United States Patent [19]

Newman et al.

[11] **3,790,772**

[45] **Feb. 5, 1974**

[54] **LIGHT BOX ASSEMBLY**

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[22] Filed: **May 18, 1972**

[21] Appl. No.: **254,490**

[52] **U.S. Cl.** ..... **240/10 R,** 40/130 R, 40/132 D

[51] **Int. Cl.** **F21p 1/02**

[58] **Field of Search** ..... 240/10 R, 10.1, 46.59; 40/130 R, 132 R, 132 D

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Attorney, Agent, or Firm—B. Edward Shlesinger, Jr. et al.

[57] **ABSTRACT**

This invention is a light box assembly which includes a box-like structure having interiorly mirrored walls. Multiple illuminating members are mounted on the walls within the box and interchangeable exterior wall panels are removably engaged with the box. Interior wall panels having cut-out portions are removably positioned within the box. The illuminating members are sequentially activated and deactivated and a constantly changing visual and color effect is thereby produced within the box itself, on the surface of the box and projected on surrounding walls and ceiling. Various effects are obtainable through the use of different interior and exterior wall panels.

18 Claims, 9 Drawing Figures

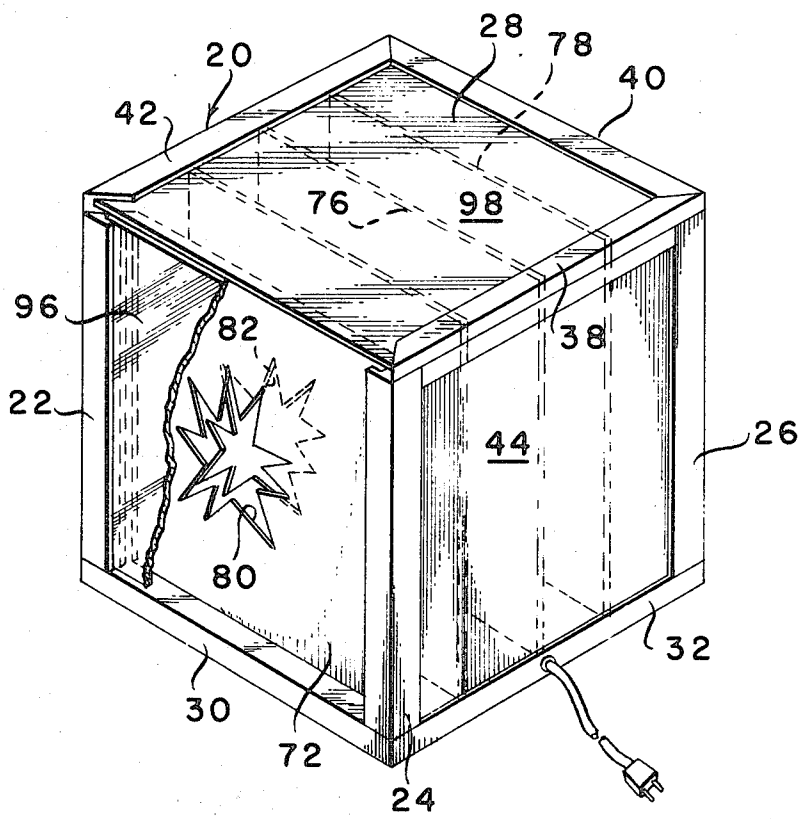


Fig. 1

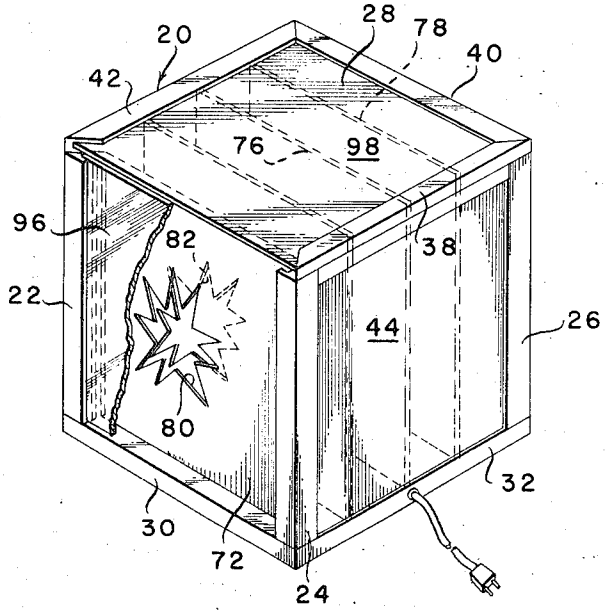

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Fig. 2

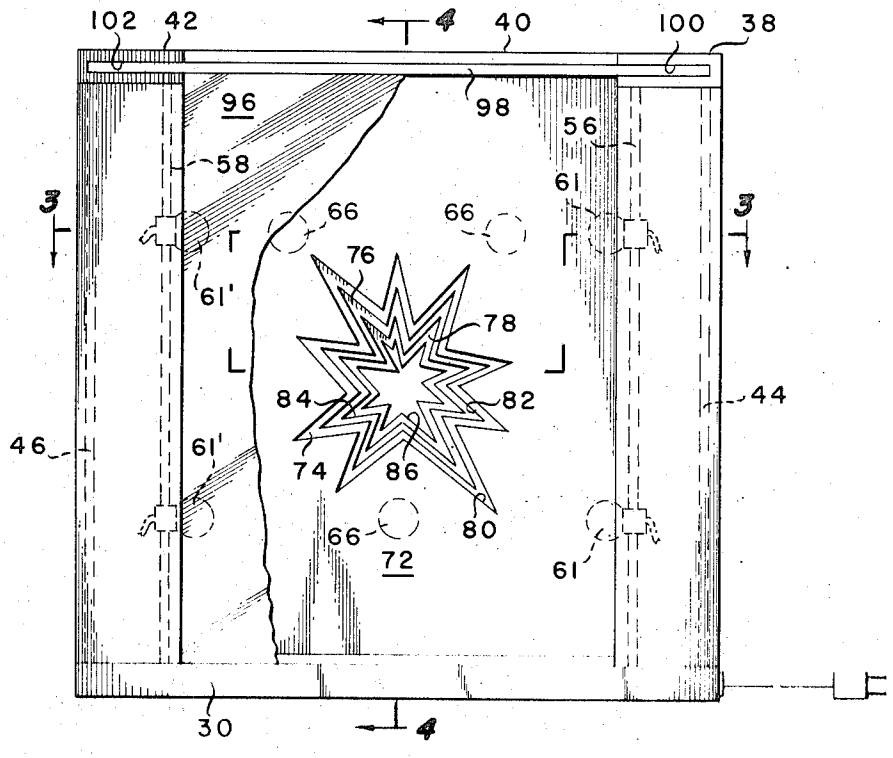

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Fig. 3

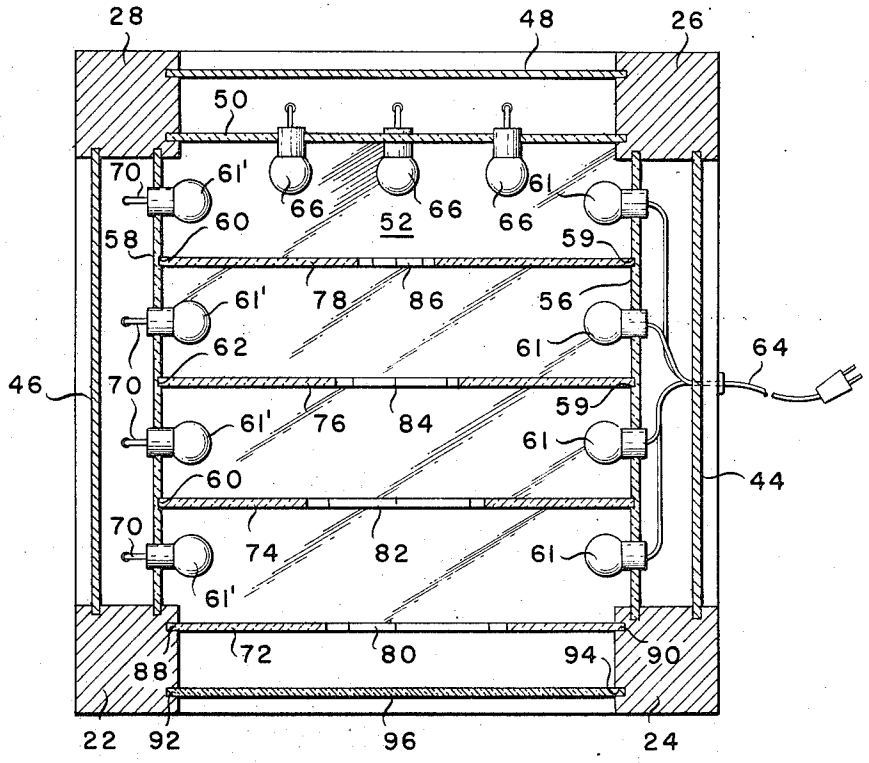

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Fig. 4

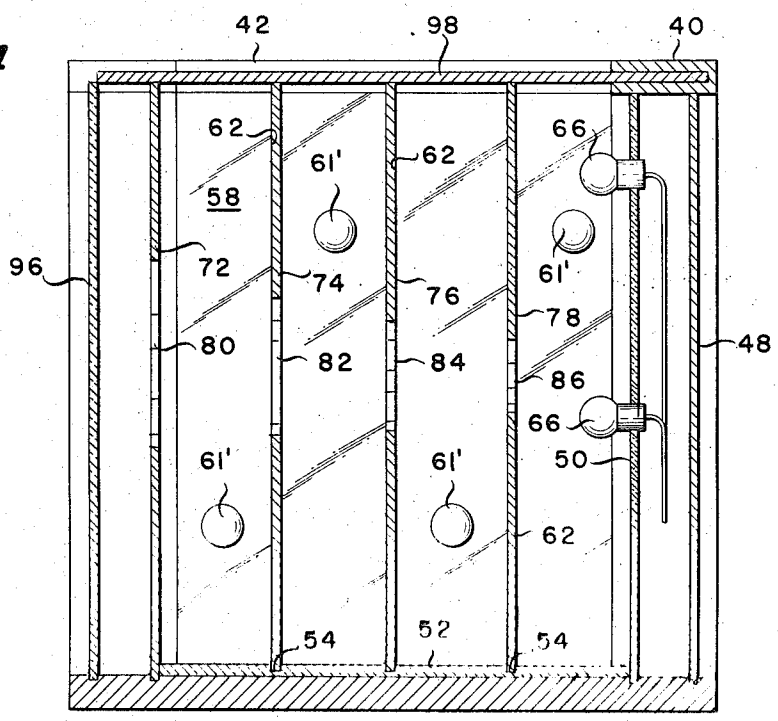
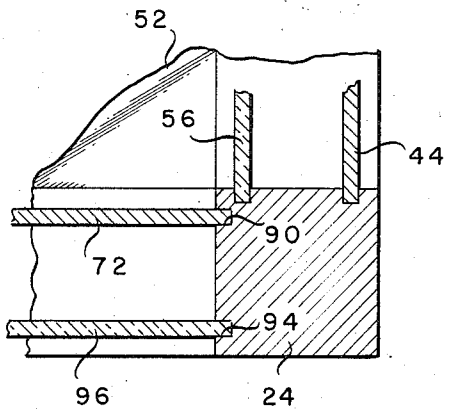

