No. 877,286.

PATENTED JAN. 21, 1908.

S. BIRNBAUM.

THEATRICAL APPLIANCE.

APPLICATION FILED FEB. 2, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

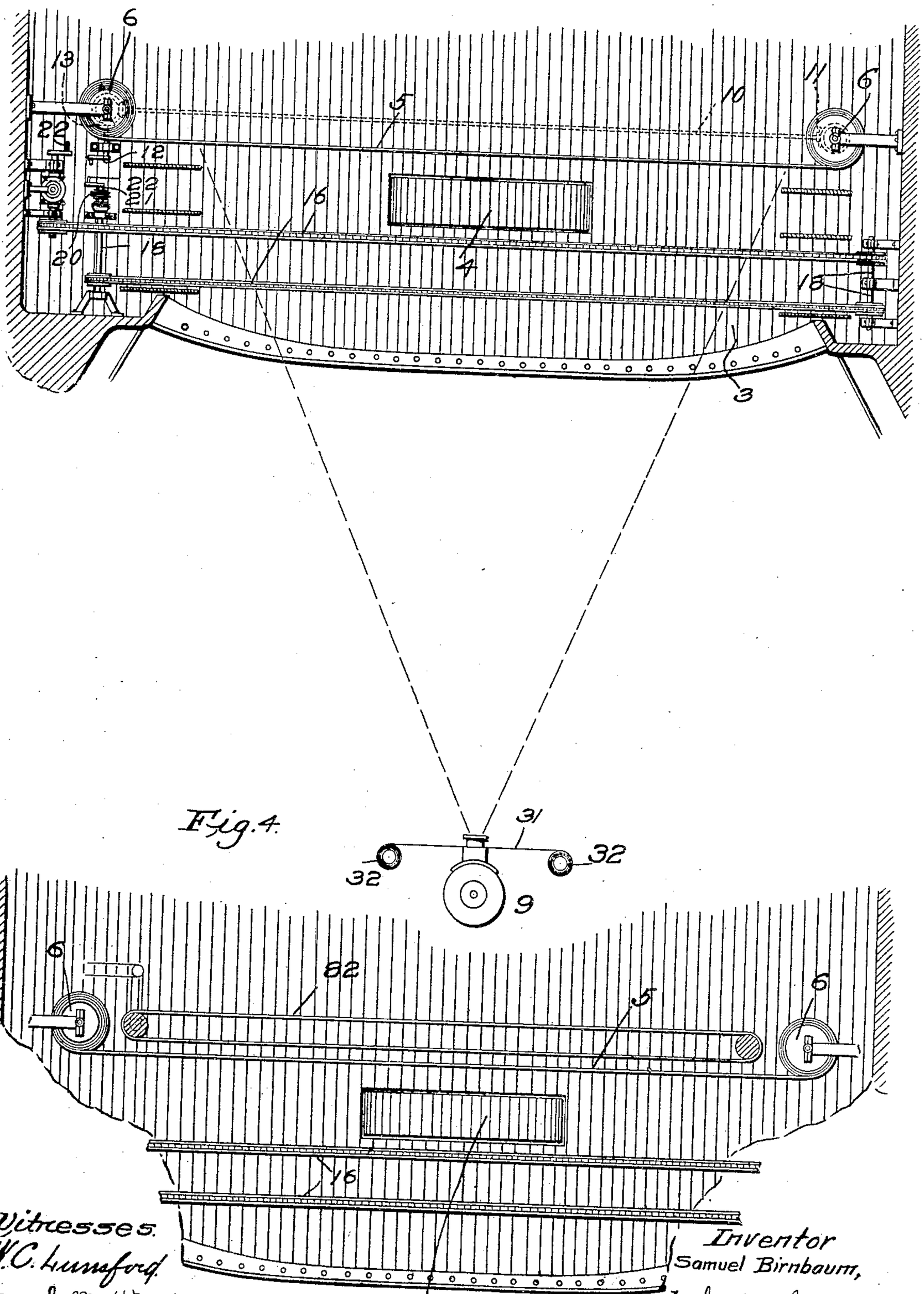

Fig. 4.

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2 SHEETS—SHEET 2.

Fig. 2.

