

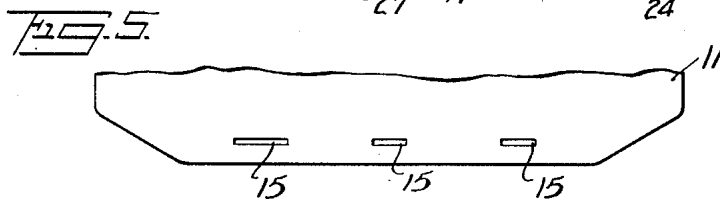
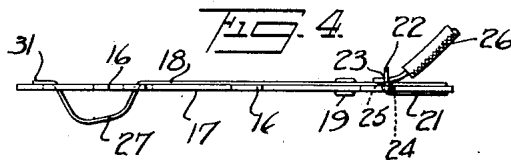
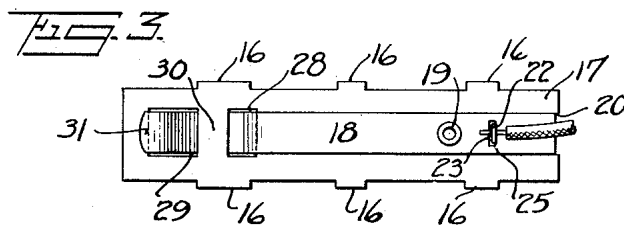
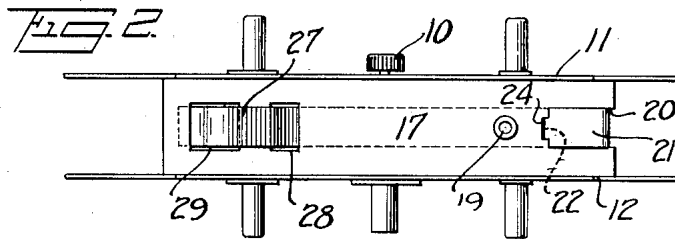
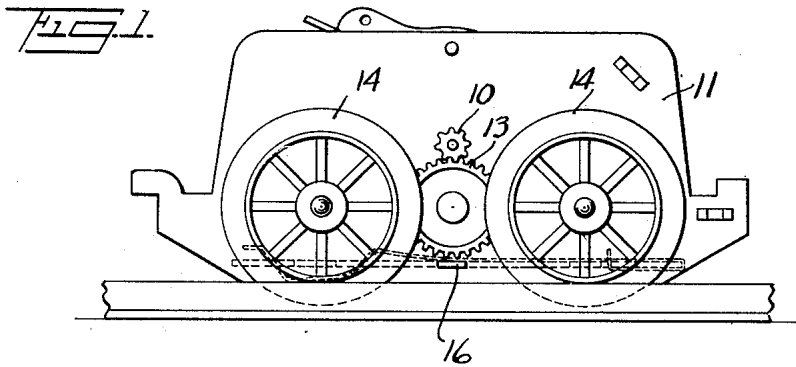
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CURRENT COLLECTOR FOR TOY LOCOMOTIVES

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CURRENT COLLECTOR FOR TOY LOCOMOTIVES

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The present invention relates to current collectors and contemplates a simply constructed, inexpensive current collector designed for toy locomotives.

5 The present invention contemplates a current collector for this purpose made out of two simple stampings, one of insulating material and one of sheet metal, such as phosphor bronze. The metal stamping is secured
10 to the insulating strip and the parts have such configuration as to hold the conducting strip in place and yet permit it to flex so as to bear yieldingly on the rail.

15 The invention also contemplates the provision of a wire fastening clip which forms a part of the conducting strip.

20 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:

25 Fig. 1 is a side elevational view of a propulsion unit of a toy locomotive showing the same resting on a toy track;

Fig. 2 is an inverted plan view of the propulsion unit with the wheels removed;

30 Fig. 3 is an inverted plan view of the current collector showing it removed from the locomotive;

Fig. 4 is a side elevational view of the same; and

35 Fig. 5 is a fragmentary view of the frame plate.

40 The toy locomotive may be of the usual construction and is provided with a motor (not shown) for operating a pinion indicated at 10. This pinion is carried in bearings formed in side plates 11 and 12. It drives a gear indicated at 13 which meshes in the usual manner with gear teeth (not shown) carried on the inner face of the locomotive driving wheels 14. The frame plates 11 and
45 12 are provided with three openings 15 adjacent the lower edges thereof as indicated in Fig. 5 and these openings are adapted to receive laterally extending lugs 16 formed in a fibre stamping 17. The width of this stamping equals the spacing of the side plates.