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Fig. 5



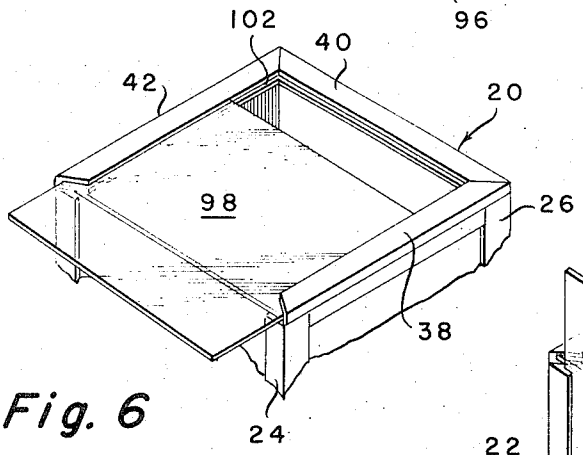
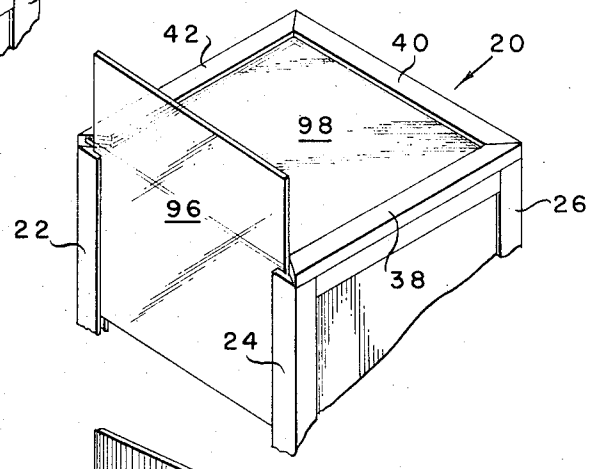


Fig. 6

Fig. 7



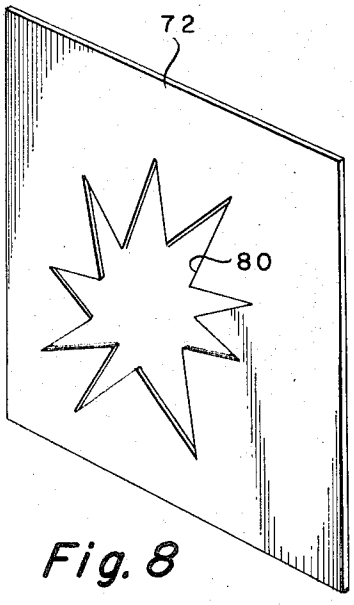


Fig. 8

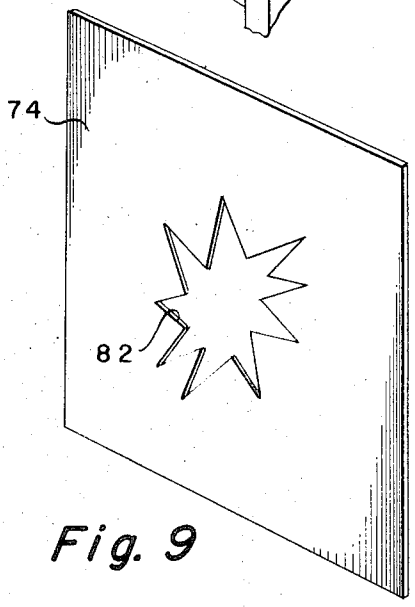


Fig. 9

LIGHT BOX ASSEMBLY

OBJECT OF THE INVENTION

It is an object of this invention to provide a light box assembly equipped with mirrors, sequentially activated and deactivated illuminating members and removable and interchangeable wall panels, the assembly producing everchanging animated light patterns and colors.

Another object is to provide a light box assembly of the kind described wherein exterior and interior wall panels may be selectively employed to produce a variety of visual effects with a minimum number of parts.

A further object is to provide a light box assembly of the kind here described wherein the exterior panels are interchangeable and comprise screens, two-way glass, plexiglass, translucent glass or mirrors and the interior walls comprise opaque panels of different colors having cut-out portions of geometric shape through which light from the sequentially operated illuminating members pass, the illuminating members preferably being of different colors to further enhance the effect produced by the assembly.

