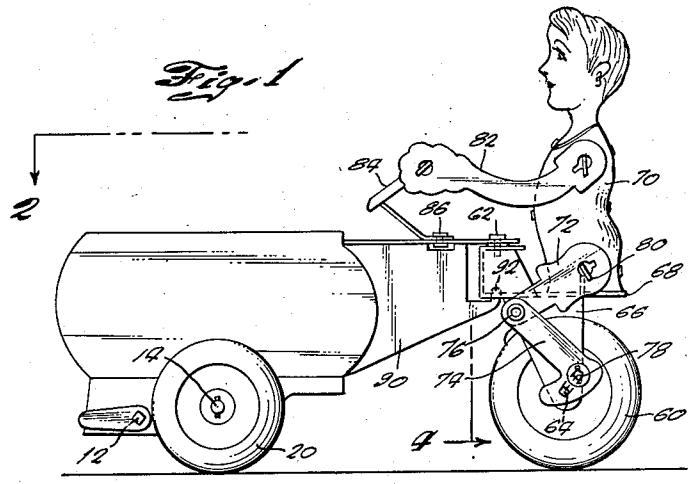
Aug. 25, 1953 R. J. LOHR 2,649,805

WHEELED TOY WITH AUTOMATICALLY STEERING CYCLIST

Filed March 9, 1949 2 Sheets-Sheet 1

Fig. 1



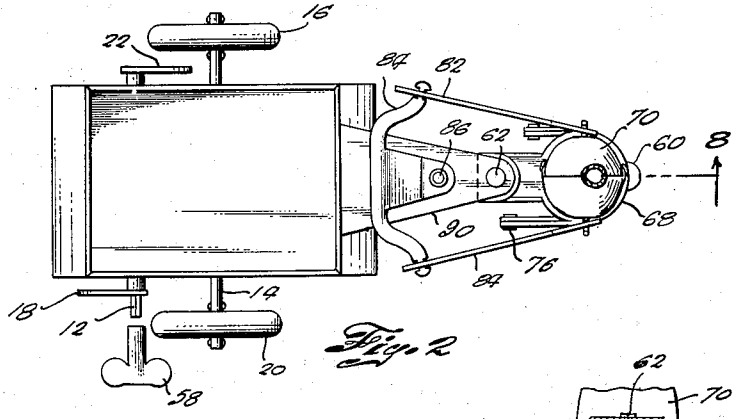




Fig. 2

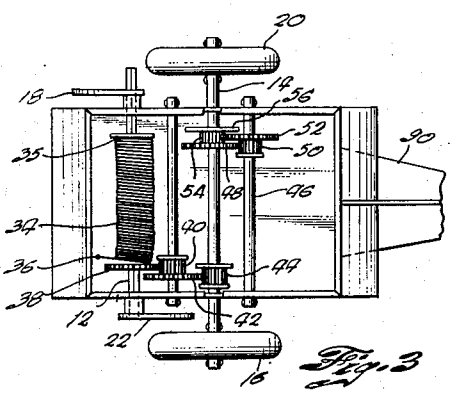



Fig. 3

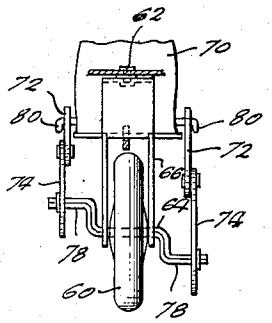



Fig. 4

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WHEELED TOY WITH AUTOMATICALLY STEERING CYCLIST

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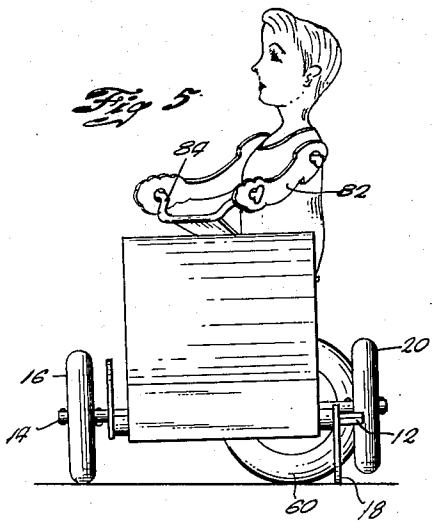



