Jan. 26, 1965 I. HARPER 3,167,257

LANTERN TYPE LIGHTING FIXTURE

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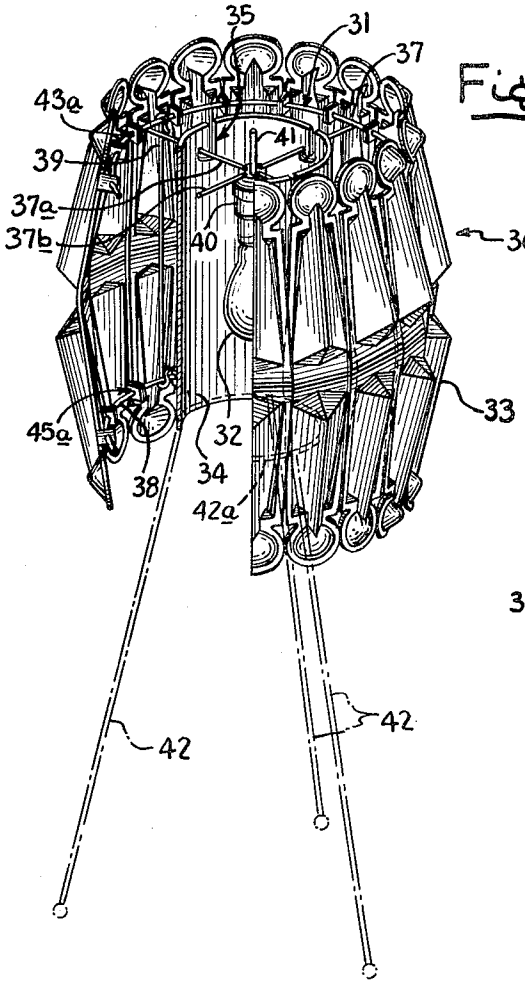


Fig. 1

Fig. 2

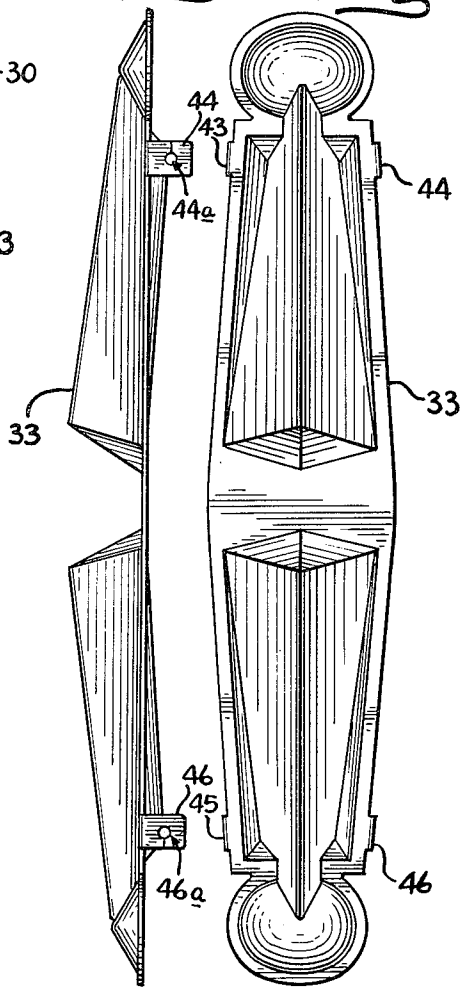
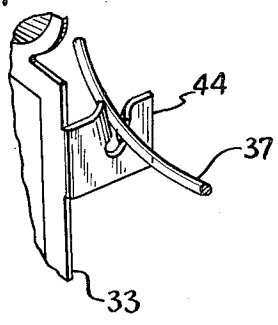


