Aug. 16, 1932. H. R. HOLDEMAN 1,872,453

LIGHTING FIXTURE

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Fig. 1.

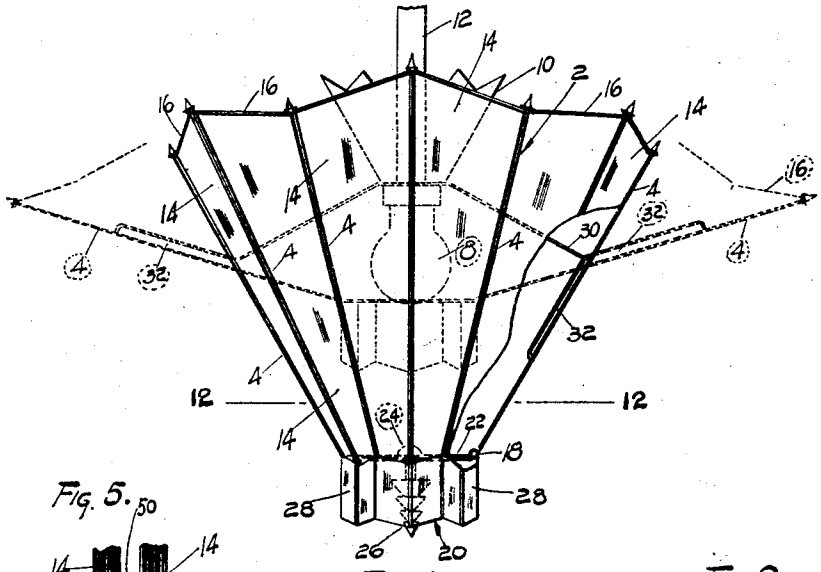


Fig. 5.

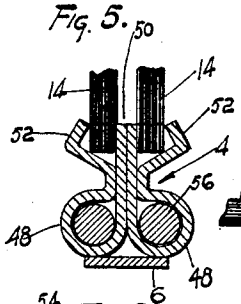


Fig. 4.

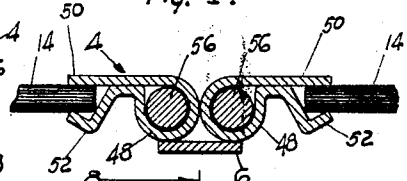


Fig. 6.

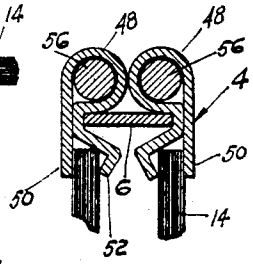


Fig. 8.

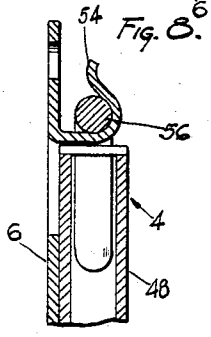
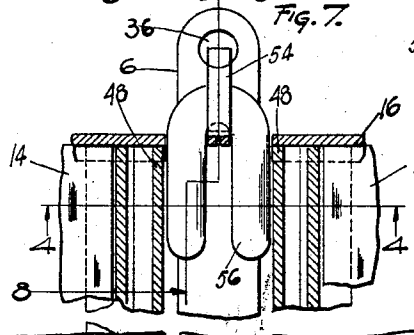
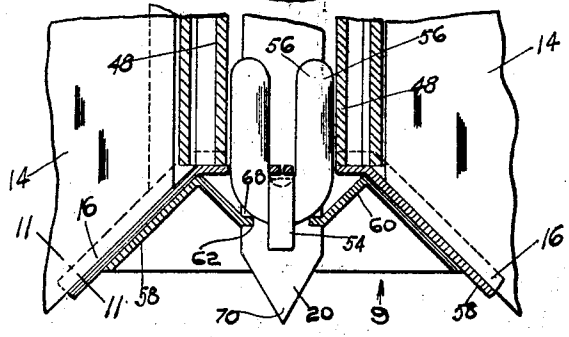


Fig. 7.





