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A.D. 1879, 18th DECEMBER.

N° 5185.

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S P E C I F I C A T I O N

OF

WILLIAM HUSKISSON DENSTONE.

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APPARATUS FOR DRAMATIC  
PERFORMANCES, &c.

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A.D. 1879, 18th DECEMBER. N° 5185.

**Apparatus for Dramatic Performances, &c.**

*(This Invention received Provisional Protection only.)*

PROVISIONAL SPECIFICATION left by William Huskisson Denstone at the Office of the Commissioners of Patents on the 18th December 1879.

WILLIAM HUSKISSON DENSTONE, of Ivy Cottage, 395, Kennington Road, in the County of Surrey. "IMPROVEMENTS IN APPARATUS TO BE USED IN THE EXHIBITION OF DRAMATIC, ILLUSORY, AND OTHER LIKE PERFORMANCES."

The object of my Invention is by a peculiar arrangement of apparatus to produce on a stage floor or platform certain illusory effects differing in character and nature from any hitherto shown.

- Some of these effects may be described as follows:—I produce or cause to appear
- 10 on the stage floor or platform out of blank space real people or objects, transparent at first (the details of scenery and flooring being visible through them), then by degrees becoming opaque, solid, and tangible, and capable of traversing any part of the stage, or stepping amongst the audience without passing from direct vision by going round any intervening scenery, doors, statues, trees, or hindrance or
- 15 obstacle of any kind. By the converse process I cause solid people or objects to become transparent and gradually disappear, the scenery and flooring being visible through them. I cause real people and solid objects to be changed into other people or objects equally real, each being solid, tangible, and directly accessible to the audience.
- 20 I cause scenery or parts of scenery to appear, disappear, or change its form. I cause solid people or objects to become penetrable and to pass through each other; I cause solid and tangible people or objects to be apparently surrounded by flames of fire and to remain unharmed, or to be apparently consumed thereby at will. I cause certain inanimate objects, such as statues, lay figures, stuffed animals,
- 25 and the like, which have been previously dismembered or otherwise shewn to be inanimate, to become endowed with appropriate life and motion.
- I cause real people or objects or parts of the same (such as a man's head) to float in the air without apparent support, allowing an assistant who is directly accessible to the audience to pass a hand, sword, or wand, or other convenient article directly
- 30 above, below, and all around the floating object; I produce these and other illusory effects on any stage floor or platform; I require no traps or openings in the same, and no apparatus apparent to the audience. The surrounding scenery and adjuncts being fully and generally lighted, I require no apparent diminution or alteration of such illumination during the progress of my illusory effects.

[Price 6d.]



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For these purposes I employ a large sheet of unsilvered plate glass (hereinafter called a glass screen) so mounted that it can at pleasure be placed diagonally across the stage floor or platform (hereinafter called the stage only); also two scenes the exact counterparts, or duplicates of each other, so fixed and arranged that the reflection on the glass screen of the one scene which is hidden from the audience precisely corresponds with the position of the other scene which is directly in the view of the audience, each of these scenes to be capable of being illuminated by separate and adjustable strong artificial lights, then by raising or lowering the lights on either scene I can cause the real scene visible to the audience to be replaced by the reflection of the duplicate scene without the audience being aware of any change having taken place.

By then introducing to the real scene some person or object hitherto unseen, and then gradually altering the lights, I cause such person or object to become gradually visible passing through various degrees of transparency, and finally solidifying them I withdraw the glass screen and the person or object can pass over any part of the stage or amongst the audience, and by alterations and modifications of this process I effect many other illusions as described above. In some cases, in place of a single sheet of glass I employ two or more sheets. In order to render the real scene absolutely invisible to the audience, and to facilitate the making of any required change in the same, I employ one or more screens, curtains, sheets, or blinds, of opaque, dark, or black material, black velvet preferred (hereinafter called the black screen), which I pass behind the glass screen in close proximity to the same at such time as the duplicate scene is illumined and the real scene darkened. I also employ a series or combination of two or more black screens so arranged as to conceal any desired part or parts of any person or object, in order that when used in conjunction with the glass screen, the part or parts thus covered may be invisible and apparently non-existent.

