

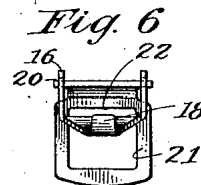
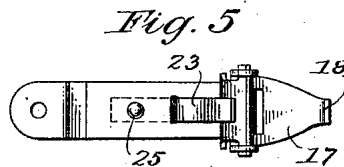
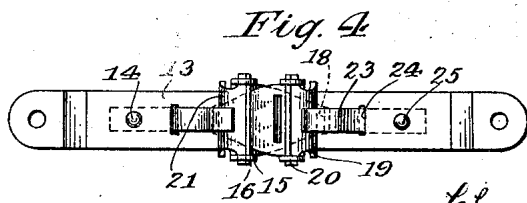
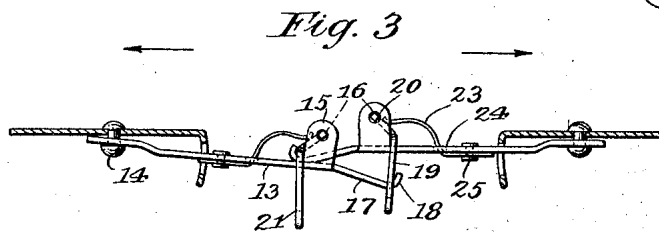
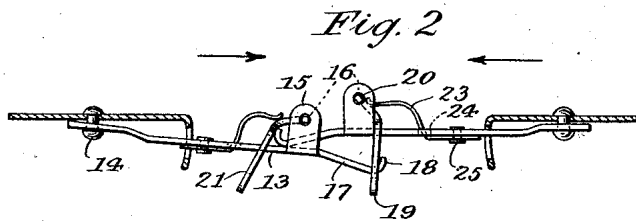
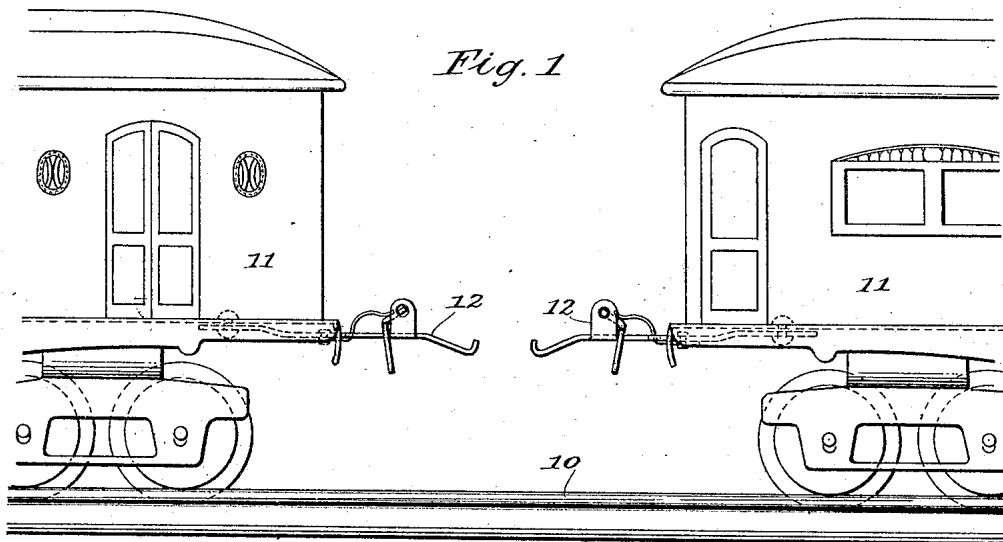
Jan. 27, 1925.

1,524,248

H. C. IVES

AUTOMATIC COUPLER FOR TOY RAILWAY CARS

Filed Aug. 29, 1924



INVENTOR.
Harry C. Ives
BY

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UNITED STATES PATENT OFFICE.

HARRY C. IVES, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE IVES MANUFACTURING CORPORATION, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

AUTOMATIC COUPLER FOR TOY RAILWAY CARS.

Application filed August 29, 1924. Serial No. 734,844.

To all whom it may concern:

Be it known that HARRY C. IVES, a citizen of the United States, and resident of Bridgeport, in the county of Fairfield and State of Connecticut, has invented certain new and useful Improvements in Automatic Couplers for Toy Railway Cars, of which the following is a specification.

My invention relates to new and useful improvements in toy railway car couplers, of the so-called automatic type and is particularly designed for use upon both mechanical and electrical trains adapted to be operated on metal track.

The invention particularly refers to that class of car couplers shown and described in Patent No. 1,029,545, and upon which the present invention is an improvement.

