

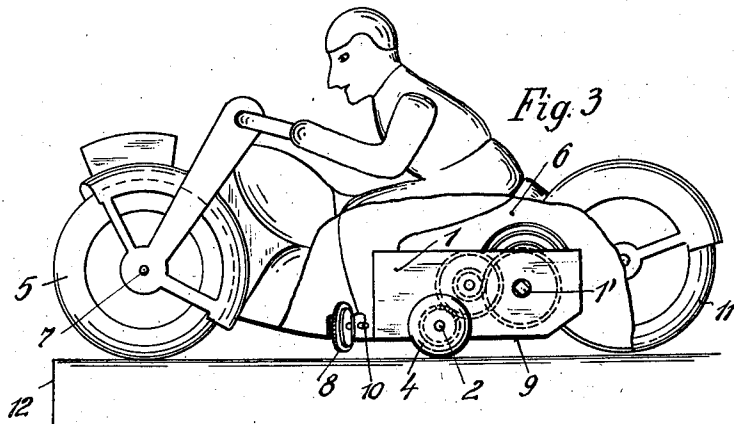
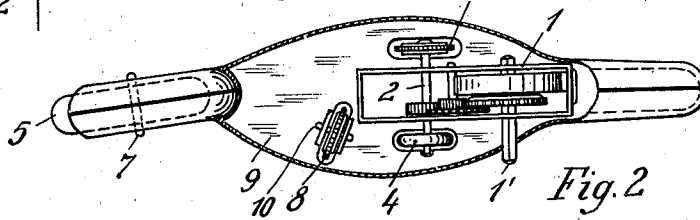
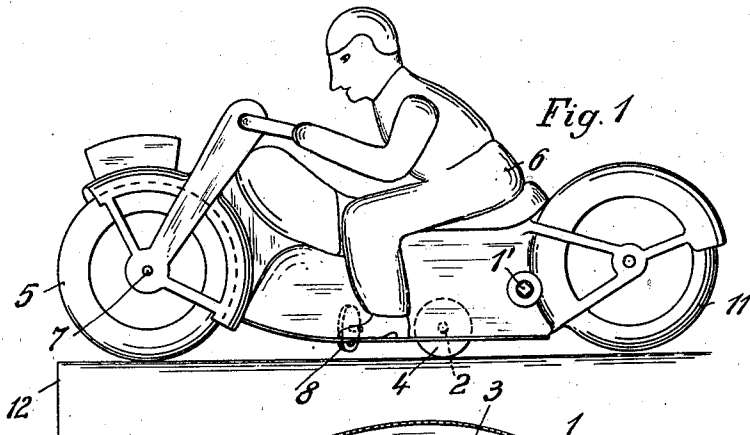
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H. MÜLLER

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TOY VEHICLE

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INVENTOR:

Heinrich Müller

By Arthur N. Hahn
ATTY.

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TOY VEHICLE

Heinrich Müller, Nuremberg, Germany

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1 Claim. (Cl. 46—213)

This invention relates to toy vehicles and more particularly to clockwork-driven toy vehicles constructed in the form of a so-called turning toy or vehicle.

5 A particular feature of such turning toys or vehicles consists therein that the vehicle moves on a running surface supported thereon at three points, of which two are represented by a pair of rear-wheels while the front part of the vehicle is supported on said running surface only at a third or front supporting point or wheel. Intermediate said pair of rear-wheels and said third supporting point or wheel there is further provided at the under part of the toy-vehicle a turning wheel normally out of contact with said running surface and coming in contact therewith, whenever said front supporting point or wheel is moving beyond the running surface. In this latter case the turning wheel will represent said third point of support and act as a guide member for the turning motion now imparted to the toy vehicle in co-operation with one or both of said rear-wheels, said turning motion being continued until said front part of the vehicle is again turned onto the running surface, whereupon normal travel will again be established.

According to my invention the toy vehicle is equipped with three running wheels representing during normal travel the said three supporting points. Of these three wheels two are rear wheels positioned on different sides of the longitudinal central axis of the toy body, while the third is a front wheel positioned essentially in said axis. Besides said three running wheels there is provided a fourth wheel, viz. the turning wheel which is rotatable about an axle directed obliquely to said longitudinal central axis. Said fourth or turning wheel, moreover, is positioned preferably on that side towards which the turning motion of the toy shall take place.

As the two rear wheels of which one or both are driven by the spring-actuated clockwork can be mounted in the base plate of the toy vehicle in a manner to be but little or hardly visible, there is provided the possibility of constructing the toy vehicle in the form of a motorcycle together with a cyclist or driver sitting thereon, the front wheel proper of the motorcycle representing the aforesaid front supporting point or wheel while the rear wheel proper of the motorcycle may be merely simulated by fixedly connecting the same to the body of the toy vehicle and mounting it somewhat above the running surface. During running motion of the

toy vehicle this rear wheel, therefore, does not act at all as a driving nor as a running wheel.