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Fig. 2.

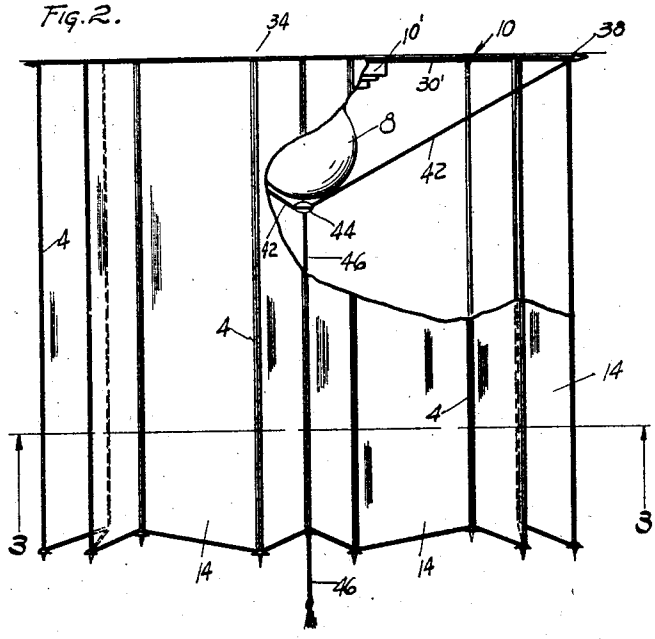


Fig. 10.

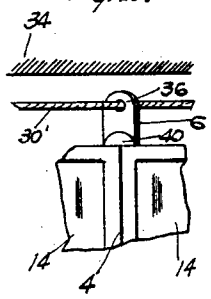


Fig. 3.

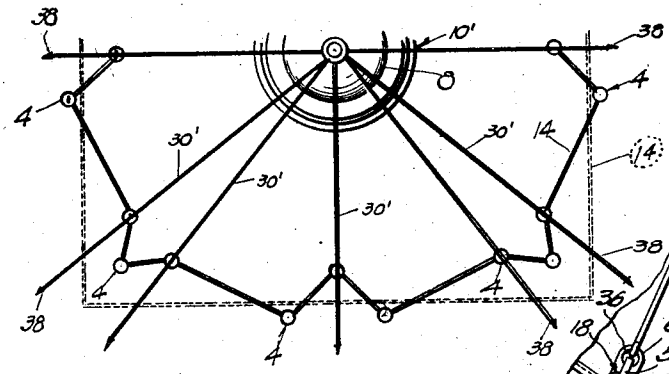


Fig. 11.

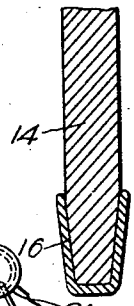


Fig. 12.

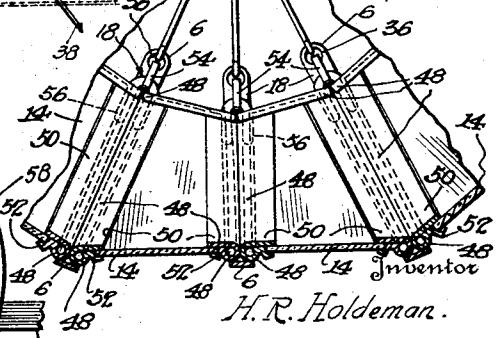
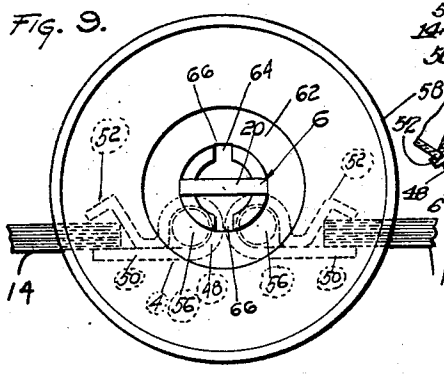


Fig. 9.