Fig. 5

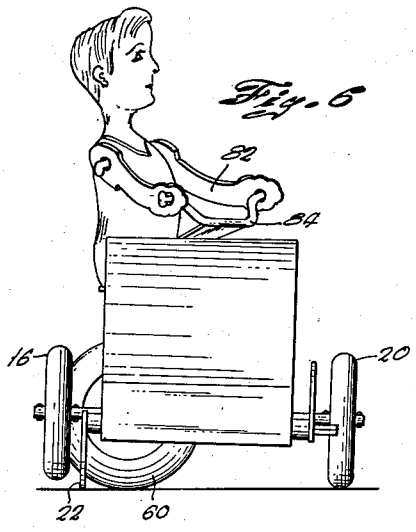



Fig. 6

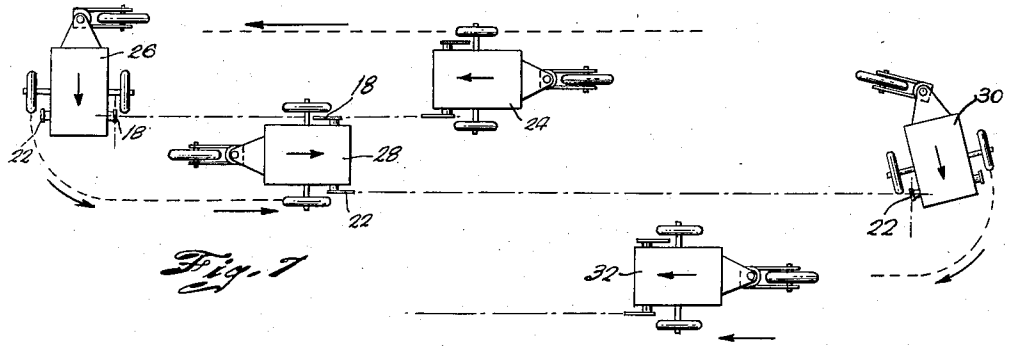



Fig. 7

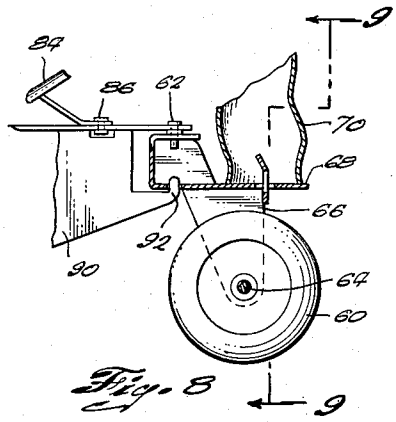



Fig. 8

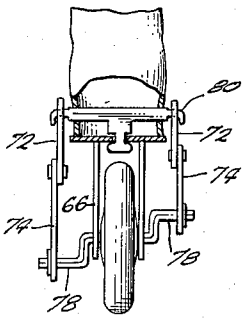



Fig. 9

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# UNITED STATES PATENT OFFICE

2,649,805

## WHEELED TOY WITH AUTOMATICALLY STEERING CYCLIST

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Application March 9, 1949, Serial No. 80,346

25 Claims. (Cl. 46—109)

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This invention relates to toys, and more particularly to wheeled toys.

Wheeled toys have already been made which steer themselves on an erratic course. The primary object of the present invention is to generally improve such toys, and to provide a toy which is of conventional, inexpensive construction in most respects, but which, by the addition of one or two small parts of negligible cost, is changed from a toy which would run straight ahead to a toy which swings abruptly through substantial changes in direction at frequent intervals, thereby increasing the amusement value of the toy. The toy is illustrated in the form of a road vehicle, but it will be understood that the improvement may be applied to any wheeled toy, as, for example, one having a body simulating an animal, or a boat, etc.

