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Gergen

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(54) **ARTISTIC LIGHTING APPARATUS WITH CYLINDRICAL GOBOS**

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F21V 1/10 (2006.01)

(52) **U.S. Cl.**
USPC **362/217.02**; 362/233; 362/286; 362/272

(58) **Field of Classification Search** 362/217, 362/233, 272, 286
See application file for complete search history.

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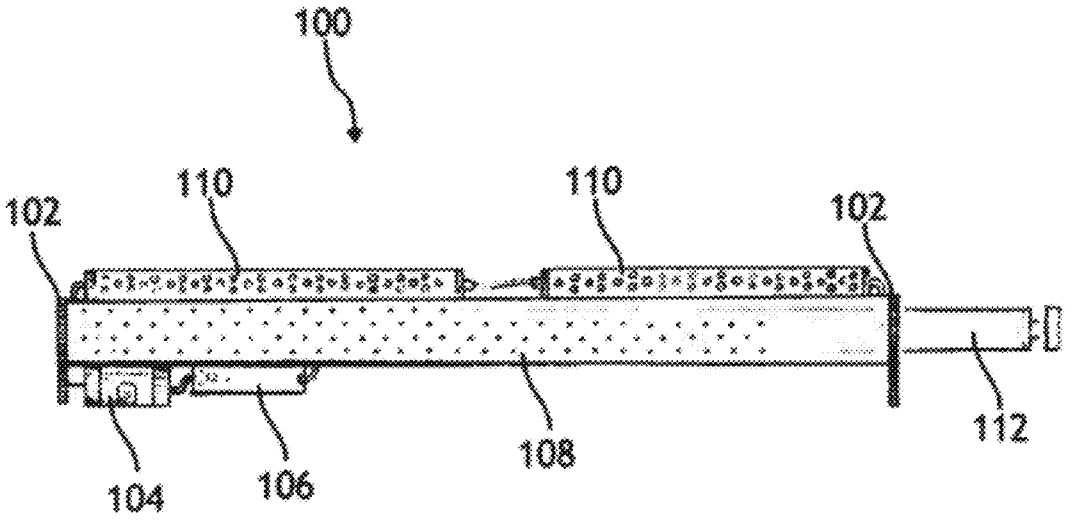
(57) **ABSTRACT**

A device for creating and enhancing a mood is disclosed. The device includes a cylindrical gobo with a light source and a motor to rotate the gobo. The device may also include color-changing LEDs. Through variations in color, light source intensity and gobo design, a user may create or enhance a desired mood in a room.

