Dec. 5, 1961 A. EINFALT 3,011,288

TOY TRACK FOR VEHICLES

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Fig. 1

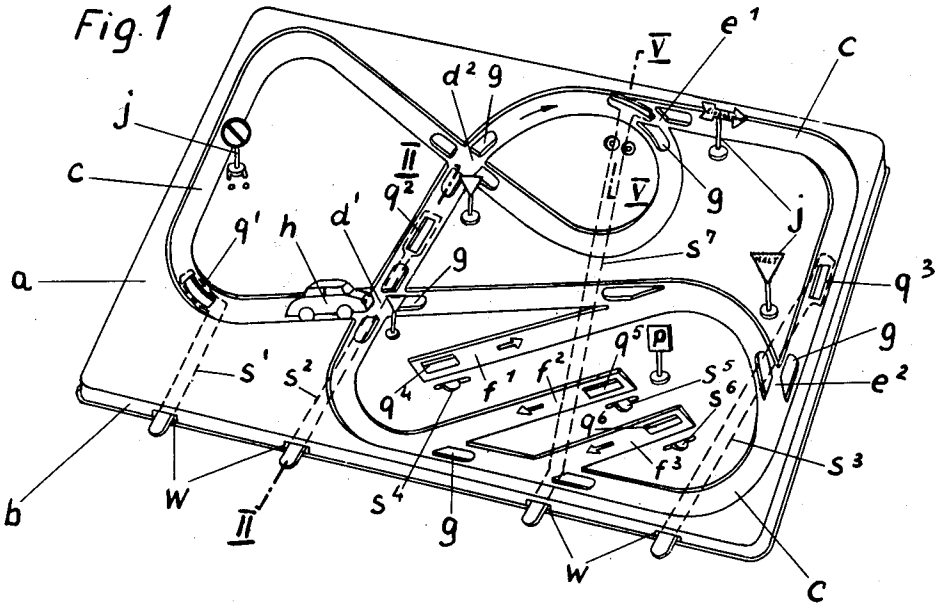


Fig. 2.

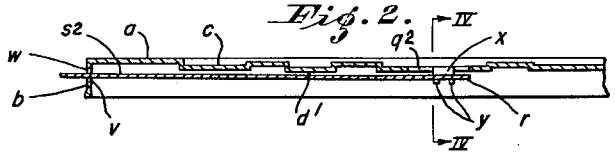


Fig. 3.

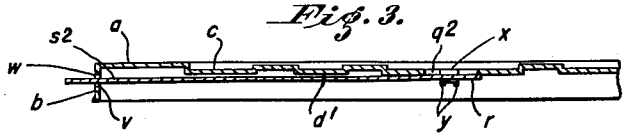


Fig. 4.

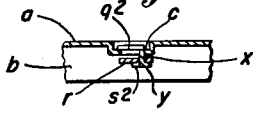


Fig. 5.

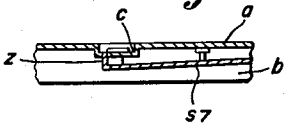


Fig. 6.

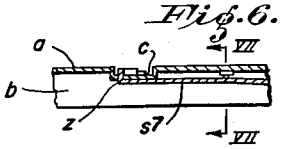


Fig. 7.



