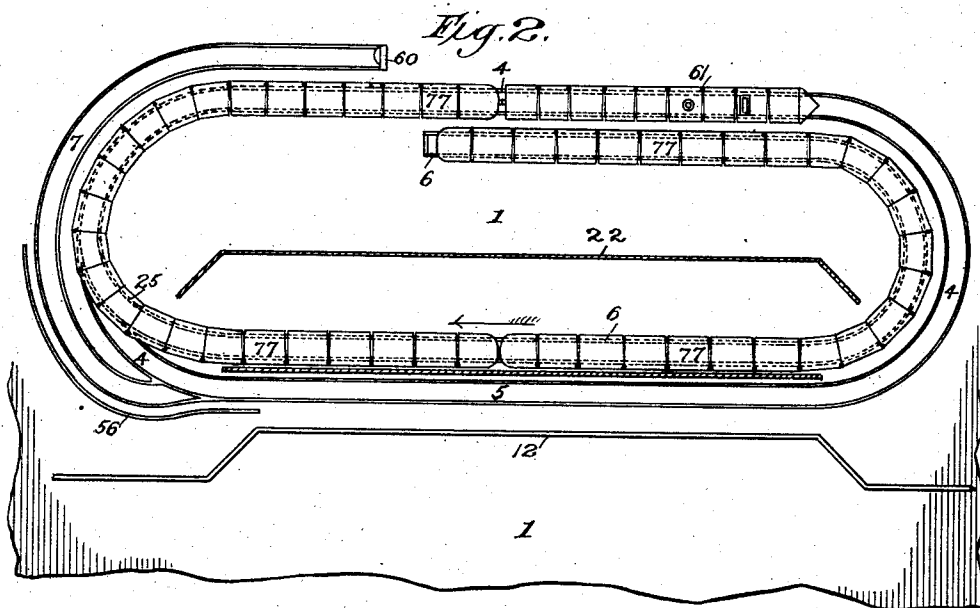
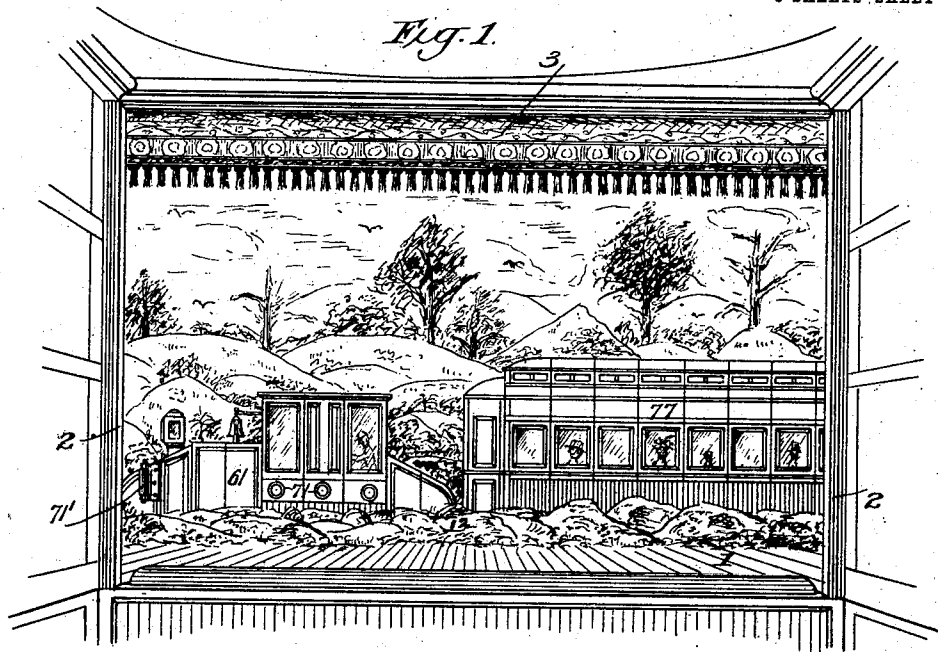




