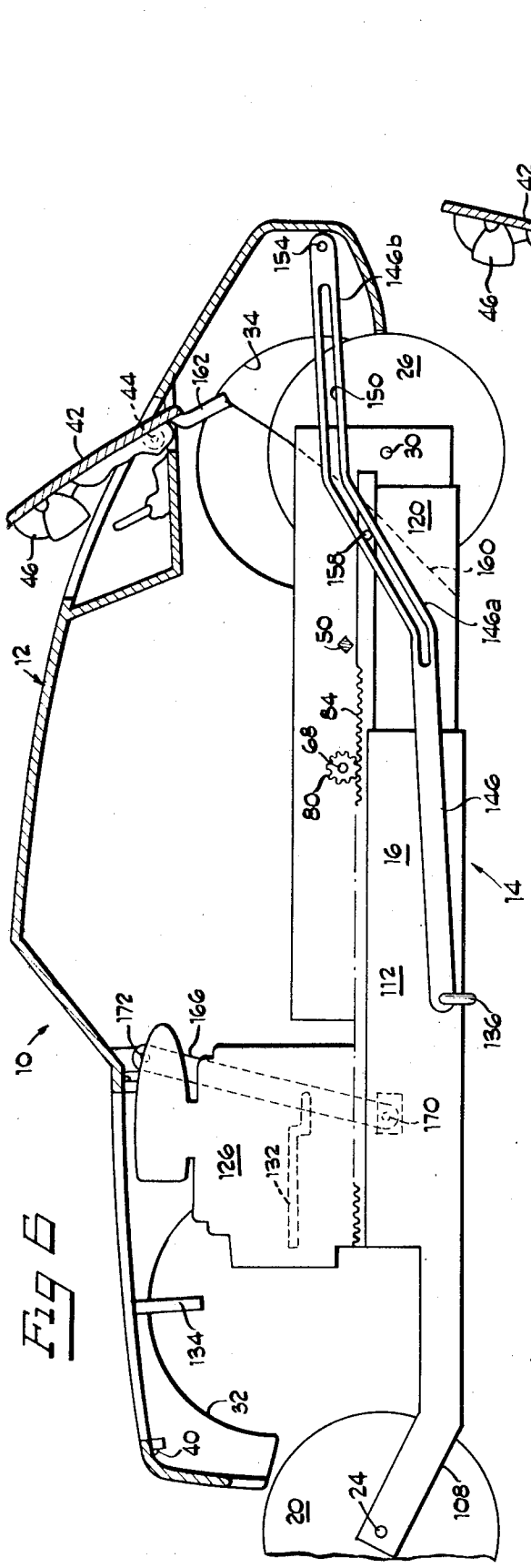


Fig 6

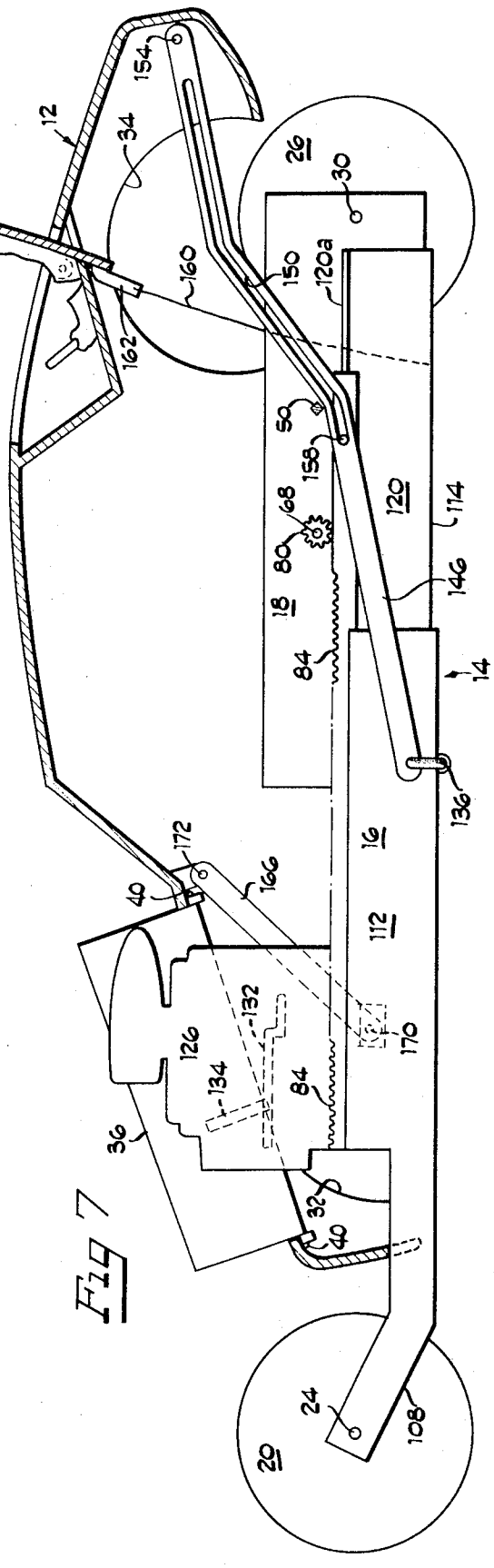


Fig 7

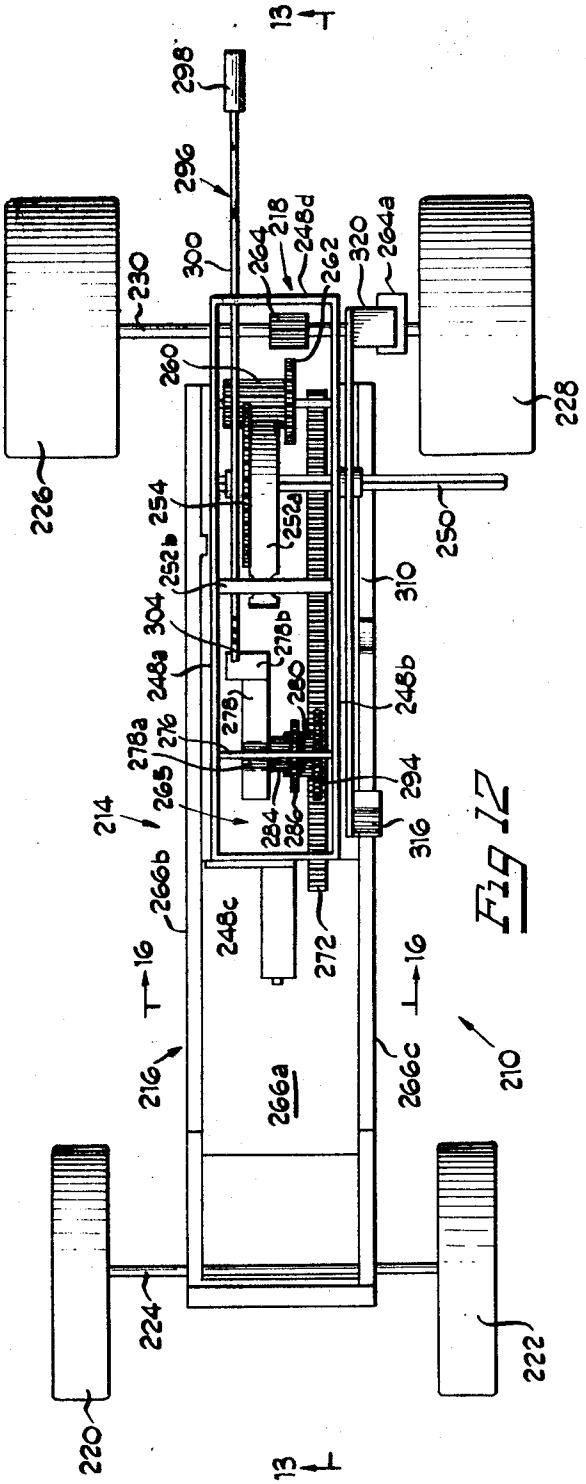

