(No Model.)

J. ARTHUR.

THEATRICAL ILLUSION APPARATUS.

No. 471,371. Patented Mar. 22, 1892.

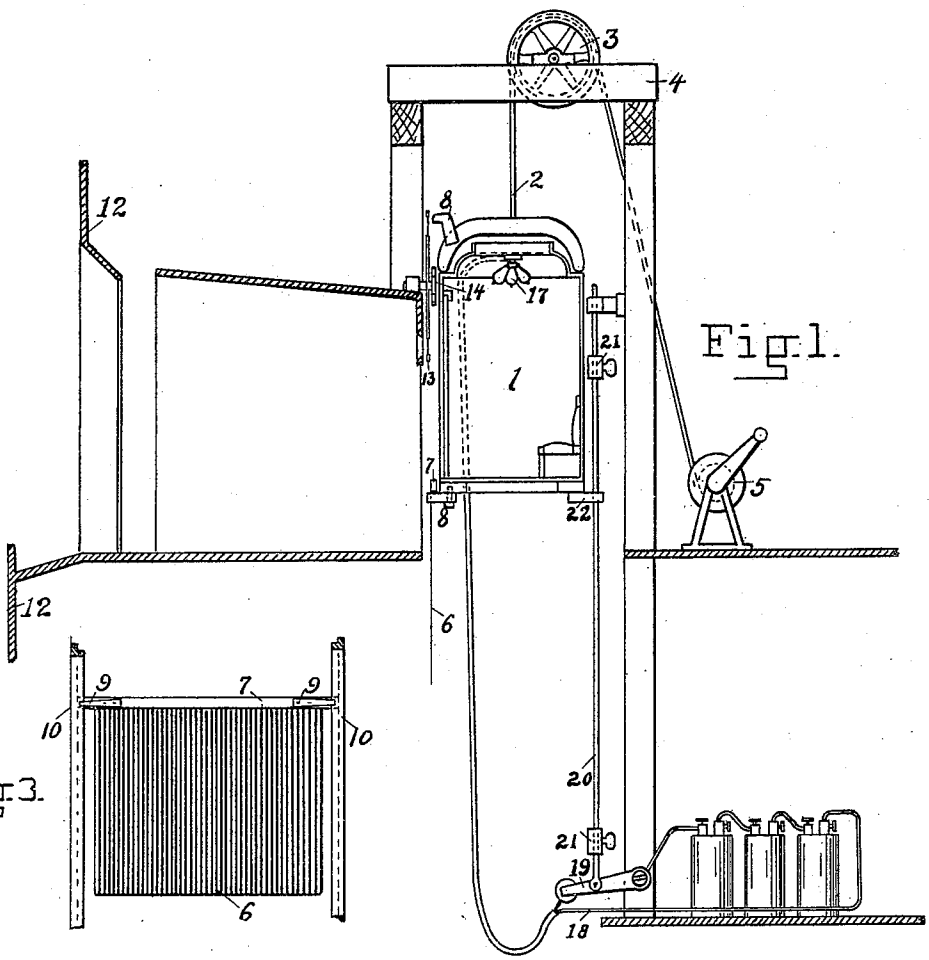
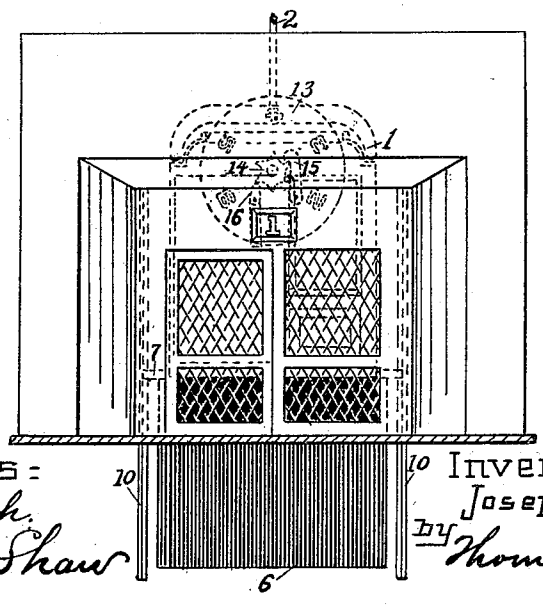


Fig. 1.

Fig. 3.

Fig. 2.



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UNITED STATES PATENT OFFICE.

JOSEPH ARTHUR, OF NEW YORK, N. Y.

THEATRICAL ILLUSION APPARATUS.

SPECIFICATION forming part of Letters Patent No. 471,371, dated March 22, 1892.