Fig. 3

Fig. 4



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Fig. 10

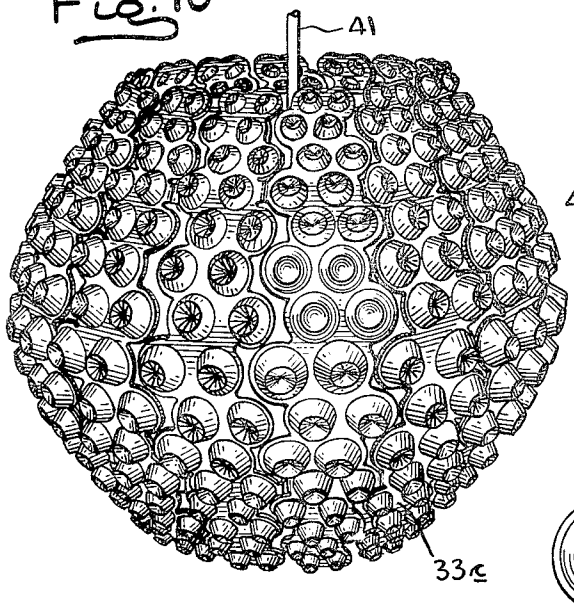


Fig. 11

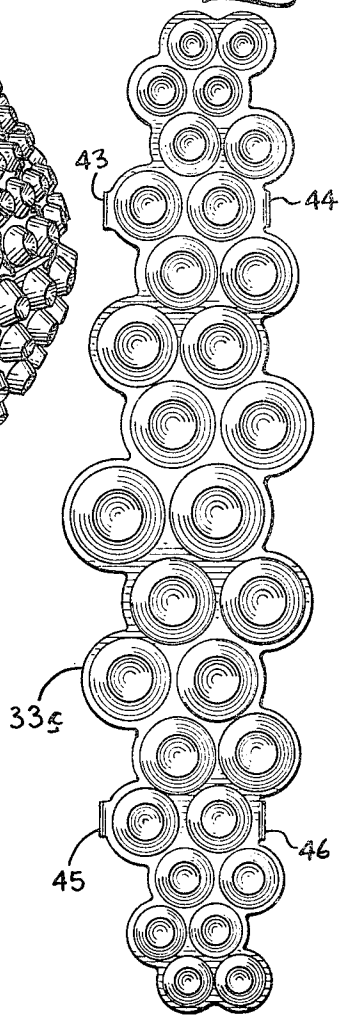


Fig. 12

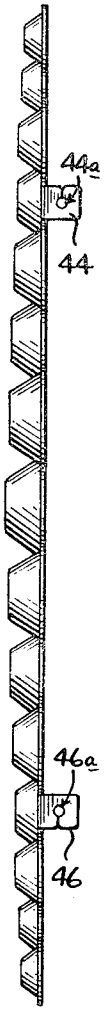
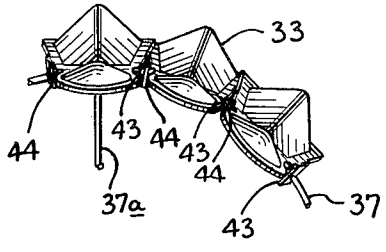


