

Feb. 28, 1928.

1,660,883

L. OBER

LAMP SHADE CONSTRUCTION

Filed Dec. 21 1926

2 Sheets-Sheet 1

Fig. 1.

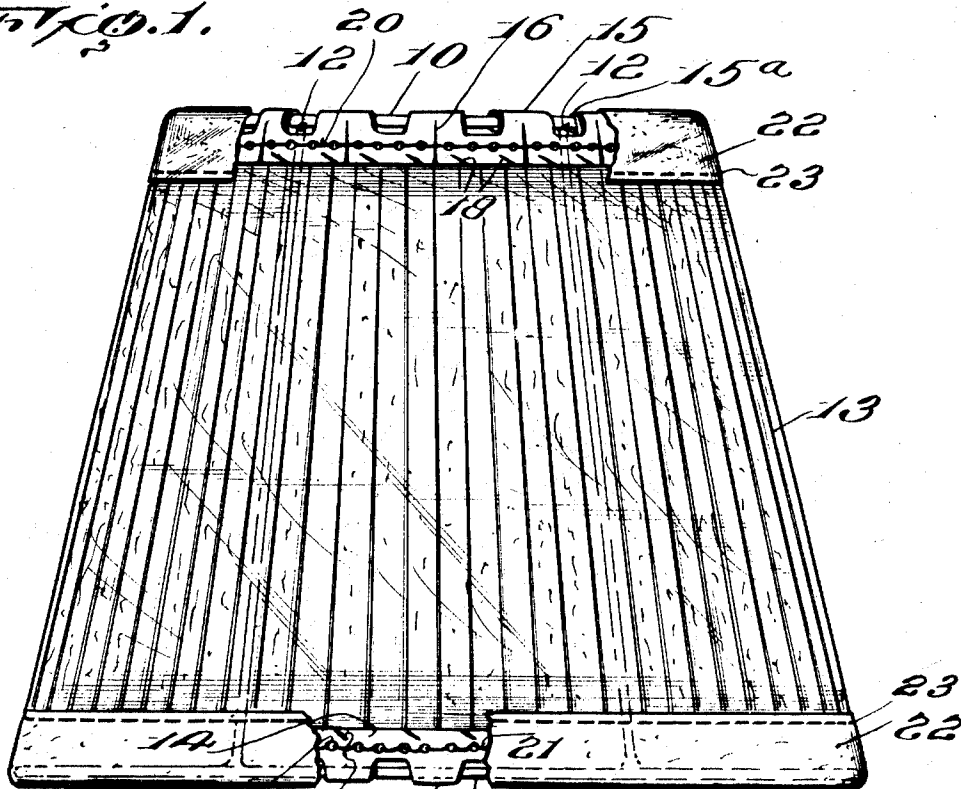


Fig. 2.

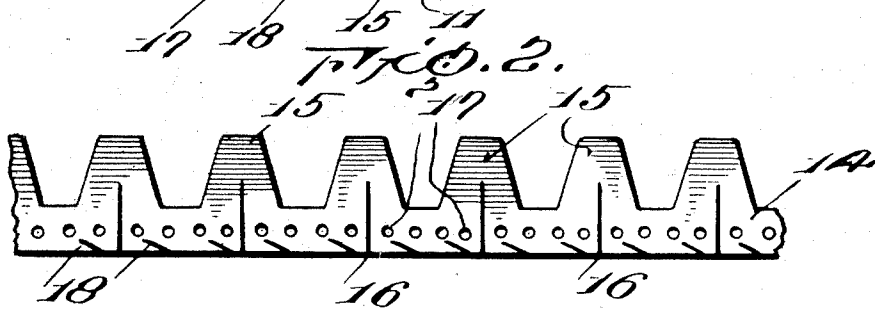
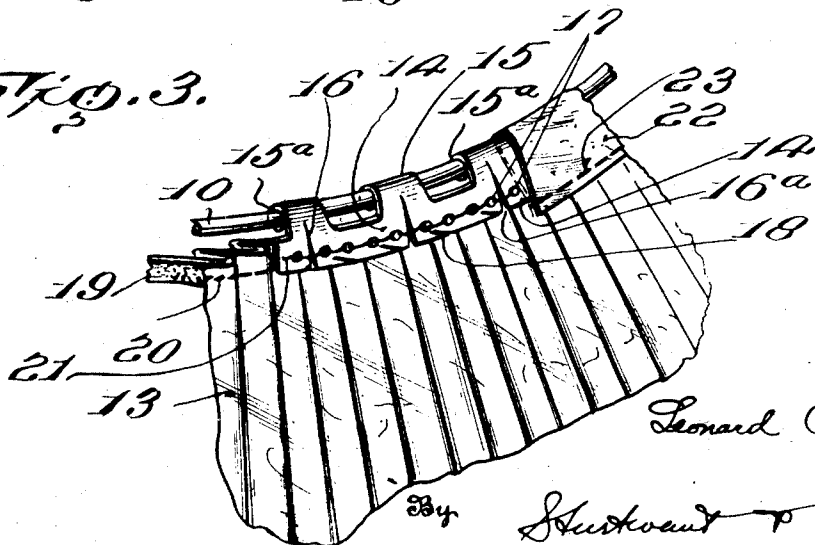


