

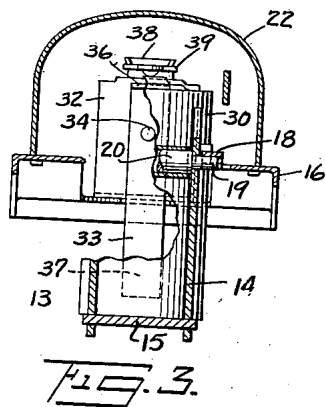
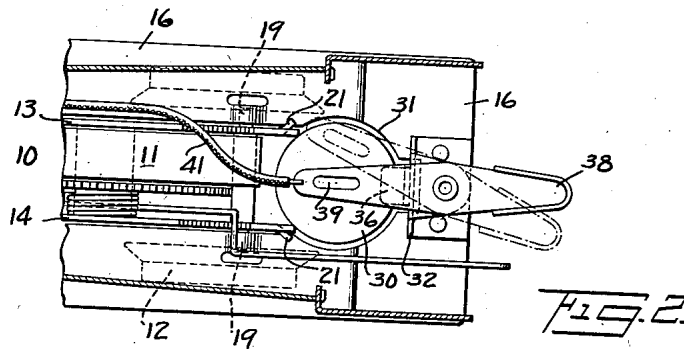
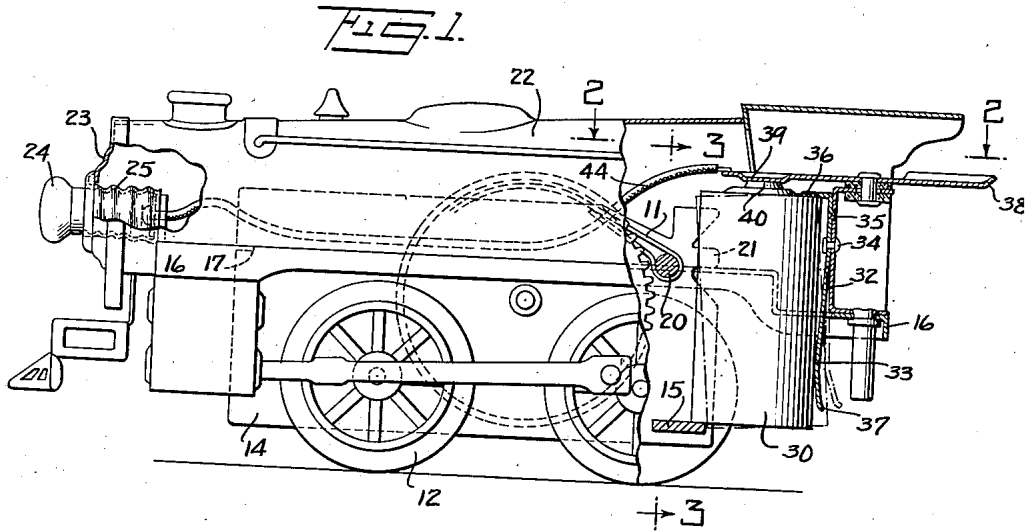
Sept. 1, 1936.

J. L. BONANNO

2,052,863

TOY VEHICLE

Filed Sept. 14, 1933



INVENTOR
Joseph L. Bonanno
BY
Joseph Shikeman
ATTORNEY

UNITED STATES PATENT OFFICE

2,052,863

TOY VEHICLE

Joseph L. Bonanno, Forest Hills, N. Y., assignor
to The Lionel Corporation, New York, N. Y., a
corporation of New York

Application September 14, 1933, Serial No. 689,356

9 Claims. (Cl. 46—203)

The present invention relates to toy vehicles and is more particularly directed toward a toy vehicle such as a toy locomotive having a spring propulsion motor and provided with a dry cell and switch arrangement for controlling the lighting of a bulb, such as a headlight bulb.

The present invention contemplates an arrangement whereby a battery or dry cell may be readily inserted into or removed from the body of the toy. The accompanying drawing shows, for purposes of illustrating the present invention, one of the many embodiments in which the invention may take form, it being understood that the drawing is illustrative of the invention rather than limiting the same. In the drawing:

Fig. 1 is a side elevational view of a mechanical toy locomotive with battery operated headlight, the parts being shown in section;

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1; and

Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 1.

The propulsion unit of the toy locomotive is indicated at 10. It comprises a mechanical motor having a propulsion spring 11 for driving a train of gears which actuate the driving wheels indicated at 12. This propulsion unit has two side frame members, indicated at 13 and 14 and a cross or distance piece 15. The propulsion unit is secured to a locomotive frame forming member 16, which extends the entire length of the toy locomotive. Any suitable method of securement may be employed.

As shown in the drawing, the plates 13 and 14 are shown with notches 17 to receive a portion of the frame member 16. The frame member 16 is recessed as indicated at 18 to receive the ends 19, 19 of the anchorage member 20 to which the spring 11 is attached. Outwardly bent members 21 on the frame plates 13 and 14 engage the upper surface of the locomotive plate forming unit 16.