Witnesses:
P. B. Philp
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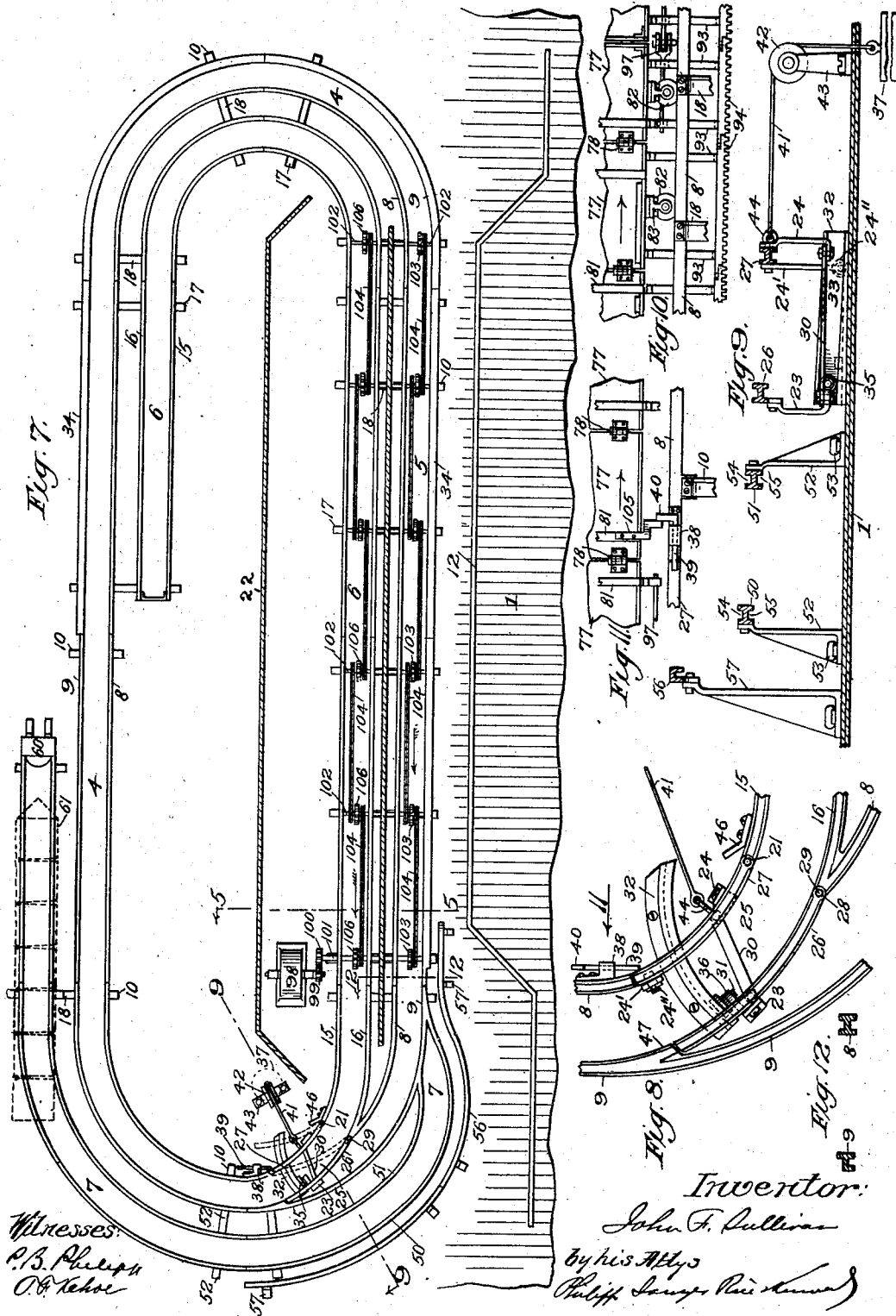
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974,203.

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THEATRICAL APPARATUS.
APPLICATION FILED FEB. 6, 1908.

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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

JOHN F. SULLIVAN, OF NEW YORK, N. Y.

THEATRICAL APPARATUS.

974,203.

Specification of Letters Patent.

Patented Nov. 1, 1910.

Application filed February 6, 1908. Serial No. 414,471.

To all whom it may concern:

Be it known that I, JOHN F. SULLIVAN, a citizen of the United States, residing at New York city, county of New York, and State of New York, have invented certain new and useful Improvements in Theatrical Apparatus, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to certain improvements in apparatus for theatrical and similar exhibition purposes.

In some theatrical and like exhibitions, certain scenes require that a moving train, composed of an engine and a number of cars, shall pass on the stage before the view of an audience. The ordinary theatrical stages are not of sufficient dimensions to permit of the production thereon of an engine and the number of cars required to compose the train. It is necessary, therefore, to provide means by which the effect or illusion of a moving train may be produced, the car and engine construction employed being of such character and dimensions that the ordinary theater stage will accommodate it.

It is one object of the present invention to provide means for producing the effect of a moving train, the train apparently being made up of a number of cars.

It is a further object of the invention to produce a track system and an engine and car construction for producing this effect which will occupy the smallest possible amount of stage space, and which can be used effectively on any ordinary theater stage.

It is a further object of the invention to provide an improved engine and car construction for carrying out the aforesaid objects.