Fig. 5



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Fig. 6

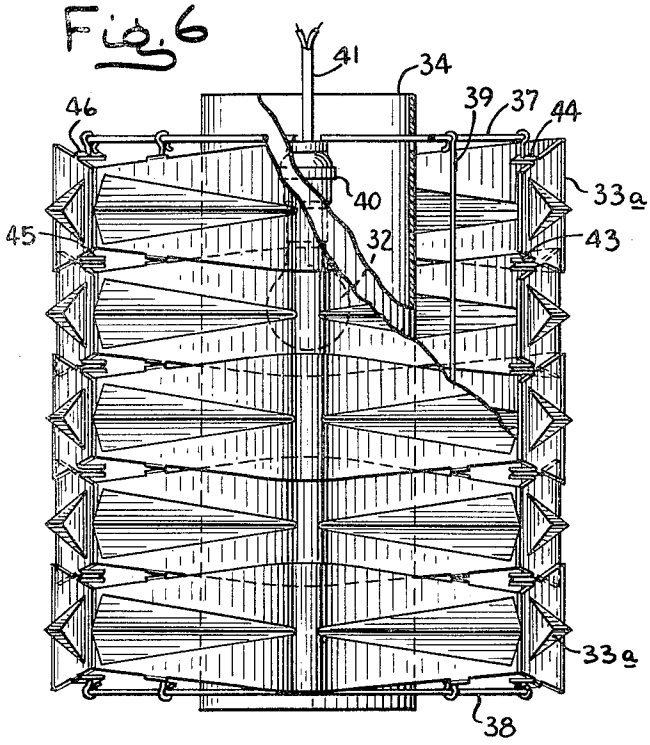


Fig. 7

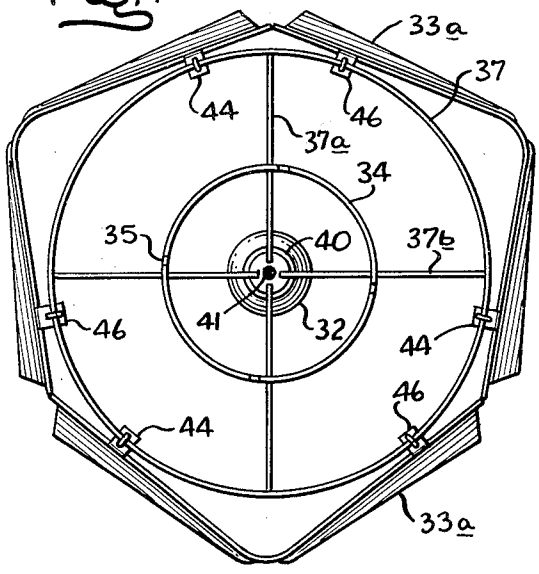


Fig. 9

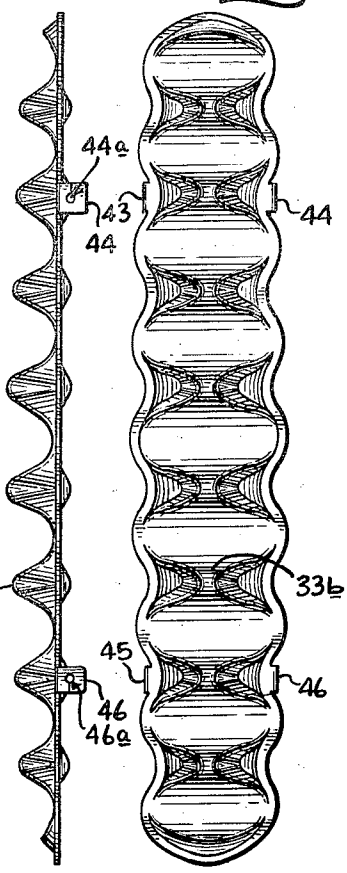


Fig. 8

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LANTERN TYPE LIGHTING FIXTURE

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Filed July 18, 1962, Ser. No. 210,730
2 Claims. (Cl. 240—10)

The present invention relates generally to lighting fixtures and more particularly to lighting fixtures of the lantern type fashioned of a plurality of elements.

It is an object of the present invention to provide a new and improved lighting fixture structure of unique and decorative form which permits of alternative fabrication in predetermined forms by appropriate selection of various elements so as to effect different appearances.

It is another object to provide a lantern type lighting fixture adapted for alternative depending support or upstanding support.

It is a related object to provide a lighting fixture as described above which permits of economical manufacture, is easy to clean and is durable.

