Dec. 15, 1942. N. L. CASE ET AL 2,305,135

UNCOUPLING SYSTEM FOR TOY RAILWAY

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Fig. 1

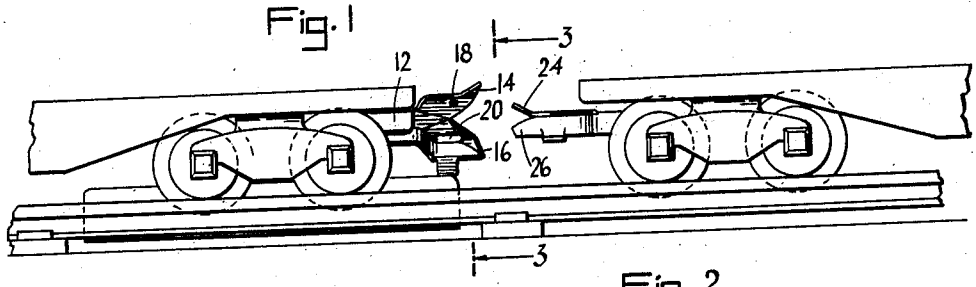


Fig. 2

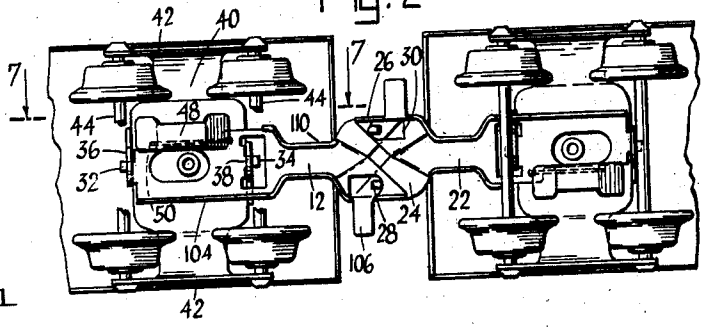


Fig. 3

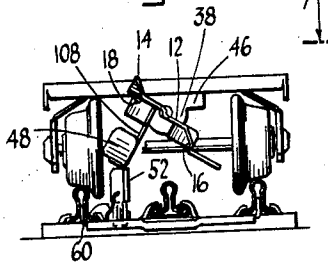


Fig. 4

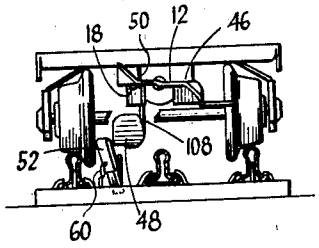


Fig. 5

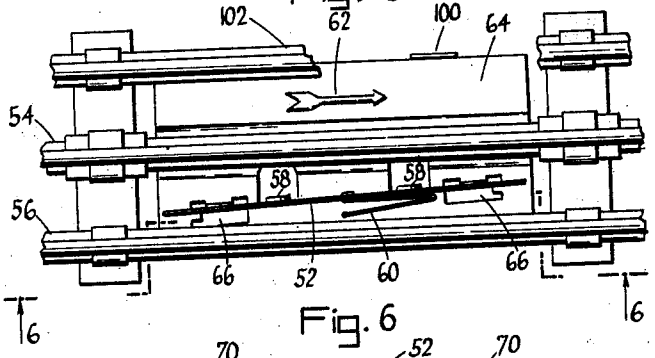


Fig. 6

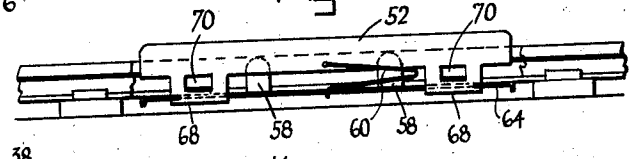
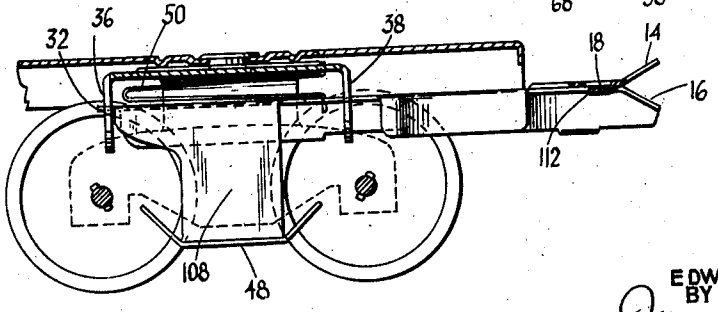


Fig. 7



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UNCOUPLING SYSTEM FOR TOY RAILWAY

