Dec. 10, 1935. J. L. COWEN 2,023,516

TOY VEHICLE

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Fig. 1.

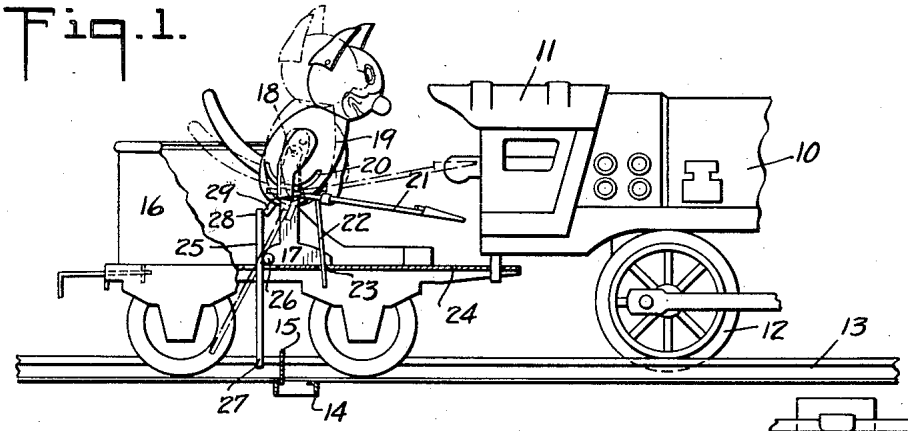


Fig. 2.

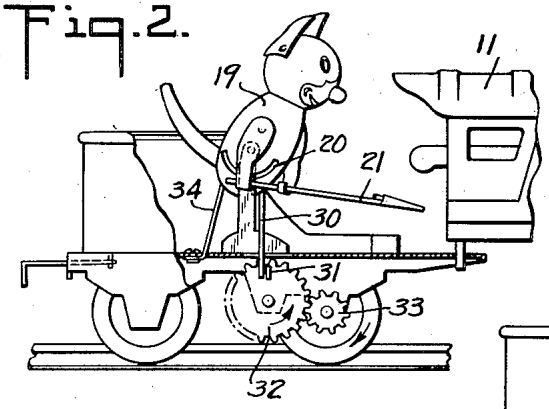
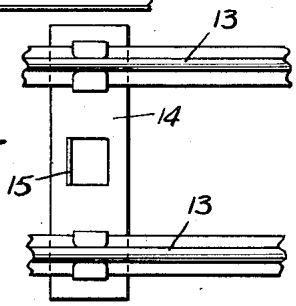


Fig. 1a.



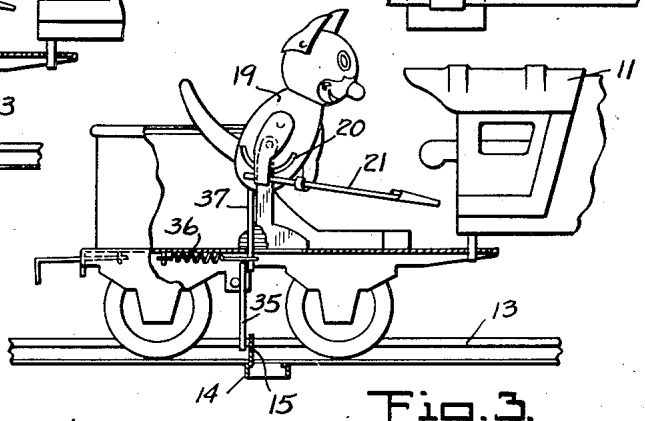


Fig. 3.

Fig. 4.

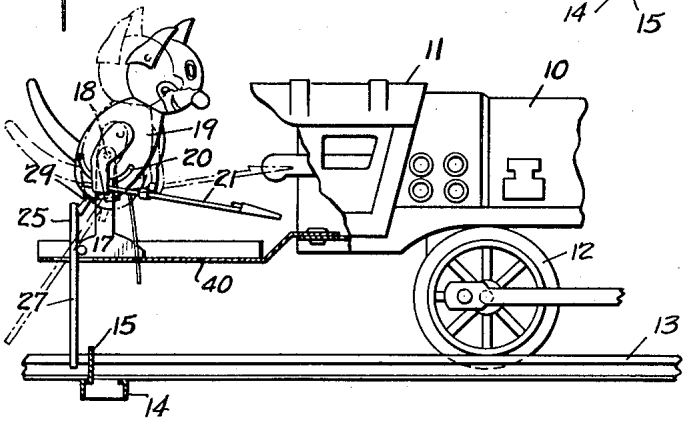


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Fig. 5.