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Fig 12

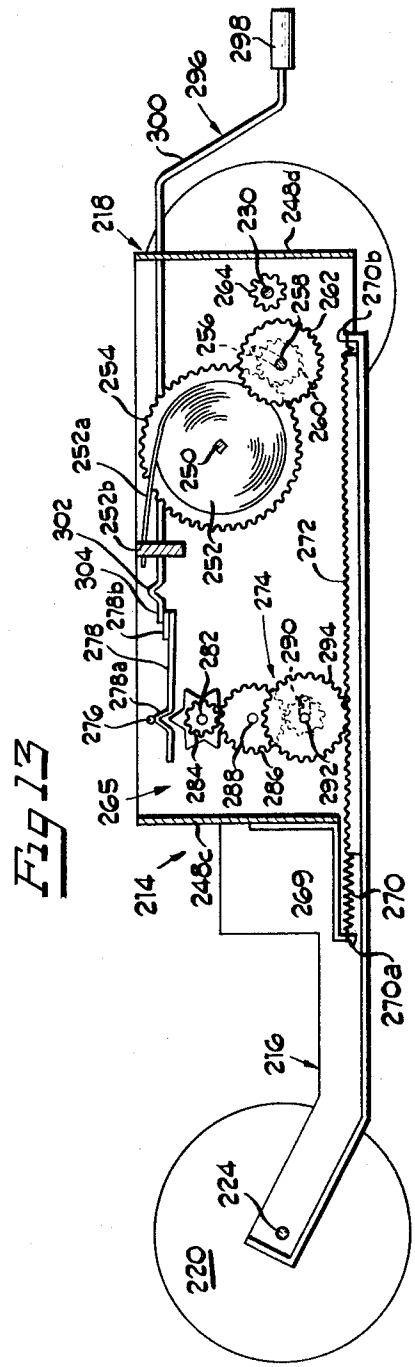
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Fig 13

