No. 666,714. Patented Jan. 29, 1901.

D. I. TOWERS.

THEATRICAL APPLIANCE.

(Application filed Aug. 16, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 3.

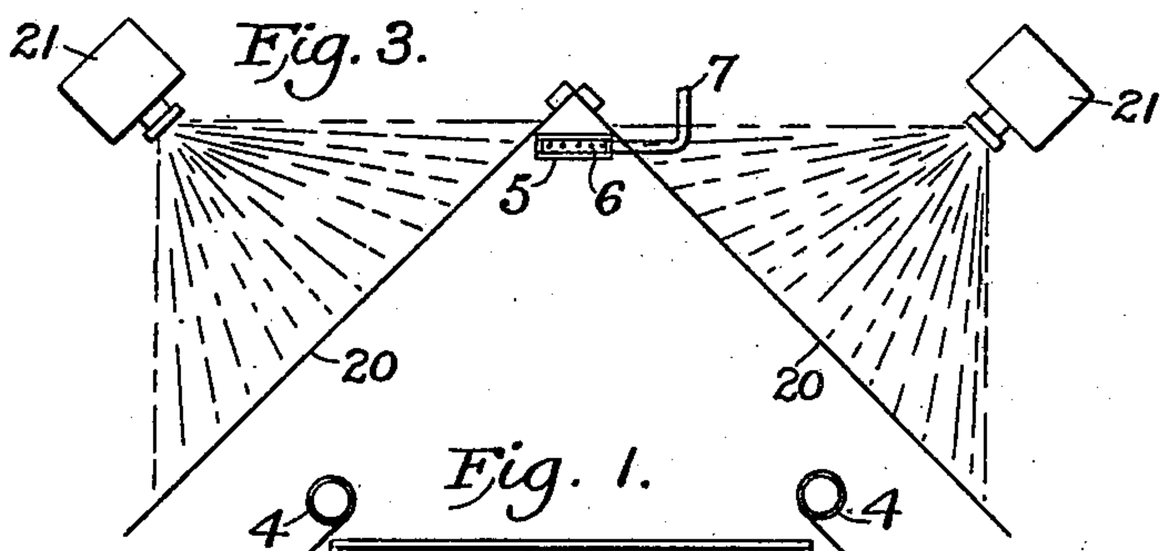

Fig. 1.