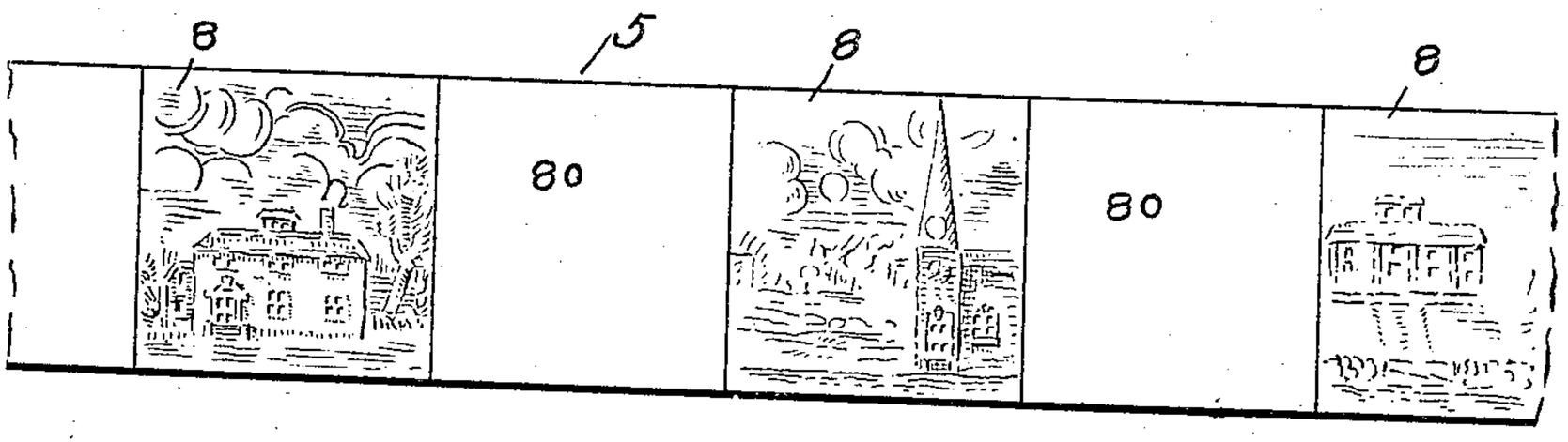

Fig. 3.

