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COUPLER FOR TOY RAILROAD VEHICLES

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Fig. 1.

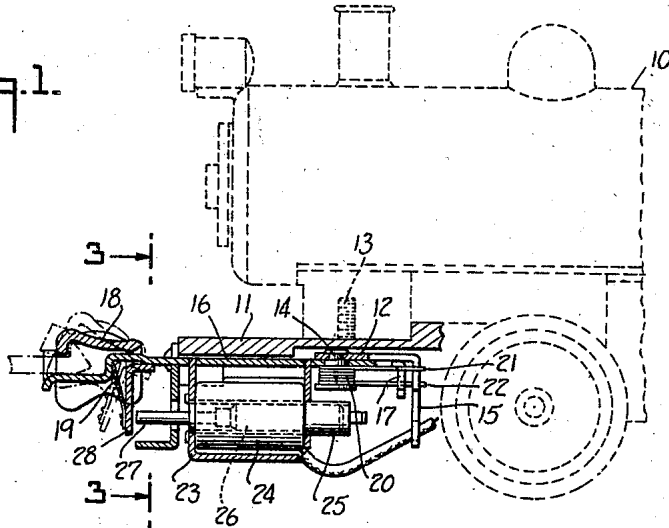


Fig. 2.

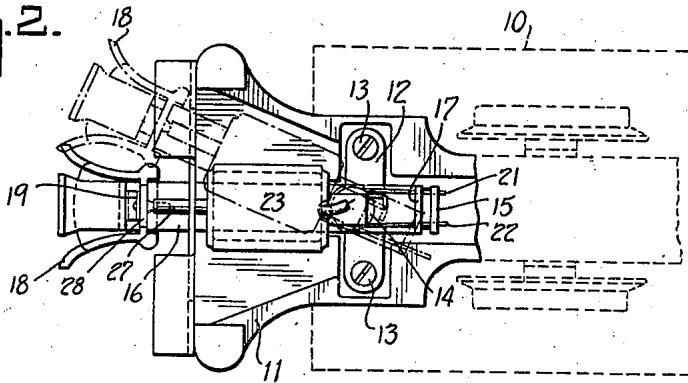
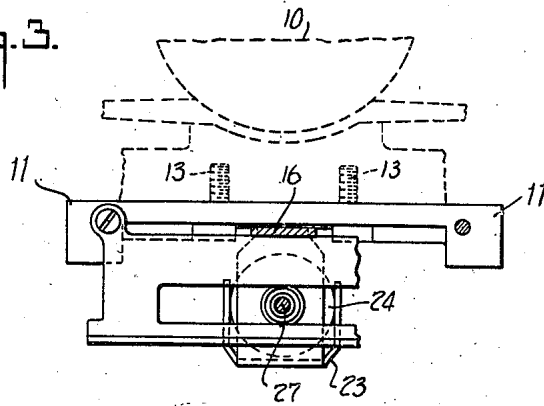


Fig. 3.



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COUPLER FOR TOY RAILROAD VEHICLES

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2 Claims. (Cl. 213—211)

The invention relates to couplers for toy railroad vehicles and is more particularly directed toward an electro-magnetically operated coupler for use on toy switch engines.

The present invention contemplates a coupler adapted to be mounted on a toy switch engine to be controlled remotely so that the toy locomotive can be used for switching toy cars about on a toy track layout.

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 this drawing:

Figure 1 is a vertical sectional view through a fragment of a toy locomotive and through a coupler;

Figure 2 is an inverted plan view of the front end of the locomotive and the coupler; and

Figure 3 is a section on the line 3—3 of Figure 1, taken in the direction of the arrows.

A toy locomotive 10 has a chassis casting, the front end of which is indicated at 11. A coupler supporting bracket 12 is secured to the chassis by screws indicated at 13. The bracket carries a pivot post 14 and has a depending arm 15. The post 14 carries a swingable coupler bar 16, having a short extension 17 adjacent the depending arm 15. The front end of the coupler bar 16 is provided with a movable coupler head 18. While this coupler head normally lowers by gravity, it is preferably provided with a spring 19 which urges it downwardly in a more positive fashion than where mere gravity is relied upon. The coupler bar when used on a switching engine is not provided with the usual coupler hook, as it is desirable to be able to release the car from the engine by the lifting of one coupler head only.

The bar 16 is biased to an intermediate or mid position by coiled spring 20 mounted on post 14 and having ends 21 and 22 which pass by extension 17 in the bar 16 and the fixed depending arm 15. When the bar 16 is shifted out of mid position, as indicated in dotted lines in Figure 2, the lower end 22 of the spring is carried with it. This tensions the spring and when the force which shifted the coupler bar is removed, the tensioned spring returns the coupler bar to the mid position. The bar 16 also carries a coil supporting bracket 23 which accommodates a coil

24 wound about a core tube 25. The core tube accommodates a plunger armature 26, the outer end 27 of which is adjacent the lower end 28 of the coupler head 18. The coil 24 may be energized in any suitable manner and when energized the toy locomotive and car will be uncoupled.

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. The combination with the relatively fixed body of a toy railroad vehicle of a coupler mechanism adapted to be positioned on the vertical longitudinal medial plane through the vehicle body and comprising a coupler bar pivotally secured to the vehicle body to swing about a vertical axis in the medial plane of the body, the bar projecting beyond the end of the body and carrying a movable coupler head biased toward coupling position, a magnet coil bodily supported by the bar to swing therewith, a coil actuated armature for shifting the coupler head to uncoupling position, and spring means for centralizing the coupler bar along the said medial plane of the vehicle body and for permitting the swinging of the coupler bar out of central position.

2. A preassembled coupler unit for toy railroad vehicles comprising a support adapted to be detachably secured to a vehicle body so as to be held stationary with respect to the vehicle and having a vertical pivot post, a coupler bar pivoted on this post and carrying a movable coupler head at one end, and a coiled spring wound about the post and having two normally parallel, outwardly projecting arms, the support having a centrally disposed extension remote from the pivot, the coupler bar having an extension normally opposite the first extension, the arms of the spring being normally in engagement with the sides of both extensions to hold the bar in mid position, one side of the extension on the bar engaging an arm of the spring and moving it away from its normal position when the bar is shifted from mid position, the other arm of the spring continuing to engage the other side of the extension on the support, whereby the spring is tensioned and the bar is biased toward the mid position.

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