To accomplish the foregoing general object, and other more specific objects which will hereinafter appear, my invention resides in the wheeled toy elements and their relation one to another as are hereinafter more particularly described in the following specification. The specification is accompanied by drawings in which:

Fig. 1 is a side elevation of a toy embodying my invention;

Fig. 2 is a partially sectioned plan view thereof;

Fig. 3 is a bottom view showing the driving mechanism;

Fig. 4 is a section taken approximately in the plane of the line 4—4 of Fig. 1;

Fig. 5 is a front end view of the toy when turning in one direction;

Fig. 6 is a similar front end view of the toy when turning in opposite direction;

Fig. 7 is a plan view suggesting one possible path of operation of the toy;

Fig. 8 is a fragmentary section taken approximately in the plane of the line 8 of Fig. 2; and

Fig. 9 is a fragmentary section taken approximately in the plane of the line 9—9 of Fig. 8.

Referring to the drawing, and more particularly to Figs. 1, 2 and 3, the toy comprises a slow speed shaft 12 geared by means of suitable gearing to a high speed shaft 14. There is a driving wheel 16 at one side of the vehicle driven by the high speed shaft 14, and an arm 18 at the other side of the vehicle, mounted on and rotated by the slow speed shaft 12. The arm 18 has a radius such that when in the course of its rotation it points downward, it bears against the surface on which the toy

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is running, and acts as a pivot point. This is best shown in Fig. 5, in which it will be seen that the downwardly pointed arm 18 has raised its side of the vehicle enough to free the wheel 20, whereupon the arm 18 acts a pivot about which the toy is turned by the driving wheel 16.

Reverting to Figs. 2 and 3, the slow speed shaft 12 is preferably provided with another arm 22 mounted at the opposite side of the vehicle. The arm 22 is preferably pointed in a different direction from the arm 18. In the simplest and most typical case the arms 18 and 22 point in diametrically opposite directions. Similarly the high speed shaft 14 has a pair of driving wheels 16 and 20. It will thus be evident that when the arm 22 in the course of its rotation points downwardly it bears against the surface on which the vehicle is running and raises its side of the vehicle, as is clearly shown in Fig. 6, thus freeing the driving wheel 16, whereupon the arm 22 acts as a pivot about which the vehicle is sharply turned by the other driving wheel 20 at the opposite side of the vehicle.

Thus the vehicle is turned at intervals, first in one direction and then in the other direction, by the alternating action of the two rotating arms and driving wheels. This is indicated in Fig. 7, in which the wheeled toy runs straight ahead at the position 24, at which time neither arm is pointed downward. Indeed at position 24 they are shown pointed horizontally, which corresponds to the middle of a straight run. At the position 26 the arm 18 is pointed downwardly and acts as a pivot, and the toy swings sharply about that pivot. At the position 28 the wheeled toy is again running straight forward, both arms being clear of the floor. At the position 30 the arm 22 is pointed downward and acts as a pivot. The toy swings around and runs off in a new direction, as is indicated by the position 32 of the toy.

It will be understood that the schematic showing in Fig. 7 is idealized in that the turning movement of the toy is shown to be a perfect U turn. This is not at all essential, and the amount of turn may be greater or less than 180°. For example, with 90° turns the toy will follow a square path. In practice the amount of turn is somewhat variable, because of slippage at the pivot, or/and slippage at the driving wheel, so that the actual change in direction varies with the nature and texture of the surface on which the toy is running. With a very rough surface, say a carpet with deep pile, the angle may be

changed by its prolonged braking action on the pivot arm.

Fig. 7 is also idealized in assuming the arm to act as a stationary pivot when in lowermost position, whereas in practice there is some movement of the pivot relative to the wheeled toy. The arm rotates, the tip end moving in a circle, and it is an arc of appreciable length at the bottom of the circle, rather than a single point, which is effective to cause turning action of the toy.

