

No. 696,835.

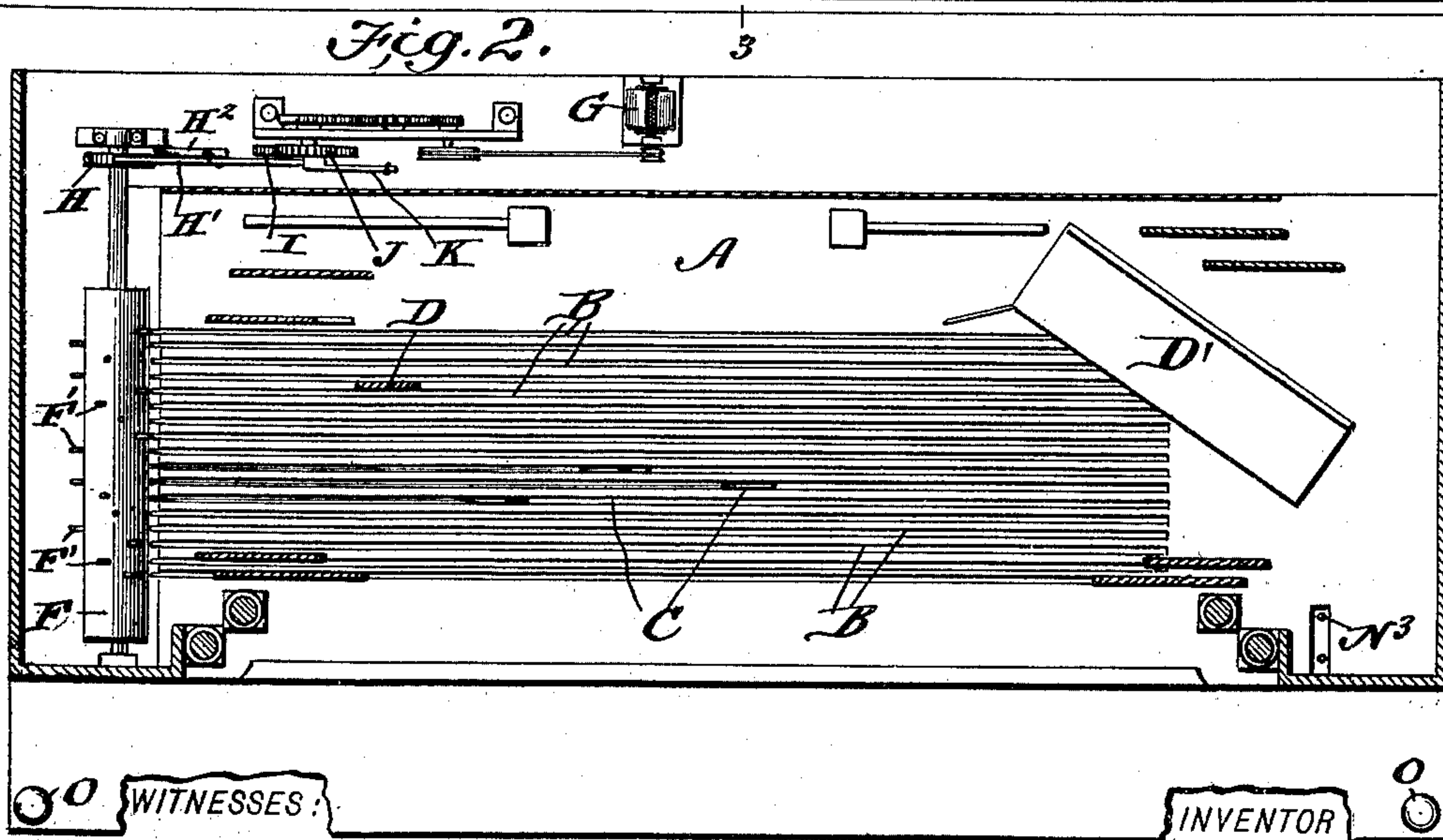
