Sept. 19, 1939. A. BURKE 2,173,547

LAMP SHADE AND LAMP SHADE FRAME

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Fig. 1.

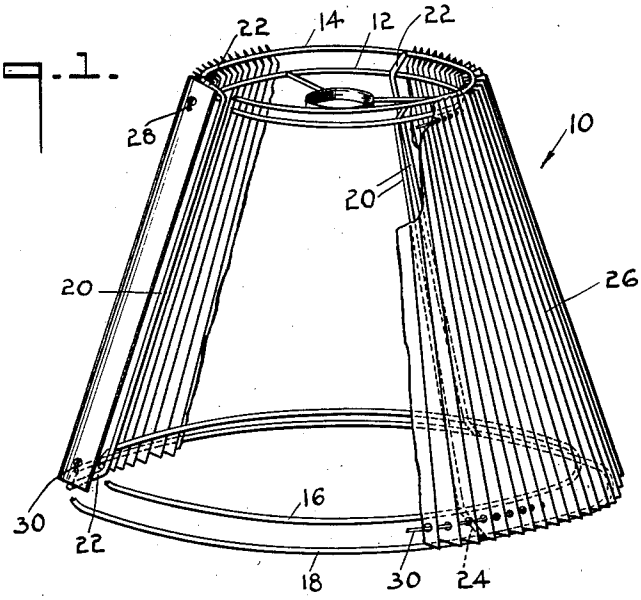


Fig. 2.

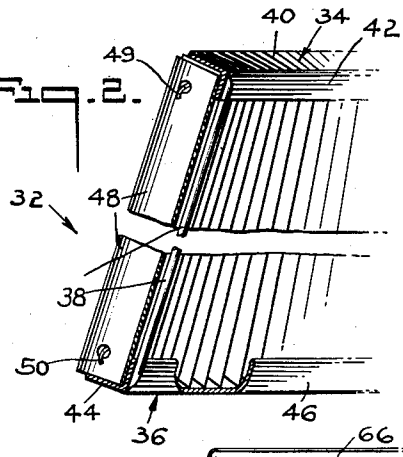


Fig. 3.

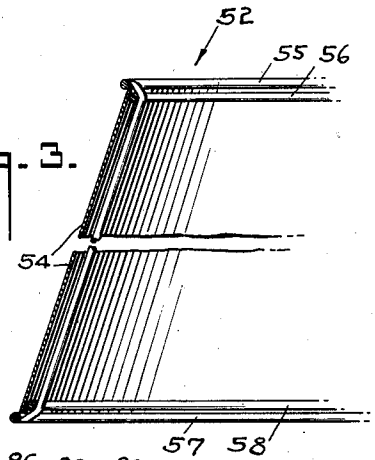


Fig. 4.

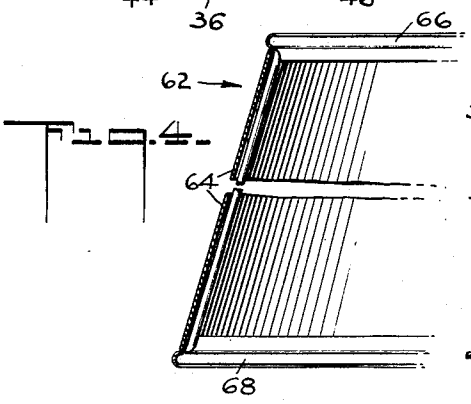
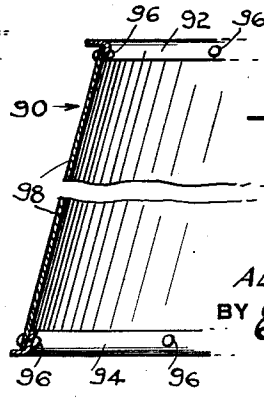


Fig. 5.



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Fig. 5.