18 Claims, 3 Drawing Sheets



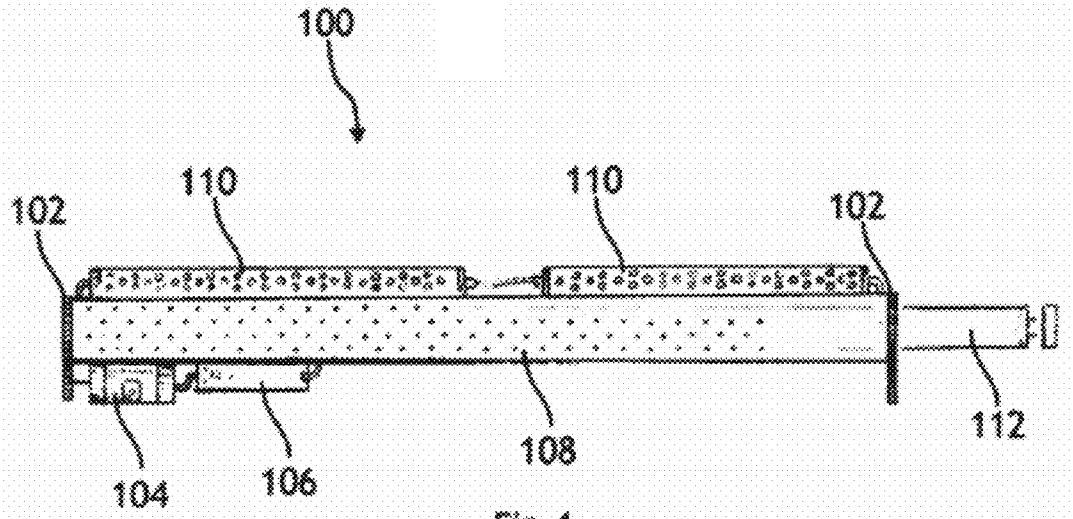


Fig. 1

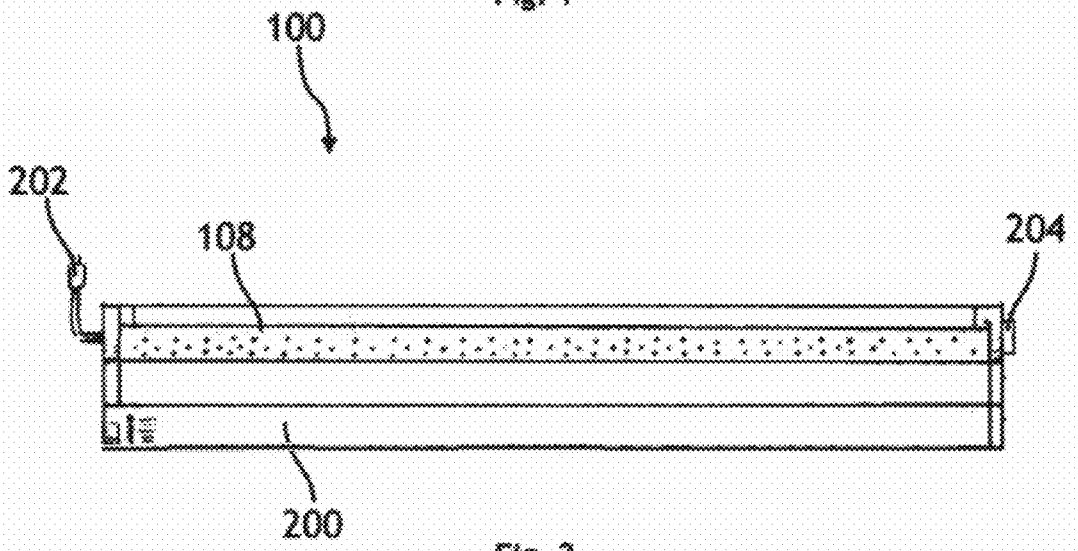


Fig. 2

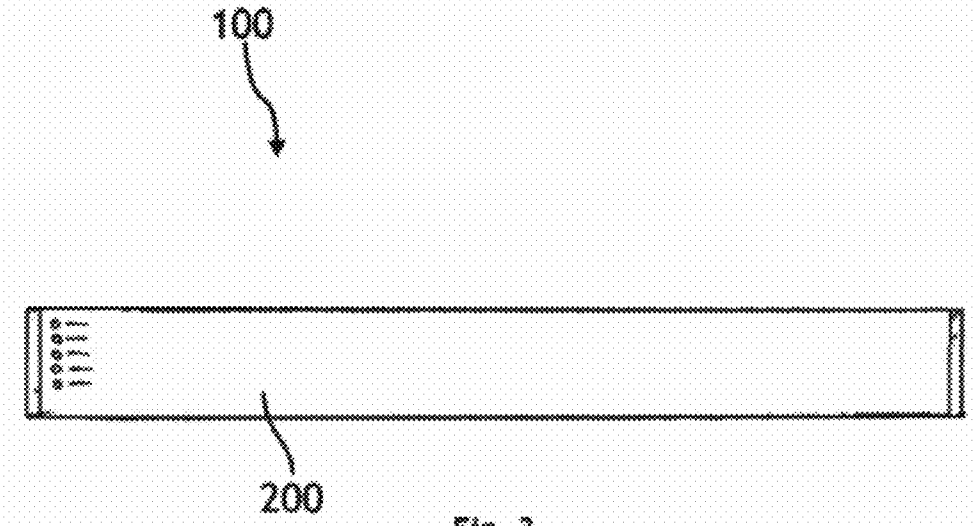


Fig. 3

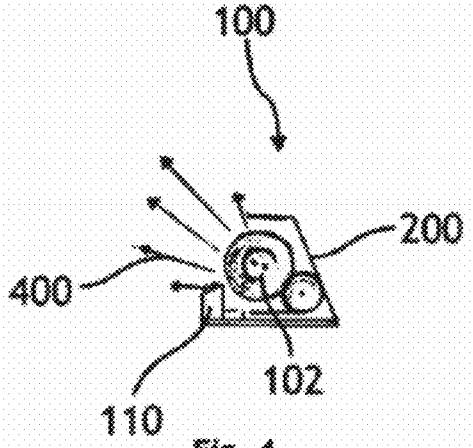


Fig. 4

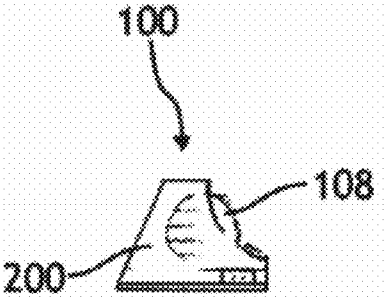


Fig. 5

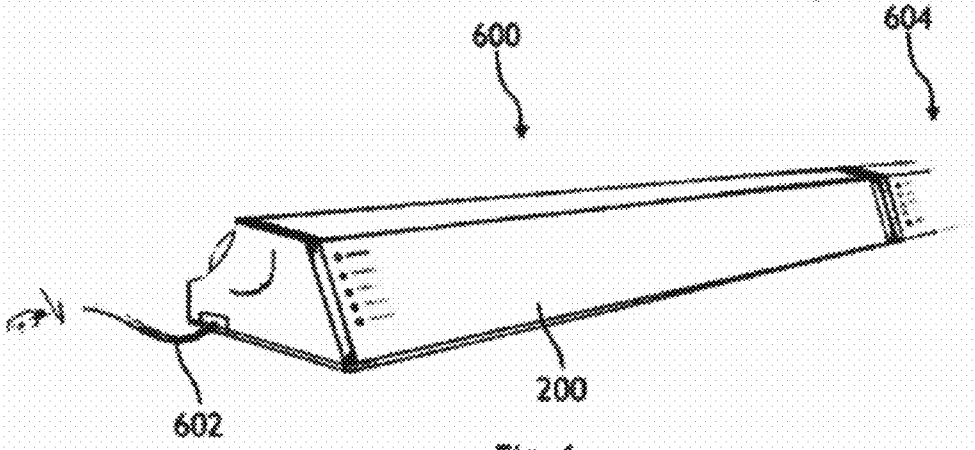


Fig. 6

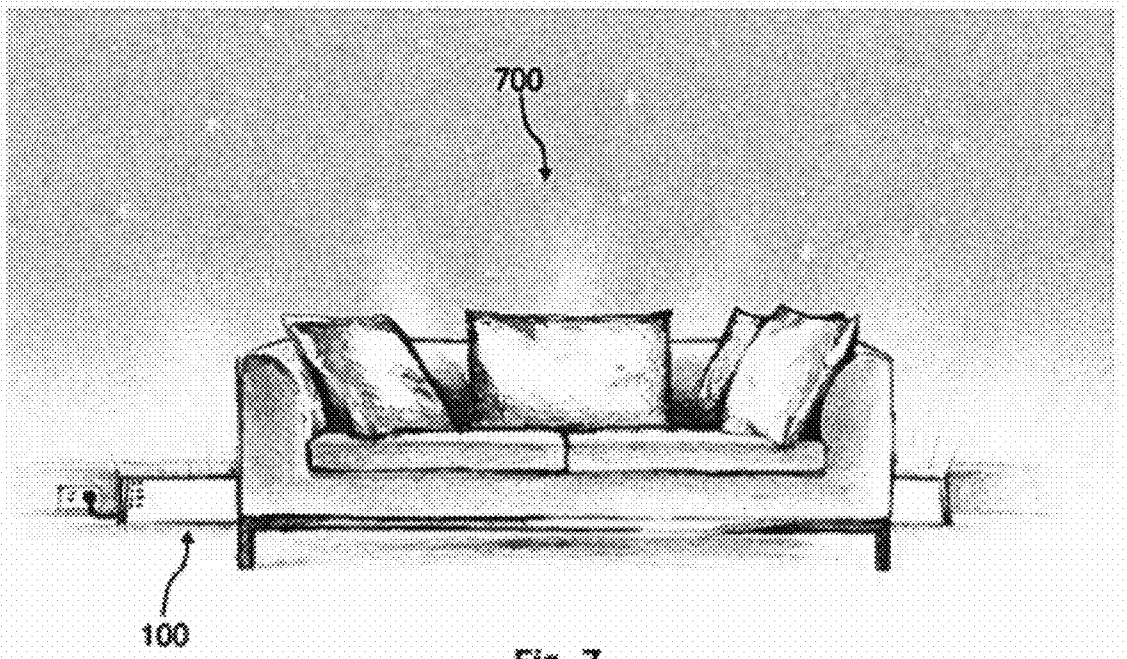


Fig. 7

ARTISTIC LIGHTING APPARATUS WITH CYLINDRICAL GOBOS

TECHNICAL FIELD

This disclosure relates to lighting systems, and particularly to artistic lighting systems for creating or enhancing a particular mood.

BACKGROUND AND PRIOR ART

Artistic lighting can create and enhance a particular mood in a particular environment. In the case of a single room, artistic lighting choices such as lighting color and intensity can create an atmosphere of calm, excitement, romance, etc.

One particular artistic lighting device is a gobo. A gobo (go between) is traditionally a metal disk with patterns cut out to let light pass through. A gobo is put into a holder and then placed in between a tight source and a surface onto which the pattern is to be projected. Gobos create stationary projections, but cannot create the impression of a dynamic environment.

SUMMARY

The present invention is an apparatus for providing dynamic, artistic lighting to a room. The apparatus comprises a cylindrical gobo functionally connected to a motor for rotating the cylindrical gobo. Light from a light source in the center of the cylindrical gobo passes through patterned openings in the gobo to form projected images on a surface.

The apparatus may also have color changing LEDs to further alter and enhance the effect created by the projected light patterns from the cylindrical gobo. Multiple devices may be connected together to project light patterns on a larger surface.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** shows a top sectional view of one embodiment of the present invention;

