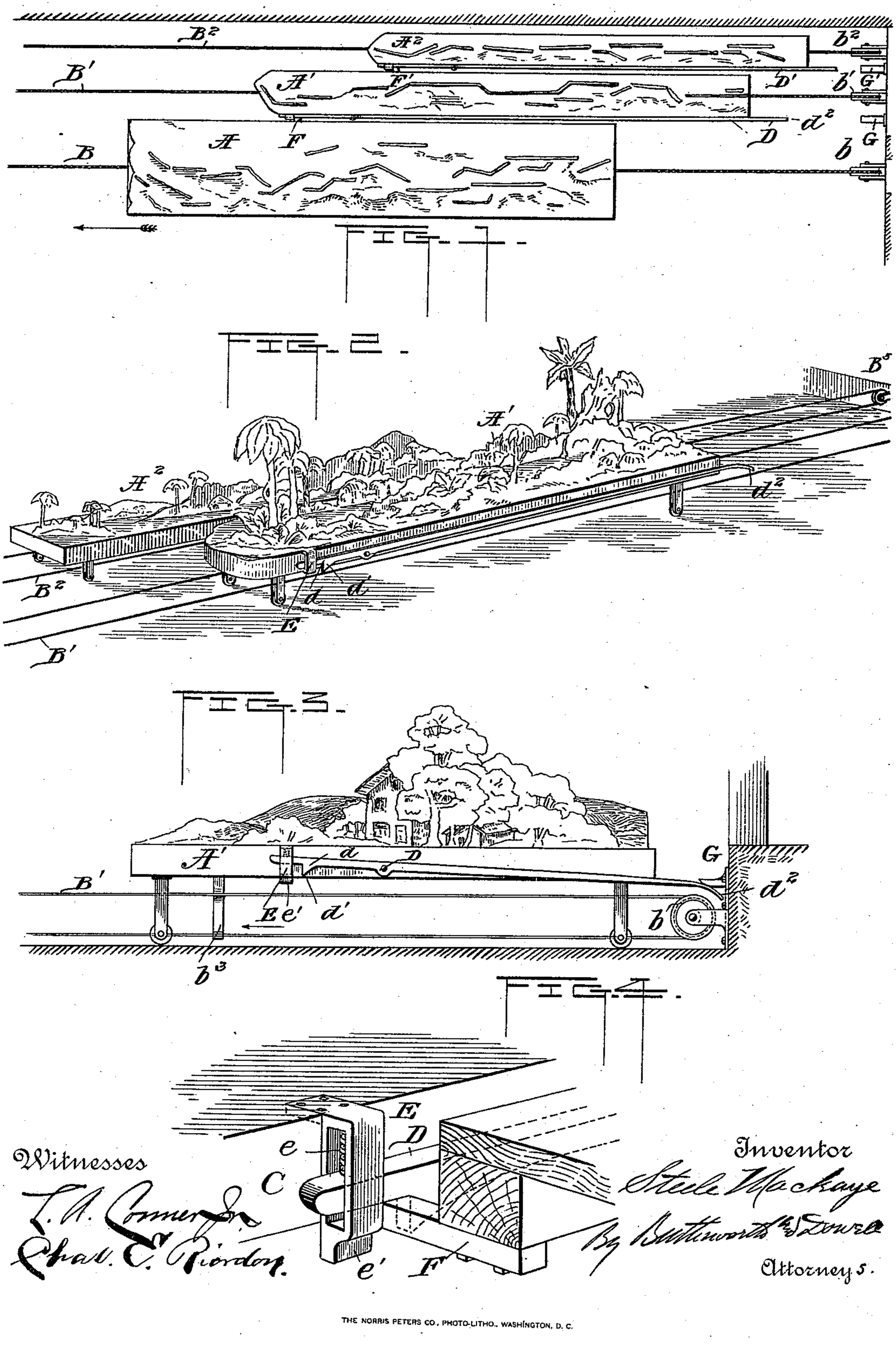
(No Model.)

S. MACKAYE.

TELESCOPIC STAGE.

No. 490,486. Patented Jan. 24, 1893.



Witnesses
T. A. Connerton
Chas. C. Riordon.

Inventor
Steele Mackaye
By Butterworth & Dowell
Attorneys.