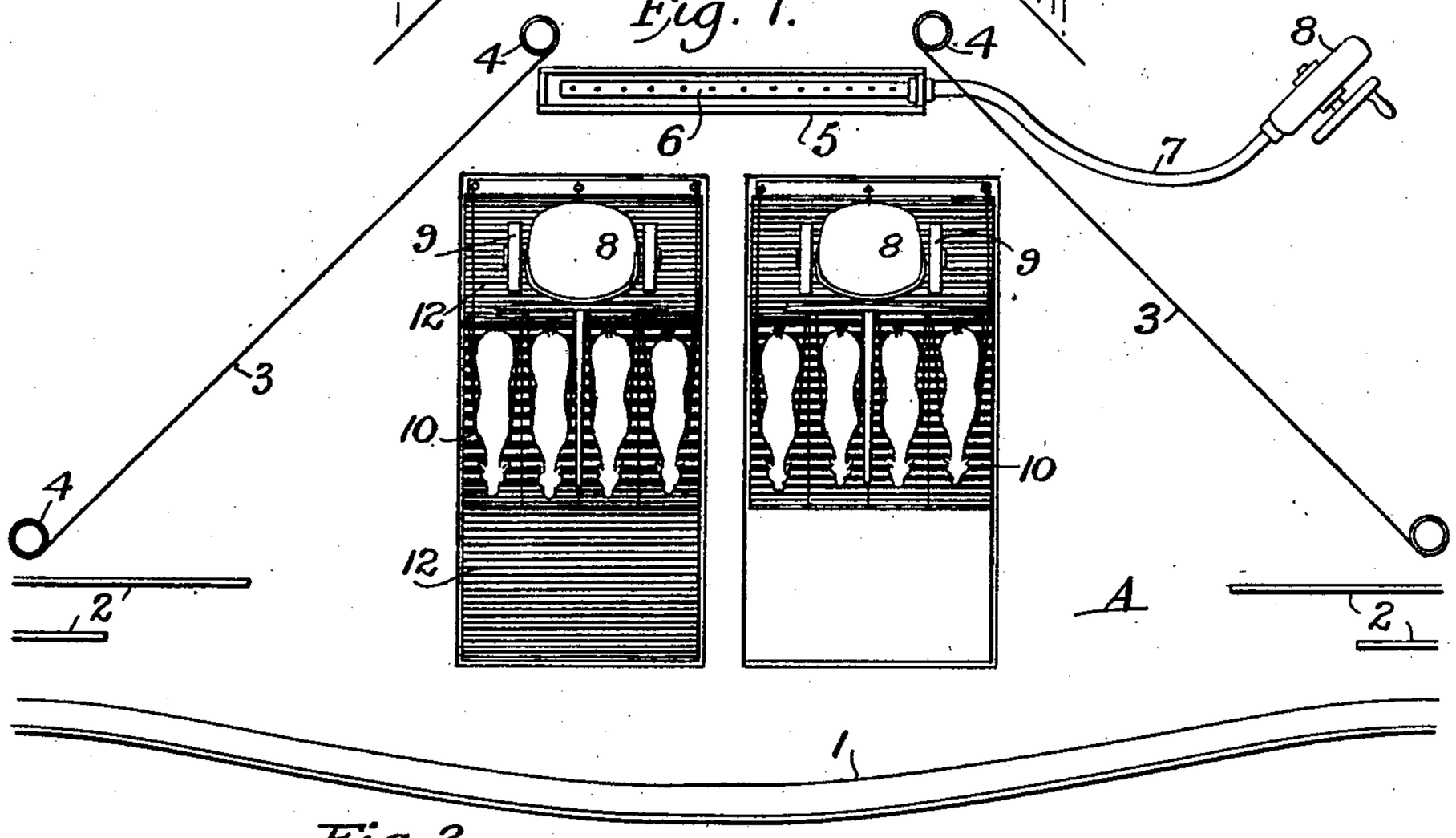

Fig. 2.

