Fig. 5
Running Straight

Fig. 6
Cornering

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BICYCLE TYPE TOY

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Application November 22, 1950, Serial No. 197,031

1 Claim. (Cl. 46—210)

This invention relates to toys, and more particularly to a novel two-wheeled toy, such as a bicycle or a motorcycle which can be controlled by a manually operated line.

For many years, three and four wheel toy land vehicles and toy aircraft of the manual control type have been popular, however two-wheeled vehicles of the bicycle type, whether hand or motor driven, have been considered unfeasible because of the difficulty in steering such devices.

According to the present invention, I have discovered that a two-wheeled toy vehicle of the bicycle type, whether hand or motor driven, can be controlled by a line attached to the frame of the vehicle in such manner as to utilize the gyroscopic and casting action of the front wheel to steer the vehicle.

The foregoing and other objects of the invention will become apparent from a consideration of the following specification and the accompanying drawings, wherein:

Figure 1 is a side elevational view of a toy motorcycle embodying the invention;

Figures 2, 3, and 4 are sectional views taken respectively, on the lines 2—2, 3—3, and 4—4 of Figure 1;

Figure 5 is a side elevational view of the toy showing the manner in which it is hand operated in a straight line;

And Figure 6 is a view showing the manner in which the toy is steered during cornering.

Describing the invention in detail and referring first to the constructional views of Figures 1—4, the embodiment illustrated comprises a frame 2 having an imitation seat 4 and an imitation motor 6, although it will be understood that an operative motor may be used, if desired, and may be connected to a rear wheel 7 mounted on a rear axle 8.

The wheel 7 is preferably rotatable within a rear hood 10 forming a part of the frame 2 which comprises a hinged socket or bearing 12 at its front end pivoted by a pin 14 (Fig. 4) to spaced cross-bars 15 of a wheel-connecting structure comprising side straps 17 connected to the cross-bars 15 and supported by a front axle 18 of a front wheel 20.

The side straps 17 are preferably provided with imitation handle bars 21 and a front hood 22 for the wheel 20.

The bearing 12 of the frame 2 through which the pin 14 extends is preferably provided with attaching means such as a hook or bracket 23, although I have found that, if desired, the bracket 23 may be connected to the side of the frame at approximately the point where the numeral 4 of the line 4—4 is applied to the frame in Figure 1. The latter arrangement is particularly useful for power driven models where the toy is steered in a circle around the operator.

As best shown in Figures 5 and 6, the bracket 23 is connected to a line 24 which is preferably connected to a control rod 26 operated manually. In Figure 5, the toy is being steered in a straight direction, and in Figure 6, the toy has been tilted slightly toward the operator so that the gyroscopic action of the wheel 20 has caused it to turn on its bearing pin 14, thereby cornering the toy.

This action is facilitated by disposing the pin 14 and bearing 12 at approximately 30° to the vertical, as shown in Figures 1 and 5; however to a lesser degree the same action is afforded by a vertical pin 14.

Referring to Figures 2 and 3, it will be seen that the wheels 7 and 20 are illustrated as solid wheels although it will be understood that any conventional type of wheel may be utilized. Furthermore the wheels are preferably flat on their tread surfaces as seen in radial cross-section; however if desired these tread surfaces may be of conventional arcuate configuration as seen in these figures.

I claim:

A bicycle pull toy comprising a main frame, a rear axle mounted on said frame, a rear wheel on said axle rotatable on a substantially fixed axis of rotation relative to the frame, a structure comprising a front axle pivoted to the frame on an axis approximately perpendicular to the front axle, a front wheel on said front axle, and a control line attached to said frame forwardly of the center of gravity of said toy for steering the toy.

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