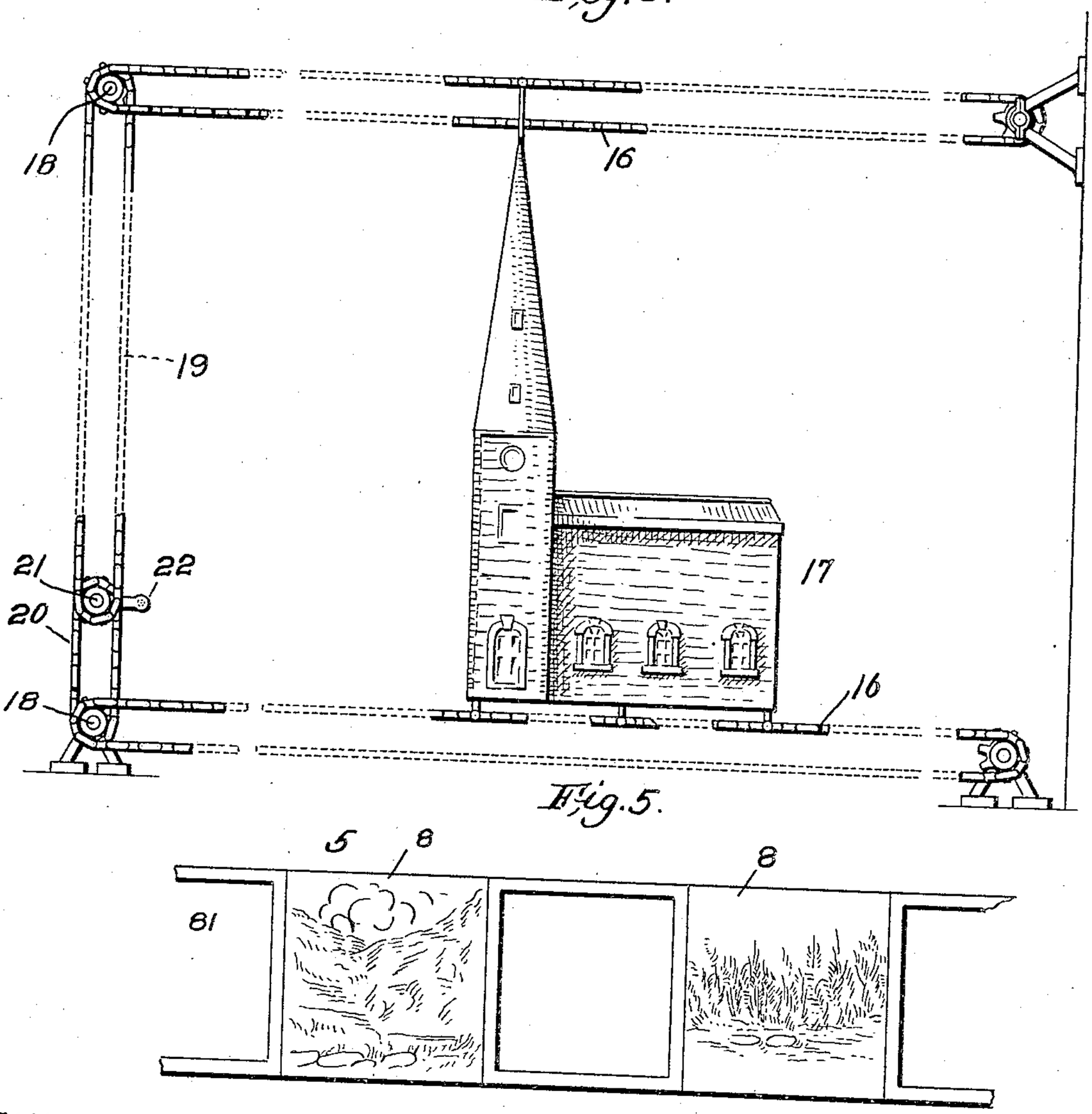

Fig. 5.

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UNITED STATES PATENT OFFICE.

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THEATRICAL APPLIANCE.

No. 877,286. Specification of Letters Patent. Patented Jan. 21, 1908.

Application filed February 2, 1907. Serial No. 355,351.

To all whom it may concern:

Be it known that I, SAMUEL BIRNBAUM, a citizen of the United States, residing in Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Theatrical Appliances, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

This invention has for its object to provide novel means for producing illusory dramatic effects on a theatrical stage, and especially to represent correctly and without any diminution of dramatic effect scenes such, for instance, as involve a traveling object which in the course of its journey is stopping more or less frequently and at different points along its route. As an example, I would refer to the illustration on the stage of Paul Revere's ride to Lexington where the scenes as produced on the stage would include a horseman riding and stopping at various places.

Apparatus for producing on a stage the appearance of a traveling person, animal or vehicle, etc. are more or less commonly used in theaters, but so far as I am aware in all such appliances no means are provided for bringing the horse or other traveling object to rest upon the stage in view of the audience. Usually the curtain is lowered before the journey is completed, thus materially taking away from the dramatic effect of the scene.

According to my improvement, it is possible to bring the animal or vehicle to rest upon the stage in full view of the audience, and to again start the animal or other traveling object on its journey without detracting at all from the illusory effect.

I will first describe some embodiments of my invention and then point out the novel features thereof in the appended claims.

In the drawings, Figure 1 is a plan view of a portion of a theatrical stage showing one embodiment of my invention; Fig. 2 is a front elevation of the curtain used in my apparatus; Fig. 3 is a detail hereinafter referred to; Fig. 4 shows a different form of the invention; Fig. 5 shows a modified form of the curtain shown in Fig. 2.

Referring to Fig. 1, 3 is the stage of a theater, and 4 a tread mill or endless path, such as is commonly used in illustrating or exhibiting horse races on the stage. In connection with this endless path, I use in the present embodiment a curtain 5 which extends across the stage and is herein shown as wound at each end upon rolls 6 so that the curtain may be advanced to present different portions of it to the view of the audience. This curtain is divided into sections 8 (as seen in Fig. 2, which is a front view of a portion of said curtain), and each section is painted to represent the background of a scene at one of the places where the traveling object is to stop. These sections 8, which for convenience are called "scenic" sections, are preferably of a size to extend clear across the stage so that when any one section is properly positioned, the scene painted thereon represents the background of the scene exhibited on the stage. The scenic sections 8 of the curtain are separated from each other by a distance equal to substantially the width of the stage, and the spaces between the sections may be merely white cloth thus constituting plain sections, as shown in Fig. 2, or this space may be open as seen in Fig. 5. These scenic sections 8 are to be used when the scene produced on the stage is a stationary or fixed scene, as will be the case when the traveling object has halted in its journey. In connection with the curtain and tread mill, as above described, I employ some suitable means for giving the effect of moving scenery when the object is supposed to be traveling, and at such times, the curtain 5 is advanced so as to carry out from the view of the audience the scenic sections.