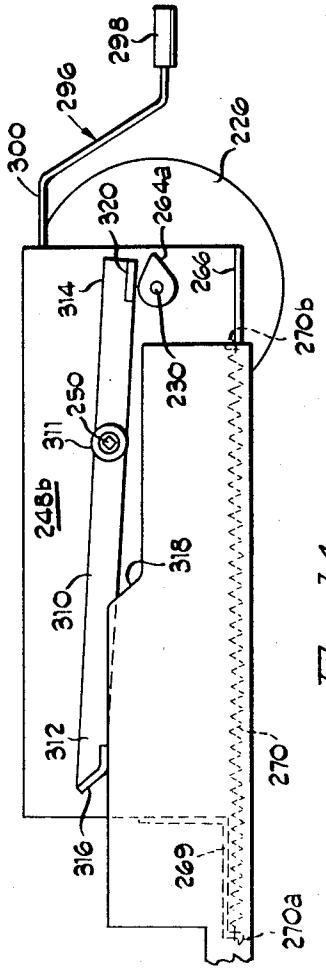

Fig 14

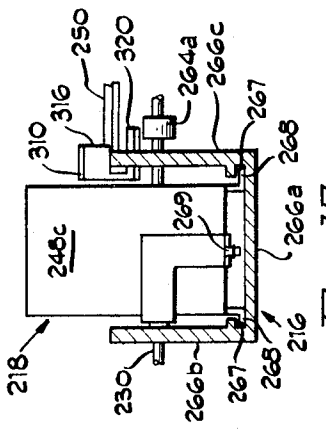

Fig 16

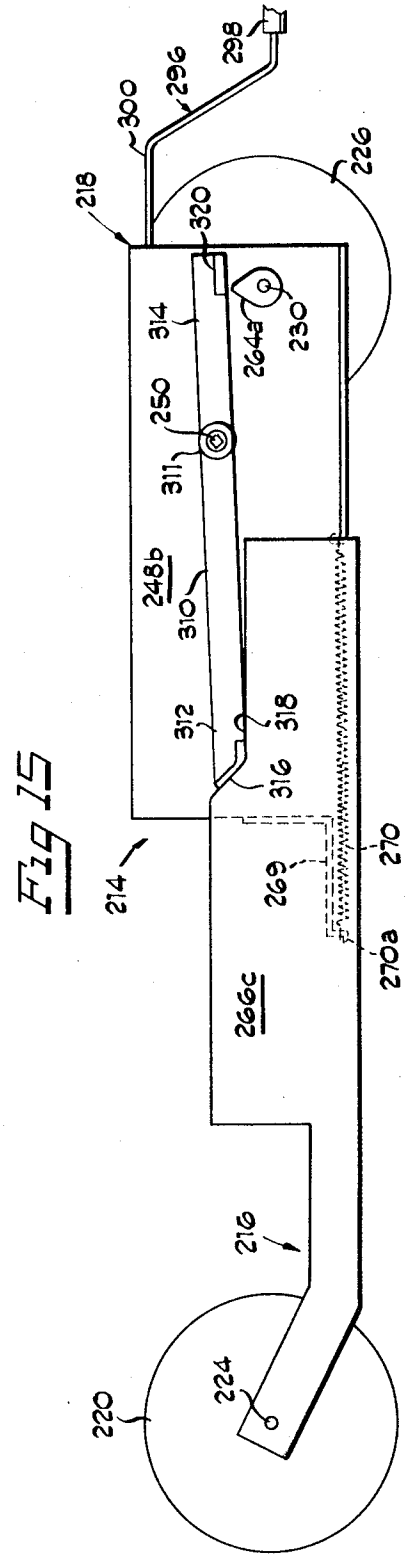

Fig 15

TOY VEHICLE

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to driven toy vehicles and more particularly, to toy vehicles which have components which are movable relative to each other as well as components which are driven to propell the vehicle.

2. Brief Description of the Prior Art

Driven toy vehicles have always been a source of fascination for youngsters. Equally fascinating have been vehicles whose configuration could be changed to alter the physical appearance. In recent years there has been the advent of the so-called "customizing" of vehicles, by owners thereof, generally in an effort to improve the speed and stability thereof. Such so-called "customizing," from time to time, radically alters the basic appearance of the commercially available vehicle.

It is the object of this invention to meet the continuing need and desire in the art for improvements in toy vehicles by providing a toy vehicle which undergoes a physical transformation in appearance, following which a means of motive power is utilized for driving the vehicle.

SUMMARY OF THE INVENTION

This invention is directed, in brief, to the provision of an improved toy vehicle which is capable of altering its physical configuration as well as being propelled along a surface.

