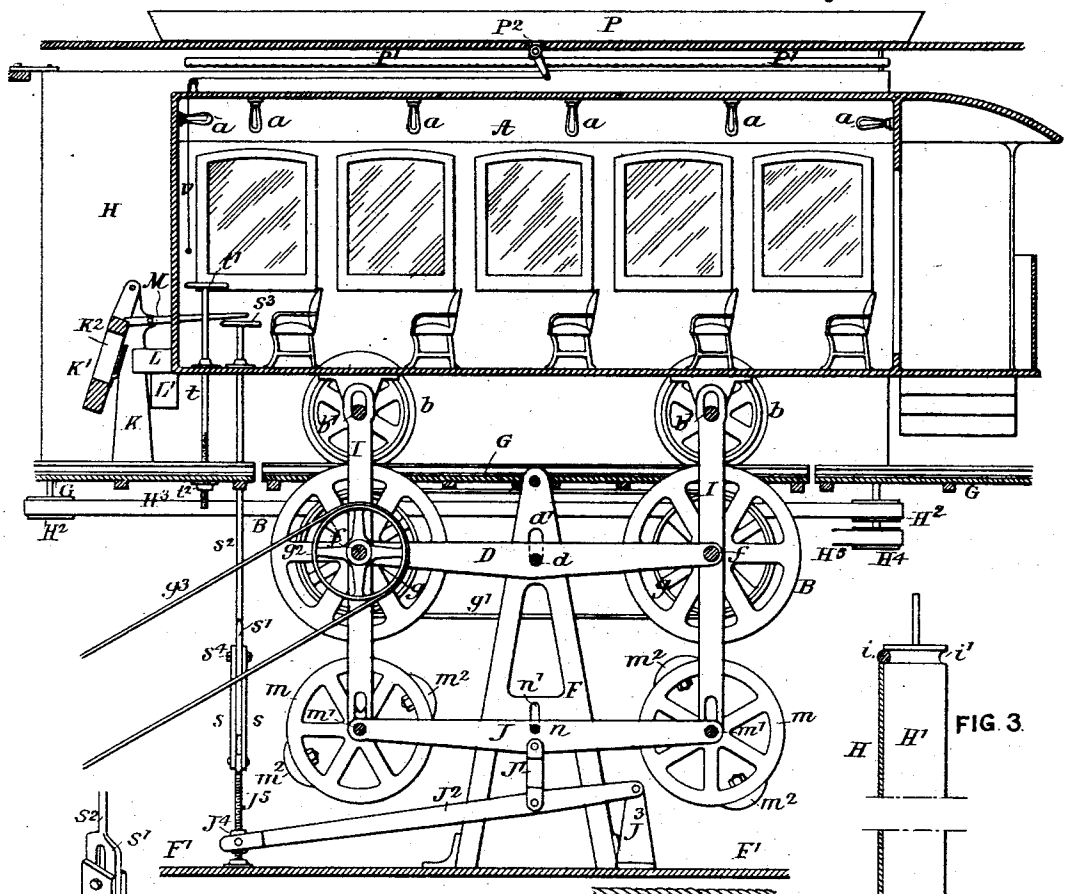
(No Model.)

A. LAKE.

THEATER APPLIANCE.

No. 520,236. FIG. 1. Patented May 22, 1894.



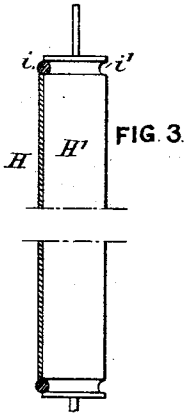


FIG. 3.

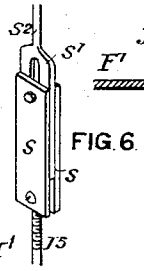


FIG. 6.

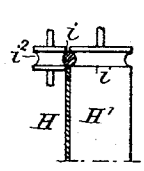


FIG. 5.

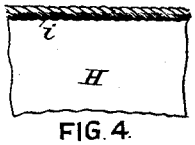


FIG. 4.