If the curtain 5 is of the form shown in Fig. 2 the advancing of the curtain, as above described, will expose to the view of the audience the plain sections 80; while if the curtain is of the form shown in Fig. 5 the advancing thereof will expose to the view of the audience an open space 81 between the scenic sections.

The effect of moving scenery may be produced in various ways, such for instance as by throwing onto the plain or unpainted sections 80 of the curtain 5, or onto a supplemental curtain situated behind the curtain 5 and which may be exposed through the open spaces 81 moving pictures projected from a moving picture lantern 9, or by having an endless painted canvas 82, as shown in Fig. 4, which is situated behind the curtain 5 and which can be seen through an open space 81, and which by its movement gives the effect of moving scenery.

In the embodiment of the invention shown

in Fig. 1, the lantern is designated generally by 9, and it may be of any suitable type adapted to throw on the curtain a moving scene. I prefer, however, that type of lantern in which a continuous film 31 is employed which carries thereon the scene to be reproduced. By moving this film across the lantern and winding it on one or the other roll 32, the moving picture effect can be produced on the screen. As stated above, the screen onto which the moving pictures are projected by the lantern 9 may either be the plain sections of the curtain 5 between the scenic sections 8, or a separate curtain behind the curtain 5 if said curtain 5 has open spaces 81 between the scenic sections 8 as seen in Fig. 5.

In using the apparatus as thus described the horseman or other traveling object is on the treadmill or endless path 4, and when the scene requires that the object should be traveling, the curtain 5 is advanced to bring one of the spaces between the scenic sections 8 into view of the audience, and if this space is merely a white cloth, then the lantern 9 is operated to project on to this white cloth as a background a moving scene representing the scenery past which the traveling object on the treadmill 4 is supposed to be moving. If, however, the form of curtain shown in Fig. 5 is used the moving scene projected by the lantern 9 may be thrown onto a supplemental curtain behind the curtain 5 through an open space 81. Or in lieu of the lantern an endless curtain 82, see Fig. 4, on which the moving scene is painted may be placed behind the curtain 5 to be seen through the open space 81 therein and the effect of moving scenery may be effected by moving this endless curtain 82.

With the lantern or its equivalent producing the moving scenery, and with the horseman or traveling object seen in the act of traveling, the illusory effect of a traveling object is perfectly produced.

When the play or scene requires that the traveling object should halt in its journey, then the curtain 5 is advanced to bring the proper scenic section 8 into view of the audience, and the object on the treadmill is brought to rest and the lantern 9 is shut off. There is thus presented on the stage and without the necessity of lowering the curtain a complete change of scene wherein the scene shown in the background is stationary and the traveling object has come to rest. When the traveling object again resumes its journey, the curtain 5 is again advanced to bring a vacant space in view and the lantern 9 set in operation to produce the effect of moving scenery and the object begins to travel.

It is immaterial to my invention whether the moving pictures exhibited by the lantern 9 are projected on to the vacant or unpainted portions of the curtain 5, or whether said curtain is cut away at points between the scenic sections 8 and the moving pictures exhibited on another curtain behind the curtain 5.

The curtain 5 may be operated in any suitable way and to illustrate one way I have shown the rolls 6 as geared together by gearing 11 and a shaft 10, so that one may be driven by the other and one of the rolls is driven by a suitable shaft 12 which has thereon a gear 13 meshing with a corresponding gear on the roll 6. This shaft is to be operated by an attendant at the proper times to advance the curtain 5.

In order to still further carry out the illusory effect, I provide means for advancing across the stage or bringing to rest upon the stage at proper times objects representing trees, buildings, etc. which form part of the complete scene. These moving objects are located in front of the tread mill, that is, between the traveling object and the audience, and preferably at different distances from the audience. In this way with the background produced by the moving picture lantern and the moving of these objects across the stage between the traveling object and the audience, the traveling object may be represented as passing behind trees or houses, or over bridges, etc.

