W. F. M. HAWE.

LAMP SHADE.

APPLICATION FILED DEC. 2, 1915.

1,173,572. Patented Feb. 29, 1916.

FIG. 1.

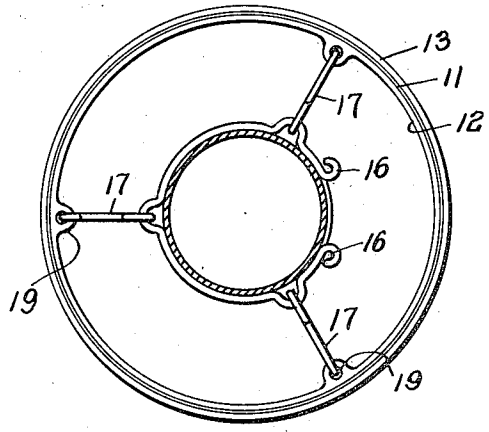



FIG. 2.

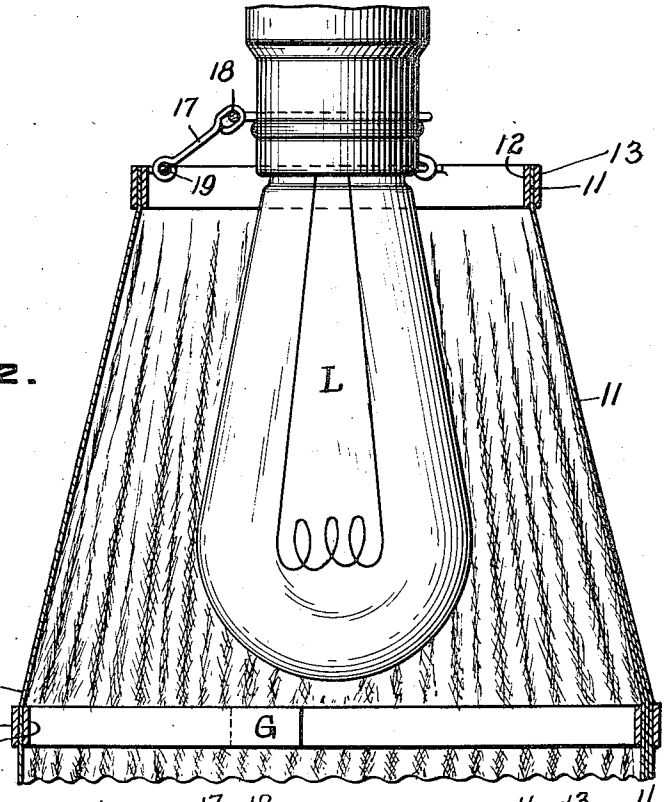
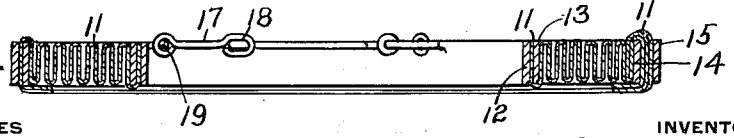



FIG. 3.

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## LAMP-SHADE.

1,173,572. Specification of Letters Patent. Patented Feb. 29, 1916.

Application filed December 2, 1915. Serial No. 64,655.

*To all whom it may concern:*

Be it known that I, WILLIAM FRANK M. HAWE, a citizen of the United States, residing at Pittsburgh, in the State of Pennsylvania, have invented certain new and useful Improvements in Lamp-Shades, of which the following is a specification.

My invention relates to articles designed to partially inclose a source of light, such for example, as an incandescent electric light bulb, allowing the rays to go freely in an upward, or downward, direction, but protecting the eyes of nearby persons by screening the lateral rays through a diffusing medium.

The objects of the invention, among others, are to provide a part-fabric shade which may be used either for direct or indirect lighting; which is collapsible into small packing space when not in use; which is readily put together and taken apart; which may be varied in size, color, density, pattern, and appearance, by an easy interchange of parts. These results, and others which will appear hereinafter, are accomplished by a construction illustrated in the accompanying drawings.

Figure 1 is a plan view of the upper portion of my shade, showing a means of attachment to a support; Fig. 2 is a vertical section through the shade showing it attached to an ordinary electric light and socket; and Fig. 3 is a vertical section of the shade in collapsed condition.

In order to shield sources of bright light to protect the eyes of persons making use of the illumination, it has been customary to use glass globes which surround the source of light on the sides, but are open at the bottom to permit the direct lighting of objects beneath the source of light. These shades are usually made of a clouded glass which permits passage of a reduced light, but so diffuses it that there are no direct lateral rays. An indirect lighting system has come into very general use, which consists in throwing the direct light rays upon a white ceiling, or other diffusive reflector, while screening the source of light from the sight of persons below by means of glass bowls of varying degrees of opacity. Shades have also been made of a frame work surrounding the light and covered with paper or fabric, upon which various designs and colors are imposed. The use of such material, instead of glass, has the advantage of economy, is not so breakable, and allows a wider range of decoration, but usually requires a complicated frame work, and makes a short-lived shade.