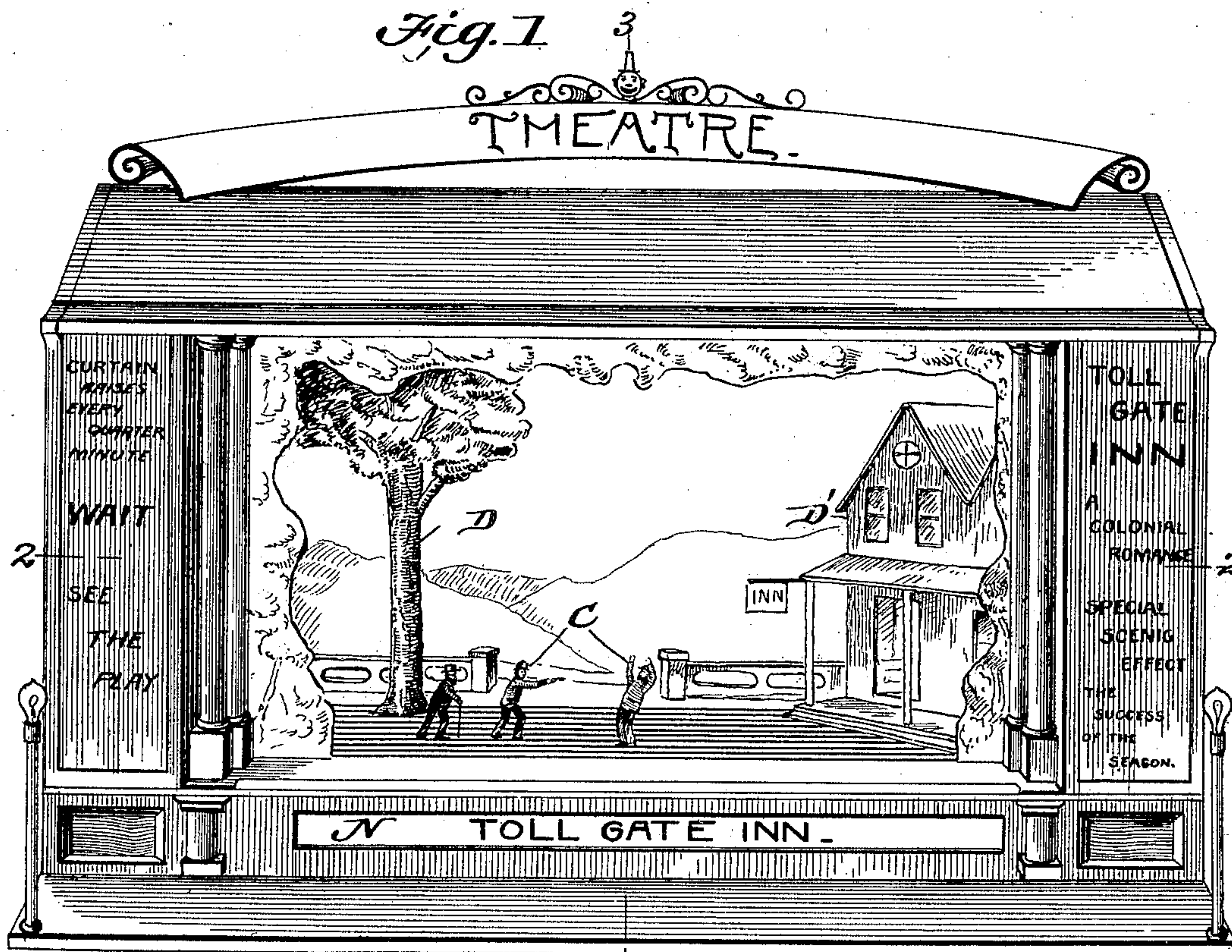
Patented Apr. 1, 1902.