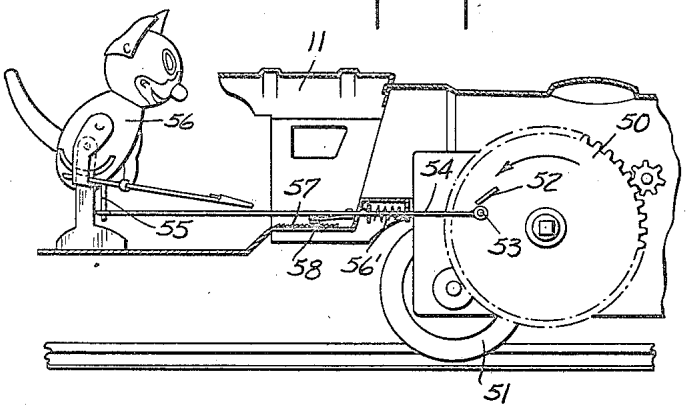


Fig. 6.

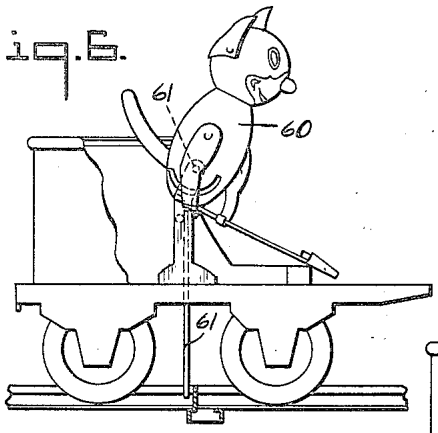
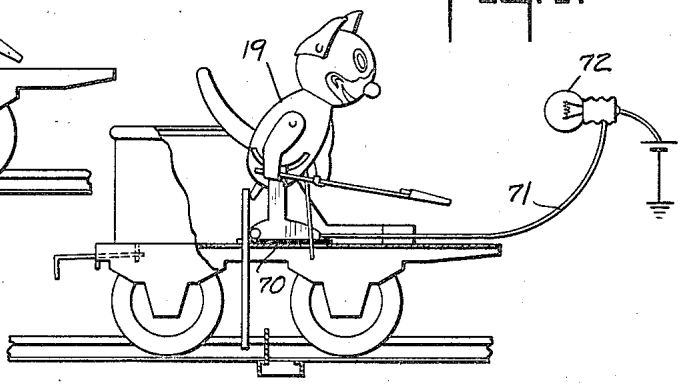


Fig. 7.



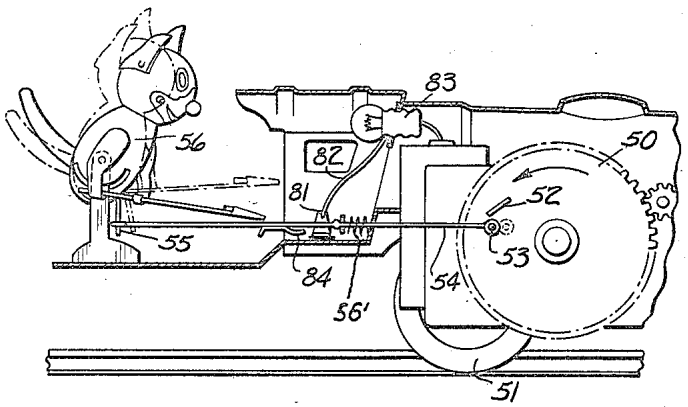


Fig. 8.

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2,023,516

TOY VEHICLE

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Application February 19, 1935, Serial No. 7,197

13 Claims. (Cl. 46—107)

The present invention relates to toy vehicles and is more particularly directed toward toy vehicles provided with movable manikins or the like adapted to be actuated in response to the movement of the vehicle.

The present invention contemplates a mechanism designed particularly to be associated with a toy locomotive and to carry out operations simulating firing of a regular locomotive by a fireman.

Other and further objects of the invention will appear as the description proceeds.

The accompanying drawings show, for purposes of illustrating the present invention, several embodiments in which the invention may take form, it being understood that the drawings are illustrative of the invention rather than limiting the same. In these drawings:

Figure 1 is a side elevational view with parts in section showing a form of stoker mechanism carried by a tender and actuated by an obstruction on the track over which the toy is propelled;

Figure 1*a* is a fragmentary top plan view of the track;

Figure 2, similar to Figure 1, illustrates a stoker adapted to be actuated by gears driven from the axle of the tender;

Figure 3 shows a further modified form of stoker mechanism actuated from the track;

Figure 4 illustrates a stoker mechanism similar to Figure 1 except that it is carried from the toy locomotive;

Figure 5 illustrates a form of stoker mechanism carried from the locomotive and adapted to be actuated by the gear used for propelling the locomotive driving wheels;

Figure 6 illustrates a further modified form of stoker mechanism;

Figure 7 illustrates a form of stoker mechanism combined with a flashing lamp, the mechanism being operated from the track; and

Figure 8 illustrates a form of stoker mechanism actuated from the driving gears of the locomotive and actuating a flashing lamp in the cab of the locomotive.