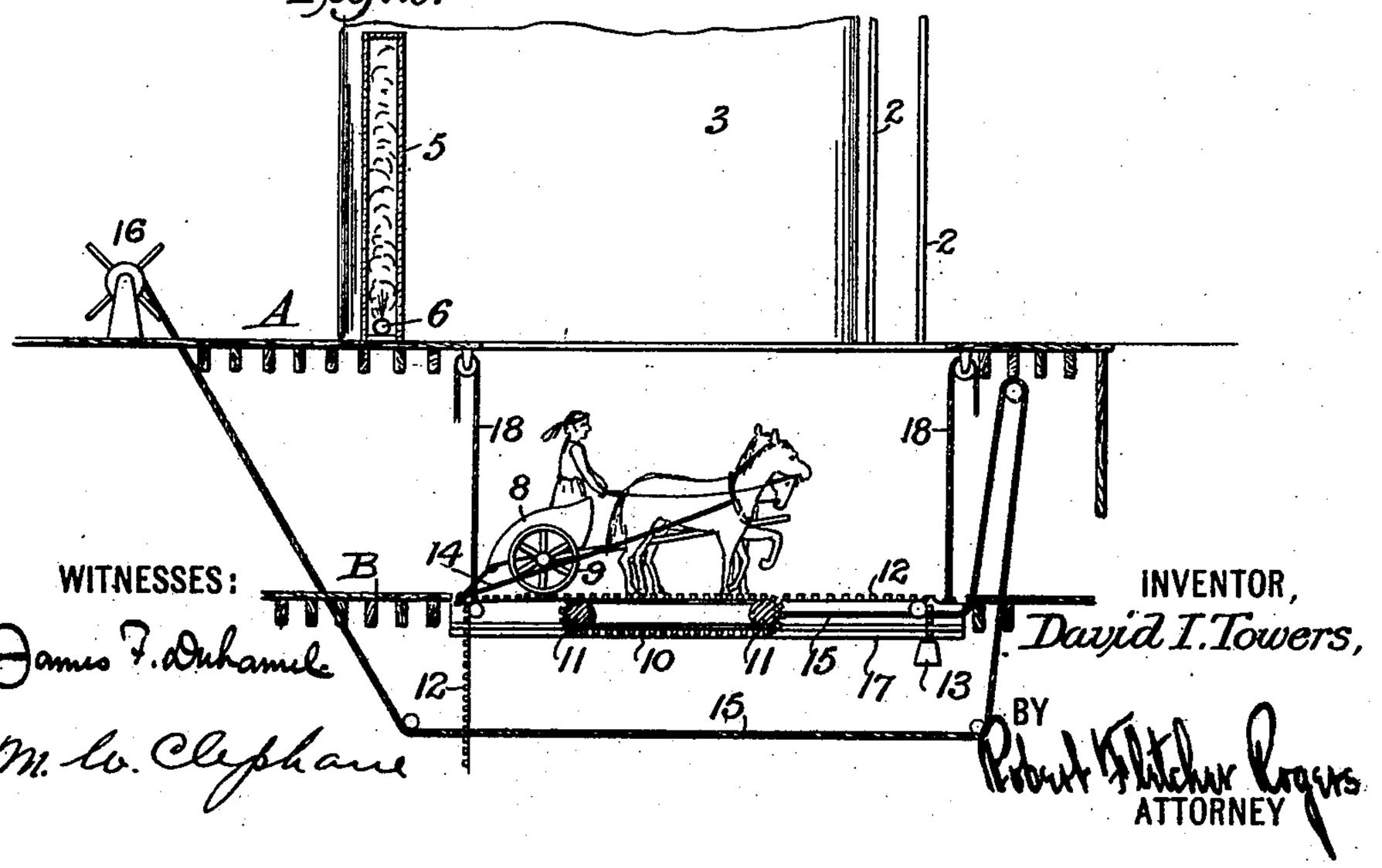

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Fig. 4.