Fig. 3.



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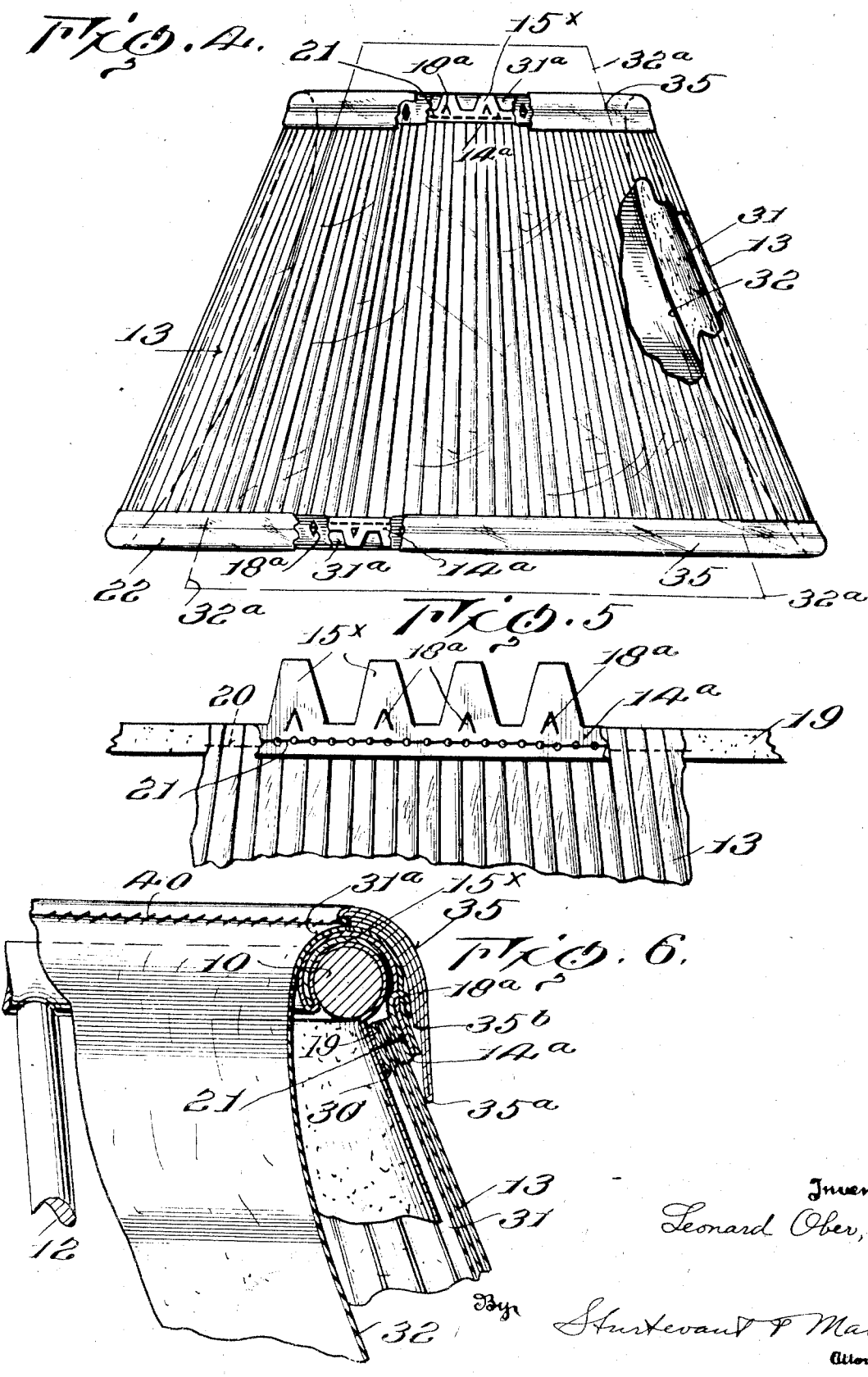
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2 Sheets-Sheet 2