A still further object is to provide a light box assembly which may be economically manufactured and readily assembled, the assembly lending itself to use by itself, for incorporation in pieces of furniture, for ornamental use as a display case for merchandise, as an advertising device, etc.

Other objects will become apparent from the following description of the presently preferred form of this invention taken in conjunction with the appended drawings.

DESCRIPTION OF THE FIGURES OF THE DRAWINGS

FIG. 1 is a perspective view of the light box assembly of the present invention;

FIG. 2 is a front elevational view of the present invention, a portion of the front wall thereof being broken away to disclose details;

FIG. 3 is a sectional view taken along the line 3—3 of FIG. 2, looking in the direction of the arrows;

FIG. 4 is a sectional view taken along the line 4—4 of FIG. 2, looking in the direction of the arrows;

FIG. 5 is an enlarged fragmentary sectional view of a corner section of the assembly of the present invention;

FIG. 6 is a fragmentary view similar to FIG. 1, showing the removable top panel of the assembly partially removed;

FIG. 7 is a view similar to FIG. 6 showing the front panel of the assembly partially removed;

FIG. 8 is a perspective view of an interior wall panel forming a part of the present invention; and

FIG. 9 is a view similar to FIG. 8 showing a second/interior wall panel employed in connection with the wall panel of FIG. 8.

DESCRIPTION OF THE INVENTION

The light box assembly of the present invention preferably includes a box generally designated **20** which is of cube shape and includes four vertical corner posts **22, 24, 26** and **28.** The lower terminals of posts **22, 24, 26** and **28** are joined by a series of rails or frame members **30, 32, 34,** and **36.** The terminals of the rails or frame members are mitered for appearance and for facility in connecting the frame members to each other and to the lower terminals of the corner posts.

The upper end of box **20** is further provided with a series of connecting rail members or frames joining the upper extremities of corner posts **22, 24, 26** and **28.** Frame member **38** joins post **24** to **26,** frame member **40** joins post **26** and **28** and frame **42** joins post **28** to post **22.** No frame member is provided between the upper terminals of posts **22** and **24.**

Exterior side panels are indicated at **44** and **46,** the lateral portions thereof being fixedly embedded in corner posts **22, 24, 26** and **28.** A back wall panel is designated **48,** and the lateral extremities thereof are embedded in corner posts **26** and **28.**

An interior back wall panel is indicated at **50** which is in spaced relation to exterior panel **48,** and the lateral extremities thereof are embedded in corner posts **26** and **28.** The interior wall surface of panel **50** is of a reflective material for purposes which will be hereinafter more fully set out. A bottom wall panel is indicated at **52** which panel is preferably supported by the lower side rails as indicated in FIG. **4.** of bottom panel **52** is also preferably of a reflective material, and is provided with a plurality of spaced, parallel, transverse grooves **54,** also shown in FIG. **4.**

Interior side wall panels are indicated at **56** and **58,** the lateral extremities of which are fixed in corner posts **22, 24, 26** and **28.** Side panel **56** is provided with a series of spaced, parallel, vertical grooves **59** which are in opposed relationship to corresponding grooves **60** in side panel **58.** The interior faces of both side panels are of a reflective material.

As shown in FIGS. **3** and **4,** a series of light bulbs **61** are engaged with electrical sockets **62** mounted in spaced relationship in panels **56,** one light bulb being preferably located within each section as defined by longitudinal grooves **59** but in spaced vertical relationship to each other. An electrical line **64** connects the sockets to a source of electrical energy. Side panel **58** is likewise provided with a plurality of light bulbs **61'** mounted in sockets **62'** in opposed relationship to bulbs **61** of panel **56,** which bulbs are likewise connected to electrical line **64** by feeder lines **64'.** Back wall panel is also provided with a plurality of light bulbs **66** mounted in sockets **68** and connected to electrical line **64** by feeder lines **70.**

Light bulbs **61, 61'** and **66** are preferably of the blinker type whereby they are sequentially activated and deactivated in order to produce a unique visual and color pattern.