Application filed January 11, 1892. Serial No. 417,608. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH ARTHUR, a citizen of the United States of America, residing at the city, county, and State of New York, have invented certain new and useful Improvements in Theatrical Illusion Apparatus, of which the following is a specification.

My invention is an improvement in theatrical illusion apparatus; and it consists of a device in which an elevator is carried up and down past a single landing a number of times, being screened from view during the movements in one direction and in full view during the movements in the other direction in order to give the impression that it is passing a number of landings in succession. The invention does not embody any panoramic device. The illusion may be increased by various additional devices—*e. g.*, an indicator, which displays numbers marking the successive passages by the landing and electric lights which are illuminated while the elevator is in view and are cut out while it is screened.

In the accompanying drawings the elevator is shown as in view while ascending and screened while descending.

Figure 1 is a side elevation of my system. Fig. 2 is a front elevation showing the car, the entrance-way thereto, the indicating device, and the screen. Fig. 3 is a detail view of the screen.

The elevator-car 1 is suspended by a cable 2, thrown over a sheave 3, supported on the top by a frame 4, and is wound about the drum 5. The screen 6, which is opaque, has a stiff cross-piece 7 fastened along its upper edge, which projects into the path of fingers 8 on the top and bottom of the car. The elevator as it ascends lifts the screen by engagement of the fingers on the bottom of the car with the cross-piece on the screen until the screen, which is the exact length of the car, completely covers the doorway and hides everything in the hoistway from view. The movement of the elevator is then reversed by unwinding the cable from the drum, but the screen remains in place, being held by the pressure of the friction-springs 9 against the guides 10 until the fingers on the top of the car engage the cross-piece on the screen and carry the screen down in front of the car. The car is thus screened during its entire downward movement past the doorway. The necessary range of movement is two car-lengths, the entrance-way being opposite the middle of the hoistway. The sides of the entrance-way may with advantage be blackened, and there are fixed screens 12, which extend above and below the entrance-way to hide the car. If it is desired to display the elevator during a descent, the fingers 8, which are shown as fastened with screws, are turned out so as not to engage with strip 7. In this case the screen is not lifted.

The movement of the screen herein described can be reversed, so as to hide the car as it ascends and expose it as it descends by having a finger on the top of the car which engages with cross-pieces at the top and bottom of the curtain as the car ascends and descends, respectively. In this case the curtain would play between the top and the middle of the hoistway. The fingers which engage with the screen can all be pivoted so that they can readily be thrown in and out of position to engage with the screen, and the elevator-car thus be shown in its downward as well as its upward movement past a number of landings; and instead of having, as shown, a single cross-piece engaging with fingers on the car at its top and bottom there can be cross-pieces at the top and bottom of the screen engaging with fingers at the bottom of the car only, and a movable screen is not strictly necessary, for the car might be moved up past the opening and down behind a screen at the side. I have shown an elevator; but the plan is equally applicable to a car moved back and forth in a horizontal plane. These are obvious modifications, and where in the claims I describe an elevator-car moved up and down past a landing I mean to include these and similar modifications.

The indicating device consists of a numbered wheel 13 on a shaft, to which is rigidly attached a toothed wheel 14, engaging with a detaining-pawl 15. This wheel is turned through one space each time a vertically-sliding rod, on which the spacing-pawl 16 is pivoted, is struck by the curtain as it reaches the top of its movement. The pawl 16 is pivoted so that it can slip by the teeth of the wheel as the curtain descends. The electric lights 17 are in a circuit 18, in which is a switch 19,

controlled by a rod 20, on which are buttons 21 that engage with a finger 22 on the bottom of the car. The switch is closed during the ascent and open during the descent of the car.

Without confining myself to the precise construction and arrangement of the parts shown, I claim—

1. In a theatrical illusion apparatus, the combination of an elevator-car, means for raising and lowering it past a landing, a screen, and means for concealing the car behind the screen during its movements in one direction only, substantially as described.

2. In a theatrical illusion apparatus, the combination of an elevator-car, means for raising and lowering it past a landing, a screen, and means for moving the screen with the car so as to screen the car during its movements in one direction only, substantially as described.

3. In a theatrical illusion apparatus, the combination of an elevator-car, means for raising and lowering it past a landing, and a screen engaged by the car and moved by it to hide the car during its movements in one direction only, substantially as described.

4. In a theatrical illusion apparatus, the combination of an elevator-car, means for raising and lowering it past a landing, a screen engaging the car and moved by it to hide the car during its movements in one direction only, and an indicating device operated by the screen, substantially as described.

Subscribed by me in New York city, this 8th day of January, 1892.

JOSEPH ARTHUR.

In presence of—
THOMAS EWING, Jr.,
I. M. MAY.