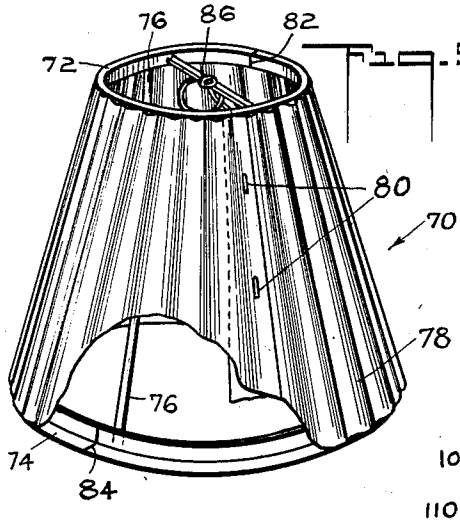


Fig. 8.

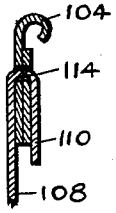


Fig. 9.

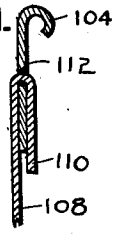
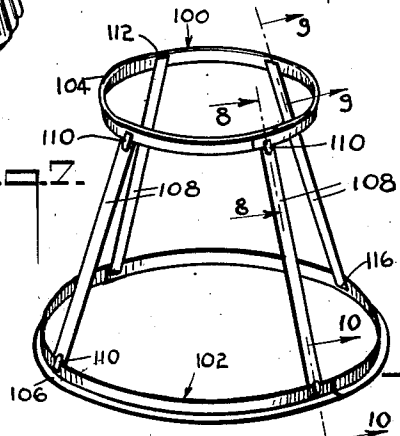


Fig. 7.



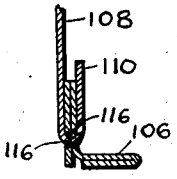
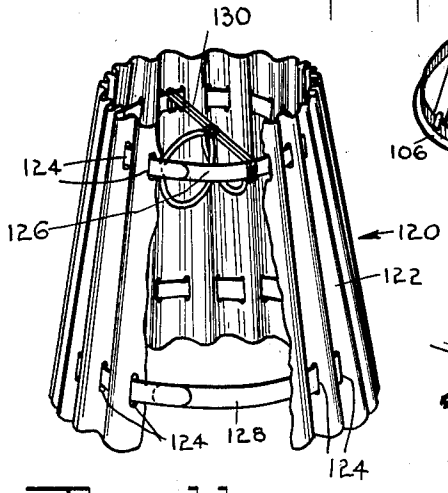


Fig. 10.

Fig. 11.



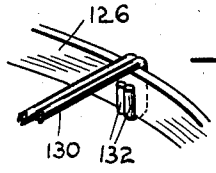
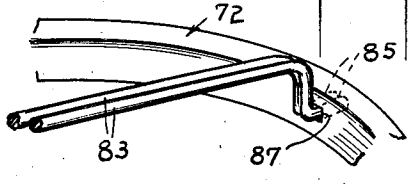


Fig. 12.

Fig. 13.



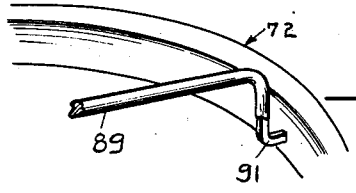


Fig. 14.

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LAMP SHADE AND LAMP SHADE FRAME

Alfred Burke, New York, N. Y.

Application August 28, 1936, Serial No. 98,377

4 Claims. (Cl. 240—108)

This invention relates to lamp shades and lamp shade frames.

Lamp shades of the type in which the covering for the frame comprises sheet material such as waxed or parchmentized paper, stiffened cloth, etc., are easily damaged, especially during packing, shipping and display thereof, by reason of the fact that the upper and lower edges of the sheet material are frequently bent or torn. It is, therefore, an object of the present invention to provide a lamp shade frame constructed and arranged to protect the edges of the shade covering against being bent, torn or otherwise damaged.

In lamp shades of the type in which pleated material is used as the shade covering, it has heretofore been the practice to secure the covering to the frame by means of cords. In order to conceal the attaching cords, it is necessary to closely space the pleats of the covering material. For this reason a relatively large quantity of material is necessary for covering the frame. Another object of the present invention is to eliminate the use of cords or similar means for attaching the cover to the frame, thereby making it possible to use flatter pleats and thus decrease the quantity of covering material and thereby reduce the cost of the shade.