UNITED STATES PATENT OFFICE.

LEONARD OBER, OF BALTIMORE, MARYLAND.

LAMP-SHADE CONSTRUCTION.

Application filed December 21, 1926. Serial No. 156,200.

This invention relates to improvements in methods of attaching fabrics to frames, and is particularly adapted for employment in the manufacture of lamp shades.

5 The invention will be described in connection with the lamp shades, so that it comprises the making of a cover of limp fabric for such a shade to be fastened to a stiff supporting ring of a skeleton frame. According to this invention, the limp fabric is made up into its destined form and fastened to an attaching strip which is provided with means for attachment to the frame. In this way the covers may be made up in 10 quantity at a factory and either sold individually for assembly by the customer or assembled at the factory upon frames, so that a semi-finished or finished article may be placed on the market.

20 Reference is made to my copending application Serial No. 147,349, filed November 9, 1926, on pleated fabrics for the disclosure of a similar article, and in the description hereafter the present improvements will be described in connection with a similarly 25 pleated cover made from a limp fabric, although it will be understood that the invention is not limited thereto.

On the accompanying drawings:

30 Figure 1 is a side elevation of a completed shade according to one illustrative form, with portions broken away to show the application of the invention thereto.

Fig. 2 is a developed view of a metal attaching strip according to this invention before application to a piece of fabric.

Fig. 3 is a perspective view, showing the attaching strip secured to a piece of pleated fabric, and having its own attaching means 40 secured to a ring of a lamp shade skeleton frame.

Fig. 4 is a view similar to Fig. 1 of a second illustrative form.

Fig. 5 is a detail view on a larger scale of the attachment strip of this second form attached to a cover.

Fig. 6 is a sectional view on a still larger scale, through the upper ring, showing the several elements in position.

50 According to the present invention, a skeleton wire frame of the customary type is made up for the particular shade, thus defining the major and minor bases and the length of side of the frame. It will particularly be understood that where reference is made, in the following specification

and claims, to "conical" this is to be intended to include not only fully conical but also frusto-conical and pyramidal shades. The invention is not, however, limited to conical, 60 frusto-conical or pyramidal shades, but may be applied for the general purpose of attachment of the edge of a piece of fabric to a support. The present improvements likewise concern means whereby a cover may be held in substantial condition for immediate 65 and easy application to such a frame, and, as described in my aforesaid copending application, a limp fabric may be used for such a cover and stiffened by the means described herein so that the cover itself may be sold in 70 condition for immediate attachment to a skeleton-frame.

According to this invention in the illustrative forms, a lamp shade skeleton frame 75 is made up with the upper ring 10 and lower ring 11 which are connected and held in rigid spaced relation by a plurality of reinforcing bars 12. The shade cover 13 may be made of any suitable material, but is illustrated as being formed of pleated fabric, which may be of limp material and formed into pleats in the manner described in my copending application prior to being secured to the present attaching devices. 85

According to the present invention, an attaching device is provided which may be permanently secured to the said cover and which has tongue means for attaching the permanently associated cover and means to 90 the several rings of the lamp shade. As shown in Fig. 2 the invention has been disclosed as employing a pliable metallic strip having a body portion 14 with laterally extending projections 15. The body portion 95 has gashes 16 extending from the edge opposite the projections across the width of the body portion and into the projection itself. This body portion may likewise be provided in the course of manufacture with a series of apertures 17 extending longitudinally along the strip and may have the small tongues 18 formed therein by further gashes extending obliquely from the edge opposite the projections, which may be called 105 the "free" edge.