Other objects and advantages of the invention will become apparent from the following detailed descripton and upon reference to the accompanying drawings, in which:

FIGURE 1 is a perspective view with a cutout section of the lantern type lighting fixture constructed in accordance with the present invention;

FIG. 2 is an enlarged elevation of an element of the lantern type lighting fixture of FIG. 1;

FIG. 3 is a front elevation of the element shown in FIG. 2;

FIG. 4 is an exploded fragmentary section of an element tab;

FIG. 5 is an enlarged fragmentary section taken from the top of FIG. 1 showing the element tabs mounted on the upper frame member;

FIG. 6 is a front elevation with a fragmentary section removed of an alternative embodiment of the present invention using a second element form;

FIG. 7 is a top view of the lantern type lighting fixture of FIG. 6;

FIG. 8 is a front elevation of a third form of an element constructed in accordance with the present invention;

FIG. 9 is a side elevation of the element of FIG. 8;

FIG. 10 is a front elevation of another exemplary embodiment of the present lantern type lighting fixture using a fourth element form;

FIG. 11 is a front elevation of the fourth element form; and

FIG. 12 is a side elevation of the element of FIG. 11.

While the invention has been described in connection with certain preferred embodiments, it is to be understood that it is not thereby intended that the invention be limited to the particular illustrated embodiments. On the contrary, it is intended to cover all modified forms and alternative constructions that are included within the spirit and scope of the appended claims.

Referring more particularly to the drawings, shown in FIG. 1 is a lantern type lighting fixture **30** embodying the present invention. The fixture includes a framework **31**, surrounding a light source **32** and having mounted thereon translucent elements **33**.

One exemplary form of the element **33** is shown in FIGS. 1–5. Three other exemplary forms of translucent elements **33***a*, **33***b*, and **33***c* are shown in FIGS. 6–12. The length and width dimensions, as shown, of each of the elements are in approximately the same proportion with the length being several times the width. The latter dimension in the illustrative forms is not uniform throughout the length of the element, but the elements are wider at the center.

A feature which is generic lies in the fashioning of the individual elements to provide surface portions which are disposed in predetermined angular relationship to each other. Thus, the translucence of the elements varies when they are viewed from different positions with respect to the background light source **32**. More particularly, of the surface structures of the four exemplary element forms here shown, element **33** in FIGS. 1–5 is shaped to provide a pair of integral pyramidal embossments extending toward each other from conical end portions. Similarly, reverse embossments, or valleys, are provided along the longitudinal edges of the pyramids.

In FIGS. 6 and 7 the exemplary element form **33***a* there shown has a pair of pyramid-shaped portions extending toward the ends without the valleys along the longitudinal edges and the conical-shaped end portions as in element **33**. In FIGS. 8 and 9 an element **33***b* is embossed so as to present a plurality of valleys running transversely of the element and a series of centrally raised portions longitudinally along the element **33***b* defining the valleys. On either side of the raised portions and extending toward the longitudinal side edges of the element **33***b* are a series of depressions. In another exemplary form, which is shown in FIGS. 10–12, the translucent element **33***c* is provided with staggered rows of frustoconical embossments, with the diameters of those embossments that are adjacent the ends being less than those in the central portion. It is apparent from the foregoing that many forms are available and each of them provides a plurality of surfaces which are disposed in a predetermined angular relationship and provide a distinctive pattern of illumination.

The framework **31** upon which the translucent elements are mounted includes an upper frame portion **37** and a lower frame portion **38** held in spaced relationship by struts **39**. The upper portion **37** of the framework **31** also includes cross-members **37***a* and **37***b*. Means are provided for fastening the translucent elements to the framework **31**. As shown this means comprises pairs of tabs **43**, **44** and **45**, **46** laterally spaced adjacent each end of the respective elements for attachment to the frame members.

Each of the element tabs **43**, **44** and **45**, **46** are provided with slotted apertures **43***a*, **44***a* and **45***a*, **46***a*, respectively, to provide slip-on engagement of the tabs onto the frame members. By flexing the tabs so as to widen the individual slot openings, the structural frame members can be slipped through the slots until they seat in the respective tab apertures (see FIG. 4), whereupon the tabs flex back to normal condition in which the slot is closed and the structural member is gripped positively by the tab.