A further object of the invention is to provide a lamp shade frame in which the rods heretofore employed for connecting the upper and lower frame members may be eliminated, if so desired.

Another object of the invention is to provide a lamp shade frame which may be readily assembled from suitable frame members which may be secured together without the use of solder and without welding or brazing.

Another object of the invention is to provide a lamp shade in which the covering material is secured to the frame members without additional fastening means or devices.

A yet further object is generally to improve lamp shades and frames therefor, and more particularly, to provide at reduced cost lamp shades of improved construction.

The above and other objects of the invention will be more fully understood as the description proceeds, reference being had to the accompanying drawings forming a part of the present specification.

In the drawings:

Fig. 1 is a perspective view, partly in section, of a lamp shade embodying one form of the present invention, part of the covering material being omitted for the sake of clearness and illustration;

Figs. 2, 3 and 4 are fragmentary perspective views, partly in section, of different forms of lamp shades embodying the present invention;

Fig. 5 is a perspective view, with part of the shade covering omitted, illustrating another form of the present invention;

Fig. 6 is a fragmentary perspective view, partly in section, showing a yet further form of the invention;

Fig. 7 is a perspective view illustrating a lamp shade frame assembled from separate members in accordance with one form of the present invention;

Figs. 8, 9 and 10 are detail sectional views on the lines 8—8, 9—9 and 10—10, respectively, of Fig. 7;

Fig. 11 is a perspective view of a lamp shade illustrating a further form of the present invention, part of the shade covering being omitted for the purpose of illustration;

Fig. 12 is a detail view of the connection between the lamp fixture and the shade illustrated in Fig. 11;

Fig. 13 is a detail view of a connection between the lamp fixture and frame illustrated in Fig. 7; and

Fig. 14 is a view similar to Fig. 13, showing a modification.

Referring to the drawings in detail, and first to the form of the invention illustrated in Fig. 1, the lamp shade 10 comprises a wire frame including a pair of upper rings 12 and 14, a pair of lower rings 16 and 18, and cross rods 20 secured at their opposite ends to the outermost rings 14 and 18 and also at points adjacent said ends to the inner rings 12 and 16. Said rods may be connected to said rings in any suitable way, as by soldering. It will be observed that the rods 20 have bent end portions 22 and 24 extending outwardly from points adjacent the rings 12 and 16, respectively, to the rings 14 and 18, to which the ends of said rods are connected. The lamp shade covering 26, here shown as composed of pleated sheet material, is bent around the frame in the usual manner, but instead of projecting at the upper and lower edges thereof beyond the frame is positioned between the upper ring 14 and the lower ring 18 with the inner face of said covering or more specifically, the folds in the pleats thereof, bearing against the rings 12 and 16. The covering is secured in said position by cords 28 and 30 which pass through aligned apertures in the pleats of the covering in the customary manner and hold said covering against the upper and lower inner rings 12 and 16. Since the frame members, that is, the upper and lower

outer rings 14 and 18 overlie the opposite edges of the covering, axial displacement of the covering in relation to the frame is prevented. Hence, it is unnecessary to wind the attaching cord 30 about the lower frame ring, as heretofore, although this can be done if so desired. It will be noticed that the location of the frame members 14 and 18 outwardly beyond the adjacent edges of the frame covering and substantially in alignment therewith not only serves to prevent relative axial displacement of frame and cover, but what is even more important, serves to protect said edges of the cover against tearing, bending or other damage.

In the form of the invention illustrated in Fig. 2, the frame of the lamp shade 32 comprises upper and lower annular frame members 34 and 36 connected by rods 38. Said frame members 34 and 36 are of angular formation in cross section, and each comprises a substantially horizontal flange and a substantially vertical flange, frame member 34 having horizontal and vertical flanges 40 and 42, respectively, and frame member 36 having horizontal and vertical flanges 44 and 46, respectively. It will be observed that the pleated shade cover 48 has its inner folded portions positioned against said vertical flanges and that the horizontal flanges 40 and 44 of the frame members extend outwardly over the opposite edges of said cover. Cords 49 and 50 passing through aligned apertures in the pleated cover 48 serve to hold the latter in position on the frame, said horizontal flanges 40 and 44 preventing axial displacement of said cover in relation to the frame.