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Fig. 8

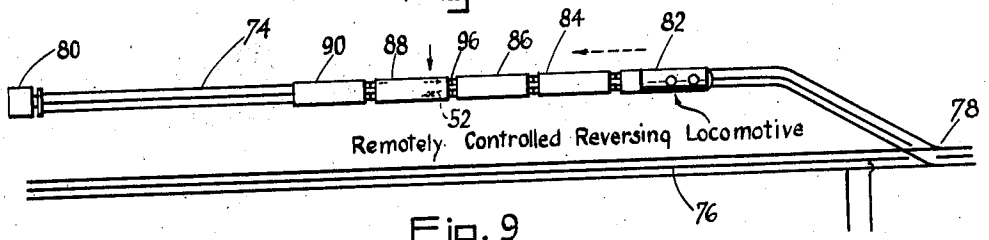


Fig. 9

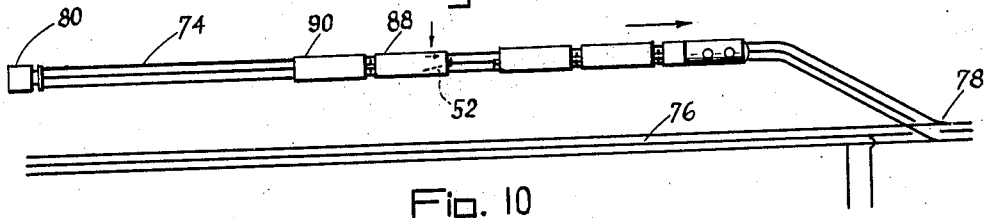


Fig. 10

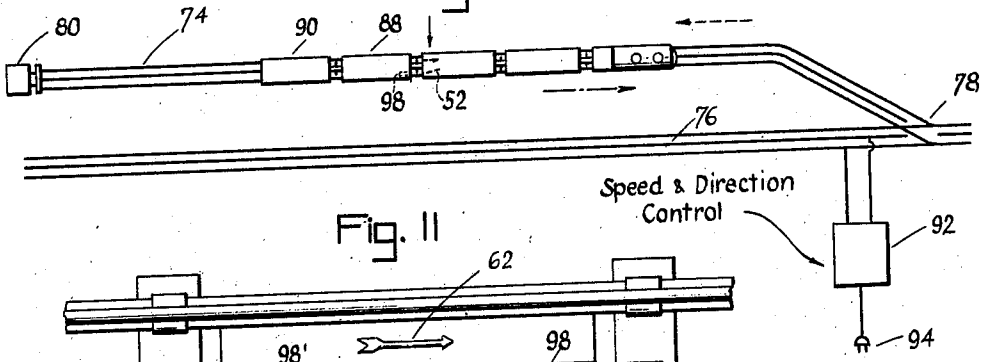


Fig. 11

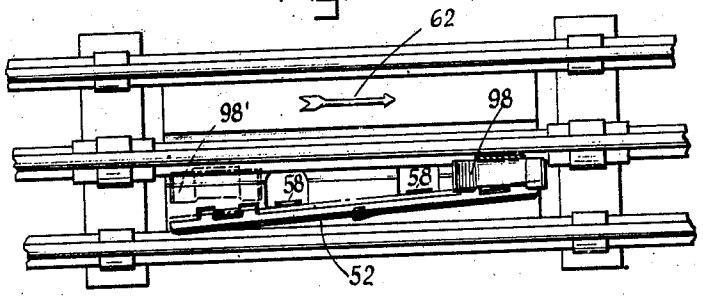


Fig. 14

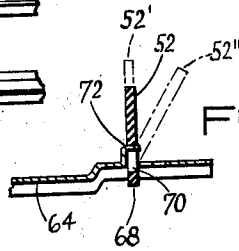
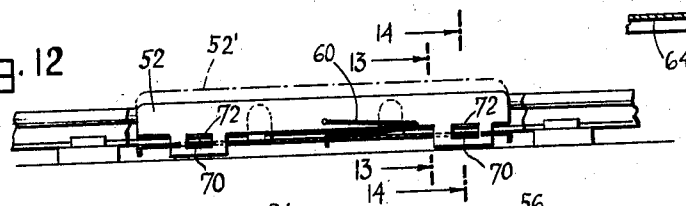


Fig. 12



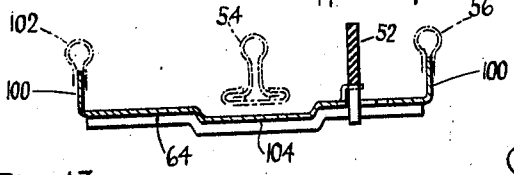


Fig. 13

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UNCOUPLING SYSTEM FOR TOY RAILWAY

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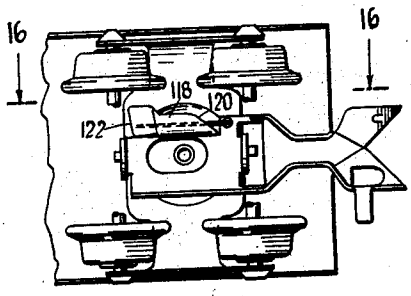