The best mode currently contemplated for carrying out the invention, includes the provision of a frame having two portions which are linearly extensible relative to each other with urging means interconnecting the frame components for driving one frame component to an extended position, relative to the other component. Means are also provided for propelling the drive wheels of the vehicle which may be associated with a lost motion connection so that driving engagement does not occur until extension of the frame components terminates. The propelling means may also serve as the urging means. Also, preferably, the vehicle body is associated with the frame component by a pin and slot arrangement, whereby, the body is vertically and horizontally displaced, relative to the frame component during the extension of one frame component relative to the other.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the toy vehicle of this invention in its original or unaltered state;

FIG. 2 is a perspective view of the toy vehicle after physical transformation has taken place;

FIG. 3 is a horizontal section view through the toy vehicle of this invention;

FIG. 4 is a vertical section view through the vehicle of this invention, taken generally along the line 4—4 of FIG. 3;

FIG. 5 is a section view through the toy vehicle taken generally through the line 5—5 of FIG. 1;

FIG. 6 is a section view of the toy vehicle similar to FIG. 5, but showing the frame and body component in an intermediate stage of movement relative to each other;

FIG. 7 is a view similar to FIGS. 5 and 6 showing the relative orientation of the frame and body components at the completion of movement of these components relative to each other, or termination of physical transformation of the vehicle;

FIG. 8 is a section view taken generally along the line 8—8 of FIG. 5;

FIG. 9 is a section view taken generally along the line 9—9 of FIG. 5;

FIG. 10 is a diagrammatic view of the means for locking components of the drive train during winding of the motor;

FIG. 11 is a perspective view of the rear driver compartment as shown in FIG. 2, when the vehicle is in the completely transformed state;

FIG. 12 is a horizontal section view of the toy vehicle of this invention utilizing a modified drive arrangement;

FIG. 13 is a vertical section view taken generally along the line 13—13 of FIG. 12;

FIG. 14 is a fragmentary elevational view of a portion of the modified vehicle drive arrangement in one position of extension;

FIG. 15 is an elevational view similar to FIG. 14 showing the drive arrangement completely extended; and

FIG. 16 is a section view taken generally along the line 16—16 if FIG. 12.

While this invention is susceptible of embodiment in many different forms, there is shown in the drawings and will herein be described in detail different embodiments therefor, with the understanding that the present disclosure is to be considered as an exemplification of the principles of the invention and is not intended to limit the invention to the embodiments illustrated.

BRIEF DESCRIPTION OF THE PREFERRED EMBODIMENT

The toy vehicle **10** of this invention includes a simulated automobile body **12** mounted over a frame **14** which is comprised of two relatively movable portions **16** and **18**. The frame supports front wheels **20** and **22** which are connected to an axle **24** which spans the frame components and rear wheels **26** and **28** which are connected to an axle **30** which spans the frame components. The body **12** has the usual front wheel openings **32** and rear wheel openings **34**. in addition, the body has movable panels in the form of hood half panels **36** and **38** which are pivoted at **40** to the body. The body also has a pivoted rear panel **42**, which is connected to a pin **44** that spans the body, and, on the interior thereof, supports a simulated driver figure, so that, when in the open position, as shown in FIGS. **2**, **7** and **11**, it appears as though a driver is sitting in an open driving compartment.

Portion **18** of frame **14** comprises a generally box-like member, including side panels **48***a* and **48***b* and end panels **48***c* and **48***d* which support the motor components and the rear wheel axle **30**. A winding shaft **50**, which is generally rectangular in configuration, extends between the side panels **48***a* and **48***b* and supports a winding spring **52** and main driving gear **54**. When the shaft **50** is rotated, the spring **52** will be stressed so that upon the release of winding force from shaft **50**, the spring **52** will be in a condition to unwind and cause rotation of the shaft **50** and gear **54** in a well known manner. A winding key **55** is provided with an opening **55***a*, which is shaped to matingly engage the shaft **50**, so that the key **55** is axially removable relative to shaft **50**. An opening **55***b* is provided in the body for inserting the

key into a position where the key may engage the shaft **50.**

An arcuate slot **56** is provided in each of the panels **48***a* and **48***b* for receiving shaft **58.** Shaft **58** supports a gear hub **60** and a gear **62,** with the gear **62** aligned for meshing engagement with the gear hub **64** on the rear axle **30.** The shaft **58** is movable between a retracted position, wherein the gear **62** is disengaged relative to the gear hub **64,** and an extended or drive position, wherein the gear **62** is in meshing engagement with the gear hub **64** and therefore, in a condition to drive the rear axle **30.** In the illustrated embodiment, it is intended that the retracted or non-engaging position would be at the bottom of the slot **56** and the extended or engaged position would be at the top of the slot **56.** Relatively speaking, this arrangement can be considered as a lost motion connection between the main motive source and the rear wheels for driving the rear wheels when the power exerted through the gear train **54, 60** is sufficient to move the shaft **58** upwardly in slot **56** to a position where the gear train **62, 64** may be brought into driving engagement.