FIG. **2** shows a top view of the embodiment shown in FIG. **1**;

FIG. **3** shows a rear view of the embodiment shown in FIG. **1**;

FIG. **4** shows a side sectional view of the embodiment shown in FIG. **1**;

FIG. **5** shows a side view of the embodiment shown in FIG. **1**;

FIG. **6** shows a perspective view of the embodiment shown in FIG. **1**;

FIG. **7** shows a environmental view of the embodiment shown in FIG. **1**;

DETAILED DESCRIPTION

Reference will now be made in detail to the subject matter disclosed, which is illustrated in the accompanying drawings. The scope of the invention is limited only by the claims; numerous alternatives, modifications and equivalents are encompassed. For the purpose of clarity, technical material that is known in the technical fields related to the embodiments has not been described in detail to avoid unnecessarily obscuring the description.

Referring to FIG. **1**, one embodiment of an artistic lighting apparatus **100** according to the present invention includes a cylindrical gobo **108**. A gobo is a device known in the art for creating projected light patterns. Gobos are generally thin metallic structures with patterns cut into the surface to allow light to pass through. A user places a gobo between a light source and a surface onto which the user wishes the pattern projected. Gobos known in the art are flat metallic disks held in gobo holders. In the present invention, the cylindrical gobo **108** may be a metallic surface with patterns cut through the surface to allow light from a light source to pass through. The artistic