Fig. 15

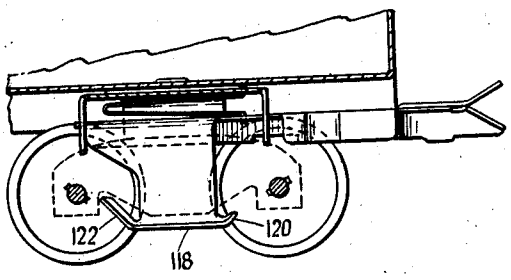


Fig. 16

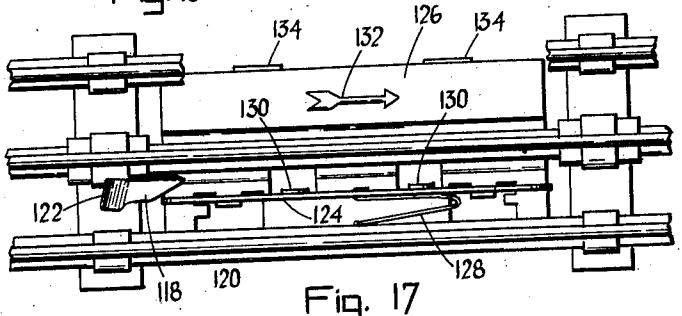


Fig. 17

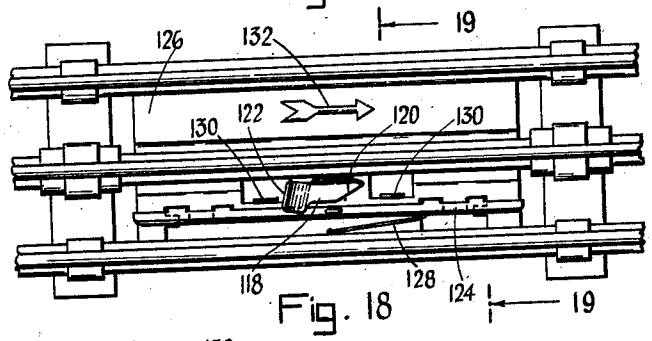


Fig. 18

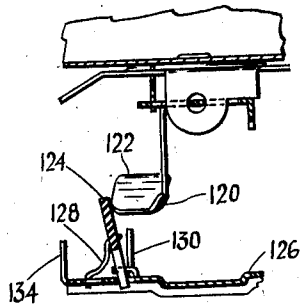


Fig. 19

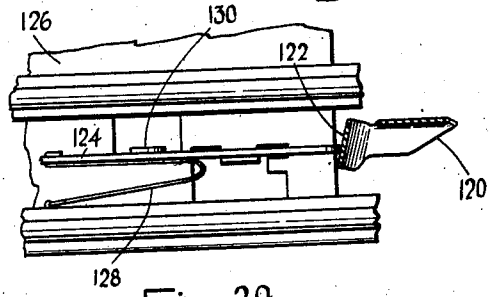


Fig. 20

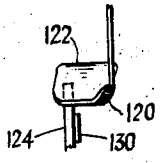


Fig. 21

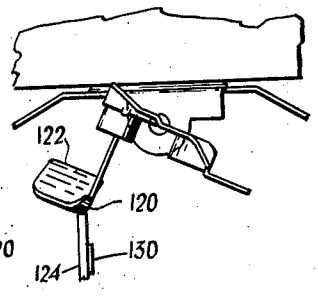


Fig. 22

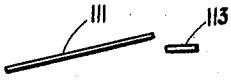


Fig. 23

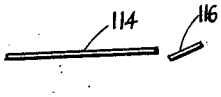


Fig. 24

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Patented Dec. 15, 1942 2,305,135

UNITED STATES PATENT OFFICE

2,305,135

UNCOUPLING SYSTEM FOR TOY RAILWAYS

Noel L. Case and Edward E. McKeige, Girard, Pa., assignors to Louis Marx & Company, Inc., New York, N. Y., a corporation of New York

Application June 12, 1941, Serial No. 397,732

14 Claims. (Cl. 213—211)

This invention relates to toy railways, and more particularly to a remotely controllable uncoupling system for the same.

The primary object of our invention is to generally improve toy railway systems, and more particularly electrically operated systems having a locomotive which may be reversed under remote control, a feature which is now common.

Toy railways have been made with couplers which automatically couple when cars are pushed together. Such railways have also been provided with a movable ramp on the track, and a cooperating car-carried trip to uncouple the cars. The ramp, if elevated locally, lacks realism, because the operator must reach over to the uncoupling point, and if remotely controlled by solenoid operation, adds considerably to the expense of the toy and complexity of the wiring needed for the system. This proves particularly true when using a considerable number of ramps located in several sidings and in a main line, as is necessary for breaking and making up trains as desired.

Another important object is to devise an improved ramp which will be applicable to a train having couplers of the general character disclosed in our co-pending application Serial No. 335,610, filed May 16, 1940, and entitled "Coupling mechanism for toy railroads." Said couplers are characterized by the use of symmetrical coupling bars at both ends of each car, said bars being oscillatable about their longitudinal axes, and each having a trip which is moved sidewardly or transversely of the car for uncoupling.

Accordingly, one particular object of our invention is to provide a ramp which does not require any external control means, and which is adapted to operate with couplers having a car-carried trip which moves transversely of the car to one side of its normal position in order to uncouple the couplers, said trip not being movable to the other side. For this purpose, we provide a ramp which is movably mounted for movement toward one side, but which is provided with stop means to prevent movement toward the other side. The ramp and trip are disposed at an angle relative to one another when viewed in plan, and are so located that the trip comes on one side of the ramp when moved in one direction and moves the ramp, but is not itself moved, whereas the trip comes on the other side of the ramp when moving in the other direction, and therefore is unable to move the ramp, but instead is itself moved to uncouple the couplers.

Another object is to provide such a ramp which will not interfere with parts of the locomotive such as the gearing or other relatively low structural parts. This is done by making the ramp depressible or vertically movable for a limited distance, said ramp being provided with a spring normally urging the same to its upward position.