A. L. McCORMICK.
MINIATURE THEATER.

(Application filed Aug. 17, 1901.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES:
M. S. Blundell
Perry B. Turpin

INVENTOR
A. L. McCormick
BY *Mumford & Co.*
ATTORNEYS

No. 696,835.

Patented Apr. 1, 1902.

A. L. McCORMICK.
MINIATURE THEATER.

(Application filed Aug. 17, 1901.)

(No Model.)

3 Sheets—Sheet 2.

Fig. 3.

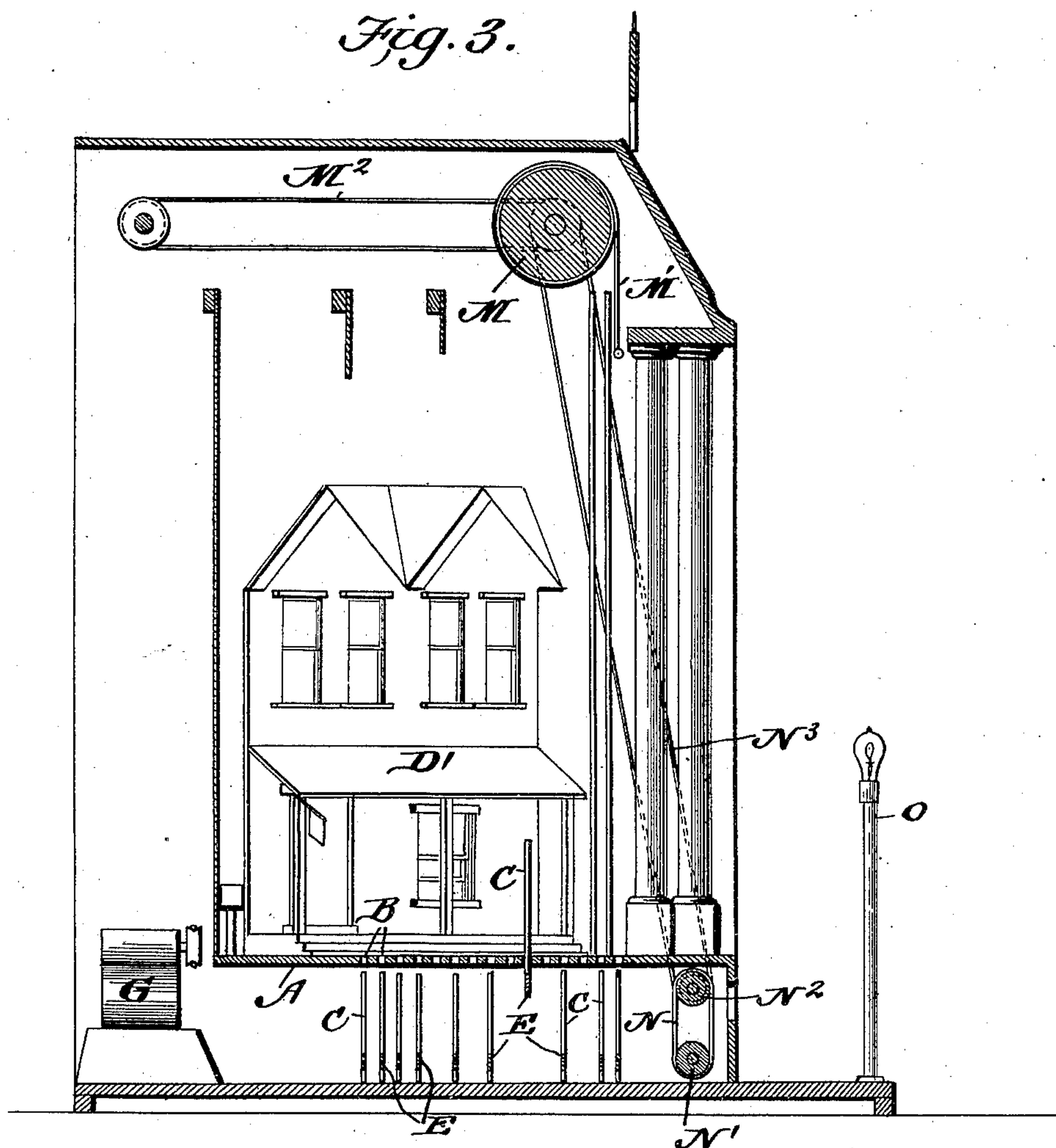
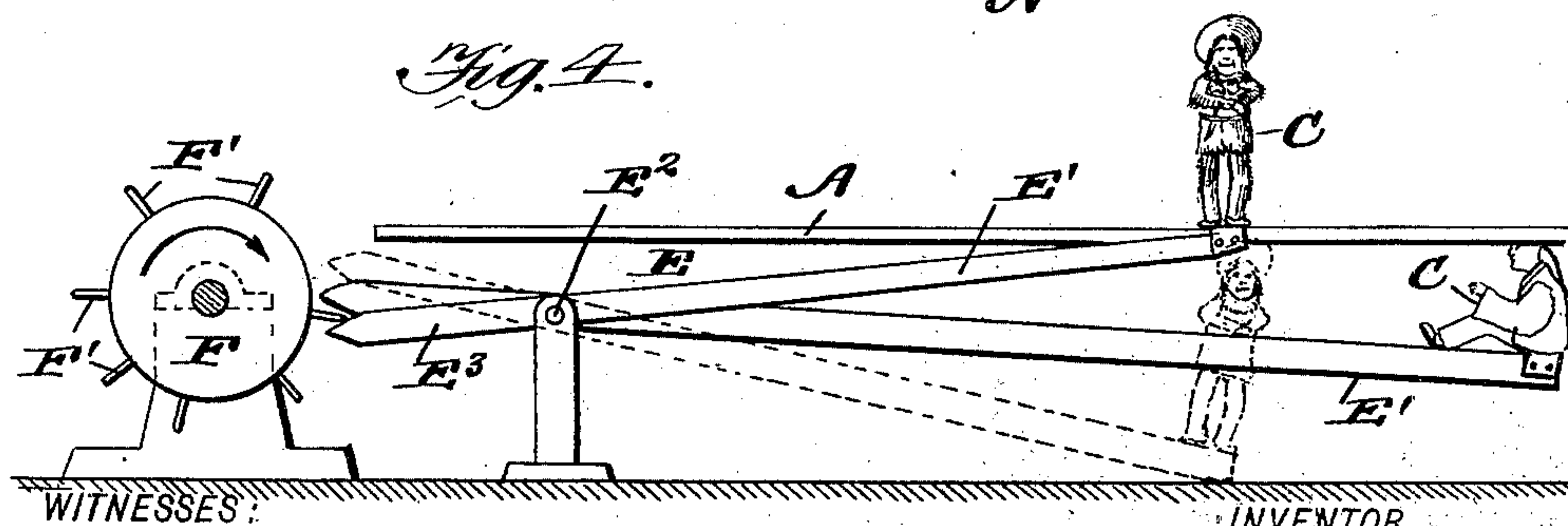


