Dec. 11, 1951 C. NEHRKE 2,578,368

TOY COUPLING

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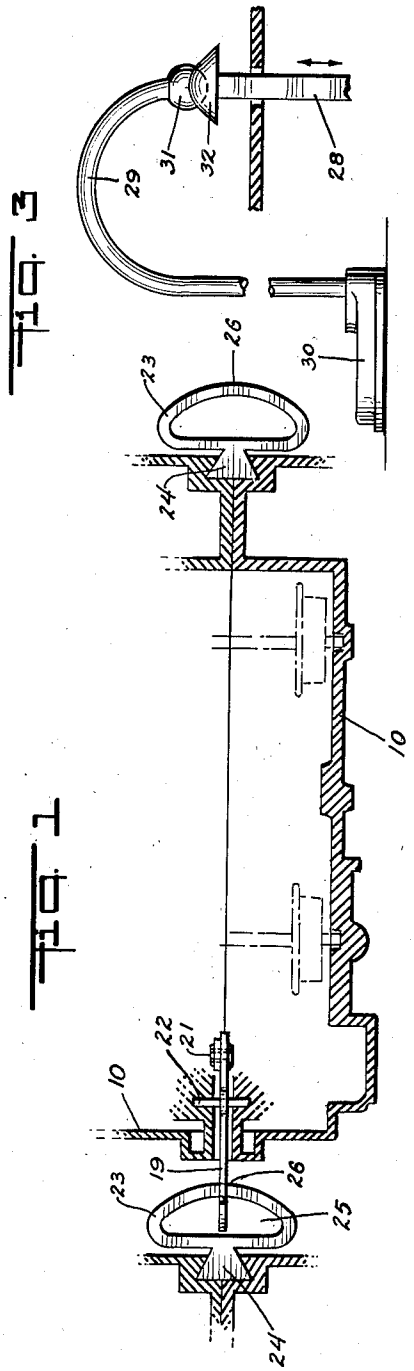


Fig. 1

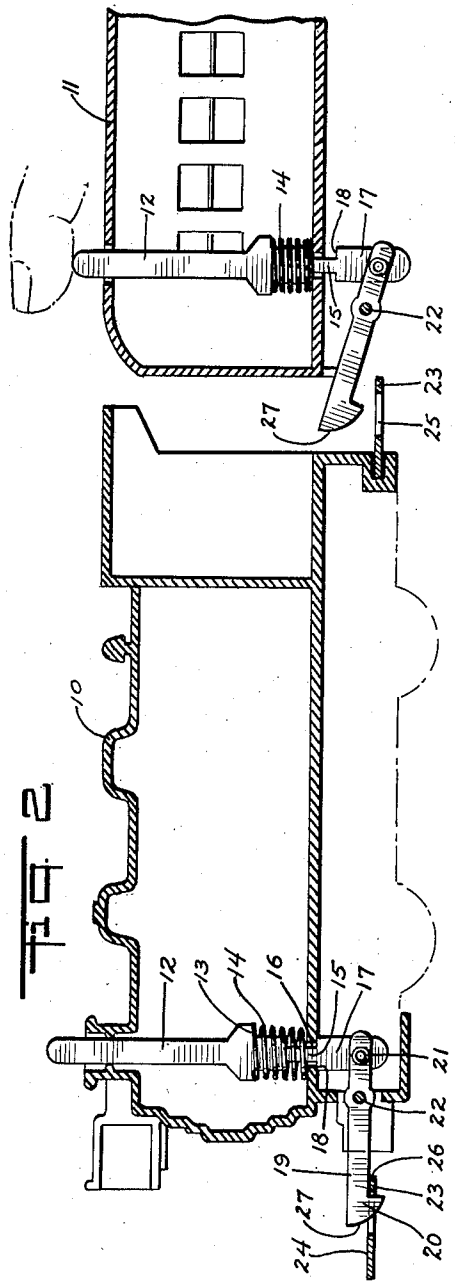


Fig. 2

Fig. 3

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TOY COUPLING

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1 Claim. (Cl. 46—218)

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This invention relates to a coupling for toys particularly adaptable for toy trains.

