

No. 770,766.

PATENTED SEPT. 27, 1904.

J. MENCHEN.

METHOD OF PROJECTING IMITATIONS OF THE AURORA BOREALIS.

APPLICATION FILED DEC. 15, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

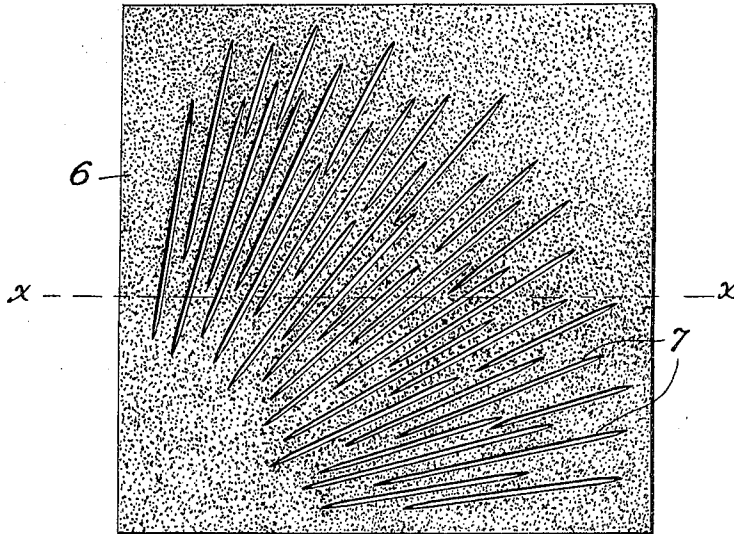


Fig. 2.

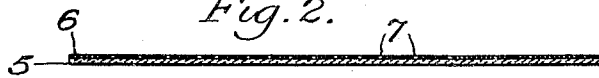


Fig. 3.

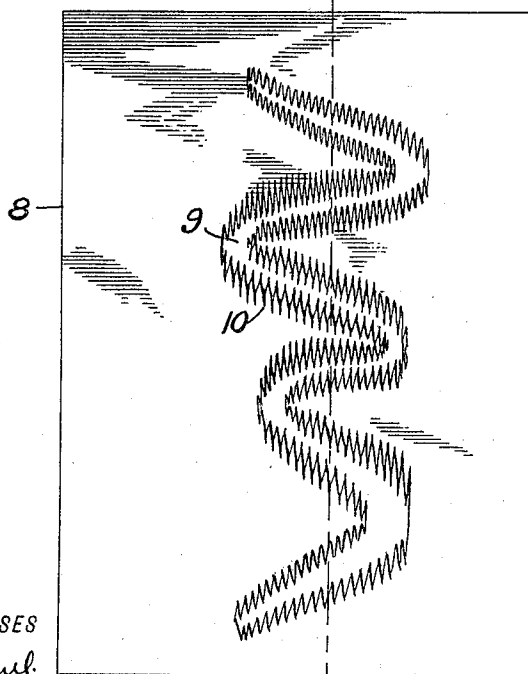


Fig. 4.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 5.

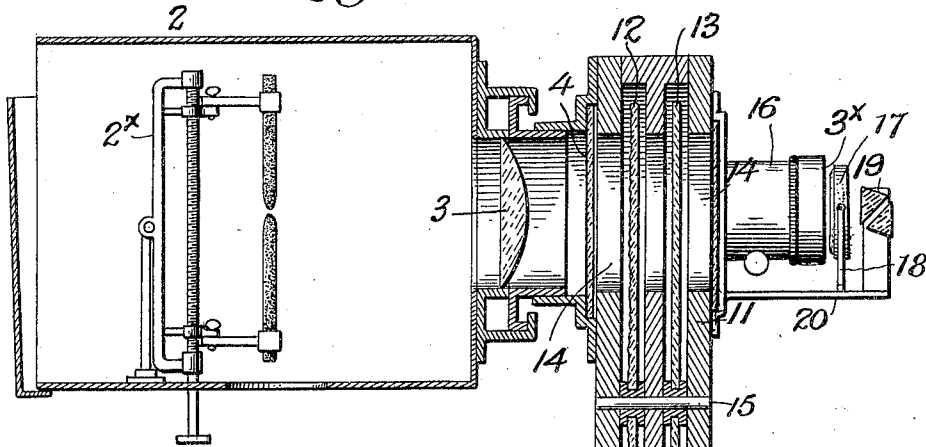


Fig. 6.

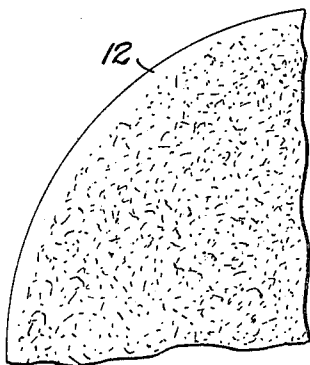
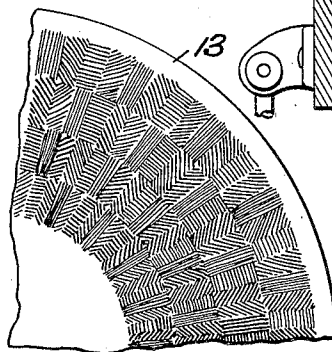


Fig. 7.



WITNESSES

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JOSEPH MENCHEN, OF NEW YORK, N. Y.