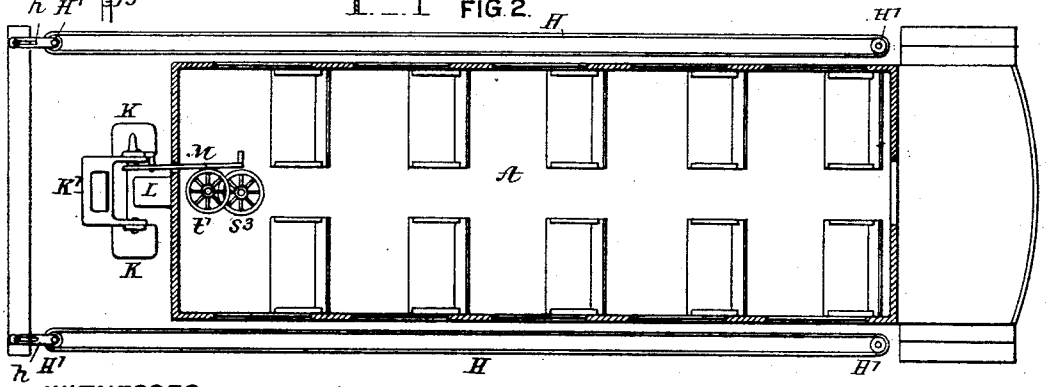


FIG. 2.

WITNESSES

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THEATER APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 520,236, dated May 22, 1894.

Application filed April 22, 1893. Serial No. 471,506. (No model.)

To all whom it may concern:

Be it known that I, AMARIAH LAKE, a citizen of the United States, and a resident of Pleasantville, Atlantic county, New Jersey, have invented certain Improvements in Illusion Apparatus, of which the following is a specification.

The main object of my invention is to construct an illusion apparatus in the nature of a railway car, so that while the car is really stationary, the occupants of the car are subject to the illusion that the car is in rapid motion. Incidental to this main illusion, I also provide others, such as that of an ascending or descending grade, jumping off the track, a collision and a passage through a rain storm, all fully set forth hereinafter.

In the accompanying drawings:—Figure 1, is a longitudinal section, partly in elevation, of an illusion apparatus embodying my invention. Fig. 2, is a plan view of the same with the car body in section; and Figs. 3, 4, 5 and 6, are views illustrating, on a larger scale, certain details of the device.

In Fig. 1, A represents a structure in imitation of a railway passenger car having rear platform, seats, windows and interior furnishings of any desired character and lighted upon the inside by any suitable means, as for instance by electric lamps *a*. The car has axles *b'* with wheels *b* which run in contact with supporting wheels B, the shafts of the latter being carried by the opposite ends of an arm D which has a trunnion shaft *d* adapted to a slot *d'* in one or more fixed standards or frames F, suitably mounted upon and secured to the floor F' of the room or apartment in which the apparatus is located. The shafts *f* of the wheels B have pulleys *g* which are connected by means of a belt *g'*, and the shaft of one of said wheels B has another pulley g^2 which is driven by a belt g^3 from a pulley upon any convenient power shaft.

Beneath the car is a flooring G upon which are representations of rails, the portion of the flooring immediately beneath the car, however, being separate from the end portions and being pivotally mounted upon the upper end of the standard F as shown in Fig. 1.

The wheels *b* of the car are not in contact with the rails upon the flooring G but rest upon and are supported by the wheels B, hence when said wheels B are turned, turning movement in a reverse direction will be imparted to the wheels *b* of the car.

At each side of the car are horizontally traveling curtains H in the form of endless aprons or bands which are mounted upon upright drums H', one of these drums being mounted in suitable fixed bearings in the floor G and in the ceiling above the car, but the other drum of each endless curtain being adapted to bearings in adjustable hangers *h*, so that the apron can always be kept stretched perfectly tight. Owing to the size and weight of the curtains H some means other than their frictional hold upon the drums H' must be resorted to in order to sustain said curtains in their proper vertical position, and for this purpose various means may be adopted, the means which I have selected for illustration in Figs. 3 and 4 of the drawings being ropes *i*, applied to the upper and lower edges of the curtain and adapted to grooves *i'* formed at the upper and lower ends of the drums H', so that as long as these ropes are maintained in the grooves of the drums the aprons are prevented from slipping down on the latter. If desired, an idler pulley i^2, such for instance, as shown in Fig. 5, may be used in connection with the grooved portion of each drum, in order to insure the retention in the groove of the rib formed by the rope at the edge of the apron. The drums of each apron may be driven in any suitable manner so as to cause that portion of said apron which is adjacent to the side of the car to travel rearward so as to subject the occupants of the car to the illusion that the latter is really traveling forward.

In Fig. 1 I have shown the drums of each apron as provided beneath the floor G with pulleys H^2 connected by means of a belt H^3, the fixed drum also having another pulley H^4 for the reception of the driving belt H^5, which may lead to a pulley on any available power shaft.