With these and other objects in view, the invention consists generally in providing a track system including what may be termed the main track, which has an exhibiting portion on which the train may pass in view of the audience; a second track, which may be termed a storage track, on which a portion of the train is temporarily stored and concealed from the audience while on such storage track; and a third track, which may be termed a side track, onto which the engine is run after it has once passed in view

of the audience, the cars of the train continuing to pass around the main track, the construction being such that after the engine has been drawn off on the side track, two ends of one car (where only one car is employed) or the front and back ends of two cars (where two cars are used) come together and form a continuous construction, which is so arranged as to extend completely around the main track. This car construction being kept moving around the main track after the engine has been switched off, gives the effect of a continuous train composed of a number of separate cars. Means are provided for moving the cars and keeping the cars moving as long as is necessary to give the desired effect.

For a full understanding of the invention, reference will now be had to the accompanying drawings, in connection with which the invention will now be described in detail.

In said drawings:—Figure 1 is a view in perspective of a stage, showing the engine and a portion of a train in its exhibiting position; Fig. 2 is a diagrammatic plan view of the track system showing the engine and cars in non-exhibiting position, and showing the masking in section which is used for concealing the various parts of the track system and train from the view of the audience; Fig. 3 is a vertical cross section showing the car construction employed; Fig. 4 is a side view looking from the inside showing the car construction at the meeting ends of the car or cars; Fig. 5 is a vertical section of the engine construction taken on line 5—5 of Figs. 6 and 7; Fig. 6 is a side view of a part of the engine construction shown in Fig. 5; Fig. 7 is a plan view, partly in section, of the track system, showing the driving mechanism for moving the cars around the track; Fig. 8 is an enlarged detail view of the switch mechanism shown in Fig. 7; Fig. 9 is a cross section of the same taken on line 9—9 of Fig. 7; Fig. 10 is an enlarged detail view of a portion of the car construction; Fig. 11 is a detail view showing the tripping mechanism by which the switch mechanism is operated, and Fig. 12 is a detail view in section, the section being taken on lines 12—12 of Figs. 6 and 7.

Referring now to said drawings illustrating one construction for accomplishing the objects of the invention, 1 indicates an ordinary theatrical stage, which is of any usual

or desired construction; 2 indicates the sides or wings, and the usual drop curtain or drop is indicated by the numeral 3.

For convenience the track system the arrangement and construction of which constitute one of the important features of the invention, will be first described. This track system is of such character that it may be positioned on the ordinary theatrical stage, and is so arranged as to economize stage space as far as possible. The specific construction and arrangement of said track system may be somewhat varied. As before stated, however, the preferred construction will include a main track 4, which has an exhibiting portion 5; a storage track 6; and a side track 7, the arrangement and construction of which tracks will now be described in detail, beginning with the main track 4. This main track may be of various configurations. In the best constructions it will be of the shape shown, that is, elliptical in plan, as such shape is found to occupy the least stage space. This main track 4 comprises rails 8, 9, these rails being of any suitable material, such as iron or steel. For a purpose hereinafter referred to, the rails 8, 9, are raised somewhat above the level of the stage floor and are supported or carried by standards 10 secured to the floor of the stage by bolts 11 or in any other suitable manner. The outer rail 9 of the main track is, as shown, arranged somewhat higher than the inner rail 8 (see Fig. 9) on the curved portions of the track, the track being thus "banked" to prevent any liability of the train leaving the track on the curves. The rails are as shown H shaped in cross section to provide flanged guideways 13, 14, in which the cars are supported and guided as hereinafter described.

To conceal the track construction from the view of the audience, there is provided along the exhibiting portion 5 of the main track masking 12 (see Figs. 1 and 7), the rest of the track system being concealed by the ordinary wing masking 22 usually employed. The masking 12 is as shown of sufficient height to conceal the rails and the supporting standards, but is low enough to allow the passing train to be plainly seen. While the portion of the main track not taken up by the exhibiting portion 5 may be and is used for storage purposes temporarily, as will hereinafter be described, a storage track proper is necessary and such a storage track is provided. This storage track 6 is, like the main track, positioned on the stage and preferably, to economize space, is located inside the main track and follows the contour thereof. This storage track is of any necessary or desired length, a length of about two-thirds of the main track, as shown, however, is found usually to be sufficient. The storage track is, like the main track, raised

or elevated above the floor level of the stage, as shown, for a purpose hereinafter referred to, and comprises two rails 15, 16 carried and supported by standards 17 (see Fig. 5). As the storage track preferably follows the contour of the main track, it is arranged as close thereto as is possible, and for convenience of construction the inner rail 8 of the main track, and the outer rail 16 of the storage track, are carried and supported by double standards, one of these standards being shown in Fig. 5 and marked 18. The rails of the storage track, like the rails of the main track, are of iron or steel, or any other suitable material, and are H shaped in cross section, forming flanged guideways 19, 20 (see Fig. 5), in which guideways the cars are guided and supported as hereinafter described. Where the storage track has a curved portion, its outer rail 16 is slightly raised or "banked" to prevent the train, when in motion, leaving the track at such point.