The lugs 16 enter the holes 15 and hold the insulating stamping in position.

A conducting strip for the current collector is in the form of a strip 18 of phosphor bronze secured to the insulating stamping by a single rivet or eyelet indicated at 19. One end of the conducting strip 18 extends to the right, as indicated in the drawing, passes downwardly through a notch 20, and is bent underneath the insulating strip as indicated
55 at 21. The extreme end of the stamping is in the form of a prong 22 apertured at 23. This prong extends up through an opening 24 in the insulating strip and through an opening
60 25 in the conducting strip. It is adapted to receive a wire 26 as indicated so as to provide a clip for securing a motor lead to the current collector. The strip 18 also extends to the left, as shown in the drawing, and is provided with a U-shaped bent portion 27 which
65 extends downwardly through an aperture 28 and upwardly through a second aperture 29 of the insulating member. These apertures are separated by a bridging strip 30 and the extreme end of the conducting strip rests on
70 the insulating strip, as indicated at 31.

The insulating strip and conductor strip are secured together to form a sub-unit such as shown in Figs. 3 and 4 and are inserted between frame plates during the assembly of
75 the motor. In order that the current collector shall be placed in the proper position in the locomotive, the lugs and notches may be made asymmetrical, as indicated by the longer lugs and larger holes at the left.
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When the locomotive is in use, the depressed portion 27 of the conducting strip is yieldingly pressed downwardly against the rail. It is securely held in place by reason of the overhanging end 31 and the bridging
85 member 30 limits its upward movement.

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

What is claimed is:

1. A current collector for toy electric loco-
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motives comprising a strip of insulating material apertured near one end and a resilient strip of conducting material bent to a U-shape near one end and secured at its other end to the end of the insulating strip remote from the aperture, the U-shaped bent portion being carried in the aperture.

2. A current collector for toy electric locomotives comprising a horizontally disposed insulating support, a resilient conducting strip carried along the upper face of the support and secured to one end thereof, the strip being bent downwardly near the other end to pass through an aperture in the other end of the support and bent upwardly at the end to engage the upper surface of the support.

3. A current collector for toy electric locomotives comprising a long strip of insulating material having two apertures near one end separated by a bridging member, and a resilient sheet metal strip narrower than the insulating strip secured at one end to the upper face of the insulating strip and bent near its free end to pass through the apertures, and underneath the bridging member.

4. A current collector for toy electric locomotives comprising a long strip of insulating material having adjacent one end two apertures disposed lengthwise of the strip and separated by a bridging member, and a conducting strip of resilient material with its flat face against the upper surface of the insulating strip and having a U-shaped portion extending through the apertures and spaced below the bridging member, the other

end of the insulating strip having a notch of the width of the conducting strips and into which the said strip extends, and a rivet adjacent the latter mentioned end of the insulating strip for securing the strips together.

5. A current collector for toy electric locomotives comprising a long strip of insulating material having adjacent one end two apertures disposed lengthwise of the strip and separated by a bridging member, and a conducting strip of resilient material with its flat face against the upper surface of the insulating strip and having a U-shaped portion extending through the apertures and spaced below the bridging member, the other end of the conducting strip being folded to pass about the other end of the insulating strip and having an apertured tip extending upwardly through the insulating and conducting strips to provide a wire grip, and a rivet for securing the body of the conducting strip to the insulating strip.

6. In a toy electric locomotive, a current collector and wire connector comprising an insulating strip fixedly carried by the locomotive and a resilient conducting strip secured to the upper side thereof, one end of the conducting strip being below the insulating strip to form a collector shoe, the other end of the conducting strip being bent to form a resilient wire clip, the configuration of the strips being such that the conducting strip is held against lateral movement but allowed a limited amount of up and down movement.

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