



A.D. 1879, 28th MARCH. N^o 1245.

SPECIFICATION

OF

JOHN HENRY PEPPER
AND
JAMES JOHN WALKER.

EXHIBITION OF DRAMATIC, DIORAMIC,
AND OTHER LIKE PERFORMANCES.

PRINTED BY ORDER OF THE COMMISSIONERS OF PATENTS FOR INVENTIONS.

LONDON:
PUBLISHED AND SOLD AT
THE COMMISSIONERS OF PATENTS' SALE DEPARTMENT,
38, CURSITOR STREET, CHANCERY LANE, E.C.

Price 6d.

1879.

A.D. 1879, 28th MARCH. N° 1245.

Exhibition of Dramatic, Dioramic, and other like Performances.

LETTERS PATENT to John Henry Pepper, of No. 16, Calverley Park Crescent, Tunbridge Wells, in the County of Kent, and James John Walker, of No. 27, Francis Street, in the County of Middlesex, for the Invention of "IMPROVEMENTS IN APPARATUS TO BE USED IN THE EXHIBITION OF DRAMATIC, DIORAMIC, AND OTHER LIKE PERFORMANCES."

Sealed the 1st July 1879, and dated the 28th March 1879.

PROVISIONAL SPECIFICATION left by the said John Henry Pepper and James John Walker at the Office of the Commissioners of Patents on the 28th March 1879.

JOHN HENRY PEPPER, of No. 16, Calverley Park Crescent, Tunbridge Wells, in the County of Kent, and JAMES JOHN WALKER, of No. 27, Francis Street, in the County of Middlesex. "IMPROVEMENTS IN APPARATUS TO BE USED IN THE EXHIBITION OF DRAMATIC, DIORAMIC, AND OTHER LIKE PERFORMANCES,"

The object of our Invention is by a peculiar arrangement of apparatus to render an actor or object gradually visible or invisible at will, and also to substitute for an object in sight of the audience the image of another similar object hidden from direct vision without the audience being aware that any such substitution has been made.

For this purpose we employ a large plate of plate glass which is transparent at one end and more and more densely silvered in passing from this towards the other end. We mount this plate so that it can at pleasure be placed diagonally across the stage or platform. As it advances the glass gradually obscures the view of the actor or object in front of which it passes, and substitutes the reflection of an object in front of the glass, but suitably concealed from the direct view of the audience.

When the two objects (or sets of objects) thus successively presented to the view

[Price 6d.]

Pepper & Walker's Impts. in the Exhibition of Dramatic, &c. Performances.

are properly placed and sufficiently alike the audience will be unaware that any change has been made.

In some cases in place of a single sheet of glass we employ two or more sheets.

We also employ a graduated diagonal mirror in exhibiting dioramic views upon a screen. By inserting the diagonal mirror between the slide and the lens of the lantern the image of another slide may be gradually substituted upon the screen for that first exhibited. 5

For some effects, as for the introduction at pleasure of a faint image in the midst of a picture remaining continually on the screen, we use in a similar manner a diagonal mirror of unsilvered glass. 10

Pepper & Walker's Impts. in the Exhibition of Dramatic, &c. Performances.

SPECIFICATION in pursuance of the conditions of the Letters Patent filed by the said John Henry Pepper and James John Walker in the Great Seal Patent Office on the 27th September 1879.

JOHN HENRY PEPPER, of No. 16, Calverley Park Crescent, Tunbridge Wells, in the County of Kent, and JAMES JOHN WALKER, of No. 27, Francis Street, in the County of Middlesex. "IMPROVEMENTS IN APPARATUS TO BE USED IN THE EXHIBITION OF DRAMATIC, DIORAMIC, AND OTHER LIKE PERFORMANCES."

The object of our Invention is, first, by a peculiar arrangement of apparatus to render an actor or object gradually visible or invisible at will, and also to substitute for an object in sight of the audience the image of another similar object hidden from direct vision without the audience being aware that any such substitution has been made.

For this purpose we employ a large mirror, either an ordinary mirror, or for some purposes by preference a large plate of plate glass which is transparent at one end, and more and more densely silvered in passing from this towards the other end. We mount this mirror or plate so that it can at pleasure be placed diagonally across the stage or platform. As it advances the glass obscures the view of the actor or object in front of which it passes, and substitutes the reflection of an object in front of the glass, but suitably concealed from the direct view of the audience.

When the two objects (or sets of objects) thus successively presented to the view are properly placed and sufficiently alike the audience will be unaware that any change has been made.

In some cases in place of a single sheet of glass we employ two or more sheets.