Reverting now to Fig. 3, it will be seen that in the particular toy here shown the slow speed shaft 12 is the winding stem of a spring motor having a main spring 34, the said winding stem having one end 35 connected thereto, and the other end 36 being connected to the body of the toy. The high speed shaft 14 is, of course, the axle of the wheels 16 and 20. The step-up gearing between the winding stem and the axle comprises a gear 38 meshing with an intermediate pinion 40 secured to an intermediate gear 42 meshing with a pinion 44 on the axle 14. Thus there is a single idle shaft between the slow and high speed shafts, and by using one or an odd number of idle shafts, the direction of rotation of the slow and high speed shafts is made the same. I have found that it is preferable to do this, for the pivot point moves through a small arc while in lowermost position, from the time the adjacent wheel is first freed from the floor, until it regains traction on the floor. When the arm turns in the same direction as the driving wheel the toy is helped over the rising or lifting action of the arm by the forward momentum of the toy, and when past dead center the rotating action of the arm helps continued forward motion of the toy. If, however, the arm rotates in opposite direction it acts as a brake throughout its contact with the floor.

Another shaft 46 forms part of a simplified governor mechanism which helps limit the speed of operation of the toy when fully wound. Specifically, high speed shaft 14 carries a gear 48 meshing with a pinion 50, which drives a gear 52 meshing with a pinion 54, which carries a slightly eccentric disc or weight 56. The pinion 54 and eccentric 56 are, of course, freely rotatable on the axle 14, and the operation is the same as though still another shaft were employed to carry the eccentric weight.

A detachable key for winding the toy is indicated at 58 in Fig. 2, it fitting slidably over the squared end of the winding stem 12.

The particular wheeled toy here shown simulates a pedal-operated delivery cart. For this purpose it is provided with a trailing rear wheel 60 (Figs. 1, 2 and 3) which is mounted for free steering action about a pivot 62. The pivot 62 is located well forward of the axle 64 of wheel 66. This gives the trailing wheel 60 a caster action, so that it does not interfere with the desired turning movement of the vehicle. The trailing wheel readily swings to an angular position relative to the main axle, as is clearly shown in Figs. 5, 6 and 7.

The wheel 60 is carried in a fork 66, the lower end of which carries the axle 64 and the upper end of which turns on the pivot 62. There is a rearward extension or seat 68 on which a simulated body 70 of a rider is mounted. The simulated legs of the rider consist of upper and lower portions 72 and 74 articulated at 76. The axle 64 is bent to form cranks 78 which simulate bicycle pedals. The feet of the lower legs 74 are pivoted on the cranks 78, while the upper legs 72 are pivoted on the body at 80. It will be understood that rotation of the trailing wheel 60 causes the legs to "push" in alternation, in simulation of pedalling the vehicle.



The arms 82 are somewhat loosely connected to a simulated handle bar 84 which is pivoted at 86. It will be evident that when the vehicle turns, the caster action of the trailing wheel 60 causes the body of the rider to turn, which consequently, through the arms 82, turns the handle bar 84. This action is rather clearly shown in Figs. 5 and 6 of the drawing, and is effective in appearance even though the pivot 86 is displaced forwardly somewhat from the pivot 62.

Both pivots 62 and 86 are carried on a rearward extension or bracket 90 which projects rearwardly from the hollow open-topped delivery cart body. The bracket has a support pivot 92 (Figs. 1 and 3) in vertical alinement with pivot 62.

It is believed that the construction and operation of my improved wheeled toy, as well as the advantages thereof, will be apparent from the foregoing detailed description. It will also be apparent that while I have shown and described the toy in a preferred form, changes may be made in the construction shown without departing from the scope of the invention as sought to be defined in the following claims. In the claims the term "vehicle" has been used for convenience, but is intended to include wheeled toys in which the body of the toy simulates a boat, an animal, or other moving creature, as well as a road vehicle.

I claim:

1. A vehicle toy having a slow speed shaft geared by means of suitable gearing to a high speed shaft, a motor for driving said shafts, a driving wheel at one side of said vehicle driven by said high speed shaft, an arm at the opposite side of said vehicle mounted on and rotated by said slow speed shaft, said arm having a radius such that when in the course of its rotation it points downward it bears against the surface on which the toy is running and acts as a pivot point about which the vehicle is turned by the aforesaid driving wheel on the other side of the vehicle.