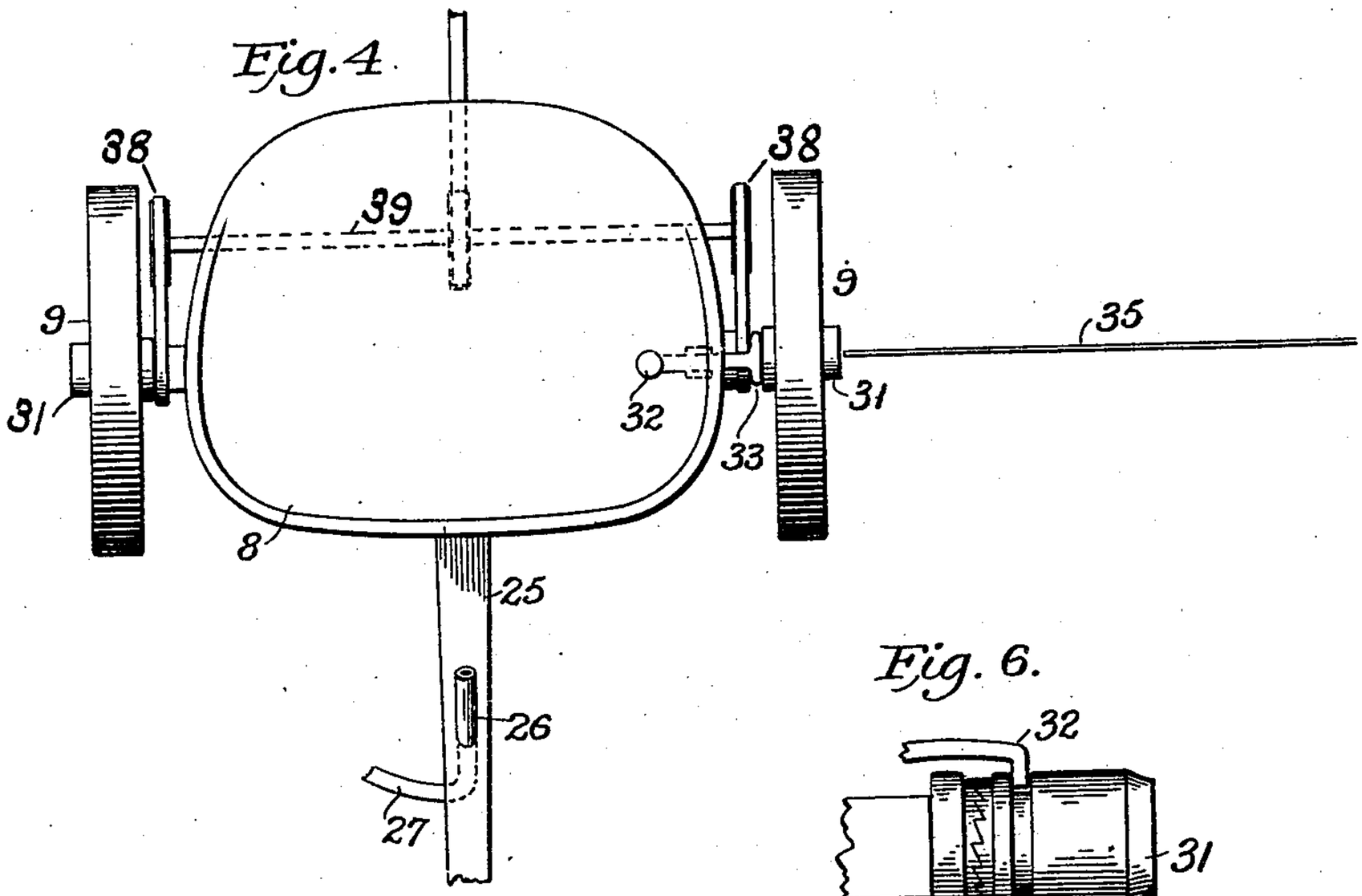
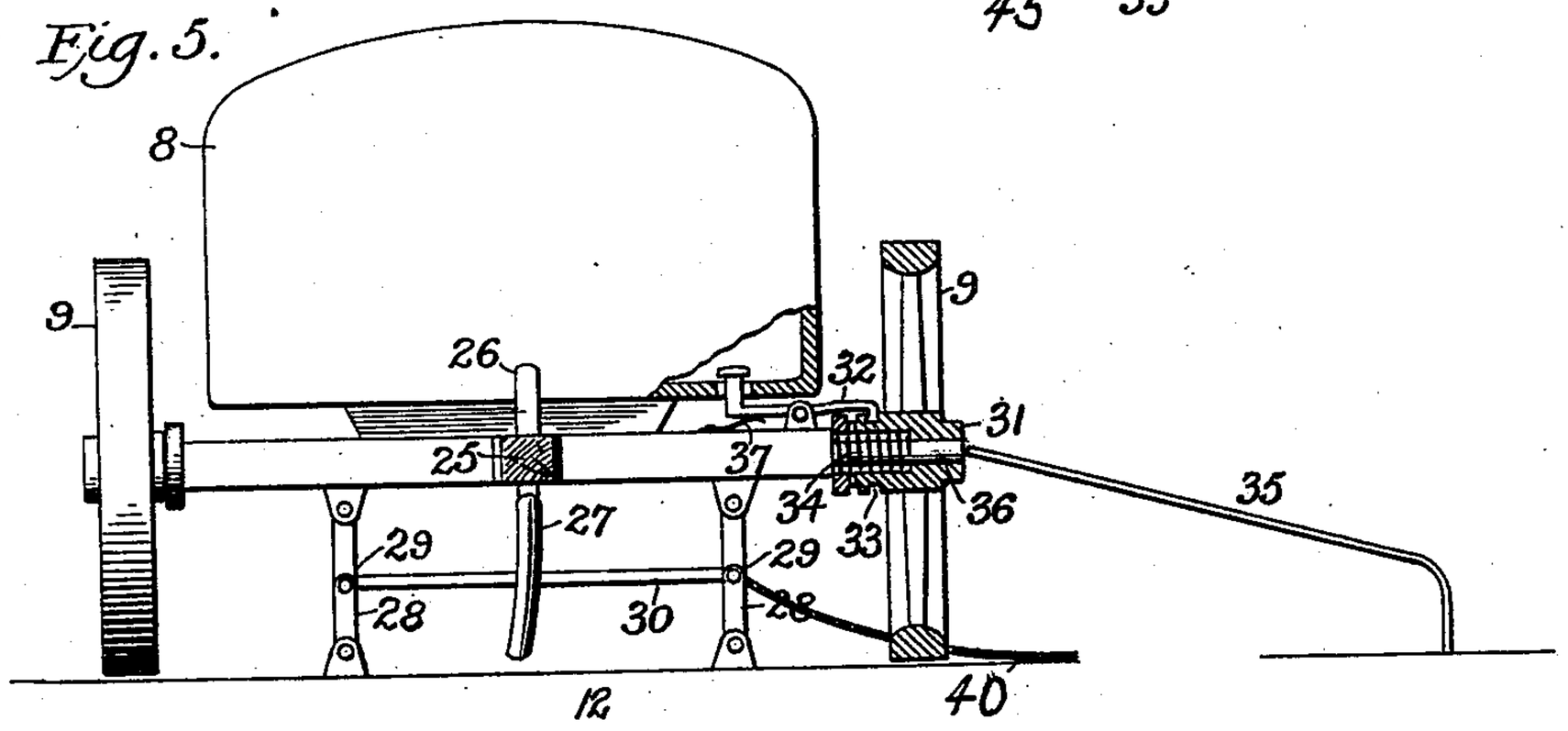