Another part of my Invention refers to my arrangement of lights, by which I can make any one or more parts of the scene light or dark at will, and by which I so modify and color the light thrown on the real scene visible to the audience, that such light exactly corresponds with the light on the reflection of the duplicate scene.

Having thus stated the nature of my Invention, I will proceed with the aid of diagrams to more fully describe the apparatus I use, and the manner in which I work the same.

The annexed Drawing illustrates the arrangement of a stage floor or platform for carrying my Invention into effect showing a ground or stage plan of the same.

A, B, is a vertical glass screen placed diagonally and at any convenient angle (45° preferred) across the stage.

This screen must be exactly at right angles to the plane of the stage, and must be so mounted that it can be quickly and silently withdrawn whenever required either by raising or lowering it, or more conveniently by running it in grooves and upon rollers or otherwise to a position A, B', where it is hidden by screens or scenery that limit the view of the audience in that direction.

C, D, E, B, and C', D', E', B, are two scenes or screens, one of which is an exact left handed or reflected counterpart of the other, and so erected and fixed that the reflection on the glass screen A, B, of C', D', E', B, exactly corresponds with the actual position of C, D, E, B.

These scenes may be of any desired shape, color, or size, and of any desired number of parts, and may also include any appropriate articles of furniture.

A, C, is a combination of the scene C, D, E, B. If the height of the glass screen at A, B, be less than the height of the surrounding scenery, I hide the upper edge of the glass screen and the groove in which the same moves by some appropriate border or piece of scenery.

That side of C', D', that faces the audience should be appropriately painted, or another piece of scenery C', F, may be used to make the stage appear symmetrical.

With the assistance of screens and shades I so arrange my lights that the light from any convenient point G falls only on the screen or scene C', F, illuminating the

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area C<sup>1</sup>, G, and nowhere beyond, and the light from any convenient point F falls only on the screen or scene A, G, illuminating the area A, G, F, and nowhere beyond, and the light from any convenient point N falls only on the screen or scene C, D, E, B, illuminating the area N, C, D, E, B, and nowhere beyond; also a second  
5 and independent light from any convenient point N falls only on the screen or scene B, E, D<sup>1</sup>, C<sup>1</sup>, and illuminating the area B, E, D<sup>1</sup> C<sup>1</sup> N, and nothing beyond.

I do not desire to limit myself to any fixed number of lights for these purposes, but merely to such an arrangement of lights that each area of illumination is circumscribed and under separate control. I also employ when necessary a lime  
10 light, electric light, or other strong power capable of illuminating any object or person in progress from the back to the front of the stage. I prefer that all lights employed should be hidden from the view of the audience. I employ no footlights or floats. I consider it very undesirable that any light should fall across or on the groove in which the glass A, B, runs during the progress of the glass, as such light  
15 would tend to reveal to the audience the existence and passage of the glass. I prefer that the screen or scene A, C, to which there is no corresponding part in the scene C<sup>1</sup>, D<sup>1</sup>, E<sup>1</sup>, B, should be but faintly if at all lighted, and moreover should be of a dark and undecided character.

As the reflection on the glass screen of the scene C<sup>1</sup>, D<sup>1</sup>, E<sup>1</sup>, B, tends to diminish  
20 the illumination of the same I light that scene with a stronger and purer light than I light the scene C, D, E, B, with.

For instance, I use one or more powerful lime lights for C<sup>1</sup>, D<sup>1</sup>, E<sup>1</sup>, B, and ordinary gas light or lime light modified by colored and darkened glass for the scene C, D, E, B.