In conjunction with the arrangement of lights, it is further an object of this invention to provide a series of interior wall panels designated **72, 74, 76** and **78** which may be of any desired color or colors, each of which is provided with a cut-out portion **80, 82, 84** and **86.** Panels **74, 76,** and **78** are held in spaced parallel relationship within the assembly by virtue of the insertion of the lateral extremities thereof in opposed grooves **59** and **60** in side panels **56** and **58.** It will be noted from FIGS. **3, 4, 8** and **9** that geometrical cut-out portions **80** and **82, 84** and **86** are preferably of decreasing size from the front of the assembly to the back thereof in order to produce the desired visual effect. The cut-out portions may assume many various shapes for producing different color patterns.

It wil be further noted from FIG. **3** that interior wall panel **72** is removably mounted in the box assembly by

virtue of vertical grooves **88** and **90** located in corner posts **22** and **24.** Corner posts **22** and **24** are provided with a second set of spaced opposed vertical grooves **92** and **94** which are adapted to receive a removable front panel **96** which is preferably of a translucent or transparent glass in order to observe visually the various effects produced by the flashing light bulbs, removable interior wall panels and the reflective surfaces within the box assembly. However, when desired, an opaque or combination opaque and translucent panel may be employed.

In addition to the removable front panel, it is also within the contemplation of the present invention to provide a removable top panel which is slideable in grooves **100** and **102** of upper side rails **38** and **42.** Top panel **98** is also preferably of transparent or translucent glass in order to either project the light patterns on the ceiling or in the case of a translucent glass member, to produce a striping effect when the interior wall panels are in place or a multi colored animated effect when the panels are removed. However, an opaque or a combination opaque and translucent panel may be employed when desired.

In use of the assembly of the present invention, many variations in the light patterns and colors are obtained by the blinking colored lights, the insertion and removal of the interior wall panels and replacement of top and front panels, e.g., translucent, transparent, plexiglass or two-way glass panels.

An example of the visual effect obtained is illustrated in FIG. **2** wherein the cut-out sections of the interior wall panels in conjunction with the blinking colored lights and the mirrors produce a depth effect as well as creating colorful and unique colored geometric patterns which are constantly changing to provide an animated effect.

It will be apparent from the foregoing description that many visual and color effects are obtainable by inserting and removing interior and exterior panels. One effect is the "sunburst effect" wherein light is reflected and mixed with the colors of the interior wall panels in a three dimensional pattern of everchanging colors.

A second effect is the "mystic light" wherein light is projected around the silhouette of the interior wall panels producing color mixtures on a translucent front panel.

A third effect is the "projector effect" whereby silhouetted patterns on the top and sides of the assembly project colored patterns on the wall and ceiling of a room. An infinity effect is produced by use of a two-way mirror. Looking into the box through the two-way mirror, an infinite number of blinking lights is seen.

Plexiglass sheets employed as the top and front panels produce geometrical shapes of colored light on the surface of the box.

With this invention, therefore, the mirrors, blinking colored lights and the removable panels, both exterior and interior, cooperate to produce everchanging and animated color patterns which are esthetically appealing and attractive.

The assembly of the present invention lends itself to multiple uses as an entertainment entity, an advertising entity, for medical purposes, etc. In these capacities, it may be used by itself, incorporated in furniture such as end tables, a coffee table or a stereo unit, as a display for merchandise, a package for Christmas lights, a Christmas decoration and a gameboard. It further has a medical application as a sleep or hypnosis inducer, as a mood establisher for soothing the ill, and as a meditation box.

While there has been herein shown and described the presently preferred forms of this invention, it is to be understood that such has been done for purposes of illustration only, and that various changes may be made therein within the scope of the appended claims.

What we claim is:

1. A light box assembly including:
a. a box-like structure having a plurality of wall panels,
b. the interior surface of at least one of said wall panels being of a reflective material,
c. at least one other of said wall panels being of a light transmitting material,
d. a plurality of illuminating lights mounted on at least one of said wall panels, removable interior wall panels positioned within said box-like structure in spaced, parallel relationship to said light-transmitting material,
e. said interior wall panels having aligned cut-out portions through which light is transmitted,
f. said illuminating lights being positioned between said interior wall panels, and
g. means for activating said illuminating lights.