In Fig. 3 I have illustrated at 17 one of these objects as representing a church. It is secured both at its top and bottom to an endless carrier or chain device 16, and is supported in proper position thereby, said endless carriers extending clear across the stage, as plainly seen in Fig. 1. The two endless chains may be connected together to be operated in unison, thereby to move the object across the stage at the desired speed, and for this purpose I have herein shown each chain 16 as passing over a sprocket-wheel mounted on a shaft on which is secured another sprocket-wheel, and the two sprocket-wheels 18 are driven by two sprocket-chains 19 and 20 from sprocket-wheels on a suitable driving shaft 21 which may be operated by any suitable crank device 22. By this means an attendant can move the object or objects 17 across the stage at any desired speed or bring it to rest in any position on the stage.

The objects 17 of whatever nature are made so that they can be detachably connected to the endless carriers 16 so that after any object has been carried across the stage it may be disconnected from the carriers and other objects of different nature applied thereto. Obviously the objects which are carried by the chain 16 nearest to the audience will be moved faster than those which are carried by the chains furthest from the audience, in order to preserve the proper illusory effect. In using my improved apparatus, so long as the traveling object on the tread mill is represented as traveling, the

object or objects 17 may be carried across the stage at the right speed, and if when the traveling object on the tread mill halts in its journey, the complete scene calls for one or more objects 17 between the halted traveling object and the audience, at such time such object or objects 17 may be brought into the right position at the right time and maintained there while the traveling object is at rest.

In illustrating, for instance, Paul Revere's ride to Lexington, the scenic sections of the curtain 5 would be painted to represent the background of the scenes at the various places where Paul Revere stopped on his journey to Lexington, and the moving pictures exhibited by the lantern 9 would be such as to exhibit on the unpainted portions of the screen 5 or their equivalent the scenery passed by Paul Revere between his stopping places. The objects 17 would represent trees or special buildings.

The advantage gained in using the curtain 5 with the separated scenic sections for representing on the stage the stationary scenes and other means, such, for instance, as the moving lantern for representing the moving scenes, is that a comparatively short curtain 5 will answer the purpose, for it will be obvious that if not only the stationary scenes, but also the moving scenes were put on the curtain 5, the length of it would be so great as to make its use impracticable.

From the above it will be seen that the separated scenic sections are painted to represent different scenes of a continuous panoramic view, and that the scenes of the panoramic view which occur between those illustrated on the scenic sections are exhibited with a moving picture effect by some suitable means so that to the audience all the successive scenes of the continuous panoramic view are presented in regular order.

It will be seen that with my apparatus as above described, it is possible to represent on the stage the complete journey of a traveler from one place to another with all its attendant change of scene without lowering the curtain, even though the representation includes the frequent stopping and starting of the traveler during its journey.

I have not attempted to show herein all ways in which my invention may be embodied, but have only shown the preferred embodiment thereof.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a stage appliance, the combination with an endless path, of a curtain having a plurality of separated scenic sections representing different scenes of a complete panoramic view, and also having plain sections, means to bring the scenic sections successively into juxtaposition to the endless path, and a moving picture machine to exhibit on the plain sections the scenes of the panorama which are not exhibited on the scenic sections.

2. In a device of the class described, the combination with an endless path, of a curtain behind the path comprising scenic sections separated by plain sections, means to move said curtain longitudinally, and a moving picture lantern to project moving pictures on to the plain sections.

3. In an apparatus of the class described, the combination with an endless path of a curtain extending longitudinally thereof, and comprising separate scenic sections, means to move the curtain longitudinally, a moving picture lantern to project moving pictures toward the curtain, and means to move scenic objects longitudinally of the endless path and on the opposite side thereof from the curtain.

4. The combination with an endless path, of a curtain having scenic sections separated by intervening blank sections, means to move the curtain to bring any desired section into juxtaposition with the endless path, and means to exhibit upon the blank sections scenes which are related to those exhibited on the scenic sections.

5. In a stage appliance, the combination with an endless path, of means presenting a plurality of scenic sections each showing different scenes of a panorama illustrating a certain event, means to bring the scenic sections successively into juxtaposition to the endless path, and a moving picture machine to exhibit the scenes of the panorama not exhibited on the scenic sections.

6. In a stage appliance, the combination with means presenting a plurality of scenic sections representing different scenes of a panoramic view, of means to bring said scenic sections into view in regular order, and means separate from the scenic sections to exhibit in rapid succession and with a moving picture effect the scenes of the panoramic view which occur between those illustrated on the scenic sections.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

SAMUEL BIRNBAUM.

Witnesses:

LOUIS C. SMITH,

BERTHA F. HEUSER.