UNITED STATES PATENT OFFICE.

STEELE MACKAYE, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE SPECTATORIA COMPANY, OF SAME PLACE.

TELESCOPIC STAGE.

SPECIFICATION forming part of Letters Patent No. 490,486, dated January 24, 1893.

Application filed May 25, 1892. Serial No. 434,294. (No model.)

To all whom it may concern:

Be it known that I, STEELE MACKAYE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Telescopic Stages; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates generally to theatrical appliances, but particularly to a system of devices or apparatuses which I have devised for producing scenic effects; this application being one of a series of applications covering specific mechanisms specially designed for use in producing and exhibiting scenic effects.

The primary object of the invention is to provide means for causing set-scenes, part-scenes or scenery or objects of any desired description placed on moving stages or sections of a stage, to be brought successively into view for the purpose of exhibiting to the audience the several objects in proper sequence to produce the desired scenic effect.

To this end my invention consists essentially of a sectional telescopic stage or series of telescopic stages adapted to be moved in proper relation to each other to successively exhibit through the usual proscenium opening of a theater or similar structure or in any proper manner, different objects placed on the several sections or stages so as to give a panoramic or other scenic effect; the stages being adapted to be locked together at predetermined intervals so as to cause them to move successively and to occupy fixed positions in respect to each other so as to produce the desired result.

The invention also consists in certain combinations of parts all as will be hereinafter described and particularly pointed out in the claims at the end of this specification.

Referring to the drawings, which form a part of this specification and in which similar letters of reference are used to denote similar parts in each of the several views, Figure 1 represents a plan of a telescopic stage or stages embodying my invention; Fig. 2 is a perspective view of the same showing the stages in a different position; Fig. 3 is a side elevation; and Fig. 4 is a detail perspective view of parts of the automatic coupling mechanism.

A, A′, A^2, may denote sections of a telescopic stage or a series of independent stages telescopically connected, and adapted to be moved back and forth upon a suitable platform or other foundation in proximity to the proscenium opening of a theater or other structure adapted for the exhibition of spectacular, scenic, dramatic or other performances. Each section or stage may have thereon such objects, for instance natural scenery, paintings, buildings, or the like, or actors as may be desired or necessary to give the desired effect, and the several sections are arranged in proper relation to each other to cause successive sections to move in the desired order to exhibit the objects thereon at the proper time to produce the desired panoramic or scenic effect.

B, B′, B^2, denote cables which pass over pulleys *b*, *b′*, b^2, journaled in suitable brackets or supports secured in any proper manner to the inner wall or other fixture of the building, and connecting with similar pulleys (not shown) loose upon a driven shaft which may be provided with suitable clutch mechanism to adapt the several cables to be thrown into and out of action at the proper time to cause the corresponding stages or stage sections to move at a pre-determined point in the movement of the preceding stage or stages; such clutch mechanism being adapted to be automatically actuated for the purpose of operating the several cables simultaneously with the automatic coupling or uncoupling of the stages or sections, so that when one stage has moved a certain distance the next stage or section in the series will be automatically coupled or uncoupled (according to the direction of motion) simultaneously with the throwing into or out of action the propelling mechanism, the several sections being thus caused to maintain fixed positions in respect to each other according to the desired previous arrangement.

The cables B, B′, B^2, may be connected to the respective stages or stage sections by

pendent arms b^3, or any suitable gripping device which may yield if necessary to prevent breakage in case of a hitch, or on coming in contact with any obstacle necessitating such action.

C, C, denote automatic couplers for connecting adjacent stages or stage sections each of which may consist of a trip lever D or D′ the forward end of which is fitted in the vertical slot of a guide bracket E, within which may be fitted a coiled or other suitable spring *e*, which is adapted to bear upon the end of the trip-lever and depress the same. The trip levers are each provided with a depending lug or projection *d*, adjacent to the guide bracket E; having a rear cam-faced edge *d′* for a purpose to be described; and the free ends of the levers are preferably curved as at d^2.

F, F′, denote coupling pins or bars which are fixed to the sides of the stages A′, A^2, in proximity to the trip-levers D, D′, so as to project into the path of the cam-lugs *d*, when the stages are moved back and forth.

e′ are stops which may form part of the guide brackets E, or be secured thereto or to the stage and are arranged to travel in the path of the projecting pins F, F′ so as to be engaged thereby.