Fig. 6.

Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

DAVID I. TOWERS, OF NEW YORK, N. Y.

THEATRICAL APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 666,714, dated January 29, 1901.

Application filed August 16, 1899. Serial No. 727,377. (No model.)

To all whom it may concern:

Be it known that I, DAVID I. TOWERS, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Theatrical Appliances, of which the following is a specification.

My invention relates to apparatus for producing illusory dramatic effects, and more particularly to that class of theatrical apparatus in which certain mechanism is employed to enable the effect of movements of various persons, animals, or objects, or of races between them, to be simulated.

I am aware that it is old in this art to employ apparatus intended to represent the movements of persons, animals, and vehicles. Such a mechanism is shown, for example, in the Letters Patent to J. W. Knell, No. 256,007, granted April 4, 1882, which shows and describes for this purpose the combination of a panoramic scene with an endless path to support the persons, animals, or vehicles arranged in parallelism with each other.

My invention consists in the construction and combination of certain features designed to heighten the effect and to represent with exactness other incidents, which I shall now proceed to describe with reference to the drawings and afterward point out in the claims at the end of the specification.

In the drawings, Figure 1 is a diagrammatic plan view of the stage, showing the arrangement of my improved devices. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a diagrammatic plan view showing a modification. Fig. 4 is a partial plan view of a chariot or other vehicle which may be employed. Fig. 5 is a front perspective view of the chariot, partly broken away and partly in section. Fig. 6 is a detached detail view of one form of hub.

Referring now to the drawings, in which corresponding parts are indicated by the same characters of reference in the various views, A represents the floor of the stage, and B the floor situated beneath the stage. The stage A is provided with footlights 1 in the customary manner and also with wing-scenes 2 2, located at the sides of the stage and designed to mask in the mechanism for operating the panoramic scenes. As shown in the drawings, I prefer to employ two panoramic scenes 3 3, which are supported and carried by rollers 4 4 and are thereon moved from the front to the rear of the stage in any approved way and in such manner as to give the effect of a disappearing vista in connection with the mechanism employed for supporting the persons, animals, or vehicles supposed to be in motion. At the rear of the panoramic scenes 3 3 and located between them and in such manner as to screen the rear rollers 4 4 and the rear opening between the panoramic scenes 3 3 I employ a mechanism for simulating dust in disturbance. As shown in the drawings, this device consists of a box 5, provided with glass fronts and having within a perforated pipe 6. The simulation of dust within the said box 5 may be produced either by feeding steam to the pipe 6 and permitting it to escape through the perforations therein and throwing a brown or dust-colored light upon the said escaping steam or, preferably, by simply inserting some dust-colored powder or other substance within the box 5 and causing its agitation by means of a blast of air produced by the blower 8 and led through the pipe 7 to the perforated pipe 6 therein.