The construction of the coupler covered in the patent referred to includes in part a locking member which is pivotedly hung in ears of the body portion of the coupler and is designed to receive and engage the end portion of the associated coupler member, in a way to form an automatic coupler. In practice I find that this locking member does not in all cases function reliably by gravity as expected to do, and consequently the effective coupling of the cars is not always assured.

My invention therefore seeks to overcome the objection noted, and is to insure a reliable interlocking engagement of one coupling member with the other and more especially to provide positive means to insure the quick and proper functioning of the locking member.

With these and other objects in view the invention resides and consists in the construction and novel combination and arrangements of parts hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claims may be resorted to without departure from the spirit or sacrificing any of the advantages of the invention.

Similar characters of reference denote like or corresponding parts throughout the several figs. of the accompanying drawings

forming a part of this specification, and upon which,

Fig. 1 is a side view of the adjacent end portions of two toy cars, provided with my improved couplers, which are shown in side elevation and spaced apart.

Fig. 2 shows a side view of the same pair of couplers, in the act of being coupled together.

Fig. 3 is a further side view of the same pair of couplers in interlocked engagement with each other.

Fig. 4 is a plan view of the pair of couplers shown in Fig. 3.

Fig. 5 is a plan view of one of the couplers, and

Fig. 6 shows a front end view of the coupler illustrating the loop through which the hook of the coacting coupler enters.

In the before mentioned drawings, I have shown a pair of couplers in coacting relations and in the further detail description the same reference characters will be applied to the parts of the two couplers. Upon the drawings 10 represents a metal track such as is commercially manufactured and put out in connection with toy railway trains, 11 represents the adjacent end portion of two toy passenger cars mounted upon the track in spaced relation to each other, and each provided with my improved couplers.

12 represents the couplers as a whole, which as shown is made up of three pieces of metal. The main draw bar 13 is formed of a piece of sheet metal which is hingedly connected to the underside of the car platform by means of a rivet 14. This draw bar includes a pair of upwardly disposed and oppositely positioned ears 15 which are pierced to form pintle eyes 16. The forward portion 17 of the bar beyond the ears is deflected downwardly slightly, and the end portion is bent up to form a hook 18 which serves as a means to engage the coacting locking member 19 of the adjacent coupler. This locking member 19 of the coupler is provided with pintles 20 which are mounted in the eyes 16 before mentioned.

The locking member further includes a rectangular opening 21 in which the body portion of the draw bar is positioned. The

top edged portion 22 of the opening lies parallel and in spaced relation to the top surface of the draw bar, while the inner side edges of the locking member is guided against the sides of the draw bar.

The larger portion of the loop of the locking member extends below the draw bar and alignment to be entered by the upwardly bent hook portion 18 of the abutting coupler as shown in Figs. 2 and 3.

This hook portion is thus designed to pass into the loop of the locking member, the hook of one coupler member serving to enter the loop above the top surface of the draw bar while the hook of the other coupler member passes into the loop of the locking member of the other coupler beneath the draw bar of said coupler member. The couplers may be normally positioned so that one is slightly elevated with respect to the other to better insure the desired interlocking engagement and to prevent the ends of the two hooks from abutting against each other when the cars are run together.

In order to insure prompt engagement of the locking member with the hook end of the draw bar when two cars are coupled together, I provide a spring 23 which is positioned in a cross slot 24 of the draw bar and has one end secured thereto by means of a rivet 25, and the other free end disposed upward into slidable engagement with the rounded back portion of the locking member 19 as is clearly shown in each of the figures of the drawings. This spring serves to swing the locking member down and forward in a manner to insure its engagement with the hook of the locking member, so that when a pulling strain is

applied to the couplers the said locking member will be swung down and firmly engage the said hook end of the bumper and clamp its edge 22 against the surface of the draw-bar in a way to prevent disengagement of the coupler members.

The couplers are readily disconnected by manually swinging the locking member 19 away from the ears 15 in a way to free the hook 19 of the coacting coupler.

Having thus described my invention, what I claim and desire to procure by Letters Patent is:

1. In an automatic coupler for toy railway cars, the combination with a car, of a draw bar pivotedly connected thereto and including a free hook end portion, and having upwardly disposed ears, a locking member pivotedly hung in said ears and including an opening to receive the hook end of a coupler, and means secured to the draw bar and engaging the locking member to yieldably hold it in engagement with the hook end portion of a connecting coupler.

2. In an automatic coupler for toy railway cars, the combination with a car, of a draw bar pivotedly connected thereto and including a free hook end portion and having upwardly disposed ears, a locking member pivotedly hung in said ears and including an opening to receive the hook end of a coupler, and a spring attached to the draw bar and having a portion in yieldable engagement with the locking member to normally hold it in engagement with the hook end portion of a connecting coupler.

Signed at Bridgeport, Connecticut this 27th day of August, 1924.

HARRY C. IVES.