2. A vehicle toy having a slow speed shaft geared by means of suitable gearing to a high speed shaft, a motor for driving said shafts, a driving wheel at one side of said vehicle driven by said high speed shaft, an arm at the opposite side of said vehicle mounted on and rotated by said slow speed shaft, said arm having a radius such that when in the course of its rotation it points downward it bears against the surface on which the toy is running and acts as a pivot point about which the vehicle is turned by the aforesaid driving wheel on the other side of the vehicle, the gearing between said shafts being such that the shafts rotate in the same direction.

3. A vehicle toy comprising a slow speed shaft extending transversely of the vehicle, a high speed shaft extending transversely of the vehicle and geared to said slow speed shaft, a motor for driving said shafts, driving wheels at the ends of said high speed shaft at the sides of the vehicle, an arm mounted on said slow speed shaft at one side of the vehicle, another arm mounted on said slow speed shaft at the other side of the vehicle, said latter arm being mounted on said shaft pointing in a different direction from said first arm, each of said arms having a length such that when the arm in the course of its rotation is pointed downward it bears against the surface on which the vehicle is running and raises its

side of the vehicle enough to free the driving wheel at its side of the vehicle, whereupon the arm acts as a pivot about which the vehicle is turned by the other driving wheel at the opposite side of the vehicle, said vehicle being turned at intervals first in one direction and then in the other direction by the alternating action of the aforesaid two rotating arms and driving wheels.

4. A vehicle toy comprising a slow speed shaft extending transversely of the vehicle, a high speed shaft extending transversely of the vehicle and geared to said slow speed shaft, a motor for driving said shafts, driving wheels at the ends of said high speed shaft at the sides of the vehicle, an arm mounted on said slow speed shaft at one side of the vehicle, another arm mounted on said slow speed shaft at the other side of the vehicle, said latter arm being mounted on said shaft pointing in a different direction from said first arm, each of said arms having a length such that when the arm in the course of its rotation is pointed downward it bears against the surface on which the vehicle is running and raises its side of the vehicle enough to free the driving wheel at its side of the vehicle, whereupon the arm acts as a pivot about which the vehicle is turned by the other driving wheel at the opposite side of the vehicle, said vehicle being turned at intervals first in one direction and then in the other direction by the alternating action of the aforesaid two rotating arms and driving wheels, the gearing between said shafts being such that the shafts rotate in the same direction.

5. A vehicle toy comprising a slow speed shaft extending transversely of the vehicle, a high speed shaft extending transversely of the vehicle and geared to said slow speed shaft, a motor for driving said shafts, driving wheels at the ends of said high speed shaft at the sides of the vehicle, an arm mounted on said slow speed shaft at one side of the vehicle, another arm mounted on said slow speed shaft at the other side of the vehicle, said latter arm being mounted on said shaft pointing in opposite direction from said first arm, each of said arms having a length such that when the arm in the course of its rotation is pointed downward it bears against the surface on which the vehicle is running and raises its side of the vehicle enough to free the driving wheel at its side of the vehicle.

6. A vehicle toy comprising a spring motor having a winding stem, an axle, driving wheels on said axle, step-up gearing between said winding stem and said axle, a main spring connected to said winding stem, and an arm mounted on and rotated by said winding stem at one side of the vehicle, said arm having a length such that when in the course of its rotation it points downwardly it bears against the surface on which the toy is running and raises that side of the vehicle, whereupon said arm acts as a pivot about which the toy is turned by the driving wheel at the opposite side of the vehicle.

7. A vehicle toy comprising a spring motor having a winding stem, an axle, driving wheels on said axle, step-up gearing between said winding stem and said axle, a main spring connected to said winding stem, and an arm mounted on and rotated by said winding stem at one side of the vehicle, said arm having a length such that when in the course of its rotation it points downwardly it bears against the surface on which the toy is running and raises that side of the vehicle, whereupon said arm acts as a pivot about which the toy is turned by the driving wheel at the opposite side at the vehicle, the gearing between said shafts being such that the shafts rotate in the same direction.