A sheet metal stamping 22 is secured to the frame forming unit 16, this stamping being shaped to simulate the boiler and cab of the locomotive. It carries a boiler front stamping indicated at 23, and a headlight bulb and socket 24 and 25 are shown as secured to the boiler front.

In the drawing, a conventional dry cell is indicated at 30. The usual paper case about the dry cell is not employed. This dry cell extends through an opening 31 formed in the frame member 16. A sheet metal strip 32 is secured to the rear end of the locomotive frame unit stamping 16. It extends upwardly to the rear of the battery 30, as indicated. A resilient strip 33 is se-

cured to the stamping 32 by a rivet indicated at 34 and is prevented from turning by a projection 35 entering a hole in the stamping 32. The upper end 36 of the stamping 33 is adapted to engage the upper end of the dry cell 30, while the lower end 37 of the spring member 33 presses against the lower side wall of the dry cell 30.

When the cell is to be inserted, it is readily passed into the dot and dash line position shown in the drawing. One then presses on the bottom of the dry cell so as to flex the spring finger 36. A spring finger 37 then presses the dry cell to the full line position so that its lower edge overlies the cross piece 15 and its side walls are brought against the ends of the frame plates 13 and 14 of the propulsion unit. To release the dry cell, one can press it sufficiently to permit moving the bottom edge of the dry cell away from the cross piece 16, whereby it can be readily grasped and taken out. The upper end of the stamping 32 pivotally and insulatedly supports a switch lever 38 having an inner end 39 which overlies the center contact post 40 of the dry cell. This switch lever is connected to the headlight by a lead indicated at 41.

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 form shown is but one 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. A toy having an apertured body, a dry cell extending into the body through the aperture, a resilient member engaging one end of the dry cell, a fixed member engaging a portion of the edge of the opposite end of the dry cell, the dry cell being movable longitudinally past the fixed member and through the aperture to be brought against the resilient member, which flexes sufficiently to allow the dry cell to pass by the edge of the fixed member so that it may be secured between the two members.

2. A toy as claimed in claim 1, having a spring pressing against the side of the cell opposite the portion engaged by the fixed member and resiliently holding the cell in such position.

3. A toy as claimed in claim 1, having stop members engaging the side wall of the dry cell adjacent the fixed member and a spring engaging the dry cell opposite the stop members and pressing the cell against said members.

4. In a toy, means for supporting a dry cell for quick insertion or removal comprising a

fixed U-shaped member adapted to engage the bottom edge of the dry cell and the side walls adjacent said edge, a fixedly supported spring spaced from the U-shaped member so as to engage the upper opposite edge of the dry cell, and a spring engageable with the side walls opposite the sides of the U-shaped member.

5. In a toy locomotive, a spring motor propulsion unit having side frames and a cross piece adjacent the ends of the side frames, a locomotive frame forming unit secured to the propulsion unit, the frame extending beyond the end of the propulsion unit and having an opening adjacent the end of the propulsion unit adapted to receive a dry cell, and a resilient finger carried by the frame to engage one end of the dry cell casing and press the other end against the cross piece.

6. In a toy locomotive, a spring motor propulsion unit having side frames and a cross piece adjacent the ends of the side frames, a locomotive frame forming unit secured to the propulsion unit, the frame extending beyond the end of the propulsion unit and having an opening adjacent the end of the propulsion unit adapted to receive a dry cell, a resilient finger carried by the frame to engage one end of the dry cell casing and press the other end against the cross piece, and a spring carried by the frame forming unit and engaging the side walls of the dry cell to press the cell against the ends of the side frames of the propulsion unit.

7. In a toy locomotive, a spring motor propulsion unit having side frames and a cross piece adjacent the ends of the side frames, a locomotive frame forming unit secured to the propulsion unit, the frame extending beyond the end of the propulsion unit and having an open-

ing adjacent the end of the propulsion unit adapted to receive a dry cell, a resilient finger carried by the frame to engage one end of the dry cell casing and press the other end against the cross piece, and an insulatedly supported pivoted switch lever engageable with the center contact of the dry cell.

8. In a toy locomotive, a spring motor propulsion unit having side frames and a cross piece adjacent the ends of the side frames, a locomotive frame forming unit secured to the propulsion unit, the frame extending beyond the end of the propulsion unit and having an opening adjacent the end of the propulsion unit adapted to receive a dry cell, a resilient finger carried by the frame to engage one end of the dry cell casing and press the other end against the cross piece, an insulatedly supported pivoted switch lever engageable with the center contact of the dry cell, and a locomotive boiler and cab simulating member secured to the frame forming unit, the cab simulating portion enclosing the switch lever and upper end of the dry cell.

9. A battery lighted mechanically operated toy locomotive of small size comprising a boiler shell, motor works mounted therebeneath and extending upwardly into the boiler shell, a grounded socket and a lamp of the flashlight battery type mounted on the locomotive, a cab formed at the rear end of the boiler shell, the floor of said cab being cut away to receive a flashlight battery cell in an upright position, support means beneath the cab bearing against and grounding the lower end of the cell, switch mechanism, and conductive means interconnecting the switch mechanism, the cell, and the lamp socket.

JOSEPH L. BONANNO.