My invention also contemplates the employment, instead of the moving panoramic scenes 3 3, of a projecting apparatus, such as a biograph or kinematograph 21, (see Fig. 3,) in which instance the moving panoramic scenes 3 3 would be replaced by stationary sheets 20 20. It will be obvious that an effect of moving scenes upon the sheets 20 20 will be produced from the moving pictures of the apparatus 21 21 similar to that of the moving panoramic scenes 3 3. I may also employ, if desired, the dust-simulating mechanism 5 in connection with this modified form of apparatus.

As illustrated in the drawings, I have shown the apparatus for supporting the moving persons, animals, or vehicles as facing toward the footlights 1 instead of in parallelism therewith. For purposes of illustration I have indicated the mechanism necessary to show a race of chariots 8 8 or similar vehicles. The horses may be attached to the chariots 8 8 in any suitable manner and are themselves lo-

cated upon the endless paths or treadmills 10 10, which permit them the effect of rapid movement, although their positions are not changed. The horses and chariots 8 8 are held in their stationary positions by means of ropes or stays 14 14, attached thereto and to any suitable point of connection—such, for instance, as to the carriages of the endless paths 10 10 hereinbefore referred to.

For the sake of convenience I prefer to locate this entire apparatus upon elevators 17, (see Fig. 2,) so that the entire race may be prepared beneath the stage and elevated thereto when the necessity arises and without loss of time by means of ropes 18 18 or in any suitable manner.

The treadmills 10 10 may be of any improved form of construction—such, for instance, as shown in the Letters Patent to J. W. Knell, No. 418,372, granted December 31, 1889—and consist of an endless path 10, which passes around rollers 11 11. The rollers 11 11 are supported in a suitable frame or carriage, which is guided in ways, as in the said patent.

If it be desired to effect a change in the relative position of the contestants in the race, this may be accomplished by means of a rope 15, attached to the carriage and passing over suitable rollers to a windlass 16, which acts not only to take up the slack when the elevator 17 is raised to the stage-level, but also to move the carriage on the elevator 17 when it is desired. I also attach to the carriage which carries the endless path 10, at the ends thereof, two flexible aprons 12 12, which are maintained in extended position by means of weights 13 13, attached thereto. It will be seen that when it is desired to move the treadmills 10 the flexible aprons 12 12 will move therewith in such manner as to aid in the effect produced and to conceal any opening in the stage-floor.

In Figs. 4, 5, and 6 I have illustrated a mode of construction of the chariot 8 which will permit the simulation of an accident thereto, such as the accidental detachment of the wheel 9 therefrom and the consequent overturning of the chariot 8. The chariot 8 is supported above the stage by means of the supports 28 28, so that the wheels 9 9 are not in contact with the floor and may be permitted to rotate to give the appearance of a rapidly-moving vehicle. This movement of the wheels 9 9 may be effected in any desired manner—as, for instance, by surface contact of a moving wheel with the hubs of the wheels 9 9 or by clockwork; but for the purpose of illustration I have shown this motion as imparted to the wheels 9 9 by means of a belt-and-pulley system consisting of a suitably-actuated shaft 39, provided at its ends with belts and pulleys 38 38, which impart motion to the hubs 31 31 of the wheels 9. In order, further, to heighten the effect and to simulate rapid motion, I provide the tongue 25 of the chariot 8 with a pipe or nozzle 26, through which an air-blast is forced from the pipe 27 in a direction opposite to that of the race and in such manner that the draperies of the driver or charioteer will be moved and agitated in a manner to indicate rapid movement.