In accordance with a further feature and object of the present invention, the ramp may also be used with couplers of the type shown in the aforesaid Ellis application, this feature being of value in case a child has two trains, one with the older and the other with the newer style coupler.

To the accomplishment of the foregoing and such other objects as will hereinafter appear, our invention consists in the toy railway elements and their relation one to the other, as hereinafter are more particularly described in the specification and sought to be defined in the claims. The specification is accompanied by drawings, in which:

Fig. 1 is a side elevation showing cars being uncoupled in accordance with our invention;

Fig. 2 is a bottom plan view of the car ends in coupled relation;

Fig. 3 is an end view of a car with its trip moved by the ramp, this view being taken in the direction of the arrows 3—3 of Fig. 1;

Fig. 4 is a similar view, but showing how the ramp is moved by the trip when the car travels in opposite direction;

Fig. 5 is a plan view of a ramp embodying features of our invention;

Fig. 6 is a section taken in the plane of the line 6—6 of Fig. 5;

Fig. 7 is a section taken in the plane of the line 7—7 of Fig. 2;

Fig. 8 is a plan view of a train being backed into a siding to uncouple the last two cars;

Fig. 9 is a similar view showing the cars separated by forward movement of the locomotive;

Fig. 10 is a similar view showing how the train may again be made up by backing the cars off the ramp before proceeding ahead out of the siding;

Fig. 11 is a horizontal section just over the trip shoe, and is explanatory of how the ramp functions when the train moves in forward direction;

Fig. 12 is a section taken in elevation, similar to Fig. 6, but showing how the ramp may be depressed;

Fig. 13 is a transverse section through the ramp, drawn to enlarged scale, and taken ap-

proximately in the plane of the line 13—13 of Fig. 12;

Fig. 14 is a fragmentary section showing the different positions of the ramp;

Fig. 15 is a bottom plan view similar to the lefthand portion of Fig. 2, but showing a modified trip;

Fig. 16 is a section taken in elevation similar to Fig. 7, but showing the modified trip;

Fig. 17 is a horizontal section taken just above the modified trip showing it approaching a modified ramp;

Fig. 18 is a similar view, but showing a later stage with the ramp moved by the trip;

Fig. 19 is a transverse section taken approximately in the plane of the line 19—19 of Fig. 18;

Fig. 20 is a fragmentary plan view similar to Fig. 17, but showing the action when the trip approaches the ramp in the opposite direction;

Fig. 21 is an end view of the trip and ramp as the trip approaches the ramp;

Fig. 22 is a similar view showing a later stage as the trip rides over the ramp; and

Figs. 23 and 24 are schematic plan views explanatory of the relation between the first and second forms of the invention.

The ramp of our invention is here illustrated applied to the control of couplers of a type which may be described with reference to Figs. 1 through 4 and 7 of the drawings. The couplers are symmetrical, that is, the coupling bars at both ends of the car are alike. The bar 12 has bifurcated ends 14 and 16, the branch 14 being biased upwardly, and the branch 16 being biased downwardly. One of the branches, in this case the upwardly biased branch 14, has a projection 18 struck downwardly therefrom, while the other branch 16 has a recess or hole 20 formed therein.

Similarly, the mating coupler bar 22 has upwardly and downwardly biased branches 24 and 26, the upwardly biased branch having a projection 28, and the downwardly biased branch a recess or hole 30. When cars are pushed together, the branched ends "gather" and come together with the projections engaged in the recesses, as is best shown in Fig. 2. To permit the coupling and uncoupling of the bars, they are mounted for oscillation on a longitudinal axis. This will be seen by comparison of Figs. 3 and 4. In Fig. 4, the coupler bar 12 is in its normal horizontal position. In Fig. 3, it has been tilted about its longitudinal axis, thereby disengaging it from the mating coupler, the projection 18 on branch 14 being lifted out of the hole in the other coupler, and the hole in branch 16 being lowered away from the projection of the other coupler.

Referring to Fig. 2, it will be seen that coupler bar 12 is provided with pivots 32 and 34 which are received in bearings 36 and 38 bent downwardly from the top wall of truck 40, said truck having side walls 42 which carry the axles 44 and flanged wheels. With this construction, the coupler bar turns with the truck.

Referring to Fig. 3, the bearing 38 is provided with a step at 46, which step acts as a motion-limiting stop to prevent tilting of the coupler bar in the opposite direction. The coupler bar may move as far as its normal horizontal position shown in Fig. 4, and may be tilted in the direction shown in Fig. 3, but cannot be tilted in the opposite direction.

A ramp contact shoe or trip 48 depends from one side of the coupler bar, as is best shown in Figs. 2, 3 and 4. It will be evident that the trip moves transversely of the car, and that it can move to only one side of the normal position shown in Fig. 4. In the present case, it may move outwardly, as shown in Fig. 3, but it cannot move inwardly of the position shown in Fig. 4. The coupler and trip are urged to the normal position shown in Fig. 4 by suitable resilient means here exemplified by a hairpin spring 50, the shape of which is best shown in Fig. 7. Said spring is located offset from the axis of the coupler, as is shown in Figs. 2 and 4, and so tends to move the coupler against the stop 46 previously referred to.

The general principles underlying this form of coupling, as well as the previous method of controlling the same, are set forth in our co-pending application Serial No. 335,610, previously referred to. The control mechanism there illustrated comprises a pair of cams or ramps mounted on a special track section and moved by a solenoid under remote control, the ramps being elevated to engage the coupler trip when it is desired to uncouple a car, but normally being lowered out of the path of the car-carried trips.