To the opposite ends of the arm D are pivoted upright bars I slotted at the upper ends for the reception of the axles *b'* of the wheels *b* of the car, and also slotted at the lower ends for receiving the axles *m'* of wheels *m*, each of these wheels being provided on its

periphery with one or more cams or lugs m^2. The axles m' are carried by the opposite ends of an arm J which has a trunnion shaft n adapted to a slot n' in the standard F, this arm J being connected by a link J' to an arm J^2 which is hung to a short standard J^3 and is provided, at the outer end, with a pivoted nut J^4, which receives a vertical screw stem J^5 mounted so as to be free to turn in a suitable bearing on the floor F' and provided at its upper end with side plates s which flank a slotted plate s' carried by a vertical shaft s^2 passing up through the floor of the car and mounted in a suitable bearing thereon, said shaft being provided at its upper end with a handle s^3. A bolt s^4 passes from one of the side plates s to the other through the slot of the plate s', so that, when the shaft s^2 is turned, the screw stem J^5 is caused to turn therewith, but said shaft s^2 is free to rise and fall without disturbing its operative connection with said screw stem J^5. By turning the shaft s^2 the arm J can be lifted so as to bring the peripheries of the wheels m into contact with those of the wheels B and thus cause said wheels m to rotate and as the cams or lugs m^2 come into contact with the wheels B, a sudden jolt is imparted to said wheels and thence to the wheels b and the car, the slot d' in the standard F permitting the necessary rise of the arm D. By this means the occupants of the car are subjected to the illusion that the car has left the track and is bumping over the ties.

In order to tilt the car body, so as to produce the illusion of an ascending or descending grade, said car body has mounted in the front end of the same a shaft t having at the upper end a hand wheel t' and threaded in the lower portion for adaptation to a nut t^2 on the floor G, hence, by turning the shaft t in one direction or the other, the front end of the car body may be raised or depressed to any desired extent, the arms D and J swinging on their trunnion shafts and the central section of the flooring G also swinging on its pivot shaft in accordance with such movement of the car body. The same result is reached if the car body itself is centrally pivoted.

To suitable standards K in front of the car is hung a weight K' having a central recess or opening which is crossed by a thin board K^2 held in position at each end by suitable guides or clips on the face of the weight, and on the front of the car body is a projection L with depending block L'. Hung to one of the standards K is a lever M, the front end of which is adapted to engage with and hold the weight K' in a forwardly inclined position, as shown in Fig. 1, the rear end of the lever projecting into the car so as to be within easy reach of the attendant, who occupies a position in the front of the car. On operating this lever so as to release the weight K' the latter swings toward the car so as to first bring the light board K^2 into contact with the projection L whereby the board is broken, while at the same time, or almost instantly afterward, the lower portion of the weight comes into contact with the block L' and strikes the same a blow sufficient to impart a sudden shock or jar to the car body, thus simulating a collision with its accompaniment of splintering timbers. In order to increase the force of the blow, the movement of the weight may be assisted by a spring if desired.

Mounted above the car is a water vessel P, which has beneath it a perforated distributing pipe P', and in the short neck connecting said water vessel with said pipe is a valve P^2 the handle of which is provided with a cord v running over a suitable pulley and terminating within the car within easy reach of the attendant, who, by pulling upon said cord, can open the valve P^2 and thereby permit the water to flow upon the top of the car in fine streams or drops simulating rain, the water dripping from the eaves of the car and falling past the windows to be caught in suitable troughs or other receptacles below the same.

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

1. The combination of the car body having rows of window openings and interior furnishings, with the endless curtains or aprons mounted upon vertical drums so as to occupy a position adjacent to said window openings on each side of the car body, and means for horizontally traversing said curtains past said rows of window openings, substantially as specified.

2. The combination of the car body having rows of window openings therein, the endless curtains or aprons disposed upon vertical drums so as to occupy a position adjacent to said window openings, mechanism for rotating said drums, and means for vertically supporting the aprons upon the drums independently of their frictional hold upon the same, substantially as specified.

3. The combination of the car body having wheels, the endless curtains, means for traversing the same, supporting wheels upon which the car wheels rest, means for rotating said supporting wheels, cam wheels, adapted by contact with the driving wheels to cause a jolting of the same, and means for moving said cam wheels into and out of engagement with the driving wheels, substantially as specified.

4. The combination of the car body, the endless curtains and means for traversing the same, with means for tipping the car body and retaining the same in the tipped position, substantially as specified.

5. The combination of the car body, the endless curtains and means for traversing the same, a weight mounted in front of the car body, and means for holding said weight away from the car body and for releasing the

same so as to permit it to strike a blow upon the car, substantially as specified.

6. The combination of the car body, the endless curtains and means for traversing the same, the weight mounted in front of the car, means for supporting a strip of thin board on said weight, a device for retaining and releasing the weight, and a projection on the car body whereby said board is broken on the release of the weight, substantially as specified.

7. The combination of the car body, the endless curtains, and means for traversing the same, with a water distributer located above the roof of the car, and a valve controlling the flow of water from said distributer upon the roof of the car, substantially as specified.

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Witnesses:
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