In the drawings a conventional toy locomotive is illustrated at 10. It has a cab-simulating portion 11 with the usual walls, roof and bottom and wheels 12 adapted to travel over the usual toy railroad track 13. As shown in Figure 1*a* certain of the cross ties 14 of the toy railroad track are provided with upstruck projections 15.

In Figure 1 a tender 16 of conventional form is shown as connected with the locomotive. This tender is provided with a fixed, upwardly extending frame or support 17 provided at its upper end 18 with a horizontal pivot. A manikin or animated figure 19 is pivotedly mounted on this support, this support being preferably carried into the inside of the figure through a slot indicated at 20. This animated figure has a shovel 21 and is held in the position indicated by a flexible spring 22 which passes down through an opening 23 in the platform 24 of the tender. A lever 25 is pivoted at 26 and the lower end of this lever 27 projects far enough down to engage the projections 15 carried by the cross ties so that the lever 25 will be rocked in a clockwise direction when the toy is driven past these cross ties. The upper end 28 of the lever 25 is engageable with a projection 29 carried by the manikin so that the manikin will have a sudden movement in response to the engagement of the lever with the projection on the toy. This will swing the shovel up to simulate the heaving of the fuel into the firebox. As soon as the lever passes by the obstruction, the spring 22 restores the parts to normal position.

In the form of construction shown in Figure 2, the same manikin or animated figure is used. It is provided with a downwardly extending member 30 engageable with a lug 31 carried by a gear wheel 32 in mesh with a driving pinion 33 carried on the axle of the tender. The restoring spring is indicated at 34.

In the form of construction shown in Figure 3 a shorter lever 35 is employed to engage the obstruction 15 on the cross ties. The animated figure or manikin 19 is held in position by a coiled spring 36 acting on a downwardly extending member 37. When the lever 35 engages the obstruction on the track, the figure is swung to lift the shovel and the spring 36 thereafter restores it to normal position.

In the form of construction shown in Figure 4 the parts are the same as shown in Figure 1 except that a rearwardly extending platform 40 carried by the locomotive is employed to support the moving parts.

In the form of construction shown in Figure 5 the driving gear 50 for the driving wheels 51 is indicated. It is provided with a camming member 52 engageable with a roller 53 carried on the front end of a rod 54. This rod extends through the cab-simulating portion 11 of the locomotive and is connected at its rear end with a downwardly extending member 55 carried by a manikin 56 similar to that shown in Figure 1. When the camming member 52 engages the roller it pulls the rod 54 to the right, swinging the figure

in a clockwise direction and compressing a spring 56'. When the camming passes by, the spring 56' moves the parts back to normal position. To simulate the appearance of the existence of fire in the firebox of the locomotive, a spark forming mechanism may be employed as indicated at 57 and 58, this being in the form of the usual flint and hardened steel. With each movement of the figure a shower of sparks will be thrown.

In the form of construction shown in Figure 6 the animated figure 60 is pivoted at 61 so that the center of gravity is in the front of the pivot and the figure then has a tendency to drop to the position shown in full lines when it is moved out of that position. Here the lower end of the lever 61 strikes the lug on the cross tie and the upper end of the lever engages the lower part of the figure to swing it up. Figure 7 illustrates a form of construction similar to that of Figure 1 except that the figure 19 is mounted on an insulating block 70. The figure is connected by a wire 71 to a lamp bulb 72 carried either on the tender or in the cab-simulating portion of the locomotive. When the lower end of the lever strikes the obstruction on the cross tie, it will ground the figure and the lamp so that the lamp will flash.

In the arrangement shown in Figure 8 the parts are much the same as shown in Figure 5 and corresponding reference characters are employed. A fixed insulated contact 81 is connected by a wire 82 with a lamp bulb 83. This contact is engaged by a spring 84 carried by the rod 54 so as to alternately open and close the circuit in the cab as the manikin operates.

From the foregoing it will be apparent that the structures above described will provide an exceedingly interesting and amusing toy. They may be applied to either mechanically driven or electrically driven toy locomotives or to other forms of toys so as to provide animated action by the figure. This action may, if desired, be accompanied by flashing of a light.