In an effort to eliminate the need for solenoid operation with complex wiring extending from each uncoupling point to a suitable remote control point, the co-pending application of Carter D. Ellis previously referred to, suggests the use of stationary ramps which are fixedly mounted on the track. Such a ramp would obviously not be satisfactory with the present type of coupler, because the trip would be operated with the train moving in either direction.

In accordance with our invention, we provide a ramp which is movable but which, however, requires no external control. Referring to Figs. 5 and 6 of the drawings, the ramp comprises a strip 52 which is disposed edgewise and which is movable toward one side but not the other. In the present case, the strip is disposed between power rail 54 and wheel-bearing rail 56, and is movable outwardly, that is, toward the wheel-bearing rail 56, but is not movable toward power rail 54. Suitable stops 58 are provided, said stops preventing inward movement of ramp strip 52. Resilient means, here exemplified by hairpin spring 60, may be provided to normally urge the ramp against the stops 58.

The ramp 52 is disposed at a slight angle relative to the rails 54 and 56 when viewed in plan, this being clear from inspection of Fig. 5. The disposition of the ramp is such that the car-carried trip 48 comes on one side of the ramp when moving in one direction, but comes on the other side of the ramp when moving in the other direction. Specifically, in the present case, the trip comes on the inside of the ramp when moving in the direction of the arrow 62. The trip cannot move inwardly, but the ramp can move outwardly, and consequently, the trip moves the ramp outwardly with no change in the coupling. In all normal cases, this would be the car-pulling direction. In the reverse direction, however, that is, in the car-pushing direction, the trip comes on the outside of the ramp. The ramp cannot move inwardly, but the trip can move outwardly, and consequently, continued movement of the car past the ramp causes an outward movement of the trip with consequent uncoupling of the cars.

Of course, if the locomotive keeps pushing the cars, the coupling is not disturbed, because a basic characteristic of the couplers is that they

automatically couple when pushed together. However, if the train is stopped with the trip at the ramp, so that the coupling is open, the locomotive may then be run forward again, thus separating the train at the desired coupler.

It is convenient to mount the ramp for tilting movement about its lower edge, and for this purpose, the base 64 and the ramp 52 are provided with mating slots and tongues which provide the desired pivotal connection. Specifically, the base is slotted at 66 to receive projections 68 at the bottom of ramp 52, and these projections are themselves slotted at 70 to receive tongues or lugs 72 formed on base 64. The ramp 52 is oscillatable from the broken-line position 52' shown in Fig. 14 to the angular broken-line position 52''. Inasmuch as it is the upper edge portion of the ramp that is effective, the tilting movement corresponds to an outward movement of the ramp. The stops 58 (Figs. 5 and 6) are lugs bent upwardly from base 64, and support the ramp in its normal upright position, the spring 60 serving to urge the ramp against the stops 58.

The operation of the invention may be described with reference to Figs. 8, 9 and 10 of the drawings. We there show the ramp 52 located in a siding 74 connected to main line 76 by means of a suitable track switch located at 78. Siding 74 may, if desired, be terminated by a bumper 80. The train comprises a locomotive 82 and cars 84, 86, 88 and 90. The locomotive 82 is of the remotely controlled reversing type. It is controlled from a remote control point by any suitable means, schematically indicated at 92 in Fig. 10, this ordinarily being a power supply transformer which in turn may be connected to an ordinary household wiring outlet, as by means of a plug 94.

It is assumed that cars 88 and 90 are to be separated from the train and left in siding 74. In Fig. 8, the train has been backed into the siding until the trip for coupler 96 reaches and is acted on by ramp 52. The locomotive is then stopped, and is then run forwardly, as shown in Fig. 9, leaving the cars 88 and 90 behind. This separation may also be obtained by moving the train backward at appreciable speed, and then abruptly slowing the movement of the locomotive when the desired trip reaches the ramp, for then the rear cars will continue moving rearwardly under their own inertia, and so will be separated from the forward cars. This is not essential, however, because the train may simply be stopped over the ramp, and the locomotive then run forwardly, as previously described.

When it is desired to again pick up the cars 88 and 90, the train is backed into the siding, as shown in Fig. 10, and pushes the cars 88 and 90 rearwardly at least far enough to move the trip 98 off the ramp. The locomotive may then be run forwardly, and the entire train will travel intact, trip 98 not being affected by ramp 52 when moving in a forward direction. This is illustrated in Fig. 11, which shows how the trip, shown in broken lines at 98', comes on the inside of the ramp 52 when moving in forward direction. When the trip 98 reaches the solid-line position shown in Fig. 11, it has tilted the ramp 52 to the outward position shown in the drawings, and corresponding to the broken-line position 52'' in Fig. 14.

It will be understood that in backing cars 88 and 90 off the ramp 52, the train should not be moved an exact car length, for that might bring the next trip to the ramp. Any intermediate stopping point may be used, or, if desired, the train may be backed all the way into the siding as far as the bumper 80, before proceeding forward.