Frame **18** also supports a front frame member drive system **65.** The front frame member drive system **65** is comprised of a gear drive component and associated governor gear train components. Included in this system is shaft **68** which extends through an arcuate slot **70** in both the panels **48***a* and **48***b.* Shaft **68** supports a gear hub **72** which is positioned for engagement with gear **54** and also supports a gear **74** for transferring drive to the components of the governor gear train. Specifically, a gear hub **76** lies directly below the gear **74** for meshing engagement therewith and is connected with a gear **78,** both of which are supported on shaft **79** which span the walls **48***a* and **48***b.* The shaft **68** extends through wall **48***a* and **48***b* to the exterior thereof, and, at its opposite free end, supports gear hubs **80** and **82** which are positioned for meshing engagement with racks **84** and **86.** Racks **84** and **86** are associated with the front frame portion **16** (as will be explained in detail later) for moving the front frame portion as the shaft **68** is rotated.

The remaining components of the governor gear train include a shaft **88** which supports hub **90** and gear **92,** with the hub **90** being in meshing engagement with gear **78;** a shaft **94** having a hub **98;** and a shaft **100** having a hub **102** in engagement with gear **98** and a cylindrical weight **104** supported thereon.

Generally speaking, the arrangement of the front frame member drive system and associated governor train is that of a lost motion connection which enables the gear **54** to hold the shaft **68** in such a position so that the gears **80** and **82** may maintain a driving engagement with the racks **84** and **86** and so that the gear **74** may be maintained in driving engagement with the governor train which will reduce the rate of unwinding of spring **52.** However, the shaft **68** may move in the slots **70** to a position where the gears **80** and **82** are released from engagement with the racks **84** and **86** and the gear **74** is brought out of engagement with the governor train. It is intended that when this occurs, the unwinding force exerted by spring **52** will cause the shaft **58** to move upwardly in the slot **56** to thereby bring gear **62** in engagement with hub **64** to drive the rear wheels. Furthermore, since the spring **52** is no longer associated with the governor train, the spring will unwind at a faster rate of speed, permitting the vehicle to be driven at a relatively rapid rate. Thus, by this arrangement, the single motive force of the spring is utilized to first drive the components of the vehicle through a state of transformation at a first, or reduced rate, of activity, and then is utilized to drive the vehicle itself along a supporting surface at second or increased, rate of speed.

The front frame portion **16** is generally U-shaped in plan and in elevation and includes forward upwardly inclined arms **106** and **108** which rotatably support the front axle **24.** Front frame portion **16** further includes side panel portions **110** and **112** which generally embrace the frame portion **18** and, furthermore, which are connected to, and support, the racks **84** and **86** which are driven by gears **80** and **82.**

A track member **114** is interposed between the frame portions **16** and **18.** Track member **114** is generally U-shaped in elevation and includes a bottom **116** and upwardly extending side walls **118** and **120.** As best seen in FIG. **8,** the track member **114** generally embraces the frame structure **18** and is connected therewith. The upper end of side walls **118** and **120** of track member **114** has laterally extending flanges **118***a* and **120***a* which are slidably received in the grooves **122** and **124** of the racks **84** and **86,** respectively. By this arrangement, the front frame member **16** is slidably mounted relative to the rear member **18** for movement between a retracted, or collapsed, position, as shown in FIG. **5,** to movement to an extended position, as shown in FIG. **7.** It is intended that this movement, which is accomplished by the driving of racks **84** and **86** by gears **80** and **82** will be utilized to transform the physical configuration of the vehicle between that shown in FIG. **1** to that shown in FIG. **2.**

The front frame **16** supports a simulated motor **126** which has depending legs **128** and **130** that are connected to the front frame and, particularly, to the side panels **110** and **112** thereof. Each side of the simulated motor **126** has cam follower surfaces **132** which are intended to engage with the depending cam surface **134** on the underside of the hood halves **36** and **38,** to raise the hood halves from a collapsed or closed position, as shown in FIGS. **1, 5, 6** and **9,** to an open position, as shown in FIGS. **2** and **7,** when the vehicle goes through the transformation stage as the front frame portion **16** is extended relative to the rear position **18.**

A link support bar **136** is positioned below frame **18,** track member **114** and front frame section **16** near the forward end of frame **18.** The bar **136** has inturned ends **138** and **140** and is supported by a depending strap **142** connected to the forward panel **48***c* of frame **18.** The depending strap **142** terminates in sleeve-like end **142***a* which embraces the bar **136** to hold the bar in a fixed position and also provides a bearing surface which permits front frame section **16** to slide across, or relative to, the bar **136.**