One of the wheels 9 of the chariot 8 is arranged so that it may be detached at will therefrom. The hub 31 of the wheel 9, as shown in Fig. 6, may be formed in two parts, the hub proper, 31, and the clutch-piece 45, arranged to engage therewith. It is to this clutch-piece 45 that the power is applied from the belt and pulley 38 to effect the rotation of the wheel. Inside the hub 31 and between it and the axle of the chariot is interposed the spring 34 in such manner that the pressure of the spring 34 will throw the wheel 9 violently from the chariot 8 when it is permitted to act. Under normal circumstances the wheel 9 is maintained in position by the pivoted pawl 32, which is pressed by the spring 37 into engagement with a groove 33, formed in the hub 31 in such manner as to permit of the rotation of the hub 31 and to hold it on the axle against the pressure of the spring 34. One end of this pawl 32 projects through the bottom of the chariot 8 in such manner that the charioteer or driver may press it at the proper moment when it is desired to release the wheel 9, whereupon the force of the spring 34 throws the wheel from the axle. I have also shown a rod 35, attached to the stage-floor and arranged in proximity to the opening in the hub 31 in such manner that when the wheel 9 is thrown from the vehicle it will pass along the rod 35 to some desired and predetermined position. In order to permit the overturning of the chariot when the wheel 9 is thus removed, I have made the chariot-supports 28 28 collapsible, they being formed in two pieces pivoted at 29 29 and connected to each other by a link 30. At the desired moment these supports 28 28 may be collapsed in any suitable manner—as, for instance, by the rope 40—and the chariot will be thereby permitted to topple over and fall upon its axle.

The operation of my improved devices will now be readily understood. The contestants in the race are properly arranged in position upon the treadmills 10 and the elevators 17 from the floor B below the stage A. At the proper moment the elevators 17 are raised to the stage-surface, and the horses are put in motion to give the effect of rapid movement. Then the panoramic or moving scenes are operated toward the rear of the stage, producing, in combination with the movement of the horses, the effect of a race toward the footlights. At the same time the appearance of dust is effected in the apparatus 5, previously described. The wheels 9 9 of the chariot 8 are rapidly operated by the connections previously described, and at the proper moment the charioteer, by means of the spring-actuated pawl 32, releases one of the wheels 9, which is caused to fall from the vehicle by the pressure of the spring 34, and at

the same moment the supports 28 28 of the chariot 8 are collapsed, permitting it to fall over to one side. At this time, if desired, the carriage supporting the treadmills 10 10 of the other contestants may be advanced to vary the relative positions and to create the effect of a victory due to the accident to the other vehicle.

I have herein presented for the purposes of illustration an approved and desirable form of the embodiment of my improved devices; but it will be understood that many variations may be made therein both in the character of their elements and in their mode of employment without departing from the spirit of my invention.

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

1. In theatrical apparatus designed to simulate an accident to a moving vehicle, the combination of the body of a vehicle and a wheel connected thereto, with means for imparting rotary motion to the wheel and means whereby said wheel may be detached and simultaneously thrown therefrom at will.

2. In theatrical apparatus designed to simulate an accident to a moving vehicle, the combination of the body of a vehicle and a wheel connected therewith, with means for imparting rotary motion to the wheel, means whereby the wheel may be released, and a spring normally held under compression and arranged to throw the wheel from the vehicle-body when released.

3. In theatrical apparatus designed to simulate an accident to a moving vehicle, the combination of the body of a vehicle, suitably supported above the stage, the wheel connected thereto, and means for imparting rotary motion to said wheel, together with means for detaching the wheel at will, and means for collapsing the support of the vehicle-body.

4. In theatrical apparatus designed to simulate an accident to a moving vehicle, the combination of the body of the vehicle, and a wheel connected thereto, with means whereby the wheel may be detached therefrom at will, and further means for guiding and conveying the detached wheel to some predetermined point.

In testimony whereof I have signed my name to this specification, at Asbury Park, in the county of Monmouth and State of New Jersey, this 14th day of August, A. D. 1899, in the presence of two subscribing witnesses.

DAVID I. TOWERS.

Witnesses:
FRANK A. PAWLEY,
RAYMOND PAWLEY.