25 The relative strength and quality of these lights I determine by experiment. It will thus be evident that by illuminating in the way I have described A, G, C<sup>1</sup>, F, and C, D, E, B, or C<sup>1</sup>, D<sup>1</sup>, E<sup>1</sup>, B, the entire scene will appear fully lighted to any spectator at S, and when the light is gradually transferred from C, D, E, B, to C<sup>1</sup>, D<sup>1</sup>, E<sup>1</sup>, B, or *vice versa*, the glass screen being in its position at A, B, and the  
30 one light not being lowered until the other is at full power there will be no apparent change of scenery or illumination to such a spectator at S. Furthermore in order to completely shut out all view of A, C, D, E, B, and to facilitate any requisite change being made therein I employ one or more opaque black screens moving parallel and silently behind and in close proximity to the glass screen A, B,  
35 and of sufficient size to completely cover the space behind. In order that the edge of the glass screen may not be observed as the glass screen is moved into position A, B, I cause the forward edge to be cut and polished at a similar angle to that formed by the glass across the stage, thereby approximately bringing the two edges of the thickness of the glass into the same line of sight to a spectator at S, when  
40 their extreme fineness renders them practically imperceptible.

In order that the edge or edges of the black screen or screens may not be observed when passed behind the glass I break up the same into a number of serrations or teeth of some six inches in depth, thereby causing the objects behind to be more gradually obscured or discovered than if the edge were straight; and I  
45 wish it to be distinctly understood that the black screen or screens must be only passed or withdrawn when the scene C<sup>1</sup>, D<sup>1</sup>, E<sup>1</sup>, B, is illuminated and the scene C, D, E, B, is darkened.

With the apparatus thus described my illusions may be performed in various ways. For example, having in the first place shown that the back scene  
50 C, D, E, B, is vacant and directly accessible I pass the glass screen to A, B, change the light from C, D, E, B, to C<sup>1</sup>, D<sup>1</sup>, E<sup>1</sup>, B, if necessary pass the black screen across, then place any desired person or object behind, withdraw the black screen and gradually change the lights, which will cause the appearance of such person or object gradually forming and growing out of blank space until  
55 completely solid. When the lights are finally altered I withdraw the glass screen, and the said person or object is at liberty to directly traverse any part of the stage or auditorium. By reversing this process a previously solid person or object may

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be made to fade gradually away and dissolve into void space, the audience being unaware of any change in illumination or scenery. By changing any person or object placed at any point P in C, D, E, B, to an exact duplicate at the corresponding point P<sup>1</sup> in C<sup>1</sup>, D<sup>1</sup>, E<sup>1</sup>, B, and then changing that duplicate to some third dissimilar person or object at P I effect the illusion of changing one solid person or object into another equally solid person or object.

Similarly any scene or scenery or part or parts of the same may be produced, dissolved, or changed as required.

By changing C, D, E, B, to C<sup>1</sup>, D<sup>1</sup>, E<sup>1</sup>, B, and then showing behind A, B, a person or object, part or parts of which are hidden by black screens or which are supported by black screens, I effect the illusion of showing part or parts of such person or object existing independently of the remainder, or floating in the air without apparent support, at the same time any assistant in C<sup>1</sup>, D<sup>1</sup>, E<sup>1</sup>, B, may perform any necessary movements for showing the same to be detached. These processes can be modified, alternated, or combined in any required way to suit the purpose of the operator.

Having thus described the nature of my Invention, and the manner in which the same is to be performed, I would remark that I do not confine myself to the precise details and effects herein given and described, nor do I limit myself to any precise arrangement of glass or glasses, nor of duplicate scene or scenes in producing my optical illusions in theatres or other suitable places, as such may be varied to suit the circumstances of particular cases.

What I claim is the apparatus for producing and working a variety of optical illusions, consisting mainly of the appearance, disappearance, or change of form, without apparent apparatus, and without apparent change or movement of scenery, or illumination, of solid and tangible persons or objects all directly accessible to the audience, which apparatus I believe to be an entirely new combination of a moveable and imperceptible glass screen passing between duplicate scenes or scenery, substantially as described, used in conjunction with opaque black screen or screens and in conjunction with a peculiar arrangement and modification of lights, substantially as described.

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