In making up a lamp shade according to the present invention the fabric 13 may have secured at its edge a paper strip 19, and the two materials be pleated and secured together by a stitched seam 20, as described in my copending application. The body por- 110

tion 14 of the metal strip is then secured to the edge of this fabric cover 13 and to the paper reinforcement 19 thereof by a stitching 21 which passes through the apertures 17; or, as an alternative, a sewing machine may be employed which itself will perforate the body portion 14 during the course of sewing as well as forming the stitches therein; this is old and well known in the art.

The cover may likewise receive a similar strip at its bottom and be placed on the market as a partly finished article. It is later associated with its proper frame by bending the projections 15 over to form hooks 15^a, as shown in Fig. 3, whereby the cover is securely attached to the skeleton frame at the top. The cover is then drawn out along the lines of its generatrices and the similar hooks or other means provided at the bottom are then brought around the lower ring 11, care being taken to have the pleats directed along the line of the generatrices for the proper appearance. During the course of this securing of the hooks about the rings the upper metal strip will conform to the conical shape by the opening of the gashes 16, as shown at 16^a in Fig. 3, and the fabric itself will yield slightly for this purpose; and a similar conformation occurs at the lower strip. The tongues 18 being opposite the narrow portions of the body, i. e., those free from projections 15, may likewise permit a yielding or clamping for the same purpose, so that the strip assumes the substantially conical shape proper for the particular shade. After the cover has thus been assembled upon the frame it is customary to place a lining and binding or edging braid 22 around the respective ring and edge of the shade where such may be engaged with the outwardly bent tongues 18 as described hereafter, and then this binding material may be fastened in place by a stitching seam 23.

According to the second illustrative form of Figs. 4, 5 and 6, the pliable metal strip has a body portion 14^a with the apertures 17 therein as before through which the stitching 21 passes to hold the pleated cover 13 permanently to this reinforcing strip after the cover has been assembled as set forth in my copending application, for example. This metallic strip body 14^a has the integral laterally extending projections 15^x, and the spurs 18^a are stamped out during the manufacture of the strip, being of triangular form with the altitude line of each triangle substantially coinciding, in the illustrated form, with the axis of symmetry of the respective projection 15^x at which it is located.

This form of shade is assembled as follows: The cover 13 is fastened to the strip 19, pleated and secured by the stitching 20 as set forth in my copending application,

for example. The metal strip 14^a, 15 is then placed at the edge of cover, at the outer face, a bias tape 30 is placed at the inner face, and the stitching 21 employed to connect these parts. The strip 14^a and the tape 30 reinforce the material and distribute any strains, so that the stitches do not pull out.

An intermediate fabric lining 31 is prepared of conical form, with its sides projecting above and below the respective top and bottom frame rings, and is loosely positioned on this frame. The finish fabric lining 32 is likewise prepared of conical form, but, as shown by the dotted lines 32^a, is of lesser diameter than the shade at any plane at a right angle to the axis of the frame.

The cover strip, of segmental form owing to the shape of the pleats and by reason of the yielding of the metal strips as set forth above, is then applied by bending the projections 15^a of the respective strip over the upper ring, for example, to form hooks which engage over the intermediate lining 31 and hold this in place, as shown in Fig. 6. The spurs 16^a have likewise been bent outward to form hooks, and the free edge 31^a of the intermediate lining is folded back and engaged thereon. A similar operation is then performed at the bottom ring 11, whereby a roughly covered shade is produced.

The finish lining 32 is then inserted in the frame in the position shown in dotted lines in Fig. 4, and the upper edge, for example, is pulled out and over the top ring 10 and the intermediate lining edge 32^a and engaged on the hooks 18^a, which are then clinched down into the position shown in Fig. 6. A similar operation is performed at the lower ring to produce the lined shade; as shown in Fig. 4, this lining is tightly engaged by the spurs at the rings, but between these rings curves inward and then upward of its own elastic strength.