In Fig. 3 the frame of the lamp shade 52 may be constructed in the same way as the frame of the lamp shade 10 illustrated in Fig. 1 but as here shown the cover 54 is composed of flat unpleated sheet material. Said cover is held in position by the engagement of the side edges thereof between the pairs of rings 55, 56 and 57, 58. The material of the cover is sufficiently stiff and flexible for this purpose. Said cover may be held in position on the frame by securing the opposite ends of the cover in overlapping relation with the cover positioned snugly against the frame rings 56 and 58, the outer rings 55 and 57 preventing axial displacement of the cover. Alternatively, said cover may be adhesively secured to the outer peripheral portions of rings 56 and 58, especially when the latter are made of or are coated with non-metallic material which would facilitate the adhesive bonding of said cover to the rings. Thus, for example, the rings 56 and 58 may be made of wood, Celluloid, phenol condensation products, etc., to which the cover 54 may be readily adhered by means of an appropriate adhesive.

The lamp shade 62 illustrated in Fig. 4 is similar to the shade illustrated in Fig. 2, but as in the case of the lamp shade 52, shown in Fig. 3, cover 64 is composed of unpleated or flat sheet material. The upper and lower annular frame members 66 and 68 are flanged vertically and horizontally and thus may be combined with the cover 64 in the same manner as the flanged frame members are associated with the cover 48 of lamp shade 32. However, as here shown, the attaching cords are dispensed with and instead the cover 64 may be secured in any suitable way, such as those described in connection with the description of shade 52. Like, the latter, shade 62 may comprise non-metallic frame members 66 and 68, and more particularly, said frame members may be made of such materials as wood, Celluloid, phenol condensation products, etc.

In Fig. 5 there is illustrated a lamp shade 70, the frame of which is similar to the frame of lamp shade 32, and as here shown, comprises an upper flanged ring 72, a lower flanged ring 74, and connecting rods 76. The pleated cover 78 is secured in position about the frame by a plurality of metal clips or staples 80 passing through the coverlapping end portion of the cover. It will be understood, of course, that the cover 78 need not be pleated, but may be made of flat material like the cover 54 of the lamp shade 52. The frame members 72 and 74 may be made from strips of drawn wire of angular form as shown, a suitable length of such wire being bent into circular formation and their ends soldered together as indicated by the reference numerals 82 and 84 for the rings 72 and 74, respectively. A conventional lamp fixture 86 of any suitable form may be secured to a vertical flange of the upper ring 72. It will be noticed that the horizontal flanged members of the frame members extend outwardly beyond the edges of the cover 78 and thus protect the latter against damage and also hold the cover in proper relation axially of the frame without additional attaching means.

The lamp shade 90 illustrated in Fig. 6 is similar to the lamp shade 62 with the exception that the cross rods of the frame are eliminated and the cover 98 is secured to the flanged rings 92 and 94 by means of rivets or eyelets 96. It will be understood that such cover is made of material such as stiffened cloth or parchmentized paper which is self-sustaining and stiff enough to hold the rings 92 and 94 in spaced relation. It will be understood also that a suitable lamp fixture, such as the lamp fixture 86, will be connected to the vertical flanges of the upper ring 92 in the manner illustrated in Fig. 5 in connection with lamp shade 70.

Fig. 7 illustrates a lamp shade frame which may be used in accordance with the present invention, for example, for the frame of lamp shades, 32, 62 and 70. As here shown, the frame comprises an upper ring 100 and a lower ring 102, each made of sections of sheet metal strips. The upper ring member 100 has a curved beaded edge 104, while the lower ring member 102 has a flattened beaded edge 106. Said rings are connected by metal strips 108 which are provided with tongue portions 110, tongue portions of three of the strips passing through circumferentially spaced slots 112 in both rings in the manner illustrated in Fig. 9. As illustrated in Figs. 8 and 10, the ends of the rings 100 and 102 overlap each other and are provided with aligned slots 114 and 116 respectively, through which the tongue portions 110 of one of the strips 108 extend for holding the ends of said rings together and also for connecting this particular strip to the rings. The frame thus constructed may be produced at low cost and may be used in the same way as the frames illustrated in Figs. 2, 4 and 5, the frame cover (not shown) being mounted so that the inner surface portions thereof bear against the vertical flanges of the rings 100 and 102, and the horizontal flanges 104 and 106 of said rings projecting outwardly beyond opposite side edges of the cover to protect said edges and to hold the cover in proper position on the frame. It will be understood that a conventional lamp fixture may be connected to the ring 100 in any suitable way preferably by soldering the ends of the fixture to the inner surface of the ring 100. How-