We also employ a graduated diagonal mirror in exhibiting dioramic views upon a screen. By inserting the diagonal mirror between the slide and the lens of the lanthorn the image of another slide may be gradually substituted upon the screen for that first exhibited.

For some effects, as for the introduction at pleasure of a faint image in the midst of a picture remaining continuously on the screen, we use in a similar manner a diagonal mirror of unsilvered glass.

In order that our said Invention may be most fully understood and readily carried into effect we will proceed to describe the Drawing hereunto annexed.

DESCRIPTION OF THE DRAWING.

Figure 1 of the Drawing represents a plan view of an arrangement such as herein before first described.

a is a stage; it may be in a lecture room or theatre; *b, b*, are the seats for the audience in front of the stage; *c* is a small room, ten or twelve feet square and eight feet high will often be sufficiently large, but it may be of any size; it may advantageously be raised and approached by two or three steps from the stage; *d* is a vertical mirror passing diagonally across the chamber *c* and dividing it into two parts, which are exact counterparts the one of the other. The mirror *d* is so mounted that it can be rapidly and noiselessly withdrawn whenever desired; this can conveniently be done by running it in guides and upon rollers to a position *d'* where it is hidden by a screen which limits the view of the audience in this direction, or the mirror might be raised and lowered vertically.

It is not necessary that the mirror should pass entirely across the chamber *c*, it might, especially when the chamber is of large size, pass only partly across it.

In consequence of the exact correspondence of the two parts of the chamber *c*, that in front and that behind the mirror, the audience will observe no change in appearance when the mirror is passed across.

The front of the chamber is in some cases partly closed at *c'*, either permanently or whenever required; this is done in order to hide from direct view any object which may be at or about the position *c'*.

Pepper & Walker's Impts. in the Exhibition of Dramatic, &c. Performances.

The illusions may be performed in various ways; but, for example, an object may, in sight of the audience, be passed from the stage to the position c^2 and there be changed for some other. This is done by providing beforehand a dummy at c^1 closely resembling the object at c^2 . Then when the object is in its place the mirror is passed across without causing any apparent change. The object, when hidden, is changed for another object externally resembling the first, the mirror is withdrawn, and the audience may then be shown in any convenient way that the object now before them differs from that which they at first had seen. 5

We prefer in many cases not to use an ordinary mirror at d but one of graduated opacity. This may be produced by removing the silvering from the glass in lines, or if the glass be silvered by chemical deposition causing the silver to be deposited upon it in lines. Near one side of the glass the lines are made fine and open and progressively, in passing towards the other side they become bolder and closer until a completely silvered surface is reached. Or other means for obtaining a graduated opacity and reflecting power may be resorted to. 10 15

By passing such a graduated mirror between the object at c^2 and the audience the object may be made to fade from the sight or gradually to resolve itself into another form.

In order that the edge of the glass mirror may not be observed as the mirror is moved across the chamber c we in some cases form the forward edge of the mirror in steps, say, of about $\frac{1}{8}$ th of an inch in depth, as shown at Figure 2, in place of simply forming it with a square end. The edge will thus, as it were, be broken up into a number of comparatively narrow edges, each one of which is practically invisible at the distance at which the spectators are separated from it. The objects at c^1 , c^2 , may be illuminated by a lamp or lamps at e , or by lamps at f , f ; or overhead lights might be used, or especially if the forward edge of the mirror is formed in steps, as above described, a strong front light may be used for illuminating the objects. 20 25

Figure 3 is a diagram view shewing how a graduated diagonal mirror may be used with a lanthorn, such as is used for exhibiting dioramic views upon a screen. A is the lens; B , the mirror which can be drawn backwards or forwards at pleasure in a diagonal line across the box or case E . 30

The slides can be placed in position either at C or D ; separate lamps outside of the box or case E are used for illuminating the slides in the two positions.

When the mirror is drawn back the slide C will be thrown by the lens on to the screen, but when the mirror is moved forwards across the lanthorn the slide D being then reflected to the lens by the graduated mirror will gradually be substituted for the slide C . 35

What we claim is,—

First. The combination of the symmetrical chamber c and moveable diagonal mirror d , substantially as described. 40

Second. We also claim the combination of a symmetrical chamber c with a moveable diagonal mirror a having a graduated opacity and reflecting power, substantially as described.

Third. Forming apparatus used for exhibiting dioramic views with a moveable graduated diagonal mirror or a diagonal mirror of unsilvered glass, substantially as herein before described. 45

In witness whereof, I, the said James John Walker, have hereunto set my hand and seal, this Twenty sixth day of September, in the year of our Lord One thousand eight hundred and seventy nine. 50

JAMES J. WALKER. (L.S.)