The novel construction and arrangement of the toy vehicle which forms part of my present invention results in a turning toy vehicle of simple construction running on three wheels, the vehicle in spite of this performing the turning motion with the greatest degree of certainty and causing the front wheel of the toy to be again swung onto the running surface, whenever it moves beyond the same in which case the wheel forming said front wheel or supporting point had lost its support on the running surface.

In the accompanying drawing which forms part of this specification my novel toy vehicle is shown in an exemplification, the new toy having the form of a motorcycle together with a cyclist or driver sitting thereon.

Fig. 1 is a side-view of the toy vehicle in the form of a motorcycle together with a cyclist thereon, Fig. 2 a top-view, partly in section, through the toy body showing the driving mechanism together with the supporting or turning wheel, and Fig. 3 a side-view similar to Fig. 1 with a part of the toy body broken away showing said driving mechanism and said supporting or running wheel likewise in side-view.

Referring more particularly to the drawing, a spring-actuated clockwork 1 provided with a winding stem 1' is mounted in the hollow body 6 of the toy vehicle, said body being composed of two lateral halves each being of the conformation of a shell. The axle 2 which is driven by said clockwork forms the axle proper for the one of the rear wheels 3, said one wheel 3 being fixedly connected to said axle 2, while the other rear wheel 4 is loosely carried by said axle to be freely rotatable thereabout. The toy vehicle, accordingly, is further equipped with a rear wheel 3 which is driven one-sided by said clockwork 1. The front supporting point of the toy vehicle is represented by the rotatable wheel 5 representing the front wheel of the motorcycle, the axle 7 of said wheel 5 being obliquely directed with respect to the longitudinal central axis of the toy body. Intermediate the axle 2 for the rear wheels 3 and 4 and the axle 7 for the front wheel 5, there is provided at the under side of the toy body on the base plate 9 thereof a freely rotatable supporting and turning wheel 8 having its axle 10 likewise obliquely directed with respect to said longitudinal central axis. Said supporting and turning wheel 8 which forms a guide member effecting the turning motion of the toy is arranged laterally of the longitudinal

central axis of the toy body, said wheel 8 being mounted on the side towards which the turning motion is to be effected.

The toy vehicle which in the example of construction described herein and shown in the drawing is represented in the form of a motorcycle together with a cyclist or driver, may also be constructed in any other desired form. The toy, as had been explained in the foregoing, is running on three wheels in rolling contact with the running surface, said wheels consisting of the two rear wheels 3 and 4, of which the wheel 3 acts driving, and the front wheel 5 positioned obliquely with respect to said former wheel, while the wheel 11 which represents the rear wheel proper of the motorcycle is positioned somewhat above the running surface as shown in Figs. 1 and 3, and thus acts neither as a driving nor as a running wheel. The rear wheel 11, therefore, may be fixedly connected to the toy body as it never rotates during motion of the toy. During normal travel on the running surface, the toy vehicle will be supported at three supporting points represented by the wheels 3 and 4 and the wheel 5, while the laterally arranged turning wheel 8 is out of contact with the running surface. If, however, the toy vehicle is travelling with its front wheel 5 beyond the edge 12 of the running surface, the front wheel 5 will lose its support and simultaneously therewith the supporting and turning wheel 8 will come in rolling contact with the running surface and effect the turning motion of the toy vehicle.

As the toy vehicle is driven one-sided by the driving wheel 3 fixedly connected to the axle 2, the vehicle will perform a turning motion and again be turned back onto the running surface with the front wheel 5 again in contact therewith by action of said turning wheel 8 with the result that the toy vehicle will now continue to travel normally on the aforesaid three supporting points represented by the wheels 3, 4 and 5.

Owing to the oblique arrangement of the axle

7 of the front wheel 5, the travel of the toy vehicle is performed in circular direction and the front wheel 5 during returning of the vehicle onto the running surface will again be lifted above the edge 12 of the running surface so that the toy vehicle will now again perform its normal travel on the three wheels 3, 4 and 5 with the turning wheel 8 lifted out of contact with the running surface.

The rear portion of the toy vehicle extends rearward of the wheels 3 and 4, and owing to the fact that the wheel 11 representing the rear wheel proper of the motorcycle is out of contact with the running surface, said rear portion is of so-called overhung construction, that is in no way immediately supported on the running surface.

I claim:

A mechanical toy simulating a two wheeled vehicle and comprising a body portion having a rotatable front wheel adapted to engage a supporting surface to support the front of the vehicle and a non-rotatable imitation rear wheel arranged close to but out of contact with said surface, the axis of rotation of said front wheel being fixedly mounted at an oblique angle to the longitudinal axis of the vehicle, a pair of supporting wheels disposed between said front wheel and said imitation wheel and normally supporting the rear portion of said toy, a clockwork carried by said body portion and operatively connected to at least one of said supporting wheels to drive the toy, and a turning wheel disposed obliquely to the longitudinal axis of the vehicle and arranged between said front wheel and said supporting wheels, said turning wheel being normally put of contact with said supporting surface but being adapted to engage said surface when said front wheel drops below the plane of said surface, thereby to change the direction of travel of the toy and restore said front wheel in engagement with the surface.

HEINRICH MÜLLER.