A pair of guide arms **144** and **146** are connected at one end to the ends **138** and **140.** The guide arms have an upwardly inclined portion **144***a* and **146***a* and a rearwardly horizontally extending portion **144***b* and **146***b,* respectively. Each guide arm is provided with a slot **148** and **150,** which generally follows the configuration of the arm, so that the slot has a first horizontal portion, a second upwardly inclined portion and a third vertically offset horizontal portion. The rear end of each of the arms **144** and **146** is connected to the posts **152** and **154,** which are formed as part of the automobile body

12. The follower pins 152 and 154 extend outwardly from the rear end of the racks 86 and 84, respectively, and is received in the slots 148 and 150 of the arms 144 and 146. By this arrangement, as the front frame portion 16 extends relative to the rear portion 18 responsive to gears 80 and 82 driving racks 84 and 86, the orientation of the automobile body relative to the frame will be vertically and horizontally offset responsive to the tracking of pins 156 and 158 in the slots 148 and 150 of the arms 144 and 146 which are connected at one end with the frame portion 16 and at the other end to the automobile body.

A strand 160 is connected at one end to an extension 162 of the pivoted panel 42, and at the other end to the track member 114. Since this strand is of a finite length, as the automobile body is vertically displaced responsive to the tracking of the pins 156 and 158 in slots 148 and 150, the connection of the strand 160 between panel 42 and track 114 will cause the panel 42 to be pivoted about its pin 44 and moved to the open position.

At the forward end of the front frame member 16, link bars 166 and 168 are pivotally connected at 170 to the frame 16. At the other end, the bars are connected to a pivotal connection 172 with the automobile body. Thus, during the movement of the automobile body 12 relative to frame 18 responsive to extension of frame 16, the front portion of the body will be guided as the links 166 and 168 travel through an arcuate path of travel.

The toy vehicle of this invention is further provided with a winding lock 169, best illustrated in FIG. 10 and also partially illustrated in FIG. 3. The winding lock 169 includes a simulated tail pipe 170 which is a rod-like structure supported between spaced sleeves 172 and 172*b* connected to frame 18. The tail pipe 170 includes spaced apart lateral projections 174 and 176, each of which has an inclined locking surface 178 and 180, respectively. The projections 174 and 176 are spaced apart a distance equal to the distance between the shafts 58 and 180. When the simulated tail pipe 170 is in a retracted, or locked, position as shown in FIG. 10, the surfaces 178 and 180 are in engagement with the shafts 58 and 100 to prevent rotation thereof. This force operating through the gear trains, will hold the spring 52 against unwinding. Thus, a user may wind up the spring, leave it in its stressed state and place the vehicle on a supporting surface, following which, when ready, he may move the tail pipe to an extended or unlocked position to release the frictional engagement with the shafts 58 and 100 and therefore permit the initiation of operation of the motive source of power provided by the spring 152.

To review the operation, a user may first wind the motive source of power through means of the key 55, shaft 50 and spring 52, with the tail pipe 170 in a retracted or locked position, which prevents the elements of the associated gear train from operating. The user may then place the vehicle 10 on a supporting surface and release the lock 169, by retracting tail pipe 170. This will permit the spring 52 to unwind and, initially, exert its motive force on the hub 72 by forcing the same downwardly in the slot 70. This will cause part of the power of the unwinding spring to be dissipated through the governor train 65, with the remainder thereof, transferred to the rotation of the gears 80 and 82, in engagement with the racks 84 and 86. During this period of time, the front frame member 16 extends relative to the rear member 18, causing the vehicle body to go through a state of physical transformation from the configuration shown in FIG. 1 to that shown in FIG. 2 through the assistance of the following pins 156 and 158 in the arms 144 and 146 and the guidance of the links 166 and 168. Thus, the vehicle body will be rearwardly displaced, as well as being upwardly displaced at the rear, and the simulated motor 126 will project through the open hood halves 36 and 38 with the panel 42 opening to produce a simulated driver in a compartment at the rear. When this motion terminates, the gears 80 and 82 will have reached the end of their engagement with the racks 84 and will continue to rotate on the smooth surface of the racks. At this point, the shaft 68 will rise in the slot 70, so that the motive force exerted by the spring 52 will then cause the shaft 58 to move upwardly in the slot 56 to put the gears 62 and 64 into engagement to drive the rear wheels. Because the spring 62 will no longer be associated with the governor train 65, the spring will unwind at a faster rate of speed so that the vehicle may be propelled along a supporting surface at a relatively rapid rate of speed. Once the spring is completely unwound, a participant may return the vehicle 10 in its original configuration as shown in FIG. 1 by merely urging the front and rear wheels together which will reverse the transformation previously accomplished through the aforementioned mechanical arrangement and gear train.