Fig. 4.



WITNESSES:
M. S. Blouelle
Perry B. Swipin.

INVENTOR
A. L. McCORMICK.
BY Munn & Co.,
ATTOR'S

A. L. McCORMICK.
MINIATURE THEATER.

(Application filed Aug. 17, 1901.)

(No Model.)

3 Sheets—Sheet 3.

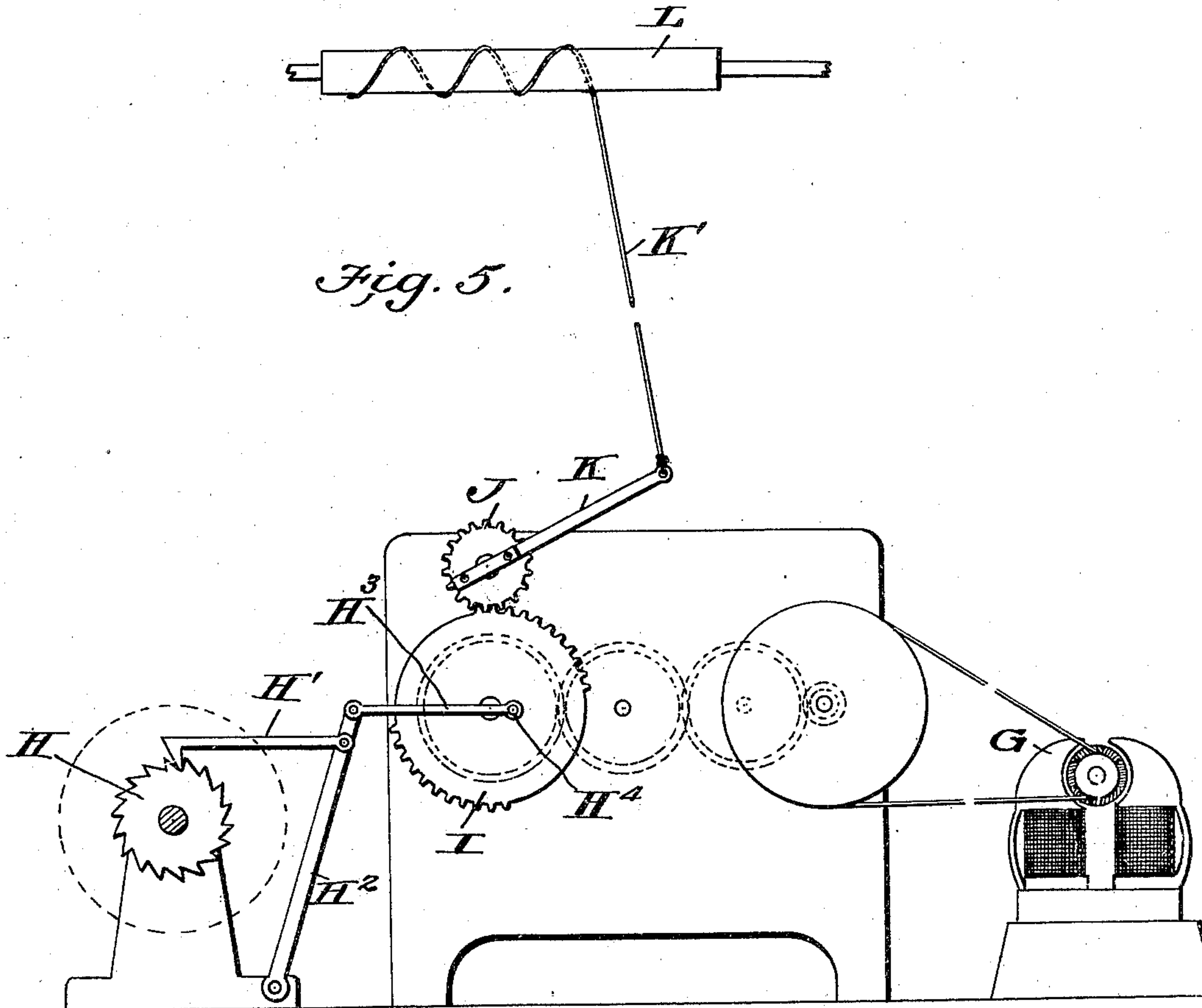


Fig. 5.

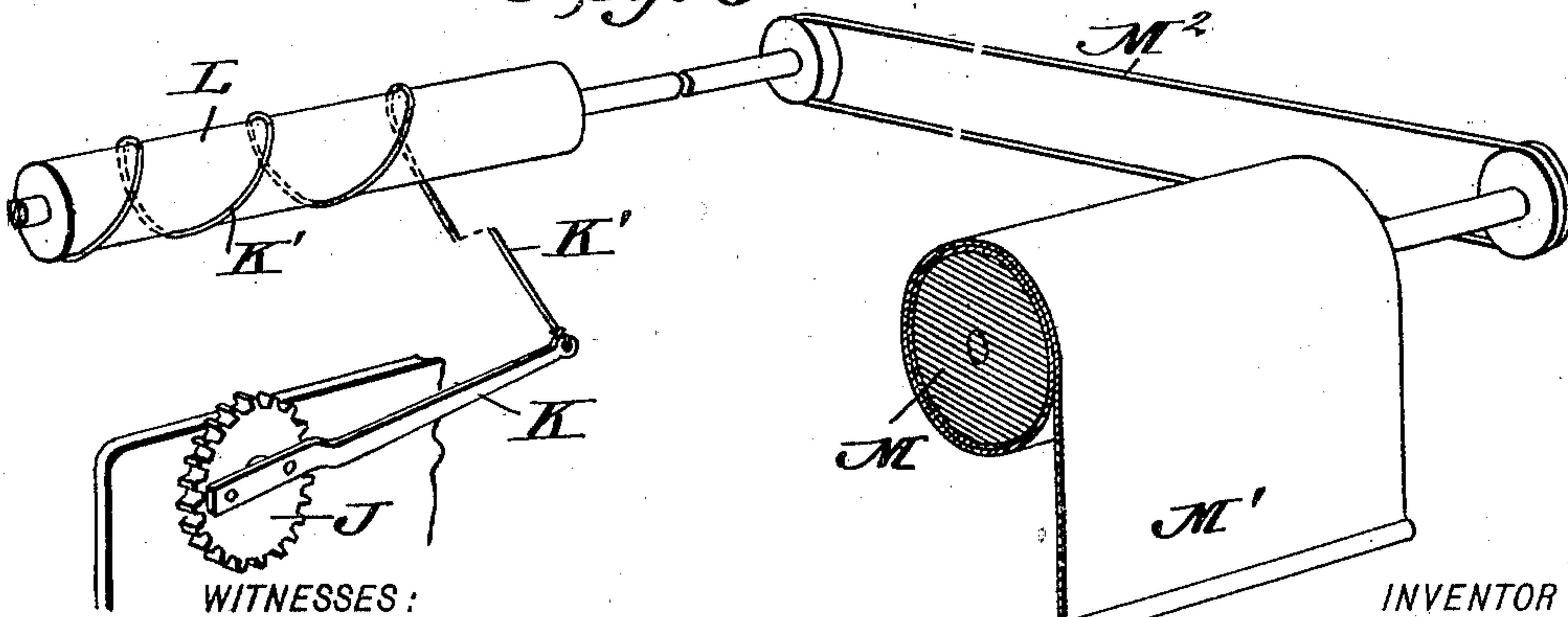


Fig. 6.