ever, when the frame member is non-metallic, or if for some other reason a soldered connection is not desired, the lamp fixture may be connected at its ends to the frame member 72 in some other manner, as for example, that illustrated in Fig. 13. As here shown, the wires 83 of the lamp fixture 86 are provided with offset ends 85 which are received in non-circular slots 87 in the vertical flange, at diametrically opposite points. As illustrated in Fig. 14, when the lamp fixture comprises a single wire 89, the offset end portions 91 thereof are flattened to thereby hold said wire against rotation when the wire is circular.

In accordance with another form of the present invention, the lamp shade 120 (Fig. 11) comprises a pleated cover 122 having a plurality of aligned apertures, here shown as elongated slots 124 adjacent the opposite edges of the cover. A band 126 passes through the slots adjacent the upper edge of the cover, and a band 128 passes through the slots adjacent the lower edge of said cover. Said bands may be made of metal or of non-metallic material, such as Celluloid, fishbone, wood, or any other suitable material which may be bent into circular configuration. It will be understood that in making a shade of this type, a suitable length of the pleated material is provided with slots 124, and that the bands 126 and 128 are passed therethrough and bent into proper form and then connected at their ends in any suitable way. After the covering material is assembled on the bands a lamp fixture 130 may be secured to the upper band in any suitable way, as for example, that shown in Fig. 12, according to which the ends 132 of the fixture wire are bent around said band.

While I have shown several embodiments of the invention, it will be understood that the latter is capable of other specific embodiments and that certain variations in the constructions herein shown may be made without departing from the scope of the present invention as defined by the appended claims.

What I claim and desire to secure by Letters Patent is:

1. A lamp shade comprising a frame and a covering of flexible sheet material therefor, said frame including upper and lower members each having an inner peripheral portion and an outer peripheral portion projecting outwardly over the upper and lower edges, respectively, of said covering and substantially in alignment therewith whereby the edges of said covering are protected by said frame members, frame members connecting said upper and lower members in fixed spaced relation, said covering engaging said inner peripheral portions of said upper and lower members and attachable to and removable from said frame while said upper and lower frame members are in said fixed spaced relation.

2. A lamp shade comprising a frame and a covering of flexible sheet material therefor, said frame including upper and lower members, each having a substantially vertical flange and a substantially horizontal flange, said last mentioned flange of each frame member extending outwardly over and substantially in alignment with the adjacent edge of said covering to protect the edges of the latter, frame members connecting said upper and lower peripheral members in fixed spaced relation, said flanges terminating in free edges disposed above and below the adjacent edges, respectively, of the frame covering at the top and bottom of the frame.

3. A lamp shade frame adapted to have a covering of sheet material secured thereto, said frame including upper and lower peripheral members, each having a substantially vertical flange and a substantially horizontal flange, said last mentioned flange of each frame member extending outwardly over and substantially in alignment with the adjacent edge of said covering to protect the edges of the latter, frame members connecting said upper and lower peripheral members in fixed spaced relation, said flanges terminating in free edges disposed above and below the adjacent edges, respectively, of the frame covering at the top and bottom of the frame.

4. A lamp shade frame adapted to have a covering of sheet material secured thereto, said frame including upper and lower peripheral members, each of said members having an angle formation constituted by substantially vertical and horizontal flanges, the face of said covering adjacent one of its edges lying against said vertical flange, means for securing said covering in said position, said horizontal flanges of said members extending over and protecting the adjacent edges of the covering when the latter is secured to the frame, frame members connecting said upper and lower peripheral members in fixed spaced relation, said horizontal flanges terminating in free edges disposed above and below the adjacent edges, respectively, of the frame covering at the top and bottom of the frame.

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