In order to permit the cars to be moved around the main track, after leaving the storage track, as will be hereinafter explained, means are provided by the present invention for disconnecting the main track and the storage track. These means include a switch mechanism which is preferably operated automatically by the train as it leaves the storage track, as hereinafter described. This switch mechanism may be somewhat varied in construction. Preferably, however, and as shown, there is provided a movable section, generally designated by the numeral 25. In the particular construction shown, this movable section is located at one end of the storage track on the curve at the left hand end of the track system. This movable section comprises two rails of iron or steel, or any other suitable material, H shaped in cross section, marked 26, 27. These rails are pivotally supported, one rail 26 being pivoted at a point 28 at the junction of the inner rail 8 of the main track, and the outer rail 16 of the storage track, by a pin 29. The other rail 27 is pivoted by a pin 21 to the end of the inner rail 15 of the storage track. These two rails 26, 27 of this movable section are supported on standards 23, 24 (see Fig. 9) which standards are in turn supported and united by a cross bar or link 30, so that the two rails may be moved together. A second supporting standard 24' located at the end of rail 27 is provided, this standard having a roller 24'' resting on the floor of the stage. Means for guiding this movable section during its switching movements are provided. In the particular construction shown a curved guide-plate 32 is firmly secured to the stage floor, which guide-plate extends to the limit of the swinging movement of the movable section in either direction. This guide-plate 32 is

provided with a slot 33 (see Fig. 9) in which slot a guide-roll 35 is adapted to run. This guide-roll 35 is as shown mounted on a stud 31 carried in a bracket 36 fast on the standard 23, this roll being mounted so as to be freely movable. The outer rail 26 of the movable section 25 when said section is located on a curve, as in the present instance, is raised slightly higher than the inner rail 27, so as to form a "bank," and prevent any tendency of the train leaving the track at that point. As this rail 26 is higher than rail 27 when it is swung over to the position shown in dotted lines in Fig. 7, in which position it takes the place of rail 27, means must be provided for lowering the rail 26 to the level of rail 27 when it is in the latter position. In the construction shown, the slot 33 in the guide-plate 32 is inclined as shown in Fig. 9, the incline extending from the outer to the inner end of the plate. The movable section being pivoted, as it swings from the position shown in dotted lines in Fig. 7 to the position shown in dotted lines in Fig. 11, the guide-rail 35 pulls down or depresses the rail as it is moved. The guide-slot is inclined to an extent sufficient to depress the rail to the required height.

The means provided for moving the swinging or movable section 25, so as to disconnect the main track from the storage track, may be somewhat varied. In the best constructions, said means will include a tripping mechanism which, as hereinafter described, will be automatically operated by the end of the train as it leaves the storage track. As shown, this tripping mechanism includes a weight 37 (see Fig. 9) against the pull of which the movable section is normally held in the position shown in full lines in Fig. 7, through the following instrumentalities.

On the inner side of the inner rail 8 of the main track 4, just beyond the end of the movable section is secured an eye 38, in which eye is secured a sliding bolt or bar 39, which bolt or bar, at one end, overlaps the inner side of the rail 27 of the movable section, the section being pulled against said bolt or bar by the action of the weight, the rail bearing against this bolt. The other end of the bolt or bar is provided with an upright arm 40 (see Fig. 11) which extends up into the path of movement of the car as hereinafter described. From the weight 37 extends a cable of rope or wire 41, this cable passing over a pulley 42 on a standard 43, this rope or cable being secured to an eye 44 fast on the inner side of the rail 27 of the movable section. When the bolt or bar 39 is moved so that its end no longer laps over onto the end of the rail 27, the section is swung over by the pull of the weight and the main track disconnected from the storage track. To limit the swinging move-

ment of the section there is provided a stop 46 secured on the inner side of the rail 15, which stop is adapted to abut against the inner side of the rail 27 when the section has been swung over, this block or stop being so arranged as to stop the swinging movement of the section when the rail 26 has been moved to its proper position. The outer rail 9 of the main track is provided with an extension or frog 47, with which extension the rail 26 of the swinging section is in line when said section is in the position shown in full lines in Fig. 9, this extension or frog 47 being provided to make the track continuous and keep the cars from leaving the track at the junction of the swinging section and the main track. The outer rail 9 of the main track is provided for a purpose hereinafter referred to with an additional flange 34, this flange being shown in the drawings in Figs. 3, 5 and 7.