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UNITED STATES PATENT OFFICE

HARRY R. HOLDEMAN, OF LOS ANGELES, CALIFORNIA, ASSIGNOR TO J. M. FELDMAN COMPANY, INC., OF LOS ANGELES, CALIFORNIA, A CORPORATION OF CALIFORNIA

LIGHTING FIXTURE

Application filed September 4, 1929. Serial No. 390,277.

My invention relates to fixtures, either portable or stationary, including those used with illuminating means as well as those used for ornamental purposes in dwellings or other places, and more particularly to lighting fixtures, it being distinctly understood that the word "fixture" whenever hereinafter used is not to be taken to mean that the construction is necessarily of stationary nature.

It is an object of my invention to provide a novel form of device adapted for special use in connection with any preferred form of illuminating means, comprising a set of panels constructed of suitable material, and preferably ornamental in character, which panels may, if desired, be detachably held for replacement in a framework composed of panel holding devices, means for holding said devices in position, and a set of hinges, whereby the adjacent or adjoining edges of the panels are hinged together, said hinges having a light excluding means associated therewith, which is especially useful when it is desired to provide the device with light reflecting surfaces, said panels being also pivotally mounted, and thus capable of both a pivotal and hinging movement whereby the geometrical design of the device may be varied at will, means, if desired, being provided for moving said panels bodily and in unison for this purpose.

It is also within the province of my invention to provide a novel form of hinge adapted for use in connection with my device, said hinge being preferably of the double action type, means being associated with said hinge for holding the same in position, and at the same time permit the removal and replacement of certain panels, when necessary.

The above and further objects and advantages of my invention, as will hereinafter more fully appear, I attain by the construction described in the specification and shown in its preferred form in the drawings, forming a part of my application.

Reference is had to the accompanying drawings, in which similar reference characters denote similar parts. In the drawings,

Fig. 1 is an elevational view of one form of my invention, the dotted lines indicating the position of the parts after the geometrical design has been changed,

Fig. 2 is a similar view of another form of my invention,

Fig. 3 is a cross-sectional view, taken on the line 3—3, Fig. 2, but only of one-half the device, the other half, not shown, being the exact duplicate, the dotted lines indicating another position of the parts,

Fig. 4 is a cross-sectional view through the hinge, taken on the line 4—4, Fig. 7,

Figs. 5 and 6 are similar views, showing the double action character of the hinge,

Fig. 7 is a fragmentary, enlarged cross-sectional view through the hinge and framework of the device,

Fig. 8 is a fragmentary longitudinal sectional view, taken on the line 8—8, Fig. 7,

Fig. 9 is a bottom plan view of Fig. 7,

Fig. 10 is a fragmentary detail view, illustrating how the framework of the form shown in Figs. 2 and 3 may be pivotally suspended, so the geometrical design of the device may be varied,

Fig. 11 is an enlarged cross-sectional view, taken on the line 11—11, Fig. 7, and

Fig. 12 is a fragmentary cross-sectional view, taken on the line 12—12, Fig. 1, looking in the direction of the arrows.

Describing my invention more in detail, in its broader aspects said invention comprises a fixture, meaning any device, either portable or stationary, used for ornamental purposes, for reflecting or diffusing light, used either with or without an illuminating means or light source, said device comprising a set of panels, ornamental, if desired, the adjoining edges of which are hinged together with a novel form of hinge, means being associated with said hinges to provide a light excluding, or retaining means, said panels being so associated that the geometrical design of the device may be altered at will, means, if desired, being also provided for this purpose for operating said panels in unison.

More specifically, my invention comprises a framework, designated generally by the reference numeral 2, which framework consists of a set of hinges 4, to be presently described more in detail, a backing or light retaining

or excluding member 6 being associated with said hinges and framework, not only to support and hold said hinges, but also to exclude and retain light from a light source, such as the lamp 8 (Fig. 1), although it is to be distinctly understood that the lamp 8 may be omitted.

The lamp 8 may be provided with a suitable base 10, of any preferred form, a means 12, whereby the device may be suspended, supported or fixed, as desired, and may be associated, in any manner in practice preferred, with said base.