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Fig. 8

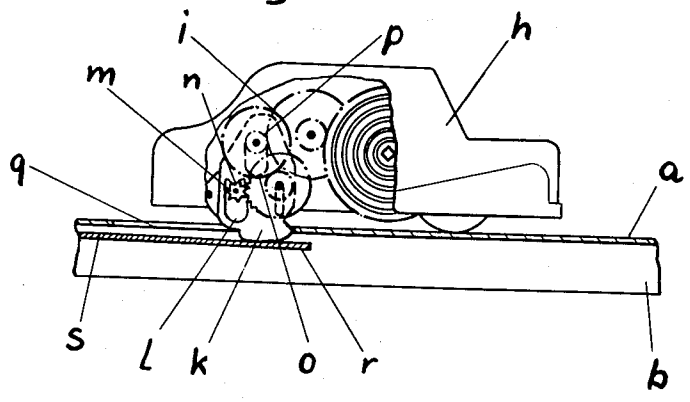


Fig. 9

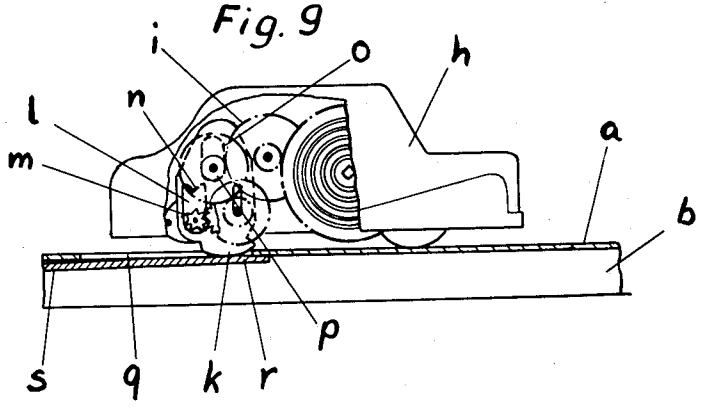


Fig. 10

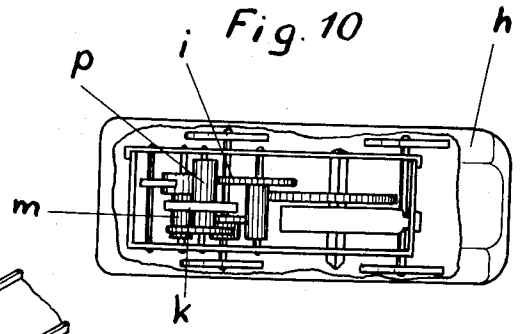
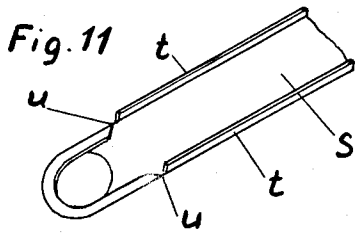


Fig. 11



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3,011,288

Patented Dec. 5, 1961

3,011,288

TOY TRACK FOR VEHICLES

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Filed May 4, 1959, Ser. No. 810,641
Claims priority, application Germany Feb. 3, 1959
6 Claims. (Cl. 46—216)

The invention relates to a toy comprising a board with a single track runway and appropriate traffic signs and vehicles movable along the runway and which can be stopped and released at certain halting places, such as branches, crossings, parking lots and the like, in that a drop-lever provided on each of the vehicles which can be lowered into the runway blocks the driving mechanism of the vehicle and on being again raised releases this mechanism.

In the known toy runways of this type, rotatable disks or other controlling devices are provided, with the aid of which the recesses in the runway are alternately closed or opened from below. The disadvantage of this arrangement is that either a rotary disk of a size corresponding to that of the board of the toy is necessary, or that if a smaller rotatable disk is chosen the recesses can only be provided at a limited distance from the center of rotation of the disk. In the former case the amount of material required is considerable and in the latter case the effects obtainable are restricted. Another objection is that the rotatable disk has to be mounted on the toy board, which as a rule need only be a thin plate, and also requires guides for ensuring its perfect rotation.

The above-mentioned objections are overcome by the construction according to the present invention in that a closing strip which can be raised and lowered is provided for each recess and mounted on the end of a tip lever.

This arrangement presents the advantage that every recess, irrespectively of the position it occupies on the board, can be easily covered or uncovered with the aid of a narrow strip requiring but little material such as sheet metal, and the front end of which forms at the same time the closing strip.

A particularly advantageous construction is attained if the tip lever for operating the closing strip and extending underneath the board is tiltable on an edge of the boundary wall of the board and in its up and down movement is guided in the region of the recess. At the same time it is advisable to provide the operating lever, which as already mentioned may consist of a strip of sheet metal, with bent-over edges and allow it to engage over the tilting edge of the board wall in two opposite grooves. In this manner it is possible to provide the operating lever with a bearing which is both reliable and easy to produce.

According to another feature of the invention, an operating lever of similar type is provided on its free end with an upwardly extending edge which can be moved up and down through an aperture in the board of the toy and serves in the case of branches for closing a branch of the runway in point-like fashion. Thus at the branch in question the two tracks of the runway can be selectively switched in or cut out as with points.

A particular advantage is that all operating levers are tiltably mounted on the same edge of the board of the toy and each is provided with a handle at its end. It is then possible for a child playing with the toy to manipulate all the levers without any difficulty from a sitting position if it has the toy in front of it resting on a table or the like with the handles of the operating levers on the front edge. This is very important because if several vehicles are moving along the runway, the child must operate the levers in quick succession.

An embodiment of the invention is illustrated schematically by way of example in the accompanying drawings, in which

FIG. 1 is a perspective view showing the board of the toy with a toy motor car and a plurality of traffic signs;

FIG. 2 a section on line II—II of FIG. 1;

FIG. 3 a similar section with a depressed operating lever;

FIG. 4 a section on line IV—IV of FIG. 2;

FIG. 5 a section on line V—V of FIG. 1;

FIG. 6 a similar section with raised operating lever; and

FIG. 7 a section on line VII—VII of FIG. 6;

FIG. 8 shows a toy motor car partly in longitudinal section with its drop-lever lowered;

FIG. 9 is a similar view with the drop-lever raised;

FIG. 10 shows the motor car in bottom plan view, and

FIG. 11 is a perspective view of an operating lever.

As already mentioned the toy comprises a board a which may consist of a relatively thin flat plate, for example, of sheet metal. It has depending or bent-down edge portions b which maintain the board a at a height above the surface on which it is placed and provide the space necessary for accommodating the operating levers under the plate.

The plate a is provided with a one-way track network in the form of sunken runways c which are formed in the plate a for example by pressing. Distributed along these runways are a few crossings, branches and parking lots; in the example illustrated there are the crossings d^1 and d^2, branches e^1 and e^2 and parking lots f^1, f^2 and f^3.