As before stated, to give the effect of a long moving train with a construction employing only one or two cars, it is necessary to have the engine (the particular construction of which will be hereinafter described) disconnected from the car construction after it has once passed the view of the audience, the car construction continuing around the track in full view of the audience. Means for accomplishing this desired effect are provided for by the present inventions, which means will now be described in detail. In the construction shown, there is provided a side track 7, before referred to. This side track is located so as to allow the engine to run thereon as soon as it has passed from before the view of the audience, in this instance the track being located at the left hand side of the track system. This side track 7 is a little longer than necessary to accommodate the engine construction, so as to allow for the momentum of the engine as it runs on the track. For the purpose of economizing stage room, this side track follows the contour of the main track 4. Like the other tracks of the system, the side track comprises two rails 50, 51, supported on and carried by standards 52 suitably secured to the stage floor as by bolts 53. These rails 50, 51 are of iron, steel or any other suitable material, and are H shaped in cross section so as to form flanged guideways 54, 55, for guiding and supporting the engine as it passes along the track. The rails of this side track are for a purpose hereinafter referred to given a gradual rise as they leave the main track so as to elevate them somewhat above the level of the rails of said main track, as shown in Fig. 9. This rise begins at the point where the side track leaves the main track. The outer rail 50 is also, as shown, slightly higher than the inner rail 51 on the curve, this arrangement forming a "bank" and preventing any tend-

ency of the engine to leave the rails on the curve.

Means are provided preferably for automatically switching the engine off onto this side track. In the preferred construction and as shown there is provided a guide rail 56, which guide rail coacts with means carried by the engine, and hereinafter described, to pull the engine away from the main track. This guide rail 56 is of iron, steel or any other suitable material, and is supported on or carried by suitable standards 57. As shown in Fig. 6 this rail is somewhat higher than the rails 50, 51 of the side track, and this guide rail 56 is furthermore arranged to extend somewhat beyond the side track and along the main track (see Fig. 7), this construction permitting the picking up of the engine while it is still on the main track and insuring its proper switching off. At the point where it is desired to have the engine leave the main track and pass onto the side track, the rail is given a gradual rise, as shown at 58 in Fig. 6, this rise acting in conjunction with certain means carried by the engine hereinafter described to pull the engine from the main track and at the same time raise it above the level of said main track. A stop or bumper 60 is or may be provided at the end of the side track to prevent the engine running off the track, if its momentum is too great when leaving the main track.

The outer rail 9 of the main track 4 is provided as before stated with an additional holding flange 34, this flange extending along the major portion of the rail as shown in Fig. 7. At a point just before the side track branches off, this flange 34 is discontinued (see Fig. 7) and the outer flange of the H shaped outer rail 9 is also cutaway at the same point, as shown in cross section in Fig. 12, this construction being adopted for reasons which will be hereinafter mentioned.

One of the objects of the present invention is to produce the effect of a long train with a comparatively short engine and car construction, as before stated. An engine and car construction of improved character is, therefore, provided for producing such effect, and such construction will now be described, the engine, for convenience, being described first, with reference particularly to Figs. 5 and 6 of the drawings. The engine shown is constructed to give the appearance of an electric engine, though of course any other form of motor may be employed, an electric engine being used particularly because with such engines it is unnecessary to employ any fire or smoke producing devices, which are dangerous. The particular construction of the engine may be somewhat varied. As the curves of the track system, around which the engine has to run, are

necessarily short and sharp, the engine has to be constructed so that it will not be injured by breaking apart or otherwise in taking such curves. The engine is therefore in the best constructions and as shown built sectionally, the sections being pivotally connected together so as to allow the necessary amount of play when rounding the curves. As shown, the side walls of the engine marked 61 are made up of a number of sections 62 (see Fig. 6), these sections being preferably in the form of thin plates of sheet iron or steel, though other suitable material may be employed. These plates 62 are secured together so as to have a certain limited amount of play, by hinges 63 located at the top and bottom of the sections, these hinges allowing the sections to swing as the engine rounds the curves. A top or roof 64 is provided and the interior of the engine structure may be strengthened by suitable braces 65 and cross bars 66. Guiding and retaining means for holding the engine on the various tracks of the system and guiding it thereon are provided, which means may be somewhat varied. In the preferred construction and as shown (see Fig. 5) there are provided shafts 67 suitably journaled in plates 67' located in the lower ends of the side plates 62 on which shafts are mounted guiding and retaining rollers 68, these rollers being provided on each side of the engine. These rollers are adapted to run in the guideways formed by the flanges of the H shaped rails, in the particular construction shown, the upper guideways of these rails. For further guiding and retaining the engine on the track, there is provided a third guiding roller 69 carried on a stud 70 secured in one of the plates 67', which guiding roller is adapted to run beneath and bear against the additional flange 34 which is provided on the outside rail 9 of the main track.