The base 64 of the ramp mechanism is preferably detachably secured to any desired track section. This permits an uncoupling ramp to be located at any convenient point in the track system, and many such ramps may be used in sidings and on the main line at various suitable points. In the present case, the base is provided with upwardly turned tongues 100 at its side edges. One of these is clearly shown in Fig. 5, where wheel-bearing rail 102 is broken away. There are four such tongues, two of which are clearly shown in Fig. 13, the tongues being bent upwardly at the side edges of the base. These tongues are dimensioned so that they can be pushed into the divided web of the wheel-bearing rails 56 and 102, thus holding the plate frictionally in position.

The plate is preferably depressed at the center, as is clearly shown at 104 in Fig. 13, thus insulating the same from the power rail 54.

While not essential, we prefer to make the ramp vertically movable for a limited distance, in addition to its regular intended outward movement. For this purpose, the slots 70 previously referred to in connection with Fig. 6, are made wide enough to permit depression of the ramp from the broken-line position 52' in Fig. 12, to the solid-line position 52, at which time the tops of slots 70 reach the lugs 72. The ramp is normally urged to its upward position by resilient means, and in the present case, the single spring 60 previously referred to, functions for two purposes, that is, to elevate the ramp as well as to tilt the same to its normal upright position. The change from the broken-line position 52' to the solid-line position 52 is also shown in Fig. 14. The advantage of providing this limited vertical movement is in increasing the clearance for the rolling stock. The locomotive, for example, may have motor parts which are disposed quite low relative to the rails, and interference with such parts is avoided because they simply brush the ramp downwardly as they pass over the same. The action of the ramp on the trip, however, is not affected, because this depends on sideward movements of either the ramp or the trip. Incidentally, despite the provision for limited vertical movement, this ramp will work successfully with the trip and coupling shown in the aforesaid co-pending Ellis application.

The couplers are pressed out of sheet metal, and are provided with a flange 104 (Fig. 2) along one edge, said flange functioning to stiffen and strengthen the coupler. A manually depressible finger 106 projects from the lower edge of flange 104. The trip 48 is formed at the lower end of an arm 108 which is preferably integral with the coupler. In this way the coupler, the trip finger 106, the arm 108, and the trip shoe 48, may all be formed out of a single piece of sheet metal. The sheet metal need be of only moderate gauge, because the coupler is stiffened and strengthened by the flange 104 running continuously along one edge, and by a shorter or interrupted flange 110 at the opposite edge.

The projection 18 is bent downwardly by excising some of the metal, as is best shown in Fig. 7, but it will be understood that the part 18 does not form a true hook. In other words, it is not displaced downwardly far enough to permit

the other coupler to be received in the hook-like formation, for that would prevent uncoupling. Instead, the edge 112 of the part 18 acts as a projection for bearing against the hole of the other coupler, and the space between the part 18 and the bottom of the coupler is made less than the thickness of the other coupler. The improved construction of the present coupler bar avoids the need for such thick metal as is required when using the coupler shown in our copending application Serial No. 335,610.

The ramp and its base are preferably made shorter than the space between successive ties of an ordinary toy track section. With this construction, the ramp is adequate in length, yet the mounting of the ramp base on the track section is greatly simplified, there being no interference with the ties.

A modified form of the invention is illustrated in Figs. 15–22. The relation between the two modifications may be preliminarily explained by reference to the schematic showing in Figs. 23 and 24. Fig. 23 schematically represents the form of the invention previously described, it constituting a ramp 111 disposed at an angle relative to the track rails, and a trip 113 disposed parallel to the track rails, so that the ramp and trip are disposed at an angle relative to one another and are so positioned that when the trip moves in one direction it comes on one side of the ramp, whereas when it moves in the opposite direction it comes on the opposite side of the ramp. It should be noted that in elementary form both the ramp and the trip may be simple upright surfaces, these being viewed edgewise in Fig. 23, the latter being a plan view.

This same result may be obtained while using a ramp which is disposed parallel to the rails if the trip is disposed at an angle. Thus, in Fig. 24 the ramp 114 is disposed parallel to the rails, while the trip 116 is disposed at an angle. It will be evident that when the trip moves in one direction, it will come on one side of the ramp, and when it moves in the opposite direction, it will come on the opposite side of the ramp. The important thing, however, is the relative angular disposition of the trip and ramp so as to produce the desired result. Thus, in an intermediate case, the ramp might be given an angle relative to the rails, and the trip might also be given an angle relative to the rails. For example, the trip 116 of Fig. 24 may be used with the ramp 111 of Fig. 23.

Moreover, it is not essential that the body of the trip or that the body of the ramp be disposed at an angle, and it is sufficient if the ends of the same are properly shaped or properly bent to achieve the desired purpose. Thus, in the specific arrangement illustrated in Figs. 15–22, the trip 118 has an intermediate portion which is substantially parallel to the rails, but one end 120 is cut away at an angle while the opposite end is bent upwardly, but is also preferably biased at a slight angle, as is shown at 122. Except for this change in the shape of the trip, the car-carried coupling mechanism may be the same as that previously described.

The ramp 124 may also be similar to that previously described, except that it is preferably disposed parallel to the rails, as will be clearly seen in Figs. 17, 18, and 19. The ramp is similarly slotted and mounted on a base plate 126 which is like that previously described, except for the fact that the lugs carrying the ramp position the same parallel to the rails, instead of at an angle. The single spring 128 may be constructed and used for two purposes as previously described; first and mainly, to normally urge the ramp to upright position against the motion-limiting stops 130; and second, to normally raise the ramp.