A modified form of the toy vehicle of this invention is shown in FIGS. 12 through 16. As disclosed therein the vehicle 210 would be intended to include a simulated body 12 in the same form as previously described, mounted over a frame 214, comprised of two relatively movable portions 216 and 218. Frame 214 supports front wheels 220 and 222 which are connected to an axle 224 spanning the frame components and rear wheels 226 and 228 connected to an axle 230 which also spans the frame components.

Portion 218 of frame 214 comprises a generally box-like member, including side panels 248*a* and 248*b* and end panels 248*c* and 248*d* which support motor components and the rear axle 230. A winding shaft, which again is preferably rectangular in configuration, extends between the side panels 248*a* and 248*b* and supports a winding spring 252 and driving gear 254. Spring 252 has an end extension 252*a* which is captivated in a bar 252*b* which spans sides 248*a* and 248*b*. The winding key 55 previously referred to, may be utilized for winding the shaft 250.

An arcuate slot 256 is provided in each of the panels 248*a* and 248*b* near axle 230 for receiving the shaft 258. Shaft 258 supports a hub 260 and a gear 262, with the gear 262 aligned for meshing engagement with the gear hub 264 on rear axle 230. Rear axle 230 also supports a cam 264*a* for a purpose to be explained.

The modified embodiment 210 is further provided with a front frame member drive system 265. The front frame member drive system 265 includes gear train components operatively associated with the front frame portion 216 and and the rear frame portion 218 to cause extension of the two components relative to each other which will be translated into transformation of the vehicle body 12 as previously described.

Front frame portion 216 is generally a U-shaped channel, both in section as well as in plan, and includes a bottom panel 266*a* and upright side panels 266*b* and

266c. Generally speaking, the sides and bottom embrace the rear frame portion 218, and specifically, the interior of walls 266b and 266c are provided with notches or grooves 267 for receiving lateral rails 268 of frame portion 218 to guide the same in a to-and-fro movement.

Front panel 248c of rear frame 218 is provided with a forwardly extending tongue 269. A spring 270 is connected at one end 270a with tongue 269 and at the other end 270b with a finger on the rear of the panel 266. Bottom 266 is provided with a rack 272 which is intended for engagement with the gear train 274.

Specifically, gear train 274 includes a rod 276 which spans the walls 248a and 248b at the top thereof and supports a leaf 278 having an inverted V-shaped offset portion 278a and a weighted end 278b. Leaf 278 is part of an escapement mechanism which includes a star gear 280 mounted on rotatable shaft 282 which also supports gear hub 284. Gear hub 284 is in meshing engagement with gear 286 mounted on rotatable shaft 288, and gear 286 is in meshing engagement with gear hub 290 on shaft 292. Shaft 292 also supports gear 294 which is in meshing engagement with the rack 272.

When frame portions 216 and 218 are retracted relative to each other, such as shown in FIGS. 12, 13 and 14, the spring 270 is stretched, or placed in a deformed state where it exerts a force tending to pull the two frame portions apart. The gear train 274 provides a governor escapement mechanism in that, during the separation of the two frame portions under the urging of spring 270, this movement is governed in a slowly progressive fashion by reason of the tracking of gear 294 of the gear train 274 along rack 272.

Means are provided for locking the fame portions 214 and 216 against extension relative to each other in opposition to the urging of the spring 270. Included in this means 296, is a simulated tail pipe 298 connected to a bent, offset wire form 300, which extends through the bar 252b and is provided an offset portion 302 on the other side of the bar 252b. Wire form 300 terminates in an end 304, which end overlies the weighted end 278b of lead 278 when the wire form 300 is in the retracted or locking position. This will prevent movement of the leaf 278, thereby holding one of the points of the star gear 280 within the inverted V-portion 270a of leaf 278, thereby preventing movement of the gear train 274 and thus, locking the gear 294 with respect to the rack 270. However, when the simulated tail pipe 298 is pulled rearwardly, to move the wire form 300 to an extended or unlocking position, this will permit the gear train 274 to move in a step-by-step fashion, thereby permitting the relative movement between the frame portions 216 and 218 responsive to the urging of the spring 270.

The modified embodiment 210 of this invention is further provided with an arm 310 which is pivoted about the winding shaft 250 within bearing means 311. The arm 310 includes a forward end 312 and a rear end 314, and, in the illustrated embodiment, arm 310 is pivoted over center, that is, closer to its rear end 314 than to its forward end 312. Forward end 312 is provided with an inclined lateral extension 316 which is intended to be matingly received in the stepped reduction 318 in side wall 248a. The rear end 314 of arm 310 is provided with a lateral extension 320 which is intended to overlie the cam 264a of rear axle 230. In operation, when the locking device 296 has been released, the frame portions 216 and 218 are driven apart under the urging of spring 270 and the controlled driving engagement between gear 294 and rack 272, as previously explained. The extension 316 of arm 310 rides on the top wall 269 until such time as the extension 316 approaches the stepped recess 318. This will generally coincide with the terminus of the travel of gear 294 along rack 272. At this time, arm 310 will drop into the recess 318 thereby moving the lateral extension 320 away from cam 264a. This will permit the rear axle to rotate and will cause the gear 254 to urge the shaft 258 upwardly in slot 256 so that the gear hub 264 on axle 230 may be engaged with the gear 262 to thereby drive the rear axle and therefore, the vehicle along a supporting surface. Again, as was the case described with respect to embodiment 10, first the physical transformation of the vehicle will take place responsive to the relative movement between the two frame portions, following which the vehicle will be driven along a supporting surface.