lighting apparatus **100** may include an elongated light source **112** inside the cylindrical gobo **108**, such as a fluorescent tube or some other light emitting structure capable of illuminating the entire interior length of the cylindrical gobo **108** and projecting light onto a surface. The artistic lighting apparatus **100** may include a gobo rotating motor **104**. The gobo rotating motor **104** may be connected to one or more gobo rotating gears **102**, also connected to the cylindrical gobo **108**. The gobo rotating motor **104** may turn the gobo rotating gears **102**, and thereby turn the cylindrical gobo **108** about an axis defined by a centerline of the cylindrical gobo **108**. The artistic lighting apparatus **100** may include one or more color-changing LED lamps **110**, known in the art. Color-changing LED lamps **110** may project colored, unpatterned light onto a surface while the elongated light source **112** emits light through the cylindrical gobo **108** to project patterned light onto the same surface. The artistic lighting apparatus **100** may include a display control computer **106**, functionally connected to the gobo rotating motor **104**, the color-changing LED lamps **110** and the elongated light source **112**. The display control computer **106** may be programmed to operate the gobo rotating motor **104**, color-changing LED lamps **110** and elongated light source **112** according to a predetermined program. The display control computer may vary the speed of rotating of the cylindrical gobo **108** by varying the speed of rotation of the gobo rotating motor **104**; it may vary the color and intensity of the color changing LED lamps **110**; and it may vary the intensity of the elongated light source **112**.