The operation of this modified form of the invention will be clear from study of the drawings. Fig. 17 shows the trip 118 approaching the ramp 124 from the left, the trip moving in the normal forward direction of the train, this being indicated by the arrow 132 on base 126. The biased end 120 of the trip bears against the inside of the ramp and its continued movement tilts the ramp outwardly, this being clearly shown in Figs. 18 and 19 of the drawings.

However, when the trip 120 approaches the ramp 104 in the opposite or backward direction, the end 122 bears against the ramp, as is clearly shown in Figs. 20 and 21. The continued movement of the trip tends to turn the ramp inwardly, but this it cannot do because of the motion-limiting stops 130. The trip 120 can however move outwardly. The trip is thus moved from the initial vertical position shown in Fig. 21 to the tilted or angular position shown in Fig. 22, at which time, of course, the tilted coupler bar is disengaged from its mating coupler bar.

As before, the base 126 may be applied to any one of the track sections by the use of upwardly directed tongues 134 which may be forced between the double webs of the folded sheet metal rails.

It is believed that the construction and operation, as well as the advantages of our improved toy train system, will be apparent from the foregoing detailed description thereof. It will also be apparent that while we have shown and described our invention in several preferred forms, many changes and modifications may be made in the structures disclosed without departing from the spirit of the invention, as sought to be defined in the following claims. In the claims we have, for convenience, referred to the ramp and the trip being disposed at an angle relative to one another, and it will be understood that this is intended to cover the modification of Figs. 15–22 as well as the modification of Figs. 1–14 and the modifications of Figs. 23 and 24. It is also intended to cover the use of a ramp and trip both disposed at any angle to the rails, in which case they may even be parallel to each other. Moreover, the statement in the claims that the ramp and trip are disposed at a relative angle is intended to include a case in which the body portion of the ramp and the body portion of the trip are disposed parallel to each other and even to the rails, but the ends of one or the other or both are so biased as to produce an effect equivalent to disposing them at an angle, the main result, of course, being that the trip is guided to and bears against one side of the ramp when moving in one direction, and is guided to and bears against the other side of the ramp when moving in the other direction.

We claim:

1. A ramp mechanism for use with a toy railway system having a car-carried trip movable transversely of the car to one side but not to the other side, said mechanism comprising a ramp mounted for movement toward one side, stops for preventing movement toward the other side, and resilient means normally holding the ramp in position against the stops, said ramp and trip being mounted at an angle relative to one

another when viewed in plan, whereby the car-carried trip comes on one side of the ramp when moving in one direction but comes on the other side of the ramp when moving in the other direction.

2. A ramp mechanism for use with a toy railway system having a car-carried trip movable transversely of the car to one side but not to the other side, said mechanism comprising a ramp mounted for limited vertical movement and for movement toward one side, stops for preventing movement toward the other side, and resilient means normally holding the ramp in position against the stops, and for urging the ramp to its upper position, said ramp and trip being mounted at an angle relative to one another when viewed in plan, whereby the car-carried trip comes on one side of the ramp when moving in one direction but comes on the other side of the ramp when moving in the other direction.

3. A ramp mechanism comprising a ramp formed by an elongated strip of material disposed edgewise, means mounting the same for tilting movement about its lower edge toward one side, stops for preventing tilting movement toward the other side, said mounting means further providing for a limited edgewise up and down movement of the ramp, independently of the tilting movement, and resilient means so disposed and so directed as to normally hold the ramp in position against the stops, and to normally urge the ramp upwardly.

4. A ramp mechanism for use with a toy railway system having a car-carried trip movable transversely of the car to one side but not to the other side, said mechanism comprising a ramp formed by an elongated strip of material disposed edgewise, means mounting the same for tilting movement about its lower edge toward one side, stops for preventing tilting movement toward the other side, and resilient means normally holding the ramp in position against the stops, said ramp and trip being mounted at an angle relative to one another when viewed in plan, whereby the car-carried trip comes on one side of the ramp when moving in one direction but comes on the other side of the ramp when moving in the other direction.

5. A toy railway system comprising cars having couplers arranged to automatically couple when pushed together, a car-carried trip for uncoupling the couplers, said trip being movable to one side of the normal position in order to uncouple the couplers but not being movable to the other side of the normal position, and a track-carried ramp mechanism disposed at a desired uncoupling point, said mechanism comprising a ramp, means mounting the same for movement toward one side, stop means to prevent movement toward the other side, resilient means normally urging said ramp to normal position against the stop means, said ramp and trip being disposed at an angle relative to one another when viewed in plan, and being so located that the trip comes on one side of the ramp when moved in one direction and moves the ramp but is not itself moved, whereas said trip comes on the other side of the ramp when moving in the other direction, and therefore cannot move the ramp but instead is itself moved to uncouple the couplers.

6. A toy railway system comprising cars having couplers arranged to automatically couple when pushed together, a car-carried trip for uncoupling the couplers, said trip being movable to one side of the normal position in order to uncouple the couplers but not being movable to the other side of the normal position, and a track-carried ramp mechanism disposed at a desired uncoupling point, said mechanism comprising a ramp, means tiltably mounting the same for tilting movement toward one side, stop means to prevent tilting toward the other side, resilient means normally urging said ramp to normal or upright position against the stop means, said ramp and trip being disposed at an angle relative to one another when viewed in plan, and being so located that the trip comes on one side of the ramp when moved in car-pulling direction and tilts the ramp but is not itself moved, whereas said trip comes on the other side of the ramp when moving in car-pushing direction and therefore cannot tilt the ramp but instead is itself moved to uncouple the couplers.