Thus, it can be seen that the toy vehicle of this invention provides the unique fascination of undergoing a physical transformation. Moreover, this transformation is such that it simulates the so-called "customizing" of automobiles into a "dragster." Moreover, following the transformation, the vehicle is then capable of being propelled along a supporting surface and both transformation and propulsion may be accomplished with a single motive means of power, shown in the preferred illustrated embodiment as a spring motor.

We claim:

1. A toy vehicle comprising:

means defining a simulated automobile body, frame means supporting said body including first and second frame portions which are movable relative to each other, said body at least having portions which are movable relative to said frame, said frame means supporting wheel means for maintaining the body supported relative to a supporting surface;

means interconnecting said body with said frame for movement of at least portions of said body responsive to movement of said portions relative to each other;

and means on said frame for moving said frame portions relative to each other and for driving said wheels to propel said vehicle along a supporting surface.

2. The toy vehicle of claim 1 wherein the means for moving said frame portion and rear wheels includes a lost motion connection for moving said wheels; said lost motion connection being related to said means for moving said body to hold said means for driving said wheels out of operational engagement until said movement of said body portions relative to said frame is completed.

3. The toy vehicle of claim 1 wherein said frame portions extend linearly relative to each other.

4. The toy vehicle of claim 3 wherein said body is connected to said frame portions for both vertical and horizontal displacement during relative movement of said frame portions.

5. The toy vehicle of claim 1 wherein at least some movable portions of the body are connected to the frame by strand means whereby the strand is pulled responsive to movement of the frame components to thereby cause movement of the movable body portions.

6. The toy vehicle of claim 1 wherein the body, as an entirety, is also movable relative to said frame with track means being provided on one of the body and frame and associated follower means is provided on the other of the body and frame for tracking in the track means to cause movement of the body through a path of travel responsive to movement of said frame portions relative to each other.

7. The toy vehicle of claim 2 wherein the lost motion connection is established by providing an elongate slot through which a shaft for one gear of the drive train is mounted so that the shaft is movable from one end of the slot and a non-driving position, to the other end of the slot where the gear is in driving engagement with another gear member of the train.

8. The toy vehicle of claim 1 wherein the first and second frame portions are normally biased for extension relative to each other with an escapement mechanism interposed therebetween.

9. The toy vehicle of claim 8 wherein a spring motor is provided for driving the rear wheels following an extension of frame components relative to each other.

10. The toy vehicle of claim 9 wherein lock means is provided for preventing the rear wheels from being driven until the extension of the frame components is completed.

11. The toy vehicle of claim 10 wherein lock means include a radial extension on the rear axle and a follower associated with the frame having a portion which normally overhangs the radial extension to prevent rotation of the axle with the follower being mounted for movement away from a locking position responsive to movement of said frame components to an extended position.

12. The toy vehicle of claim 11 wherein the follower is an arm which is pivoted in overcenter fashion to one frame component and has a portion which rides on the other frame component with said other frame component having a recess therein into which said follower drops as said frame components extend relative to each other.

13. The toy vehicle of claim 8 wherein lock means is provided to hold the two frame components retracted in opposition to the biasing means including an arm adjacent to the escapement mechanism and movable between a retracted position, wherein the arm blocks movement of the escapement mechanism, and therefore, prevents movement of the two frame portions, to an extended position where the escapement mechanism is free to operate.

14. The toy vehicle of claim 2 wherein a single motor means is provided for moving the frame portions and rear wheels, the motor means being associated with a gear train for driving the frame portions and another gear train for driving the wheel portions with the lost motion connection for the rear wheel drive comprising a slotted mounting of one of the shafts of the rear wheel drive train.

15. The toy vehicle of claim 14 wherein the front gear train also includes a gear shaft which is movably mounted relative to the remainder of the gear train for movement between a driving position and a non-driving position responsive to forces imposed thereon.

16. The toy vehicle of claim 14 wherein locking means is provided for holding the means for moving the frame portions and for driving the wheels, and includes a locking member having a gear shaft engaging portion which is movable between a locking position, wherein portions abut at least one gear shaft with a gear train and prevent rotation thereof, and a release position, wherein the gear shaft engaging portion is moved away from the gear shafts of the gear train, whereby rotation of the gear shaft is permitted.

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