METHOD OF PROJECTING IMITATIONS OF THE AURORA BOREALIS.

SPECIFICATION forming part of Letters Patent No. 770,766, dated September 27, 1904.

Application filed December 15, 1903. Serial No. 185,218. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH MENCHEN, a citizen of the United States, residing in the city, county, and State of New York, have invented an Improved Method of Projecting an Imitation of the Aurora Borealis, of which the following is a full, clear, and exact specification.

My invention consists in representing upon screens, stage-settings, and the like an imitation of the aurora borealis by projecting light from any suitable source through means designed to conform the light to the contour of the aurora, to color and flicker it, if desirable, and to make the rays of light wide or narrow, short or long, as they strike the screen.

The object of the invention is to provide a method of this character which may be readily carried out and which while applicable for general amusement or instruction purposes is particularly adaptable to theatrical uses.

In the accompanying drawings, wherein like numerals of reference designate like parts throughout the several views, I have shown one of the forms of apparatus which may be used to effectively carry out my invention.

Figure 1 is a face view of one-half a screen designed to project a representation of an aurora having rays radiating from a central point. Fig. 2 is a cross-sectional view on the line *xx* of the screen shown in Fig. 1. Fig. 3 is a face view of an entire screen designed to project an aurora having substantially vertical rays. Fig. 4 is a vertical sectional view on the line *yy* of Fig. 3. Fig. 5 is a diagrammatic view of the apparatus for projecting the imitation aurora. Figs. 6 and 7 illustrate portions of transparencies employed in carrying out my improved method.

To make my invention understood, an explanation of the means shown in the accompanying drawings will be given.

2 represents a lens-box of any suitable construction having therein means, such as a carbon-lamp 2^x, for projecting light through the lens 3. The aurora-screen 4, which may be of the kind shown in either Figs. 1 or 2 or of any other suitable design, is interposed between the condenser-lens 3 and the screen or stage-setting upon which the imitation aurora

is to be shown. In the drawings the screen is represented as being in proximity to the condenser-lens; but it may with equal effect be placed on the outside of the case 11 near the objective tube 16. The aurora-screen 4 may be constructed of any suitable substance—such, for example, as glass or celluloid 5, having an opaque coating 6 and openings 7 for passage of the light—or it may be made of an opaque substance 8, such as metal, and have openings 9, with serrations 10, for allowing the light to pass through. The object is to have an opaque plate with transparent openings which will have the contour of the aurora borealis.

I provide special means independent of each other for coloring and flickering the light, which consist of a casing 11, containing transparencies 12 and 13. (Shown in the drawings as mounted upon a shaft 15.) The transparency 12 is a plate, disk, or like medium of crackled or fluted glass and is designed to “flicker” or “wave” the light coming from the lamp.

13 is a disk or the like colored with one or more colors, as shown in Fig. 7, and is provided for the purpose of coloring the light in its passage to the screen or stage-setting.

14 is a lens-opening in the casing 11, through which the light passes.

While for convenience the transparencies 12 and 13 are shown in the drawings as being rotatory, they may in practice be moved up and down or from side to side, as may best suit the purposes of the operator.

For the purpose of making the rays appear either wide or narrow or short or long as they strike the screen I place in front of the objective lens 3^x a disk or plate 17, having its surface ribbed and being revolvably mounted in a frame 18. According to the position into which disk 17 is turned, the rays will be shaped as desired. I also provide in front of the disk 17 glass prisms 19, carried by an angular support 20. The prisms may be substituted for the transparency 13 to color the light. Either the transparency or the prisms may be used at one time, but both should not be used together.

It will be understood that I may, if desired,

have one or more lens-openings, such as 14, in the casing 11, using as many lamps as there are openings, and that the devices herein shown may be varied in numerous particulars and my improved method of projecting an imitation of the aurora carried out.

The operation is as follows: The light is properly adjusted, then the aurora-screen 4 is put into place. If it is desired to merely color the aurora, the light is allowed to pass through the disk 13, which may or may not be moved, as preferred, or through the prisms 19. If it is also desired to give the aurora a flickering or wavy appearance, the light is passed through the disk or plate 12, which should be moved to give the desired effect. If now it is desired to make the rays long or short, wide or narrow, the light is also passed through the disk 17.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The method of producing an imitation of the aurora borealis for scenic effects consisting in projecting light through a screen with openings conforming to the outlines of the aurora, through a transparent substance of irregular surface or surfaces and through a colored transparency, substantially as described.

2. The method of producing an imitation of

the aurora borealis for scenic effects consisting in projecting light through an opening in a screen conforming to the outlines of an aurora, producing a flickering effect upon the light and coloring the same, substantially as described.

3. The method of producing an imitation of the aurora borealis for scenic effects consisting in projecting light through an opening in a transparency conforming to the outlines of an aurora, through a moving transparency of irregular surface to produce a flickering effect and through a moving colored transparency, substantially as described.

4. The method of producing an imitation of the aurora borealis for scenic effects consisting in projecting light through an object having an opening conforming to the shape of the aurora, and placing in the path of the light a fluted disk for flickering it, a ribbed disk for giving the rays of light the appearance of being long or short, wide or narrow and means for coloring the light, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

JOSEPH MENCHEN.

Witnesses:

WM. F. HALL,
H. A. LANE.