7. An electrically operated toy railway system comprising a track having wheel-bearing rails and an insulated power rail, a train comprising an electrically operated locomotive and cars operable on said track, said locomotive being of the remotely controlled reversing type, a remote direction control means for the locomotive, a car-carried trip which is movable to one side of its normal position but which is not movable to the other side of its normal position, and a track-carried ramp mechanism disposed at a desired uncoupling point, said mechanism comprising a ramp, means mounting the same for movement toward one side, stop means to prevent movement toward the other side, resilient means normally urging said ramp to normal position against the stop means, said ramp and trip being disposed at an angle relative to one another when viewed in plan, and being so located that the trip comes on one side of the ramp when moved in one direction and moves the ramp but is not itself moved, whereas said trip comes on the other side of the ramp when moving in the other direction and therefore cannot move the ramp but instead is itself moved.

8. An electrically operated toy railway system comprising a track having wheel-bearing rails and an insulated power rail, a train comprising an electrically operated locomotive and cars operable on said track, said locomotive being of the remotely controlled reversing type, a remote direction control means for the locomotive, said cars having couplers which automatically couple when pushed together, a car-carried trip which is movable to one side of its normal position to uncouple the couplers but which is not movable to the other side of its normal position, and a track-carried ramp mechanism disposed at a desired uncoupling point, said mechanism comprising a ramp, means mounting the same for movement toward one side, stop means to prevent movement toward the other side, resilient means normally urging said ramp to normal position against the stop means, said ramp and trip being disposed at an angle relative to one another when viewed in plan, and being so located that the trip comes on one side of the ramp when moved in one direction and moves the ramp but is not itself moved, whereas said trip comes on the other side of the ramp when moving in the other direction and therefore cannot move the ramp but instead is itself moved to uncouple the couplers.

9. An electrically operated toy railway system comprising a track having wheel-bearing rails and an insulated power rail, a train comprising an electrically operated locomotive and cars oper-

able on said track, said locomotive being of the remotely controlled reversing type, remote means to control the starting, stopping, and reversing of the locomotive, said cars having couplers which automatically couple when pushed together, a car-carried trip which is movable to one side of its normal position to uncouple the couplers but which is not movable to the other side of its normal position, and a track-carried ramp mechanism disposed at a desired uncoupling point, said mechanism comprising a ramp, means tiltably mounting the same for tilting movement toward one side, stop means to prevent tilting toward the other side, resilient means normally urging said ramp to normal or upright position against the stop means, said ramp and trip being disposed at an angle relative to one another when viewed in plan, and being so located that the trip comes on one side of the ramp when moved in car-pulling direction and tilts the ramp but is not itself moved, whereas said trip comes on the other side of the ramp when moving in car-pushing direction and therefore cannot tilt the ramp but instead is itself moved to uncouple the couplers.

10. A ramp mechanism for use with a toy railroad, said mechanism comprising a base plate having upwardly projecting tongues dimensioned to be frictionally received in the webs of the wheel-bearing rails, said plate being depressed at the center to void contact with the insulated power rail, a ramp comprising a strip disposed edgewise, means mounting the strip on the base plate for tilting movement about its lower edge, stop means to limit tilting movement of the ramp in one direction, and resilient means normally urging said ramp against said stop means.

11. A ramp mechanism for use with a toy railroad, said mechanism comprising a base plate having means to secure the same to a toy track, a ramp comprising a strip disposed edgewise, said strip and base plate having interlocking lugs and slots for loosely mounting the strip on the base plate for tilting movement, stops to limit tilting movement of the ramp in one direction, and resilient means normally urging said ramp against said stops.

12. A ramp mechanism for use with a toy railroad, said mechanism comprising a base plate having upwardly projecting tongues dimensioned to be frictionally received in the webs of the wheel-bearing rails, said plate being depressed at the center to avoid contact with the insulated power rail, a ramp comprising a strip disposed edgewise, said strip and base plate having interlocking lugs and slots for loosely mounting the strip on the base plate for tilting movement and vertical movement, stops bent up from said base plate to limit tilting movement of the ramp in one direction, and resilient means normally urging said ramp against said stops and also urging said ramp upwardly.

13. A ramp mechanism for use with a toy railroad, said mechanism comprising a base having means to secure the same to a toy track, a ramp mounted on said base for movement toward one side, stops for preventing movement toward the other side, resilient means normally holding the ramp in position against the stops, and means on said base to indicate the correct normal traffic direction over the ramp.

14. A ramp mechanism for use with a toy railroad, said mechanism comprising a base plate having upwardly projecting tongues dimensioned to be frictionally received in the webs of the wheel-bearing rails, said plate being depressed at the center to avoid contact with the insulated power rail, a ramp comprising a strip disposed edgewise, said strip and base plate having interlocking lugs and slots for mounting the strip on the base plate for tilting movement, stops to limit tilting movement of the ramp in one direction, resilient means normally urging said ramp against said stops, and an arrow on said base plate indicating normal traffic direction.

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