My lamp shade is preferably composed of a flexible material, such as silk, or any other fabric, it being understood that by the term "fabric" is meant any form of thin flexible medium through which a certain amount of diffused light will pass. In order to give form to the shade, and to determine its size and shape I use supporting rings, preferably in the form of hoops. These are arranged in pairs, the outer one of which is slightly larger than the inner, so that the two will telescope. One set of rings is thus used to clamp and support the fabric at the top of the shade, and another set similarly holds it at the bottom. (Intermediate sets may be used to vary the shape, etc., if desired). Beyond the rings the excess material may be trimmed off, leaving a scalloped edge as shown at the bottom of Fig. 2, or trimmed close with no extending edge, as shown at the top of that figure. I prefer to use one set of rings larger than the other set, in order to give the shade a more symmetrical shape,—and in addition this allows the whole to be collapsed into the form shown in Fig. 3. In this condition the smaller pair of rings lies inside the larger pair, and the fabric folds between, so that the entire shade may be packed in the space occupied by the largest ring.

The fabric being held in shape by the weight of the lower pair of rings suspended from the supporting upper pair, no upright supports are necessary.

In case it is desired to use the shade in an indirect lighting system it is only necessary to suspend it by the larger rings, leaving the fabric bounded by the smaller rings uncut, which will thus form the bottom of a bowl screening the light on all sides and at the bottom, but leaving a large opening for light rays to strike the ceiling or the reflector above. A fabric with white interior is desirable for this form of my shade, to increase upward reflection.

In putting this shade together a piece of fabric, 11, is laid over the smallest ring, 12, and its companion ring, 13, is pushed down over the fabric and over the inner ring, 12, thus clamping it tightly. Then at the proper

distance from the first set of rings the larger inner ring, 14, is put inside the draped fabric, and the larger outer ring, 15, is forced down over it, thus clamping the fabric between the second pair of rings. The excess fabric may then be trimmed off at a proper distance below the lower pair of rings. In case the shade is to be used on a lamp such as that shown in Fig. 2, the circular portion of fabric bounded by the upper set of rings is trimmed flush with the rings, leaving an opening for insertion of the lamp, L. If the shade is to be used on the ordinary pedestal lamp such as is used for dining tables, etc., this portion of the fabric may be left untouched and the ring 12 supported from beneath and inside the shade. For the purpose of attachment to the ordinary electric light stem I provide a spring clip, 16, which has links, 17, with elongated eyes, 18, attached to it and in turn hooked into lugs, 19, on the ring 12, as shown.

I may make either my inner or outer ring of a resilient material and with a gap, or overlapping portion, G, so that it will be resiliently expansible to maintain a constant pressure on fabrics of different thicknesses, which may be interchanged in the same rings.

My shade may be used for the so-called indirect system. The links, 17, are then attached to the ring 14, in the same manner as here shown attached to ring 12, and the larger and open end is at the top. In this case the bottom, the portion bounded by ring 12, is not cut out.

By using my invention any flexible fabric may be formed into a lamp shade by simply clamping the rings 12, 13, 14, 15, in proper position thereon, and cutting away the excess portion of fabric beyond the rings. There will be an excess of fabric at the second set of rings, but this will be taken up by the folding upon itself of the material. This is not disadvantageous, but is on the contrary rather attractive in appearance and adds to the possibilities of decoration. Otherwise, of course a shaped and sewed fabric may be used.

By means of this construction, the fabric may be changed as frequently as desired, using fresh pieces instead of cleaning. In addition varying colors may be substituted at any time and without great difficulty. Persons may use a fabric of the same design as the decorations on their walls or furniture, or may substitute various patterns to conform to a color scheme desired for any particular occasion. This would be impossible if the entire shade had to be made up and determined in advance at the factory. In addition there is the great economy of packing space arising from the collapsible feature of this construction.

Other advantages and uses will be apparent to those familiar with the art.

I claim:

1. A collapsible lamp shade comprising several pairs of independent telescoping rings, a removable flexible fabric clamped between the rings of each pair, and a detachable suspending device on one of the pairs of rings.

2. A lamp shade consisting of a plurality of sets of independent telescoping rings and a removable fabric retained between and shaped by the rings.

3. A lamp shade consisting of a pair of separate rings, one ring fitting within the other, a larger pair of separate rings, one ring fitting within the other, and a removable flexible fabric retained by the pairs of interfitting rings.

4. In a lamp shade the combination of a pair of separate telescoping rings, means to support one of said rings, a translucent fabric removably retained between the rings and depending therefrom, and a second pair of separate telescoping rings retaining the flexible material below the first and forming the bottom of the shade.

5. A collapsible lamp shade consisting of a pair of telescoping rings, a flexible material removably retained between the rings, a larger set of telescoping rings also removably retaining the flexible material, and supporting means for the upper set of rings.

6. In a lamp shade the combination of a pair of independent telescoping rings, means of support thereof, a fabric removably retained between the rings and depending therefrom, and a second pair of independent telescoping rings retaining the fabric and forming the bottom edge of the shade, one ring of each pair being resiliently expansible, whereby to take varying thicknesses of fabric, substantially as described.

In testimony whereof I have hereunto signed my name.

WILLIAM FRANK M. HAWE.