Means are provided on the engine for automatically switching it from the main track 4 onto the side track 7 hereinbefore described. These means may be somewhat varied. As shown, there are provided rollers 71 having flanges 72, a sufficient number of these rollers being provided to insure the proper guiding of the engine. These flanged rollers 71 are carried on studs 73 mounted in plates 74 secured in the side plates 62 of the engine. These flanged rollers 71 are located on the outer side of the engine and are so positioned as to engage the raised guide-rail 56 hereinbefore referred to. As the engine moves along the main track, these flanged rollers 71 come in contact with the rail 56, on which the rollers ride so that, as the engine continues its movement, it is pulled off from the main track onto the side track and at the same time when the rollers strike the raised portion 58 of the guide-rail the en-

gine is lifted and the guide-rollers 68 are lifted out of the guideways of the H shaped rails of the main track. A further roller 71' supported in a bracket secured to one of the plates 62 is provided which roller is arranged to bear against the inner sides of the rail 56, and hold the engine on the rails as it moves around the side track. This construction enables the engine to be switched off onto the side track automatically. To check the momentum of the engine, after it has been switched off onto the side track, a brake is or may be employed, this brake comprising a pivoted handle 75 and shoe 75' which works against the guide-roller 68, it being shown in loose position in dotted lines in Fig. 6.

The particular car construction employed may be somewhat varied. The construction will, however, be of a length sufficient to just encircle the main track, so that after the engine has been switched off onto the side track, the car construction may be kept moving continuously around the main track and thus give the effect of a train composed of a number of cars. A construction representing one or more cars may be employed. In the peculiar construction shown there are two such cars, the specific construction of which will now be described in detail, with especial reference to Figs. 3 and 4. For the reason hereinbefore referred to in connection with the engine, the cars comprise several sections pivotally secured together so as to allow a certain amount of play and permit the cars to take the curves without being damaged. As shown, (see Fig. 4) the side walls of the cars are composed of a plurality of sections, preferably in the form of plates of thin sheet iron or steel, which are marked 77, these plates being pivotally secured to each other by hinges 78 at the tops and bottoms of the plates, and each section is provided with cross-pieces 78' forming rests or seats for the passengers. The top or roof of the car 79 is formed by a number of plates 80, put together so as to have the same limited amount of play as the side plates when the cars take the curves, the plates being slidably arranged so as to open up or spread apart on the curves. Suitable strengthening braces 81 are provided, as shown.

The cars are supported on and guided around the track in any suitable manner. In the construction shown there are provided guiding rollers 82, these guiding rollers being provided on each side of the car as shown in Fig. 3, and a set of these rollers is preferably provided for each section, these rollers acting both to support and guide the car. These rollers 82 are mounted on studs 83 carried by brackets 84 suitably secured to the undersides of the side plates 77, these rollers being adapted to run in the

upper guideways of the H shaped rails of the track system. On the outer side, that is, the side facing the stage, the car is provided with additional guiding roller 85, which guiding roller is adapted to run in the under guideway formed by the H shaped flanged rail, this guiding roller 85 being carried on a stud 86 mounted in a bracket 87, said bracket being supported on a plate 88 carried by hangers 89 suitably secured to the bottom portion of the car. On account of the switch mechanism hereinbefore referred to, this roller can only be provided on the outer side of the car, as will be readily understood. For strengthening the inner side of the car, a roller 90 is provided which is adapted to bear against the side of the inner flange of the H shaped rail, this roller 90 being carried on a stud 91 secured to a bracket 92 carried by a frame work 93 hereinafter referred to. This construction of guide rollers makes a very firm support for the car and makes it impossible for the car to leave the rails at any point of its travel around the track system.

The cars may be moved around the track in any suitable manner. In the particular construction shown the framework 93 before referred to is suitably supported on the bottom of the car and carries at its lower end racks 94, these racks being short racks, a rack being preferably provided for each one of the plate sections 77 of the car, so that it will be possible for the racks to pass around the short curves of the track system. These racks extend continuously beneath the cars except for a short space between the meeting ends of the two cars, as shown in Fig. 4, this space being left so that the two cars can come together at the switch section of the system as will be later on referred to. Chains 95 secured in eyes 96 may be provided for binding the plate sections more securely together, if desired, and a coupling device 97, for uniting the meeting ends of two cars, after they have passed the switch mechanism, may likewise be provided. Any suitable means for driving the cars around the track system may be provided. A bar 96' is or may be also provided by which the meeting ends of the cars may be united firmly together, this bar being put in place after the ends of the cars have come together beyond the switch. In the construction shown, referring to Figs. 5 and 7, the driving mechanism comprises an electric motor 98, the shaft of which has a pinion 99 which meshes with a gear 100, which gear is carried on the end of a shaft 101, and a plurality of shafts 102 and gears 103, 106, located between the rails of the main track 4 and the storage track 6, the rails being raised above the level of the floor of the stage to accommodate them as before explained, these shafts 102 being driven

from the main shaft by chains 104. The gears 103, 106 carried by these shafts are located centrally and between the rails and arranged to mesh with the racks 94 carried by the car sections 77.

