Oct. 5, 1965 L. ROEPER 3,209,491

CYLINDRICAL RUNWAY TOY

Filed April 15, 1963

Fig. 1

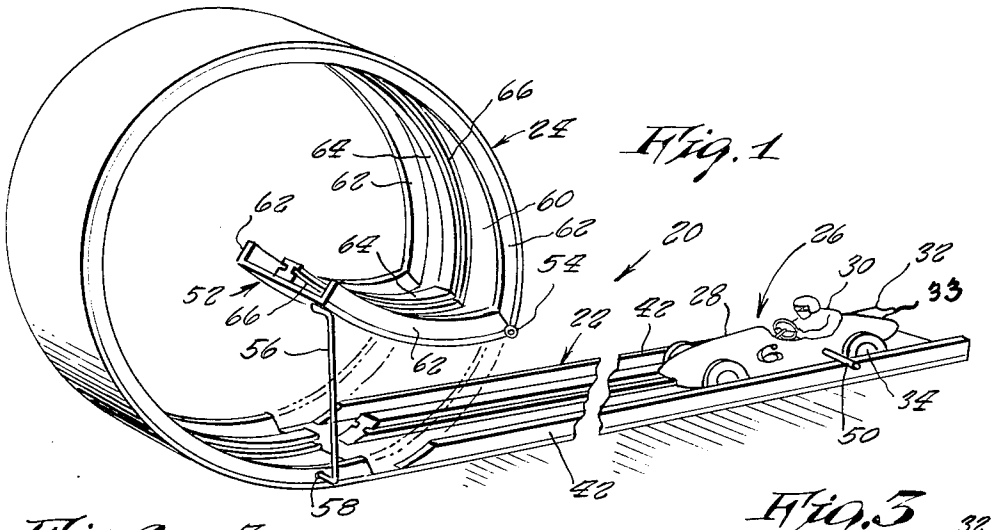


Fig. 2

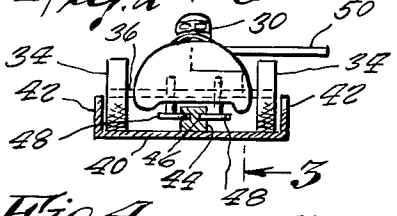


Fig. 3

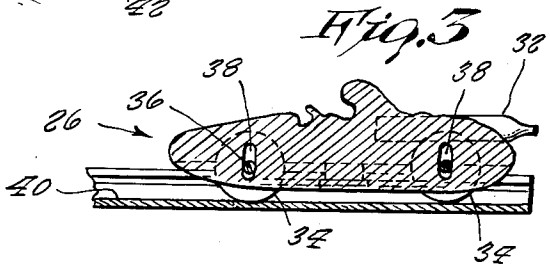


Fig. 4

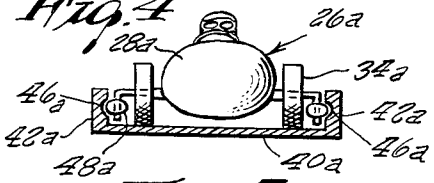


Fig. 5

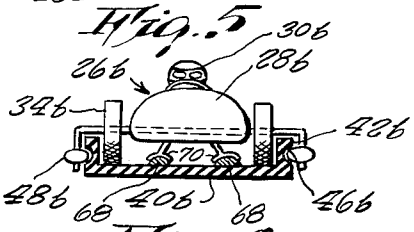
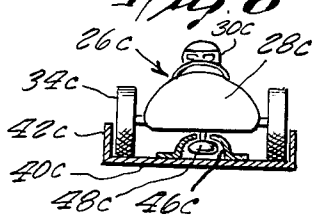


Fig. 6



INVENTOR.
LEO ROEPER
BY
Jacob L. Rollin
ATTORNEY

United States Patent Office

3,209,491
Patented Oct. 5, 1965

1

3,209,491

CYLINDRICAL RUNWAY TOY

Leo Roeper, 300 St. Nicholas Ave., Ridgewood, N.Y.

Filed Apr. 15, 1963, Ser. No. 273,224
6 Claims. (Cl. 46—243)

This invention relates to toys in general, and in particular to a toy race track and a toy vehicle adapted to operate on an endless circular track or on a cylindrical surface.

Another object of the invention is to provide a power-operated toy race track and vehicle of the above type which is simple in construction and economical to manufacture.

An important object of the invention is to provide a toy race track and a toy vehicle which may run in an annular course in a vertical or horizontal plane without being affected by gravity.

Other objects and a fuller understanding of the invention may be had by referring to the following description and claims taken in conjunction with the accompanying drawings.