WITNESSES:

M. S. Blondel.
Perce B. Furpin.

INVENTOR

A. L. McCormick.

BY *Mum & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

ARTHUR LANGDON McCORMICK, OF PORT HURON, MICHIGAN.

MINIATURE THEATER.

SPECIFICATION forming part of Letters Patent No. 696,835, dated April 1, 1902.

Application filed August 17, 1901. Serial No. 72,376. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR LANGDON McCORMICK, residing at Port Huron, in the county of St. Clair and State of Michigan, have made certain new and useful Improvements in Miniature Theaters, of which the following is a specification.

My invention is an improved miniature theater, having for an object to provide an automatically-operated apparatus in the nature of a model playhouse having scenery and other accessories by which to represent in succession a number of scenes or acts of a play.

In carrying out the invention I provide a suitable stage having slots through which the actors or other figures are caused to pass into and out of view by supporting the same upon suitable keys or levers operated automatically by the means presently described. To this end I provide the actors or figures participating in each scene in groups and project and retract the several figures of each group to present the desired scene.

The invention consists in certain novel constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a perspective elevation of a theater embodying my invention. Fig. 2 is a horizontal section on about line 2 2 of Fig. 1. Fig. 3 is a vertical cross-section on about line 3 3 of Fig. 1. Fig. 4 is a detail view illustrating the pin-shaft and one of the keys or levers carrying the figures of the play. Fig. 5 is a detail view illustrating the gearing for driving the several parts, and Fig. 6 is a diagrammatic view illustrating the operating devices for raising and lowering the curtain.

By my invention I seek to provide movable supports for the figures of each scene, by which such figures may be projected into view; also, means for raising and lowering the curtain, so such curtain will be down when the figures of the scene are being adjusted into and out of view; also, an announcing-finger which will be projected into view and bear the number of the act or scene, and also the lines supposed to be spoken by the prominent figure of the scene or other information concerning the scene which it may be desired

to communicate simultaneously with the displaying of the scene.

In the construction shown I provide the miniature theater with a stage A, having slots B, through which the figures C may be projected from below into view from the front of the proscenium. I also provide the stage with suitable scenery, such as shown at D and D', and which may be varied to suit the play or scene and some parts of which may when desired be projected from below in the same manner as the figures of the scene, as will be more fully described hereinafter.

The figures C, which may be varied as desired and may preferably be photographed images of actors participating in the play it is desired to reproduce in miniature, are supported on one arm E' of a lever which is pivoted at E² and has its arm E³ extended in position to be engaged by pins F' on the drum F, which extends alongside the stage and is suitably driven, preferably, by step-by-step devices operated from a motor G, which may be of any suitable construction. The pins F' are so arranged on the drum F as to operate their respective keys or levers E to project the several figures of the scene at the same time. As the figures may vary both in number and position in the several succeeding scenes and with each play presented, I have not thought it necessary to illustrate the same further than I have done in Figs. 1, 2, 3, and 4 of the accompanying drawings. It should be understood that in the construction shown the pins F' depress the arms E³ of the levers E, thus elevating the arms E', with the figures C, and such arms E' and figures C drop by gravity after the pin F' passes out of engagement with the arm E³.

For operating the drum F, I provide in connection therewith the ratchet-wheel H, engaged by the pawl H' on a rocking arm H², which is operated by a pitman H³ from a crank H⁴ on a mutilated gear I, which is geared with the motor G, suitable reducing or other gearing being employed to secure the desired movement of the gear L. By this construction as the gear I turns it moves the pawl H' in one direction to turn the drum F and in the opposite direction to return to position for operating the said drum, as will be understood from Fig. 5.