As hereinbefore stated, the main track is disconnected from the storage track by a tripping mechanism hereinbefore described, which tripping mechanism is automatically operated by the car as it leaves the storage track. These means, in the construction shown, comprise a trip bar 105 secured to the rear one of the sections 77 of the car construction. This trip bar 105 extends down into the path of the arm 40 of the bar or bolt 39, by which the switch mechanism is controlled, this trip bar 105 tending to pull the bar 39 from the eye-bolt 38, allowing the weight 37 to act and to automatically swing the switch and disconnect the main and storage tracks.

While, from the foregoing description, the construction of the devices of the present invention is clear, a brief description of the operation and the various movements of the train around the track system will be given.

Assuming the engine and the two cars to be in the position shown in Fig. 2, the motor is started and through the driving mechanism described the gears 106 located on the storage track are turned and, meshing with the racks 94, move the train around the track system. As the train moves around, the engine and the first car pass along the main track 4 before the view of the audience. When the engine has passed the view of the audience, it is picked up by the guide rail 56 and switched off from the main track onto the side track 7, the flanged guide rolls 71 riding on the guide rail 56. As the forward movement of the engine continues, the flanged guide rolls 71 strike the raised portion 58 of the guide rail 56, and the engine is raised up or lifted at the same time as it is pulled from the main track onto the side track, this lifting of the engine disengaging the supporting and guiding rolls 68 from the guide ways of the flanged rails of the main track, the holding flange 34 on the main track being cutaway at this point, as hereinbefore described, and the guide rolls 68 being lifted out of the guide ways of the flanged rails of said main track, the engine is free to move along the side track and thus becomes disconnected from the train. The car construction, however, having no means for co-acting with the guide rails 56, continues along on the main track 4, being moved along by the gears 103 meshing with the racks 94 on the bottom of the car. While the engine is being switched off onto the side track, the rear end of the second car, which as shown in Fig. 2 was originally positioned on the

storage track, has reached and just passed from the switch mechanism, and the forward end of the front car has caught up with and joined the rear of the second car. As soon as the rear end of the second car has passed the end of the moving section 25, and just before the front of the second car reaches said section, the trip bar or trigger 105 has come into contact with the arm 40 of the sliding bolt or bar 39 and has withdrawn said bar from the eye 38 and thus has allowed the moving section 25 to swing over to the position shown in dotted lines in Fig. 7. This swinging movement takes place just as the front end of the first car comes in contact with the rear end of the second car. The two cars then form one continuous construction, as heretofore described, and are moved around the main track as long as is necessary to give the effect required, the cars being moved by the driving gears 103, before referred to.

It is understood that the invention is not limited to the specific construction shown and described, but that changes and variations may be made in the same without departing from the spirit of the invention.

What I claim is:—

1. In a theatrical apparatus for producing the effect of a moving train, the combination of a track, an engine and car arranged to pass in view of an audience, means for moving the engine and car around the track, and means for separating the engine from the car and concealing the engine after it has once passed in view and at the same time permitting the car to continue to pass in view as long as desired.
2. In a theatrical apparatus for producing the effect of a moving train, the combination of a track, an engine and car arranged to pass in view of an audience, means for moving the engine and car around the track, and means for automatically separating the engine from the car and concealing the engine after it has once passed in view and at the same time permitting the car to continue to pass in view as long as desired.
3. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, a train arranged to pass in view of an audience, a storage track normally connected with the main track on which storage track a part of the train is stored, means for moving the part of the train from the storage track on to the main track, and a switch mechanism for disconnecting the storage track from the main track after the train has left the storage track.
4. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, a train arranged to pass in view of an audience, a storage track normally con-

ected with the main track on which storage track a part of the train is stored, means for moving the part of the train from the storage track onto the main track, and a switch mechanism for automatically disconnecting the storage track from the main track after the train has left the storage track.

5. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, a train arranged to pass in view of an audience, a storage track normally connected with the main track on which storage track a part of the train is stored, means for moving the part of the train from the storage track onto the main track, and a switch mechanism automatically operated by the train as it leaves the storage track for disconnecting said storage track from the main track.

6. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, an engine and a portion of a train positioned on the track ready to be moved in view of an audience, means for moving the engine and said portion of the train along the track in view of an audience, means for separating the engine from the front portion of the train and concealing the engine, a storage track on which another portion of the train is stored, said storage track being normally connected with the main track, means for moving the train from the storage track onto the main track, and a switch mechanism for disconnecting the storage track and main track after the train has passed from the storage track onto the main track whereby the two portions of the train come together and form a continuous train.

7. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, a storage track normally connected with the main track, a movable section, means for moving said section to disconnect the storage track from the main track, and masking arranged to conceal the storage track.

8. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, a storage track normally connected to the main track, a pivoted section, means for swinging said section to disconnect the storage track from the main track, and masking arranged to conceal the storage track.

9. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, a storage track normally connected with the main track, a movable section, and means for automatically moving said section

to disconnect the storage track from the main track.

10. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, a storage track normally connected with the main track, a pivoted section thereon, and means for automatically swinging said section to disconnect the storage track from the main track.

11. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track, a storage track normally connected with the main track, a movable section comprising two rails, one of said rails being higher than the other, means for moving said section to disconnect the storage track from the main track, and means for depressing the higher of said rails to the level of the lower of said rails.

12. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, a storage track normally connected to the main track, a pivoted section, means for automatically moving said section to disconnect the storage track from the main track, and a guide for guiding said section during its movement.

13. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, a storage track normally connected to the main track, a pivoted section, a tripping device operating automatically to move the section to disconnect the storage track from the main track, and a guide for guiding said section during its swinging movement.

14. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, a storage track normally connected to the main track, a pivoted section, a tripping device operating automatically to swing the section to disconnect the storage track from the main track, a guide for guiding said section during its swinging movement, and a stop for limiting the movement of the section.

15. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, a storage track normally connected to the main track, a pivoted section, a tripping device operating automatically to swing the section to disconnect the storage track from the main track, said tripping device including a weight, and a guide for guiding said section during its movement.

16. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track, a storage track normally connected with the main track, a movable section comprising two rails, means for

moving said section to disconnect the storage track from the main track, a guide plate having a slot and a guide roller carried by one of said rails engaging said slot for guiding said section during its movement.

17. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track, a storage track normally connected with the main track, a movable section comprising two rails one of said rails being higher than the other, means for moving said section to disconnect the storage track from the main track, a guide plate having an inclined slot and a guide roller carried by one of said rails engaging said inclined slot whereby as the section is moved the higher rail is depressed to the level of the lower rail.

18. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, an engine and cars thereon means for moving the engine and cars along the exhibiting portion in view of an audience, a side track, and means for guiding the engine on to the side track after it has passed the exhibiting portion, the cars continuing along the main track.

19. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, an engine and cars thereon, means for moving the engine and cars along the exhibiting portion in view of an audience, a side track, and means for automatically guiding the engine on to the side track after it has passed the exhibiting portion, the cars continuing along the main track.

20. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, an engine and cars thereon, means for moving the engine and cars along the exhibiting portion, a side track, a guide rail along the side track arranged to engage with rollers on the engine for drawing the engine onto the side track after it has passed the exhibiting portion, the cars continuing along the main track.

21. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track having an exhibiting portion, an engine and cars thereon means for moving the engine and cars along the exhibiting portion, a side track rising gradually from the main track, a guide rail along the side track arranged to engage with guide rollers on the engine for drawing the engine onto the side track and raising it above the main track, after it has passed the exhibiting portion, the cars continuing along the main track.

22. In a theatrical apparatus for producing the effect of a moving train, the combination of an elliptical main track having an exhibiting portion, a storage track located inside the main track, masking arranged between the main and storage tracks, a train, and driving means for moving the train around the tracks.

23. In a theatrical apparatus for producing the effect of a moving train, the combination of an elliptical main track having an exhibiting portion, a storage track located inside the main track, a train, means for moving a train on both tracks simultaneously and at the same speed, and masking arranged to conceal the portion of the train on the storage track.

24. In a theatrical apparatus for producing the effect of a moving train, the combination of a track, a construction simulating a railroad passenger car comprising a plurality of sections positioned thereon, driving gears positioned in the path of the car, and a rack carried by the car and arranged to directly engage with the driving gears whereby the car is moved around the track.

25. In a theatrical apparatus for producing the effect of a moving train, the combination of a track, a car comprising a plurality of sections positioned thereon, driving gears positioned in the path of the car, and a plurality of racks, one carried by each of the car sections, arranged to engage with the driving gears whereby the car is moved along the track.

26. In a theatrical apparatus for producing the effect of a moving train, the combination of a main track, a storage track normally connected to the main track, a pivoted section, a tripping device including a pin on the main track against which pin the pivoted section is drawn by a weight, a car positioned on the storage track, and a trip bar carried by the car for removing the pin whereby the track section is moved by the pull of the weight to disconnect the storage track from the main track.

27. In a theatrical apparatus for producing the effect of a moving train, a track system comprising a main track, a storage track, and a side track, these tracks comprising rails H shaped in cross section to form guideways, the outer rails on the main track having an additional holding flange.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses.

JOHN F. SULLIVAN.

Witnesses:

J. A. GRAVES,
P. B. PHILPP.