Jan. 5, 1926. 1,568,459

F. KACIREK

TOY VEHICLE

Filed Dec. 8, 1924

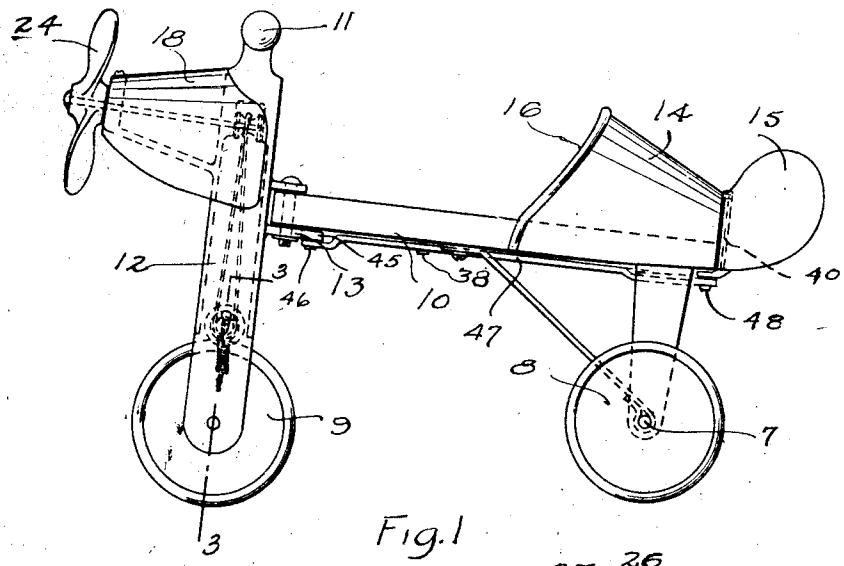
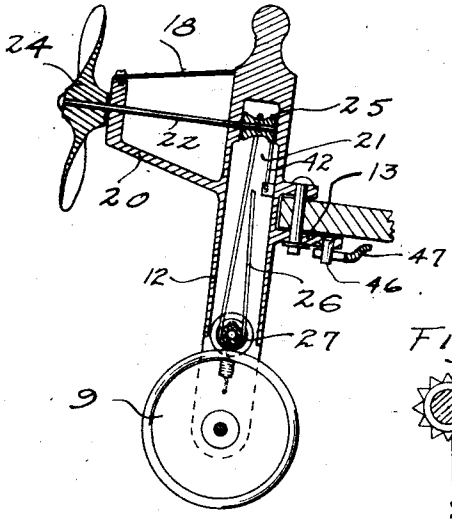


Fig. 1

Fig. 2



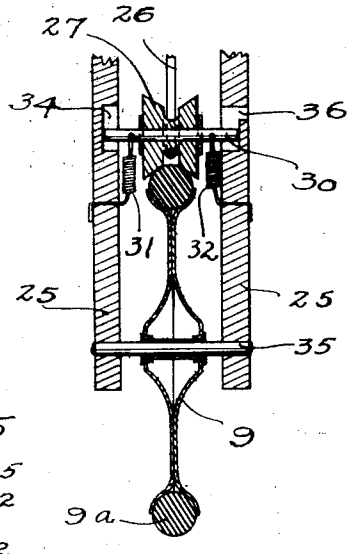
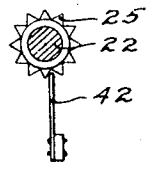


Fig. 3

Fig. 5



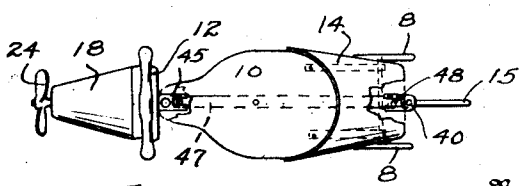


Fig. 4

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UNITED STATES PATENT OFFICE.

FRANK KACIREK, OF CLEVELAND, OHIO, ASSIGNOR TO ALFRED L. HOHLFELDER, OF CLEVELAND, OHIO.

TOY VEHICLE.

Application filed December 8, 1924. Serial No. 754,493.

To all whom it may concern:

Be it known that I, FRANK KACIREK, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in a Toy Vehicle, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention is concerned with toy vehicles and more particularly with toy vehicles adapted to be straddled by the juvenile rider.

The general object of my invention is the provision of a novelty adaptable to toy vehicles of the type referred to which may be economically manufactured and which may be of a durable character while providing movable elements in imitation of the movable elements of an aeroplane all operated from the front of the vehicle.

A further object of my invention is the provision of a toy vehicle of the class referred to having a propeller and driving means therefor all carried by a front fork member attached to a dirigible wheel.

Other objects of my invention will hereinafter be set forth in the following description referring to the accompanying drawings and the essential characteristics are summarized in the claims.