8. A vehicle toy comprising a spring motor having a winding stem, an axle, driving wheels on said axle, step-up gearing between said winding stem and said axle, a main spring connected to said winding stem, an arm mounted on said winding stem at one side of the vehicle, a second arm mounted on said winding stem at the other side of the vehicle, said arms being mounted pointing in different directions, and each of said arms having a length such that when in the course of its rotation it points downwardly it bears against the surface on which the toy is running and raises its side of the vehicle, whereupon said arm acts as a pivot about which the toy is turned by the driving wheel at the opposite side at the vehicle, said vehicle being turned at intervals first in one direction and then in the other direction by the alternating action of the aforesaid two rotating arms and driving wheels.

9. A vehicle toy comprising a spring motor having a winding stem, an axle, driving wheels on said axle, step-up gearing between said winding stem and said axle, a main spring connected to said winding stem, an arm mounted on said winding stem at one side of the vehicle, a second arm mounted on said winding stem at the other side of the vehicle, said arms being mounted pointing in different directions, and each of said arms having a length such that when in the course of its rotation it points downwardly it bears against the surface on which the toy is running and raises its side of the vehicle, whereupon said arm acts as a pivot about which the toy is turned by the driving wheel at the opposite side at the vehicle, said vehicle being turned at intervals first in one direction and then in the other direction by the alternating action of the aforesaid two rotataing arms and driving wheels, the gearing between said shafts being such that the shafts rotate in the same direction.

10. A vehicle toy comprising a spring motor having a winding stem, an axle, driving wheels on said axle, step-up gearing between said winding stem and said axle, a main spring connected to said winding stem, an arm mounted on said winding stem at one side of the vehicle, a second arm mounted on said winding stem at the other side of the vehicle, said arms being mounted pointing in opposite directions, and each of said arms having a length such that when in the course of its rotation it points downwardly it bears against the surface on which the toy is running and raises its side of the vehicle, whereupon said arm acts as a pivot about which the toy is turned by the driving wheel at the opposite side at the vehicle.

11. A toy as defined in claim 8, in which the vehicle is additionally provided with a rear wheel mounted for a caster action in order not to interfere with the turning movement of the vehicle.

12. A toy as defined in claim 1, in which the vehicle is additionally provided with a rear wheel rotatable about a horizontal axis and mounted for a free caster action about an upright axis in order not to interfere with the turning movement of the vehicle, and in which the trailing wheel is surmounted by a simulated cyclist having articulated legs connected to cranks on said trailing wheel, said upright axis being located only a short distance in front of the horizontal axis, whereby the wheel and cyclist turn sharply

about the upright axis as the toy turns about the pivot point.

13. A toy as defined in claim 3, in which the vehicle is additionally provided with a rear wheel rotatable about a horizontal axis and mounted for a free caster action about an upright axis in order not to interfere with the turning movement of the vehicle, and in which the trailing wheel is surmounted by a simulated cyclist having articulated legs connected to cranks on said trailing wheel, said upright axis being located only a short distance in front of the horizontal axis, whereby the wheel and cyclist turn sharply about the upright axis as the toy turns about the pivot point.

14. A vehicle toy comprising a spring motor having a winding stem, an axle, driving wheels on said axle, step-up gearing between said winding stem and said axle, a main spring connected to said winding stem, an arm mounted on said winding stem at one side of the vehicle, a second arm mounted on said winding stem at the other side of the vehicle, said arms being mounted pointing in different directions, and each of said arms having a length such that when in the course of its rotation it points downwardly it bears against the surface on which the toy is running and raises its side of the vehicle, whereupon said arm acts as a pivot about which the toy is turned by the driving wheel at the opposite side at the vehicle, said vehicle being turned at intervals first in one direction and then in the other direction by the alternating action of the aforesaid two rotating arms and driving wheels, said vehicle being additionally provided with a rear wheel mounted for a caster action in order not to interfere with the turning movement of the vehicle, and said trailing wheel being surmounted by a simulated cyclist having articulated legs connected to cranks on said trailing wheel.