Referring to FIG. **2** and FIG. **3**, the artistic lighting apparatus **100** may further include light obstructive housing **200** to define a direction for light emitted from the artistic lighting apparatus **100** to project onto a surface. The light obstructive housing **200** obstructs allows the user to position the artistic lighting apparatus **100** such that light may be projected onto a single surface and obscured form all other surfaces. The light obstructive housing **200** also provides a structure for mounting the gobo rotating motor **104** and the gobo rotating gears **102**. The light obstructive housing **200** also supports the cylindrical gobo **108**, because the cylindrical gobo **108** would be functionally connected to the gobo rotating gears **102**. The light obstructive housing **200** may also provide a housing for the color-changing LED lamps **110**, and support for the elongated light source **112**. The artistic lighting apparatus **100** may include a power input connector **202** such as a power cord, functionally connected to the display control computer **106**, and may include a pass-through power output connector **204** to connect a second artistic lighting apparatus.

Referring to FIG. **4** and FIG. **5**, the figures show a sectional view and side view of the artistic lighting apparatus **100** in operation. The light obstructive housing **200** obstructs light emanating from the elongated light source **112** and the color-changing LED lamps **110** except where the user has oriented the artistic lighting apparatus **100** to direct such light **400** toward a particular surface. The light obstructive housing allows the user to create a particular artistic affect, and contain the affect to a defined area.

Referring to FIG. **6**, in another embodiment, a user may connect a first artistic lighting apparatus **600** to an identical second artistic lighting apparatus **604**. In this embodiment,

the first artistic lighting apparatus **600** may include a detachable power cord **602**. The detachable power cord **602** would be detached from the second artistic lighting apparatus **604**. The first artistic lighting apparatus may have a pass-through power output connector **204** (not shown), that would engage a receptacle where the detachable power cord **602** would have been attached, and thereby provide power to the second artistic lighting apparatus **604**.

Referring to FIG. **7**, the artistic lighting apparatus **100** projects an artistic light display **700** onto a surface. The light display **700** may include various colors to create or enhance a particular mood. The light display may also change as the cylindrical gobo **108** rotates within the artistic lighting apparatus **100**.

Although the disclosure has been described in terms of specific embodiments, one skilled in the art will recognized that various modifications may be made that are within the scope of the present disclosure. Therefore, the scope of the disclosure should not be limited to the foregoing description. Rather, the scope of the disclosure should be determined based upon the claims recited herein, including the full scope of equivalents thereof.

What is claimed is:

1. An artistic lighting apparatus comprising:

a light obstructive housing for directing light from a cylindrical gobo and from one or more color-changing LED lamps inside the light obstructive housing toward a surface;

a cylindrical gobo for applying a pattern to light emitted from a light source, disposed inside the light obstructive housing;

an elongated light source for emitting light to pass through openings in the cylindrical gobo, disposed along an axis substantially defined by a centerline of the cylindrical gobo;

a gobo rotating motor for rotating the cylindrical gobo about an axis defined by a centerline of the cylindrical gobo; and

a power input connector for powering the elongated light source and the gobo rotating motor, functionally connected to the elongated light source and the gobo rotating motor.

2. The apparatus of claim **1**, further comprising a display control computer configured to control the speed of rotation of the gobo rotating motor, functionally interposed between the power input connector and the gobo rotating motor.

3. The apparatus of claim **1**, further comprising a display control computer configured to control the intensity of light emitted from the elongated light source, functionally interposed between the power input connector and the elongated light source.

4. The apparatus of claim **3**, further comprising a display control computer configured to control the speed of rotation of the gobo rotating motor, functionally interposed between the power input connector and the gobo rotating motor.

5. The apparatus of claim **1**, further comprising one or more color-changing LED lamps.

6. The apparatus of claim **5**, further comprising a display control computer configured to control the speed of rotation of the gobo rotating motor, functionally interposed between the power input connector and the gobo rotating motor.