The mutilated gear I meshes with a pinion J, which is provided with an arm K, having a cord K' wound on a shaft L, which is in connection with the drum M on which the curtain M' is wound. The connection is shown as effected by means of a belt-gear M², and this may be desirable when the drums L and M are separate from each other; but I do not desire to be limited to any special construction by which the curtain is operated in suitable relation to the movable figures of the scene.

In the operation of the curtain it is intended that the pinion J should be given rotary movement step by step in one direction, the mutilated portion or blank space between the toothed segments of the wheel I permitting the curtain to be at rest for a short period while down during the shifting of the scenes and scenic figures and also while up in order to permit the desired exposure of the figures.

As before suggested, I provide an indicator or announcer for the different scenes. This is shown as consisting of a belt N, carried on rollers N' and N², one of which is geared by a belt N³ with the curtain-drum, so the movements of the endless indicator can be controlled by and caused to correspond with the movements of the curtain. Any suitable inscriptions can be provided on this indicator, it being found desirable in some instances to supply thereon the names of the scene and of the principal figures and sometimes some of the words spoken by some of the principal figures.

To heighten the effect, different-colored lights may be provided, and I also provide lamps O, which may be controlled by the movements of the curtain so the lamps will only burn when the curtain is raised. It will be understood that furniture and other scenic objects may be supported and operated like the imitation of the players, as before described.

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

1. A miniature theater substantially as described having a stage, figures or scenic objects movable from a point above the stage when in play to a point below the upper surface of the stage when out of play and means for automatically operating the said figures or objects substantially as set forth.

2. A miniature theater having a slotted stage, movable scenic objects arranged to be projected through said slot from a point above the stage when in play to a point below the upper surface of the stage when out of play, and means for automatically operating said objects substantially as set forth.

3. A miniature theater having automatically-operating devices by which to shift the scene, and a curtain arranged for operation in connection with such devices whereby the scenes will be shifted when the curtain is down substantially as set forth.

4. In a miniature theater the combination of the scenic objects, the keys or levers for supporting and operating the same and the drum having pins or projections for operating said keys or levers, the levers terminating alongside the drum and operating in a direction tangentially to the drum at their ends adjacent thereto, whereby the movements of the levers will not be limited by coming in contact with the drum substantially as set forth.

5. In a miniature theater the combination of a stage having slots, the scenic objects movable through said slots to points above and below the upper surface of the stage, the keys or levers for operating said objects, and the drum having pins or projections by which to operate said keys or levers, substantially as set forth.

6. The combination in a miniature theater, of the stage, the scenic objects, the keys or levers carrying the same, the drum having pins or projections for operating the keys or levers and the operating mechanism having step-by-step devices for moving the pin-drum, substantially as set forth.

7. A theater substantially as described, comprising a movable curtain, movable scenic objects and automatically-operating devices arranged to shift the scenic objects when the curtain is down and the stage is not in view, substantially as set forth.

8. A miniature theater substantially as described comprising the movable scenic objects, the movable curtain, a movable indicator or announcing device, and the operating mechanism connected with said indicator, curtain, and scenic objects and arranged to shift the scenic objects when the curtain is down and the stage is not in view, substantially as described.

9. In a miniature theater the combination with the curtain, of a shaft in connection therewith, a pinion having an arm provided with a cord wound on said shaft, and the operating devices having a mutilated gear meshing with the said pinion, substantially as set forth.

10. The combination with a miniature theater of the movable scenic objects, the keys supporting the same, the drum having pins or projections engaging said keys, said drum being provided with a ratchet-wheel, a rocking arm having a pawl engaging said ratchet-wheel, the operating devices having a crank and a pitman connecting said crank with the rocking arm, and a mutilated gear, and the pinion having an arm, the curtain, the shaft in connection with said curtain, and the cord connecting said shaft with the arm of the pinion, substantially as set forth.

11. A theater having a stage, a curtain which may be adjusted to expose or hide the stage and operating means for shifting the curtain and moving the scenic objects and so arranged relatively to the curtain and scenic objects that the scenic objects will be shifted

when the curtain is down, substantially as set forth.

12. A theater substantially as described, having a stage, figures or scenic objects movable into and out of position for exposure in connection with said stage, together with automatically-operating devices by which said

figures or objects may be moved into view or entirely out of view with respect to the upper surface of the stage, substantially as set forth. 10

ARTHUR LANGDON McCORMICK.

Witnesses:

KATIE O'BRIEN,
E. J. McCORMICK.