15. A vehicle toy comprising a spring motor having a winding stem, an axle, driving wheels on said axle, step-up gearing between said winding stem and said axle, a main spring connected to said winding stem, and an arm mounted on and rotated by said winding stem at one side of the vehicle, said arm having a length such that when in the course of its rotation it points downwardly it bears against the surface on which the toy is running and raises that side of the vehicle, whereupon said arm acts as a pivot about which the toy is turned by the driving wheel at the opposite side of the vehicle, said vehicle being additionally provided with a rear wheel rotatable about a horizontal axis and mounted for a free caster action about an upright axis in order not to interfere with the turning movement of the vehicle, and said trailing wheel being surmounted by a simulated cyclist having articulated legs connected to cranks on said trailing wheel, said upright axis being located only a short distance in front of the horizontal axis, whereby the wheel and cyclist turn sharply about the upright axis as the toy turns about the pivot point.

16. A vehicle toy having a slow speed shaft geared by means of suitable gearing to a high speed shaft, a motor for driving said shafts, a driving wheel at one side of said vehicle driven by said high speed shaft, a wheel at the other side of the vehicle carried on said high speed shaft, an arm at said latter side of said vehicle mounted on and rotated by said slow speed shaft in a plane nearer the vehicle than the latter wheel, said arm having a radius short enough to clear the high speed shaft but long enough so that when in the course of its rotation it points downward it bears against the surface on which the toy is running and acts as a pivot point about which the vehicle is turned by the aforesaid driving wheel on the other side of the vehicle.

17. A vehicle toy having a slow speed shaft geared by means of suitable gearing to a high speed shaft, a motor for driving said shafts, a driving wheel at one side of said vehicle driven by said high speed shaft, a wheel at the other side of the vehicle carried on said high speed shaft, an arm at said latter side of said vehicle mounted on and rotated by said slow speed shaft in a plane nearer the vehicle than the latter wheel, said arm having a radius short enough to clear the high speed shaft but long enough so that when in the course of its rotation it points downward it bears against the surface on which the toy is running and acts as a pivot point about which the vehicle is turned by the aforesaid driving wheel on the other side of the vehicle, the gearing between said shafts being such that the shafts rotate in the same direction.

18. A vehicle toy comprising a slow speed shaft extending transversely of the vehicle, a high speed shaft extending transversely of the vehicle and geared to said slow speed shaft, a motor for driving said shafts, driving wheels at the ends of said high speed shaft at the sides of the vehicle, an arm mounted on said slow speed shaft at one side of the vehicle, another arm mounted on said slow speed shaft at the other side of the vehicle, said latter arm being mounted on said shaft pointing in a different direction from said first arm, each of said arms turning in planes between the planes of the wheels and having a length short enough to clear the high speed shaft but long enough so that when the arm in the course of its rotation is pointed downward it bears against the surface on which the vehicle is running and raises its side of the vehicle enough to free the driving wheel at its side of the vehicle, whereupon the arm acts as a pivot about which the vehicle is turned by the other driving wheel at the opposite side of the vehicle, said vehicle being turned at intervals first in one direction and then in the other direction by the alternating action of the aforesaid two rotating arms and driving wheels.

19. A vehicle toy comprising a slow speed shaft extending transversely of the vehicle, a high speed shaft extending transversely of the vehicle and geared to said slow speed shaft, a motor for driving said shafts, driving wheels at the ends of said high speed shaft at the sides of the vehicle, an arm mounted on said slow speed shaft at one end of the vehicle, another arm mounted on said slow speed shaft at the other side of the vehicle, said latter arm being mounted on said shaft pointing in a different direction from said first arm, each of said arms turning in planes between the planes of the wheels and having a length short enough to clear the high speed shaft but long enough so that when the arm in the course of its rotation is pointed downward it bears against the surface on which the vehicle is running and raises its side of the vehicle enough to free the driving wheel at its side of the vehicle, whereupon the arm acts as a pivot about which the vehicle is turned by the other driving wheel at the opposite side of the vehicle, said vehicle being turned at intervals first in one direction and then in the other direction by the alternating action of the aforesaid two rotating arms and driving wheels, the gearing between said shafts

being such that the shafts rotate in the same direction.