The framework 2 has associated therewith the panels 14, which may be ornamental and constructed of suitable material, translucent, transparent, opaque, or of any character in practice preferred, the longitudinal edges of which are held by the hinge structure, presently to be described, and their upper and lower edges with V-shaped devices 16, which are nothing more than the more or less conventional bent metal strips or strips made of other material, for holding said panels in position, with which strips are associated a special form of holding or securing means, comprising conical devices 58, which may be of ornamental form, and provided with re-entrant portions 60 having suitable slots 64 (Fig. 9) for receiving the base construction 20. This structure provides a ready and simple means for replacing the individual panels when necessary.

The backing 6 of each hinge 4, of the form of my invention depicted in Fig. 1 may have a hinge or pivot connection 18 of conventional or other form, with a base construction 20, which may comprise a set of arms 22, radiating from a central portion 24, said hinge, if desired, may comprise an ordinary eye and pin structure, either permanently or detachably associated with the central portion 24.

If desired, also, an ornamental lower part 26, formed of pendants, prisms or panels 28, may be associated with the lower portion of the device to add to its attractiveness.

The panels 14, being hinged together, and also pivoted as at 18, said panels may be adjusted to form at will a variety of geometrical designs. For this purpose the rods or members 30, suitably connected as at 32 with the base of the lamp 8, are provided. The outer end of each rod or member 30 may be equipped with an opening in the shape of a slot or eye of ample size for play, so there will be no binding, said eye or slot receiving the rail or elongated loop 32, associated with the backing 6 of the hinge 4 in any manner in practice desired. Of course, any other suitable means may be substituted for that just described.

The length of the rods 30 determine the degree of the opening of the panels 14. It will be clear that the hinged panels 14 may be manipulated so they will be moved bodily to form a variety of geometrical designs.

In Figs. 2, 3 and 10, I have shown another form of my invention, in which the same principle of operation is disclosed, but there is a slightly different structure whereby the panels may be moved in unison. In said figures, the fixture is adapted to be positioned on the ceiling 34 (Fig. 10) by means of the base 10′ of the lamp 8, by the usual means. The panels 14 in this form are also provided with hinges 4, which have the backing 6 (Fig. 10), but in this form of my invention said backing is provided with a hole or opening 36, whereby the framework of the device is suspended, rods or members 30′, extending through said holes 36, and provided with suitable stops 38, to prevent the backings 36 from sliding off the rods 30′, said rods, as more particularly shown in Fig. 3 being secured to the base 10′ and radiating therefrom through the openings 36 of said backings.

To operate the panels in unison, each backing 6 is provided with a suitable anchoring means 40, Fig. 10, to which the rods or wires 42, flexible or otherwise, are secured, a central device 44, of any preferred form, being provided as an operating means, and to which the rods or wires 42 are secured. See Fig. 2. To actuate the device 44, a suitable wire, string or the like, 46, is provided to pull the device 44 so the panels may be adjusted to form a variety of geometrical designs. See the dotted lines Fig. 3.

Reference is now had to Figs. 4–9 inclusive, in which figures the hinge, backing and securing or holding devices are more particularly illustrated, it being understood that both forms of my invention are provided with this structure.

The hinge 4 is constructed of suitable material, of which the framework of the device is made, and comprises a pair of tubular members 48, with which are integrally associated the flat leaves 50, and angular leaves 52, between which the panels 14 are positioned and held, the angular leaf 52 forming an effective means whereby said panels are held in position. It will be understood, of course, that Figs. 4–9 inclusive are very much exaggerated as to scale for the sake of clearness.

The backing or light excluding or retaining means 6 is preferably made of elongated form, and of suitable dimensions, and is provided at the upper and lower portions thereof with a pintle retaining means or device 54, preferably curved, as shown more particularly in Fig. 8, whereby the U-shaped pintles 56 may be held in position, the space between the curved portion of the device 54 and the backing 6 being smaller than the diameter of the cross section of said pintle. By snapping the pintles over the devices or hooks 54, and positioning the legs thereof

within the tubular members 48, the leaves are held together for a hinging movement, it being possible to move said leaves through an arc of 180° (see Figs. 5 and 6), thus forming a double action hinge.