An edge binding 35 is now prepared by doubling a suitable fabric to present a smooth edge 35^a. This binding is then placed upon the turned edge of the finish lining 32 and sewed by a stitch 40 thereto at a line intermediate its width, but nearer to the rough edges 35^b than to the smooth edge 35^a. This stitch has for distinctness been shown as full lines in Fig. 6, but it will be understood that it is preferably concealed. The smooth edge 35^a has been kept toward the axis of the frame; the binding 35 is then folded over the stitching into the position of Fig. 6 in which it hides the rough edges 35^b, and is held by its own elasticity around the projecting bead formed about the ring by the thicknesses of material; or it may be secured by a concealed stitch. A similar binding it then placed at the bottom of the shade.

In each illustrative form it will be noted

that the metal strip may be cut from a skelp having a width equal to the combined width of the projections and twice that of a body portion, since the saw-like projections 15, 15* are complementary of the gap between them. These strips can thus be cheaply and easily cut to shape, with their gashes and stampings, by a punch press or rolling mill.

It is apparent that the invention is not limited solely to the illustrative form represented, but that it may be employed in many ways in the arts.

I claim:

1. In a lamp shade cover to be applied to a lamp shade frame, a fabric yieldable to pulls thereon, a metal strip having frame-engageable members thereon, and means securing said strip along the fabric so that said strip and securing means support said fabric against yielding to such pulls and maintain the same at a given dimension, said members being adapted to secure said strip and fabric to the frame.

2. A flexible metallic attaching strip for lamp shades provided with a portion whereby the strip is securable at the edge of a lamp shade cover of limp fabric to reinforce the same, and having hooks formed integrally with said strip and projecting laterally from the body of the strip, said hooks being adapted to be bent around a shade frame member whereby to attach the strip and cover to said member.

3. A metallic attaching strip for lamp shades, said strip having a body portion and provided with lateral projections at one edge to be bent into attaching hooks whereby to connect said strip to the frame of the shade, said strip having gashes extending from its other edge through the body portion into said projections so that the strip may yield to accommodate itself to a lamp shade of conical form, said strip also having a portion whereby it is attachable to the lamp shade cover.

4. A metallic attaching strip for lamp shades, said strip having a body portion provided with means whereby said strip is permanently attachable to a shade cover of limp fabric to reinforce the same and to stiffen the same prior to and during assembly, said strip also having means so that it

may be thereafter attached to the shade frame in assembling.

5. A lamp shade having upper and lower frame rings, spacing members to hold said rings spaced from one another, a shade cover, and metal strips fastened to said cover at its upper and lower edges and having means engageable with said rings whereby to assemble said cover upon said frame.

6. A lamp shade having upper and lower frame rings, spacing members to hold said rings spaced from one another, a shade cover, a lining, and metal strips fastened to said cover at its upper and lower edges and having hooks thereon to engage said rings whereby to assemble said cover upon said frame, said strips also having spurs to engage and hold said lining.

7. A metallic attaching strip for lamp shades, said strip having a body portion and being provided with integral lateral extensions to engage a frame ring and secure the strip and associated parts thereto, said strip also having integral portions to form spurs to engage a lining, and means on said strip whereby it is attachable to a lamp shade cover.

8. A metallic attaching strip for lamp shades, said strip having a body portion and being provided with integral lateral extensions to form hooks to engage a frame ring, said extensions being separated by gaps complementary thereto, and means on said strip whereby it is attachable to a lamp shade cover.

9. A metallic attaching strip for lamp shades, said strip being provided with means for attachment to a lamp shade cover, said strip also having integral portions to form spurs to engage a lining.

10. A metallic attaching strip for lamp shades, said strip having means to engage a frame ring, said strip also having integral portions to form spurs to engage a lining.

11. A metallic attaching strip for lamp shades, said strip having means to engage a frame ring, said strip also having integral portions to form spurs to engage a trimming.

In testimony whereof, I affix my signature.

LEONARD OBER.