2. The light box assembly of claim **1,** with the addition of:
a. means for sequentially activating and deactivating said illuminating lights.

3. The light box assembly of claim **2,** wherein:
a. said illuminating lights are of different colors.

4. The light box assembly of claim **1,** wherein:
a. said light-transmitting panel is removable.

5. The light box assembly of claim **4,** with the addition of:
a. a plurality of removable wall panels of at least partially translucent and transparent material selectively employed as the light-transmitting panel.

6. The light box assembly of claim **1,** wherein:
a. a second wall panel is of a light-transmitting material.

7. The light box assembly of claim **6,** wherein:
a. said second wall panel is removable.

8. The light box assembly of claim **7,** with the addition of:
a. a plurality of wall panels of translucent and transparent material selectively employed as the light transmitting second wall panel.

9. The light box assembly of claim **1,** wherein:
a. said cut-out portions comprise geometric designs of progressively reduced size from the front to the back of the assembly.

10. The light box assembly of claim **1** wherein:
a. the interior surfaces of a plurality of said wall panels are of a reflective material.

11. The light box assembly of claim **1,** wherein:
a. illuminating lights are positioned on opposed wall panels.

12. A light box assembly including:
a. a box-like member having side, back, front, bottom and top wall panels,
b. the interior of a plurality of said wall panels being of reflective material,
c. a plurality of spaced illuminating lights of different colors mounted on the interior surfaces of said side panels,

d. said front wall panel being of a light transmitting material,

e. a plurality of interior wall panels removably inserted in said box-like structure in spaced, parallel relationship to each other and to said front wall panel,

f. Said illuminating lights being positioned between said removable interior wall panels, and

g. means for sequentially activating and deactivating said illuminating lights,

h. each of said interior wall panels having cut-out portions through which the colors from said illuminating lights are transmitted, whereby different colored animated light patterns are viewed through said front wall panel.

13. The light box assembly of claim **12,** wherein:

a. said front wall panel is removable.

14. The light box assembly of claim **13,** with the addition of:

a. a plurality of at least partially translucent and transparent panels selectively employed as said front wall panel.

15. The light box assembly of claim **12,** wherein:

a. The interior surface of said back, bottom and side panels are of a reflective material.

16. A light box assembly including:

a. a box-like member having side, back, front, bottom and top wall panels,

b. said top panel being removable,

c. the interior of a plurality of said wall panels being of a reflective material,

d. a plurality of spaced illuminating lights of different colors mounted on the interior surfaces of said side panels,

e. said front wall panel being of a light-transmitting material,

f. means for sequentially activating and deactivating said illuminating lights, and

g. a plurality of interior wall panels removably inserted in said box-like stucture in spaced, parallel relationship to each other and to said front wall panel,

h. each of said interior wall panels having cut-out portions through which the colors from said illuminating lights are transmitted, whereby different colored animated light patterns are viewed through said front wall panel upon sequential activation and deactivation of said illuminating lights.

17. The light box assembly of claim **16,** with the addition of:

a. a plurality of at least partially transparent panels selectively employed as said top panel.

18. A light box assembly including:

a. a box-like member having side, back, front, bottom and top wall panels,

b. the interior of a plurality of said wall panels being of reflective material,

c. a plurality of spaced illuminating lights of different colors mounted on the interior surfaces of said side panels,

d. said front wall panel being of a light-transmitting material,

e. means for sequentially activating and deactivating said illuminating lights,

f. a plurality of interior wall panels removably inserted in said box-like structure in spaced, parallel relationship to each other and to said front wall panel,

g. said interior wall panels having cut-out portions through which the colors from said illuminating lights are transmitted,

h. said interior wall panels being of different colors and said cut-out portions progressively decreasing in size from the front to the back of the assembly, whereby different colored animated light patterns are viewed through said front wall panel upon sequential activation and deactivation of said illuminating lights.

* * * * *