As an additional means for holding the parts of the hinge 4 in position, and to insure that they may not accidently fall apart, either the top or bottom, or both portions of the hinge may be provided with a set of locking or securing means 58, which devices are preferably conical in form (Fig. 7) and are provided with a re-entrant portion 60, the base 62 of which is provided with a slot 64, having portions 66 of sufficient width to accommodate the thickness of the backing 6, which may be notched as at 68 (Fig. 7). The device 58 is manipulated so the preferably pointed end 70 (Fig. 7) of the backing 6 is positioned within the slot portions 66, until the notches 68 are engaged. Then turning the device 58 in either direction the walls of the device 58 engage the V-shaped members 16, the backing 6 being cross-wise of said device. See Figs. 7 and 9. To remove the devices 58, a simple turning movement in either direction, causes the backing 6 to be aligned with the slot portions 66, after which said device 58 may easily be slipped off, the V-shaped member 16 removed, as well as the panel 14, and another panel inserted.

While I have thus described my invention with great particularity, it will be clear that the same may be modified throughout a wide range. I accordingly do not propose to be limited to the exact details of construction shown and described, but reserve the right in practice to make any and all modifications thereof that fall within the scope of the appended claims.

I claim as my invention:

1. In a device of the class described, an illuminating means, a lighting fixture associated with said means, said lighting fixture comprising a set of panels adapted to form a plurality of different geometrical designs, means on one end, and on each edge of each of said panels whereby the other end of each of said panels may be moved toward and away from said illuminating means, and said panels moved toward and away from the vertical axis of said fixture, so that said geometrical designs may be altered at will.

2. In a lighting fixture, a support, a light source associated with said support, a set of panels adapted to be arranged in a plurality of varying geometrical designs about said light source, a base for said fixture, hinges associated with each edge of each of said panels, a backing for each of said hinges, hinge means for connecting said backings to said base, and means associated with said support and said first named hinges whereby said geometrical designs may be altered at will.

3. In a device of the class described, a support, a light source associated with said support, a set of panels arranged about said light source, sets of means associated with said panels whereby said panels may be moved relatively to each other and with respect to said light source, panel operating means pivoted to said support, a base, hinge means for connecting said base to certain of said sets of means, and means slidably associated with said panel operating means whereby said panels may at will be moved relatively to each other and with respect to said light source.

4. In a device of the class described, a support, a light source associated with said support, a sectional member, said member comprising a framework including a set of hinged panels, a base, hinge means for connecting said base to said framework, and means associated with said framework and said support whereby said panels may be adjusted so said member may be made to form a variety of geometrical designs.

5. A framework adapted for use in connection with a light fixture, said framework comprising a set of panel supporting hinges, each including a plurality of leaves, a backing, and means for connecting said leaves to each other and said backing, said leaves being composed of flat and angular bent portions.

6. A hinge adapted for use in connection with the framework of a light fixture, said hinge comprising a pair of members each fashioned to form a sleeve and a pair of leaves, spaced apart at their ends, a backing, means for connecting said sleeves to each other, and means for connecting said last mentioned means to said backing.

7. A hinge adapted for use in connection with the framework of a light fixture, comprising a pair of sleeve members and a flat leaf and an angular leaf extending from each of said sleeve members, a pair of U-shaped pintles positioned in the ends of said sleeve members for holding said sleeve members together, a backing, and means for connecting said pintles to said backing.

8. A hinge adapted for special use in connection with the framework of a light fixture, said hinge including a backing, a pair of double action hinge leaves, pintle members connecting said leaves together to permit the double action of said leaves, means for anchoring said pintles to said backing, and a lock device for attachment to at least one end of said backing to assist in holding said hinge together.

In testimony whereof I have signed my name to this specification.

HARRY R. HOLDEMAN.