7. The apparatus of claim **5**, further comprising a display control computer configured to control the intensity of light emitted from the elongated light source, functionally interposed between the input power connector and the elongated light source.

8. The apparatus of claim **7**, further comprising a display control computer configured to control the speed of rotation of the gobo rotating motor, functionally interposed between the power input connector and the gobo rotating motor.

9. The apparatus of claim **1**, further comprising:

a detachable power cord for powering the gobo rotating motor and the elongated light source, functionally connected to the power input connector; and

a pass-through power output connector for providing power to a second artistic lighting apparatus, functionally connected to the power input connector,

wherein the pass-through power output connector is configured to engage a power input connector of a second artistic lighting apparatus.

10. The apparatus of claim **9**, further comprising a display control computer configured to control the speed of rotation of the gobo rotating motor, functionally interposed between the power input connector and the gobo rotating motor.

11. The apparatus of claim **9**, further comprising a display control computer configured to control the intensity of light emitted from the elongated light source, functionally interposed between the power input connector and the elongated tight source.

12. The apparatus of claim **11**, further comprising a display control computer configured to control the speed of rotation of the gobo rotating motor, functionally interposed between the power input connector and the gobo rotating motor.

13. The apparatus of claim **9**, further comprising one or more color-changing LED lamps.

14. The apparatus of claim **13**, further comprising a display control computer configured to control the speed of rotation of the gobo rotating motor, functionally interposed between the power input connector and the gobo rotating motor.

15. The apparatus of claim **13**, further comprising a display control computer configured to control the intensity of light emitted from the elongated light source, functionally interposed between the input power connector and the elongated light source.

16. The apparatus of claim **15**, further comprising a display control computer configured to control the speed of rotation of the gobo rotating motor, functionally interposed between the power input connector and the gobo rotating motor.

17. An artistic lighting apparatus comprising:

a light obstructive housing for directing light from a cylindrical gobo and from one or more color-changing LED lamps inside the light obstructive housing toward a surface;

a cylindrical gobo for applying a pattern to light emitted from a light source, disposed inside the light obstructive housing;

an elongated light source for emitting light to pass through openings in the cylindrical gobo, disposed along an axis substantially defined by a centerline of the cylindrical gobo;

a display control computer, operably connected to the elongated light source, configured to:

control the speed of rotation of a gobo rotating motor;

control the intensity of the elongated light source; and

control the color and intensity of one or more color-changing LED lamps;

a gobo rotating motor for rotating the cylindrical gobo about an axis defined by a centerline of the cylindrical gobo, operably connected to the cylindrical gobo, and operably connected to the display control computer;

a power input connector for powering the elongated light source and the gobo rotating motor, operably connected to the display control computer;

one or more color-changing LED lamps for providing changing light colors, operably connected to the display control computer;

detachable power cord for powering the gobo rotating motor and the elongated light source, operably connected to the power input connector; and

a pass-through power output connector for providing power to a second artistic lighting apparatus, functionally connected to the power input connector,

wherein the pass-through power output connector is configured to engage a power input connector of a second artistic lighting apparatus.

18. An artistic lighting apparatus comprising:

an obstructing means for directing light from a patterning means and from one or more color-changing means inside the obstructing means toward a surface;

a patterning means for applying a pattern to light emitted from a light emitting means, disposed inside the obstructing means;

a light emitting means for emitting light to pass through openings in the patterning means, disposed along an axis substantially defined by a centerline of the patterning means;

a display control means, operably connected to the light emitting means, configured to:

control the speed of rotation of a rotating means;

control the intensity of the light emitting means; and

control the color and intensity of one or more color-changing means;

a rotating means for rotating the patterning means about an axis defined by a centerline of the patterning means, operably connected to the patterning means, and operably connected to the display control means;

a powering means for powering the light emitting means and the rotating means, operably connected to the display control means;

one or more color-changing means for providing changing light colors, operably connected to the display control means;

detachable power means for powering the rotating means and the light emitting means, operably connected to the powering means; and

a pass-through means for providing power to a second artistic lighting apparatus, functionally connected to the powering means,

wherein the pass-through means is configured to engage a powering means of a second artistic lighting apparatus.

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