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AUTOMATIC COUPLER FOR TOY CARS

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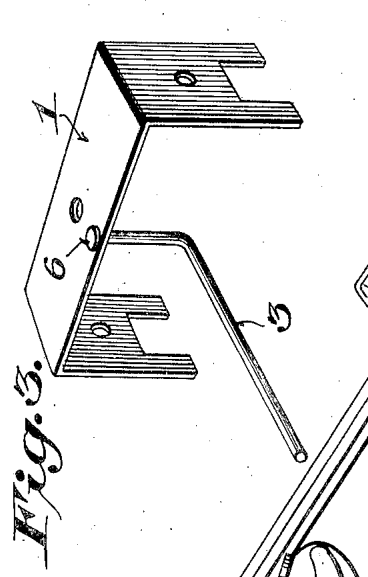

Fig. 3.

Fig. 1.

Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

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AUTOMATIC COUPLER FOR TOY CARS.

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This invention relates to toy railways and more particularly to a novel coupling for automatically connecting the cars to form a train.

A primary object of the invention is to provide means for controlling the coupler parts in such a way that they will readily interlock by the movement of one car relatively to the other on curves as well as straight track. In that connection the invention contemplates means for automatically positioning the draw-bar or shank portions of the coupler by and with the movement of the car truck. Since the car trucks follow the tracks the coupler will at all times be held automatically over the central part of the track thus insuring an automatic coupling hitch at all times.

A further object of the invention is to provide a simple, practical and reliable construction that is economical to manufacture, easy to assemble and positive in its operation.

With the above and other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

A preferred and practical embodiment of the invention is shown in the accompanying drawings, in which:

Figure 1 is a plan view showing the ends of two cars on a portion of a track, the said cars being equipped with the present improvements and the coupler members on each car being about to engage.

Fig. 2 is a detail vertical cross-sectional view showing the manner of controlling the coupling member from the truck.

Fig. 3 is a detail perspective view of the truck frame and coupler control arm.

Similar reference characters designate corresponding parts throughout the several figures of the drawings.

The present invention is adapted generally to control the coupler parts of any automatic toy coupler, but for purposes of illustration the same has been shown and described in connection with an automatic coupler for toy trains of the type shown in the patent to Harry S. Becker, No. 1,561,398, dated November 10, 1925. Therefore, it will be unnecessary to describe in detail the features of the coupler herein since reference may be had to the patent.

As shown, the automatic coupler consists of the parts A and A′ having the rear ends of their shank portions pivotally supported as at B to a suitable bracket or equivalent part of the car body designated generally as C. The said parts A and A′ are pivoted to swing in a horizontal plane and have an arc of movement sufficient to permit the cars to couple under all conditions of use, and on curves of various degrees.

The distinctive feature of the present invention resides as is previously indicated in the control of the coupler parts by means of the car truck designated generally as T and including the metallic bolster or frame part 1 together with the wheels W which travel on the tracks in the usual manner. The said frame 1 is preferably of transversely arched formation and is pivotally secured to the bottom of the car body C by the pivot pin 2 or its equivalent so that the entire truck will have a free swivel movement to follow the tracks.

In the embodiment shown, the truck actuated medium for positioning the coupler parts consists of a control arm 3 carried by the frame 1 and engaging with the coupler part so as to swing the same on its pivot B in accordance with the position of the car truck with reference to the car body and tracks. By reference to Fig. 2, showing the coupler part A, it will be observed that the end 4 of the control arm has a sliding engagement with an eye 5 or equivalent guiding member depending from the under side of the coupler part. The said control arm 3 is suitably attached to the frame 1, as by riveting the same thereto, the same being indicated as 6. Also the control arm in the present construction is preferably of angular formation to provide the necessary clearance for the type of coupler used and the point of attachment of the said arm to the frame 1 is relatively eccentric to the pivot 2 which connects the frame with the car body.

With the arrangement shown, it will be apparent that the coupler part will always be held in proper position by the trucks so that the cars may automatically couple on curves as well as on straight sections of track, or in other words coupling alinement of the parts A and A′ is always assured.

Without further description it is thought

that the features and advantages of the invention will be readily apparent to those skilled in the art, and it will of course be understood that changes in the form, proportion and minor details of construction may be resorted to, without departing from the spirit of the invention and scope of the appended claims.

I claim:

1. A coupler construction for toy cars including a coupler part pivotally supported by the car body to move in a horizontal plane, an eye carried by said coupler part, and an arm adapted to be carried by and move with the truck and having its forward end sliding in said eye.

2. A coupler construction for toy cars including a bracket adapted to be carried by the car, a horizontally movable coupling part pivotally mounted in said bracket, and an arm including a vertical portion adapted to be attached rigidly to the truck of the car and a horizontal portion extending forwardly below the bracket toward the coupling part and slidably engaging the same.

3. In a metal toy car construction, the combination with the metallic bottom of the car, of a metallic bracket carried by the car, a horizontal movable coupling pivotally carried by said bracket, a truck including a metallic arched bolster member pivotally connected to the bottom of the car, and an arm carried by the arched metallic bolster of the truck and having a forwardly extending portion slidably engaging with said coupling part.

In testimony whereof I hereunto affix my signature.

FRED MIZE.