In the drawings Fig. 1 is a side elevation of a toy vehicle embodying my invention; Fig. 2 is a central cross-sectional elevation of the forward part of the vehicle; Fig. 3 is an enlarged cross-sectional view taken through the front portion of the vehicle substantially along the line 3—3 of Fig. 1; Fig. 4 is a small plan view of the vehicle and Fig. 5 is a detail of a sound producing mechanism.

In Fig. 1 I show a toy vehicle corresponding to the general construction of a popular form of juvenile toy having a pair of rear wheels 8 supported on an axle 7 and a forward dirigible wheel 9 supporting a flat seat or body member 10. The forward wheel 9 is attached to a front fork member 12 having a bracket 13 affording a pivotal connection to the forward end of the body portion 10. The fork member is provided with a handle bar 11 at the top thereof whereby the fork member may be turned for steering purposes.

My invention contemplates a body construction which will be suggestive in a juvenile way of an aeroplane. I accordingly provide a rear rounded body portion 14 having a seat back and an imitation rudder. The rudder may be rigided with the body member 14, or as shown, it may be pivotally mounted on a vertically extending pin 40 which is suitably supported by the body portion. This rudder may be shifted when the front wheel is turned by a very simple mechanism to be hereinafter described. The body member 14 may be provided with the seat back 16 which may be secured thereto and to the body member 10.

The fork member 12 is provided with a cowl structure 18 which is carried entirely by the fork member and may comprise metallic sheeting fashioned to present a sloping hood appearance. Positioned within this cowl structure is a forwardly extending portion 20 which may be formed integrally with the fork member 12 or separable therefrom to comprise a bearing for a shaft 22 in accordance with the particular design of fork member it is desired to use, namely either wooden or pressed metal design. As stated the interior of this structure constitutes a housing for a shaft 22 extending forwardly of the vehicle and upon an outer end of which is mounted an imitation propeller 24. The rearward end of the shaft extends into a cavity 21 which is suitably formed by constructing the steering fork 12 to be hollow and this rear extension of the shaft serves to carry a pulley 25 rigidly mounted thereon. This pulley may have a rim thereof notched whereby a vibrator blade 42 may intermittently contact therewith to produce a noise in imitation of an aeroplane engine and this vibrator may be suitably mounted within the fork cavity 21.

Extending downwardly and completely housed by the fork structure is a flexible belt 26 having a quarter turn or twist therein whereby it may extend over a pulley 27 driven by the front wheel 9. The pulley 27 is mounted upon a spindle 30 bearing in slots 34 formed interiorly of the side portions 25 of the front fork member 12. The shape of the pulley 27 as shown in Fig. 3 is such that as to provide a proper circumferential driving contact for the belt 26 while also providing a frictional contact with the tire 9a of the front wheel 9. The front wheel 9 as shown in Fig. 3 may be

mounted in any convenient manner on the front fork and is conventionally illustrated in that figure as being mounted upon a pin 35 bearing in the bifurcated portions of the fork. The spindle 30 is engaged by springs 31 and 32, the ends of which are secured to the bifurcated portions 25 of the fork 12. The slots 34 to permit an adjusting or floating movement of the shaft 30. The pulley 27 is thus urged into engagement with the tire 9ª under all conditions. One of the slots is provided with an opening 36 to permit insertion of the shaft.

Having described the means by which I rotate a propeller disposed at the front end of the vehicle, I will now describe a specific means by way of illustration only, whereby the rudder may be moved when any movement of the front dirigible wheel takes place. As shown in Figs. 1 and 4, the bracket member 13, connecting the dirigible fork member 12 with the body 10, is provided with a rearwardly extending portion 45 which may carry a pin 46. The pin 46 engages a longitudinally extending lever 47 suspended on 38 depending from the underside of the body 10 and the rear end of which engages a lug 48 formed on the rudder member 15. Hence when the fork 12 is turned the rudder 15 will be tilted.

It will be understood that if it is desired, the front wheel may be mounted upon an axle suitably bearing in the front fork, whereby pedals may be provided for driving the front wheel. As shown in the drawings, however, the vehicle is propelled in the usual juvenile manner with the feet contacting with the ground.

It will be seen from the foregoing description of my invention that I provide a very simple, novel, juvenile toy having a rotating element disposed upon a front dirigible member which rotating member is always visible to the child's eyes and thus having a special appeal. Also by mounting the shaft 22 on the front fork member, the driving mechanism may be embodied in a toy in a very simple but durable construction inducive to a commercially successful embodiment of the invention.

I claim:

1. In a toy vehicle of the character described, the combination of a body supported by rear wheels, a front fork member pivotally connected to the body, a cowl structure carried by the fork member, a front dirigible wheel attached to and supporting the fork, a shaft mounted in the cowl structure, a pulley mounted on the fork and driven by said front wheel and flexible means drivingly connecting said pulley to the shaft.

2. In a toy vehicle of the character described the combination of a body supported by rear wheels, a single front dirigible wheel, a forked member therefor pivotally attached to the forward end of the body, a cowl structure supported by the forked member, a shaft mounted within the cowl structure and means driven by said front wheel for rotating the shaft.