It is obvious that the invention may be embodied in many forms and constructions within the scope of the claims, and I wish it to be understood that the particular forms shown are but a few of the many forms. Various modifications and changes being possible, I do not otherwise limit myself in any way with respect thereto.

What is claimed is:

1. In combination, a toy locomotive having a cab-simulating portion, a movably supported, fireman simulating manikin carried to the rear of the cab-simulating portion and provided with a shovel, a pendant pivoted member having its upper end adjacent the manikin and adapted to engage the manikin and swing it in one direction when the lower end of the pendant member meets an obstruction, and a spring for restoring the manikin to normal position.

2. In combination, a toy locomotive having a cab-simulating portion and a rearwardly extending platform, a movably supported, fireman simulating manikin carried on the platform and provided with a shovel, a pendant pivoted member carried by the platform having its upper end adjacent the manikin and adapted to engage the manikin and swing it in one direction when the lower end of the pendant member meets an obstruction, and a spring for restoring the manikin to normal position.

3. In combination, a toy locomotive having a cab-simulating portion, a tender, a movably supported, fireman simulating manikin carried on the tender and provided with a shovel, a pendant pivoted member carried by the tender having its upper end adjacent the manikin and adapted to engage the manikin and swing it in one direction when the lower end of the pendant member meets an obstruction, and a spring for restoring the manikin to normal position.

4. In combination, a toy locomotive having a cab-simulating portion, a movably supported, fireman simulating manikin carried to the rear of the cab-simulating portion and provided with a shovel, an electric lamp bulb for illuminating the cab-simulating portion, means to move the manikin back and forth to simulate the "firing" of the locomotive, and a switch operable by the manikin operating means to control the lamp bulb.

5. In combination, a toy railroad track having cross ties provided with upwardly extending projections, a toy vehicle adapted to move along the track, an animated figure carried by the vehicle and having a normal position of rest, and an operating means for shifting the figure out of position upon engagement of said means with the projections on the cross ties.

6. In combination, a toy railroad track having cross ties provided with upwardly extending projections, a toy vehicle adapted to move along the track, an animated figure carried by the vehicle and having a normal position of rest, and a pendant lever engageable with the projections to be moved thereby and acting on the figure to shift the figure.

7. In combination, a toy locomotive having a rearwardly opening cab-simulating portion provided with side walls and roof, a fireman simulating manikin rockably supported on a transverse pivot disposed to the rear of the cab-simulating portion and above the bottom of the cab-simulating portion, the manikin carrying a forwardly extending shovel which reaches substantially to the rear of the cab-simulating portion, and means to rock the manikin back and forth to simulate the operation of "firing" the locomotive.

8. The combination set forth in claim 7, wherein the locomotive has driving wheels and the manikin rocking means includes a member moving with the driving wheels for shifting the manikin in one direction and a spring for restoring the manikin to normal position.

9. In combination, a toy locomotive having a rearwardly opening cab-simulating portion provided with side walls and roof, a fireman simulating manikin rockably supported on a transverse pivot disposed to the rear of the cab-simulating portion and above the bottom of the cab-simulating portion, the manikin carrying a forwardly extending shovel which reaches substantially to the rear of the cab-simulating portion, the manikin being weighted to normally have the shovel in its lower position, means to rock the manikin to raise the shovel, and a spring to restore the manikin to normal position.

10. In combination, a toy locomotive having a rearwardly opening cab-simulating portion provided with side walls and a roof, a tender having a floor below the bottom of the cab-simulating portion, a fireman simulating manikin rockably supported on a transverse pivot above the floor of the tender and provided with a forwardly extending shovel which reaches substantially to the rear of the cab-simulating portion, and means to rock the manikin back and forth

to simulate the operation of "firing" the locomotive.

11. In combination, a toy locomotive having a rearwardly opening cab-simulating portion provided with side walls, roof and floor, a rearwardly extending platform secured to the floor, a manikin support extending upwardly from the platform, a fireman simulating manikin rockably carried on the support and provided with a shovel extending substantially to the rear of the cab-simulating portion, and means to rock the manikin back and forth to simulate the operation of "firing" the locomotive.

12. The combination set forth in claim 11, wherein the locomotive has driving wheels and the manikin rocking means includes a member moving with the driving wheels for shifting the manikin in one direction and a spring for restoring the manikin to normal position.

13. In combination, a toy locomotive having driving wheels and a cab-simulating portion, a movably supported, fireman simulating manikin carried to the rear of the cab-simulating portion and provided with a shovel, means moving with the driving wheels for moving the manikin in one direction, a spring for restoring the manikin whereby it may move back and forth and simulate the operation of "firing" the locomotive, an electric lamp bulb for illuminating the cab-simulating portion, and a switch operable by the manikin operating means to control the lamp bulb.

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