Broadly, it is an object of my invention to provide a simple, inexpensive coupling for toy trains which automatically couples trains and is positive in its operation and easy to release.

More particularly, it is an object to provide a toy coupling which permits a toy train to travel around a curve.

For a fuller understanding of the nature and objects of my invention, reference is had to the following drawings, in which:

Figure 1 is a bottom view of a split plastic shell of a toy train, part of one half of the shell being broken away.

Figure 2 is a longitudinal sectional view of a toy locomotive and train showing one coupling in closed or locked position and one coupling in open or released position.

Figure 3 is an elevation of a modified stake and a side elevation of a striking arm for automatically uncoupling the cars of the train.

Referring to the drawings, numerals 10 and 11 represent a plastic shell of a toy locomotive and passenger car respectively comprising two identical halves split longitudinally. A coupling preferably made of metal is positioned between the halves and comprises a stake 12 having a shoulder 13 to receive the upper end of a coil spring 14, a narrow portion 15 which passes through a narrow opening 16 at the bottom of the train acting as an upward and downward stop. A wider base portion 17 has an upper shoulder 18 which acts as a stop against the bottom of the train. Spring 14 is seated between shoulder 13 and the bottom of the train creating upward pressure upon the stake 12. The stake 12 projects through the upper part of the train to provide a finger piece for pressing the stake 12 downward.

A release bar 19 having a hook 20 at one end and an eyelet hinge 21 at the opposite end connected to the base portion 17 as shown in Figure 2 is pivoted by pin 22 which passes through a hole in bar 19. Pin 22 lays in aligned holes provided in each half shell. An elongated eye 23 is horizontally positioned by a dovetail projection 24 which is placed in a depression in both halves of the shell at the rear of the train to receive the hook 20 for coupling the various cars of the trains. Eye 23 has an enlongated opening 25 which permits the hook 20 to move within the opening 25 so that the cars can travel around curved rails (not shown). The rear part 26 of the eye 23 acts as a stop against the front of the following train.

In operation when the rear train moves against the forward train, the rounded end 27 of the hook 20 rides over the rear part 26 of the eye 23 against spring pressure and locks

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within the opening 25 being held there by the upward pressure of spring 14. To uncouple the cars the protruding end of stake 12 is pressed downward against the pressure of spring 14 causing the hook 20 to pivot upward about pin 22, thus freeing the hook from eye 23.

Referring to Fig. 3, numeral 28 represents a modified stake having a top member 32 substantially cone shaped attached to the top. A striking arm 29 having a base 30 at one end and a ball 31 at the opposite end may be placed adjacent the tracks (not shown) so that when the train comes along the tracks the member 32 will strike the ball 31. Since stake 28 is movable downwardly and ball 31 is stationary, the stake 28 will be depressed similar to stake 12 and the car will become uncoupled.

Although I have shown my coupling applied to toy trains, it can be used upon a large variety of other items and devices.

It is obvious that various changes and modifications may be made in the details of construction without departing from the general spirit of the invention.

I claim:

A car coupling comprising coupling means carried by adjacent car ends for cooperative engagement in coupling and uncoupling the cars, one of said coupling means comprising an elongated flat eye, said eye horizontally attached to the center of one end of a car, a stake vertically positioned in an adjacent car end along the longitudinal axis of the car with its upper end projecting above said car and its lower end projecting below said car, said stake having upper and lower shoulders, a spring seated upon said stake with its upper end seated against said upper shoulder and its bottom end seated upon the bottom of the car, creating a forward pressure upon said stake, said lower shoulder of said stake limiting the forward movement of said stake by stopping against the bottom of the car, a pivoted horizontal hook hinged to the lower portion of said stake, said eye receiving said hook for coupling said cars.

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