At the crossings and branches in the runways c, protrusions g are provided in the tracks for guiding the vehicles at the crossings and branches.

The toy includes several toy motor vehicles, for example toy automobiles h. In the construction illustrated these are each provided with a clockwork motor i incorporating a drop-lever k capable of moving up and down about a pivot axle and of engaging a rotary part, for example a pinion m of the motor with the aid of a slot l. When the drop-lever k is raised as shown in FIG. 9, the pinion m rotates freely in the slot l. If, however, the drop-lever k descends into the position shown in FIG. 8, the locking nose n engages the teeth of the pinion m and blocks the running down movement of the clockwork motor.

To assist the guiding of the drop-lever k it can also be provided with a slot o engaging over a pinion p.

The board a has apertures or recesses q^1, q^2, q^3, q^4, q^5 and q^6 in the runways c and these are coordinated to the crossings, branches and parking lots. When a vehicle reaches one of these recesses its drop-lever k descends into the position shown in FIG. 8 with the result that the clockwork motor is blocked and the vehicle brought to a standstill.

Underneath the plate a, closing strips r are provided one for each of these recesses q and each strip forms the end of one of the tip levers s^1, s^2, s^3, s^4, s^5 and s^6. If the closing strip is raised by means of its operating lever so that it is brought out of the position shown in FIGS. 2 and 8 and into the position shown in FIGS. 3 and 9, the corresponding recess q will be closed from below with the result that the drop-lever is raised into the position shown in FIG. 9 with the result that the clockwork motor is released and the toy vehicle can travel on.

The operating levers s which may each consist of a flat sheet metal strip, have downwardly bent edges t with two opposite grooves u by means of which they engage over the bearing edge. This bearing edge is, in the case of the levers s^1, s^2, s^3, the lower edge of an aperture provided in the front wall b of the plate a.

Similarly, the same type of tipping bearing can be pro-

vided for the levers s^4, s^5, s^6 which are coordinated to the parking lots f^1, f^2, f^3 or their recesses q^4, q^5, q^6.

The operating levers s assume the position shown in FIGS. 2 and 8 under the action of gravity. By exerting pressure on the ends projecting from the edge or wall b, which ends may be constructed as handles, the operating levers are tipped into the position illustrated in FIGS. 3 and 9. They are thereby guided into the ranges of the recesses q by means of a lug x which may be bent out from the material displaced during the stamping of the recesses q and has a holding edge y engaging through a slot in the operating lever s.

In addition to the operating levers for the halting places, similar operating levers s^7 can, as already mentioned, also be provided at the branches. These levers s^7 have an upwardly projecting edge z which can be moved upwards through a corresponding slot in the runway c. When this edge z is raised out of the position shown in FIG. 5 into the position shown in FIG. 6, it projects into the runway at the branch e^1 and acts like a point, preventing the oncoming vehicle from travelling straight ahead and diverting it into the curve or branch.

This lever s^7 is similarly mounted and guided to the other operating levers in the manner above described.

It is advisable to provide the runway with traffic signs at the crossings, branches, parking lots, etc., which signs correspond to the conventional traffic signs used on the roads, for example "halt" or "stop" signs, "major road" signs, "parking" signs and so forth. These traffic signs j can be removed and interchanged. Therefore, in the example illustrated they are provided with a plug-in base the plug pins of which can be inserted in corresponding sockets or holes in the board of the toy.

I claim:

1. A toy track system for at least one toy motor vehicle having a drop-lever movable up and down to release and stop the vehicle respectively, said track system comprising: an elevated base plate having depending edge portions; a one-way track network having crossings, branches and parking lots on said elevated base plate, said network also having apertures formed therein permitting downward movement of the drop-lever to stop the vehicle at points coordinated with said crossings, branches and parking lots; a normally depressed closing strip positioned under each of said apertures; and means for elevating said closing strips individually to close said apertures respectively and raise the drop-lever to release the vehicle, said means including tip-levers connected to said closing strips and extending outwardly of the edge portion of said board.

2. Apparatus according to claim 1 wherein the operating levers extend underneath the board and are tiltable through slots in the edge portions thereof and including means for guiding each lever in the region of one of the recesses in the board.

3. Toy according to claim 2, wherein each of the operating levers has bent-over side edges with two opposite notches engaging a tilting edge provided in the depending edge portion of the board.

4. Toy according to claim 2, wherein said means for guiding the operating levers is a lug extending downwards from the underside of the board and engaging in a slot in the lever, the lug having a bent-over edge engaging underneath the lever.

5. Toy according to claim 1, including an additional, tiltably mounted operating lever having on its free end an upwardly extending strip movable up and down through an aperture in the track network adjacent at least one of said branches forming two track portions to block one portion and divert the vehicle into the other portion.

6. Toy according to claim 1, wherein all the operating levers are tiltably mounted on the same downwardly bent edge of the board and including a handle for each said lever.

References Cited in the file of this patent

UNITED STATES PATENTS

2,664,831 Fields ---------- Jan. 5, 1954

FOREIGN PATENTS

8,204 France ---------- Nov. 27, 1907