In accordance with another feature of the invention, the elements can be mounted either longitudinally (FIGS. 1, 10) or transversely (FIGS. 6, 7) of the central axis of the supporting framework to provide predetermined, alternative, three-dimensional geometrical shapes. As shown in FIGS. 1 and 10, the lantern has a barrel shape with the elements **33** and **33***c* mounted so as to flex outwardly. In effecting this result, either the struts **39** are equally shortened or the distance between opposite pairs of tabs **43**, **44** and **45**, **46** of the individual elements **33** are equally increased. As has been noted, the elements are wider in the center. Thus, with the elements centrally flexed, contiguous edges of adjacent elements abut one another. Alternatively, they may be placed so that their central portions overlap to provide additional material thickness and add shadow designs. A drum shaped fixture results, it will be apparent, when the struts are sub-

stantially equal to the distance between opposite pairs of the mounting tabs so that upon engagement with the frame members the elements **33** have substantially no central flexing. By way of illustration, such a lantern type fixture having a drum shape is disclosed in FIGS. 6 and 7 wherein the elements **33***a* are mounted transversely with respect to the central longitudinal axis of the fixture. On the latter construction, the tabs **43**, **44** and **45**, **46** grip the struts **39** and the adjacent ends of the elements abut surrounding the central framework axis.

In the illustrative fixtures the light source **32** comprises an incandescent bulb which is received in a centrally mounted socket **40** supported by the cross-members **37***a*, **37***b* of the framework **31**. To enhance uniformity of illumination, a light diffuser **34** is interposed between the light source **32** and the framework-mounted elements 33. The diffuser is formed of uniformly translucent material and preferably is constructed with bayonet slots **35** for depending mounting upon the cross-members **37***a*, **37***b*.

As another feature of the present invention the fixture can be alternatively supported from above as by a cord **41** or from below. In the latter instance upstanding support might be provided by a pedestal including upstanding tripod legs **42** and a top ring **42***a* as shown in broken lines in FIG. 1 with the diffuser **34** resting upon the ring.

Lighting fixtures embodying the teachings of the present invention present different designs according to the choice of element form which permits of mounting in a variety of ways on selected framework structures to provide individually attractive appearances. The elements can take a variety of shapes and forms. By surrounding the light source **32** with these elements having their angularly disposed surfaces, the thickness of translucent element material interposed between a viewer and the light source is non-uniform. To provide other areas of reduced light intensity, the elements can be mounted so that the central marginal portions overlap. Thus light must penetrate a double layer of element material in those areas. As can be seen in FIGS. 1, 6 and 7 additional reduced light intensity areas are provided to the lantern design. Accordingly, an attractive, predetermined design as define by the areas of varying degrees of transmitted light is presented to the viewer.

I claim as my invention:

1. In a lantern type lighting fixture for use with a source of light comprising in combination, a supporting structure including an upper frame member, a lower frame member, strut members interposed between said frame members for maintaining them in spaced relation, a light diffuser mounted on said supporting structure and surrounding the light source, and a series of independent elongated translucent light diffusing elements, each element being of substantially uniform thickness throughout and fashioned with angularly disposed surfaces to vary the translucence of elements as viewed against the light source background, each of said elements having at least one tab adjacent each of the opposite ends thereof, and each of said tabs having a slotted aperture therein for gripping engagement with one of said members.

2. In a lantern type lighting fixture for use with a source of light comprising in combination, a supporting structure including an upper frame member, a lower frame member, strut members interposed between said frame members for maintaining them in spaced relation, a light defuser mounted on said supporting structure for surrounding the light source, and a series of independent elongated translucent light diffusing elements fashioned with angularly disposed surfaces to vary the translucence of elements as viewed against the background of diffused light, each of said elements having a central portion and opposite end portions with an integral tab adjacent each of the opposite ends thereof, each of said tabs having a slotted aperture therein for gripping engagement with one of said members, said elements being wider at their central portions than at their ends to add shadow designs upon overlapping of element adjacent edges when the elements are mounted on said frame members.

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