G, G′, denote cam-faced stops or tripping-devices which are adapted to engage the curved ends d^2 of the trip-levers D, D′ as the stage approaches the limit of its movement in one direction, for the purpose of releasing the pins F, F′, and uncoupling the stages so as to permit one section to remain stationary while the adjacent section continues its movement until all the sections have reached the desired limit.

By this construction, it will be observed that as the stage or section A, moves forward in the direction indicated by the arrow in Fig. 1, the pin F, on said stage will engage the cam-lug *d*, of the adjacent trip-lever D, and raise the end of said lever against the tension of the spring *e*, and said pin will engage the stop *e′*, whereupon the end of the lever D, will be depressed by the spring *e*, and the pin F, will be locked between the depending stop and lug, thus automatically coupling the stages or stage sections together. At the same time the operating gearing of the cable B′, will be brought into action and the stage A′, will be moved along with the stage A, until the pin F′, engages the stop *e′* upon the adjacent stage A^2, whereupon the latter will be moved by the cable B^2; the gearing of the several cables being thrown into action automatically (or by hand if desired) simultaneously with the coupling of the stages together. On the reverse movement as the stage A^2 approaches the limit of its movement the rear end of the trip-lever D′ will be engaged by the tripping device or cam G′, so as to elevate the front end of said lever and release the pin F′, thereby permitting the stage A′ to continue its movement, while the cable B^2 is thrown out of action. As the stage A′ reaches the limit of its movement the cam or tripping device G will engage the rear end of the trip-lever D, and thereby disengage the pin F, upon stage A so as to permit the latter stage to complete its movement, the cable B′, being simultaneously thrown out of action.

While I preferably use an automatic coupler and tripping device, various kinds of couplers, automatic or otherwise, may be used, the form shown being only one of a number of ways in which the same result may be accomplished. The stages or stage sections may also be of any desired shape or configuration. For certain purposes it may be desirable to construct the stages in the form of segments of a circle corresponding with the concave formation of the platform or foundation upon which they are adapted to move; the concave side of one stage being adapted to fit the convex side of the adjacent stage, and I do not desire to limit my invention to the specific construction and arrangement of parts shown and described herein. Neither do I desire to claim in this application the mechanism for automatically actuating the cables simultaneously with the coupling of the stages together as such mechanism forms the subject-matter of a separate application filed simultaneously herewith.

Having thus described my invention what I claim as new and desire to secure by Letters Patent of the United States, is:—

1. In theatrical appliances, a telescopic stage or stages comprising two or more independent movable sections, and means for coupling the same together so as to cause the sections to move in unison, substantially as described.

2. In theatrical appliances, a telescopic stage or stages comprising two or more independent movable sections, and means for automatically coupling the same together so as to cause the sections to move in unison, substantially as described.

3. In theatrical appliances, a stage or stages comprising two or more independent telescopic sections, means for coupling the sections together so as to cause them to move in unison, and mechanism for propelling such sections, substantially as described.

4. In theatrical appliances, a stage or stages comprising two or more independent telescopic sections, means for automatically coupling the sections together so as to cause them to move in unison, and mechanism for propelling such sections, substantially as described.

5. In theatrical appliances, the combination with the telescopic stage or stages formed in two or more movable sections, of the trip-lever, and stop on one of said sections, and the coupling pin on the adjacent section for automatically actuating said trip-lever so as to lock the sections together when said parts engage each other, substantially as described.

6. In combination with the telescopic stage or stages, the automatic coupler, comprising the trip-lever having the cam-lug thereon, the

vertically slotted bracket and the stop on one stage, and the coupling pin on the adjacent stage projecting into the path of said stop, together with means for automatically disengaging the coupling pin at a pre-determined point in the movement of the stages, substantially as described.

7. In theatrical appliances, a series of independent movable stages, with set-scenes or other objects thereon, mechanism for propelling each stage independently of the other, and automatic coupling mechanism for locking adjacent stages together at a pre-determined point in the movement of the foremost stage, together with means for unlocking the stages at such pre-determined point on the reverse movement of the stages, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

STEELE MACKAYE.

Witnesses:

POWEL CROSLEY,

SIDNEY CLARKE WHITE, Jr.