20. A vehicle toy comprising a slow speed shaft extending transversely of the vehicle, a high speed shaft extending transversely of the vehicle and geared to said slow speed shaft, a motor for driving said shafts, driving wheels at the ends of said high speed shaft at the sides of the vehicle, an arm mounted on said slow speed shaft at one side of the vehicle, another arm mounted on said slow speed shaft at the other side of the vehicle, said latter arm being mounted on said shaft pointing in opposite direction from said first arm, each of said arms turning in planes between the planes of the wheels and having a length short enough to clear the high speed shaft but long enough so that when the arm in the course of its rotation is pointed downward it bears against the surface on which the vehicle is running and raises its side of the vehicle enough to free the driving wheel at its side of the vehicle.

21. A vehicle toy comprising a spring motor having a winding stem, an axle, driving wheels on said axle, step-up gearing between said winding stem and said axle, a main spring connected to said winding stem, and an arm mounted on and rotated by said winding stem at one side of the vehicle in a plane between the planes of the wheels, said arm having a length short enough to clear the high speed shaft but long enough so that when in the course of its rotation it points downwardly it bears against the surface on which the toy is running and raises that side of the vehicle, whereupon said arm acts as a pivot about which the toy is turned by the driving wheel at the opposite side of the vehicle.

22. A vehicle toy comprising a spring motor having a winding stem, an axle, driving wheels on said axle, step-up gearing between said winding stem and said axle, a main spring connected to said winding stem, and an arm mounted on and rotated by said winding stem at one side of the vehicle in a plane between the planes of the wheels, said arm having a length short enough to clear the high speed shaft but long enough so that when in the course of its rotation it points downwardly it bears against the surface on which the toy is running and raises that side of the vehicle, whereupon said arm acts as a pivot about which the toy is turned by the driving wheel at the opposite side at the vehicle, the gearing between said shafts being such that the shafts rotate in the same direction.

23. A vehicle toy comprising a spring motor having a winding stem, an axle, driving wheels on said axle, step-up gearing between said winding stem and said axle, a main spring connected to said winding stem, an arm mounted on said winding stem at one side of the vehicle, a second arm mounted on said winding stem at the other side of the vehicle, said arms being mounted pointing in different directions, and each of said arms turning in planes between the planes of the wheels and having a length short enough to clear the high speed shaft but long enough so that when in the course of its rotation it points downwardly it bears against the surface on which the toy is running and raises its side of the vehicle, whereupon said arm acts as a pivot about which the toy is turned by the driving wheel at the opposite side at the vehicle, said vehicle being turned at intervals first in one direction and then in the other direction by the alternating action of the aforesaid two rotating arms and driving wheels.



24. A vehicle toy comprising a spring motor having a winding stem, an axle, driving wheels on said axle, step-up gearing between said winding stem and said axle, a main spring connected to said winding stem, an arm mounted on said winding stem at one side of the vehicle, a second arm mounted on said winding stem at the other side of the vehicle, said arms being mounted pointing in different directions, and each of said arms turning in planes between the planes of the wheels and having a length short enough to clear the high speed shaft but long enough so that when in the course of its rotation it points downwardly it bears against the surface on which the toy is running and raises its side of the vehicle, whereupon said arm acts as a pivot about which the toy is turned by the driving wheel at the opposite side at the vehicle, said vehicle being turned at intervals first in one direction and then in the other direction by the alternating action of the aforesaid two rotating arms and driving wheels, the gearing between said shafts being such that the shafts rotate in the same direction.

25. A vehicle toy comprising a spring motor having a winding stem, an axle, driving wheels on said axle, step-up gearing between said winding stem and said axle, a main spring connected to said winding stem, an arm mounted on said winding stem at one side of the vehicle, a second arm mounted on said winding stem at the other side of the vehicle, said arms being mounted pointing in opposite directions, and each of said arms turning in planes between the planes of the wheels and having a length short enough to clear the high speed shaft but long enough so that when in the course of its rotation it points downwardly it bears against the surface on which the toy is running and raises its side of the vehicle, whereupon said arm acts as a pivot about which the toy is turned by the driving wheel at the opposite side at the vehicle.

RAYMOND J. LOHR.

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