It should be understood, however, that these are given by way of illustration and not of limitation, and that various changes in the details, form and arrangement of the parts may be made without departing from the scope of the invention.

In the drawings:

FIG. 1 is a perspective view of one embodiment of the invention,

FIG. 2 is a cross-section taken on a line through the approach runway of FIG. 1,

FIG. 3 is a cross-section taken on line 3—3 of FIG. 2,

FIGS. 4, 5 and 6 are cross-sectional views similar to FIG. 2, showing modified constructions of the invention.

Referring now to the drawings in detail, the toy illustrated in FIG. 1 comprises a race track, generally indicated by the numeral **20** and including a runway **22** which extends into a barrel **24**. An automobile **26** is positioned on the runway and includes a body **28**, a driver's figure **30** and compressed gas cartridge **32**, whose neck **33** may be punctured by a suitable puncturing tool (not shown) to permit the gas to escape under pressure rearwardly, thus causing the automobile **26** to be propelled forward. The wheels **34** of the automobile are mounted on axles **36** which are displaceable in slots **38**. The race track comprises a bed **40** formed with side walls **42** and a central guide rail **44**, extending longitudinally of the track and provided with grooves **46** in which are received groove followers **48**. A laterally projecting trip bar **50** is secured to one side of the automobile for closing a door **52** secured by hinge **54** to barrel **24** and initially held in open position by means of support **56** pivotable in opening **58**. As the automobile is propelled forward the bar **50** trips the support **56**, disengaging it from the door **52** and permitting it to swing downwardly, as shown in dotted lines in FIG. 1, thus forming a circular runway. The circular runway consists of a floor **60**, sidewalls **62** and guide track **64** formed with grooves **66**.

In the modification shown in FIG. 4, the vehicle **26*a*** is provided with a body **28*a*** and wheels **34*a***, while track walls **42*a*** are formed with grooves **46*a*** receiving followers **48*a***.

In FIG. 5 there is shown an electrically operated modification of the toy. The bed **40*b*** is formed of insulating material and grooves **46*b*** are formed in walls **42*b*** for receiving followers **48*b***. Longitudinally extending electrodes **68** feed current through contacts **70** to an electric motor (not shown) in the body **28*b***.

2

In yet another modification shown in FIG. 6, the floor **40*c*** is likewise formed with side walls **42*c*** and the vehicle **26*c*** is provided with a body **28*c*** and a guide **46*c*** in the form of an elongated bar of transverse arcuate cross section, the bar being slotted to receive a follower **48*c***. Obviously the propulsion means in this embodiment are self-contained, in the manner shown in FIG. 3.

The invention having thus been described, what is claimed and desired to be secured by Letters Patent of the United States of America is:

1. A toy race track comprising an open end cylinder, an inner runway extending about the inner wall of said cylinder, a portion of said cylinder's wall being formed as a door, hinge means for said door, a support pivotally mounted at said cylinder's edge for supporting said door in open position, an outer approach runway aligned with said inner runway adjacent said door portion, a toy vehicle provided with a laterally projecting bar for displacing said support, means for propelling the vehicle on said runways, said runways being provided with guide means for the vehicle and follower means in said vehicle for engaging with said guide means.

2. The device according to claim **1**, wherein said guide means comprise a track provided with lateral grooves and said follower means are a pair of groove followers secured to the underside of the vehicle.

3. The device according to claim **1**, wherein said guide means are side walls extending from both said runways and provided with interior grooves and said follower means are a pair of groove followers extending laterally of said vehicle.

4. The device according to claim **1**, wherein said guide means comprise a longitudinally slotted rail of arcuate transverse cross section and said follower means is a rod secured to the underside of the vehicle and extending downwardly through said slot.

5. The device according to claim **1** wherein said means for propelling the vehicle is a compressed gas cartridge mounted on said vehicle.

6. The device according to claim **1**, wherein the means for propelling said vehicle include an electric motor for said vehicle and an electric power supply and said runways are of electrically insulating material and wherein a pair of current bearing rails is secured to said runways, there being further provided a pair of electrical contacts on the underside of the vehicle's body and means connecting said contacts to said motor.

References Cited by the Examiner

UNITED STATES PATENTS

643,996	2/00	Anderson	104—57
812,595	2/06	Roberts	46—202
2,591,376	4/52	Rees	46—206
2,698,180	12/54	Hersh	273—86
2,920,420	1/60	Kolodziejski	46—243

DELBERT B. LOWE, *Primary Examiner.*

RICHARD C. PINKHAM, *Examiner.*