3. In a three-wheeled toy vehicle the combination of a body having a pair of rear wheels and a front dirigible wheel, a forked member attached to the front wheel, a cowl structure carried solely by the forked member, a shaft supported by the forked member and cowl structure and means carried by the forked member and driven by said front wheel for driving the shaft.

4. In a toy vehicle of the character described a front fork member, a wheel connected thereto, a second wheel driven by the first wheel, a shaft mounted on the fork member with the axis thereof at substantially a right-angle to the axis of said wheels, a pulley on the shaft and flexible means drivingly connecting said second wheel to the pulley.

5. In a toy vehicle of the character described, a dirigible wheel mounted on a bifurcated steering post, said post having means adapting it to pivotal connection to a vehicle body, a pulley mounted between the bifurcated portions of said post and in juxtaposition to the rim of said wheel whereby the pulley may be frictionally driven by the wheel, a shaft rotatably mounted on the steering post and having a second pulley mounted thereon and flexible means connecting said pulleys.

6. In a toy vehicle of the character described, the combination of a body supported by rear wheels, a front fork member pivotally connected to the body, a rudder attached to the rear end of the body and a lever member connecting the fork member to the rudder whereby the fork member and rudder will be tilted in unison.

7. In a toy vehicle of the character described, the combination of a body supported by rear wheels, a front fork member pivotally connected to the body, a rotatable shaft carried by the fork member, a front dirigible wheel attached to and supporting the fork, a propeller mounted on the shaft, a pulley mounted on the fork and driven by said front wheel and flexible means drivingly connecting said pulley to the shaft.

8. In a three-wheeled toy vehicle the combination of a body having a pair of rear wheels and a front dirigible wheel, a steering member attached to the front wheel, a propeller shaft carried solely by the steering member, a pulley supported by the shaft member and means carried by the steering member and driven by said front wheel for driving the shaft.

9. In a toy vehicle of the character described a front steering member, a wheel

connected thereto, a second wheel driven by the first wheel, a shaft mounted on the steering member with the axis thereof at substantially a right-angle to the axis of said wheels, a pulley on the shaft flexible means drivingly connecting said second wheel to the pulley and a resilient mounting for said second wheel.

10. In a toy vehicle of the character described a dirigible wheel mounted on a front steering post, said post having means adapting it to pivotal connection to a vehicle body, a pulley mounted on said post and in juxtaposition to the rim of said wheel whereby the pulley may be frictionally driven by the wheel, a shaft rotatably mounted on the steering post and having a second pulley mounted thereon, flexible means connecting said pulleys and a resilient mounting on the steering post for supporting said second pulley in cooperative relation to the tire of said steering wheel.

11. In a toy vehicle of the character described the combination of a front dirigible member, a shaft carried thereby, a notched pulley mounted on the shaft, a steerable wheel carried by the fork, and means drivingly connecting the pulley and a vibrating member acting on the pulley to make a noise when the vehicle is moved.

12. In a toy vehicle of the character described the combination of a front dirigible fork member, a wheel carried thereby a notched member rotatably mounted on the fork member, a vibrator acting on the notches of said member to make a noise and means driven by said wheel for driving the notched member.

13. In a toy vehicle of the character described, the combination of a body supported by rear wheels, a front fork member pivotally connected to the body, a rotatable shaft carried by the fork member, a front dirigible wheel attached to and supporting the fork, a propeller mounted on the shaft, a notched pulley mounted on the fork and driven by said front wheel, a vibrator member acting on the notched pulley to make a noise and flexible means drivingly connecting said pulley to the shaft.

14. In a toy vehicle of the character described the combination of a body supported by rear wheels, a single front dirigible wheel, a forked member therefor pivotally attached to the forward end of the body, a bracket on the fork comprising said pivotal attachment, a lever supported by the body and connected to the lever, a rudder mounted on the body and means connecting the lever to the rudder whereby the rudder is tilted when the fork member is turned.

15. In a three-wheeled toy vehicle the combination of a body having a pair of rear wheels and a front dirigible wheel, a steering member attached to the front wheel, a propeller shaft carried solely by the steering member, a pulley supported by the shaft member, means carried by the steering member and driven by said front wheel for driving the shaft, and means acting on the pulley to make a noise when the shaft is rotated.

16. In a toy vehicle of the character described a dirigible wheel mounted on a front steering post, said post having means adapting it to pivotal connection to a vehicle body, a pulley mounted on said post and in juxtaposition to the rim of said wheel whereby the pulley may be frictionally driven by the wheel, a shaft rotatably mounted on the steering post and having a second pulley mounted thereon, flexible means connecting said pulleys, a resilient mounting on the steering post for supporting said second pulley in cooperative relation to the tire of said steering wheel and a noise producing device operated by said shaft.

In testimony whereof, I hereunto affix my signature.

FRANK KACIREK.