

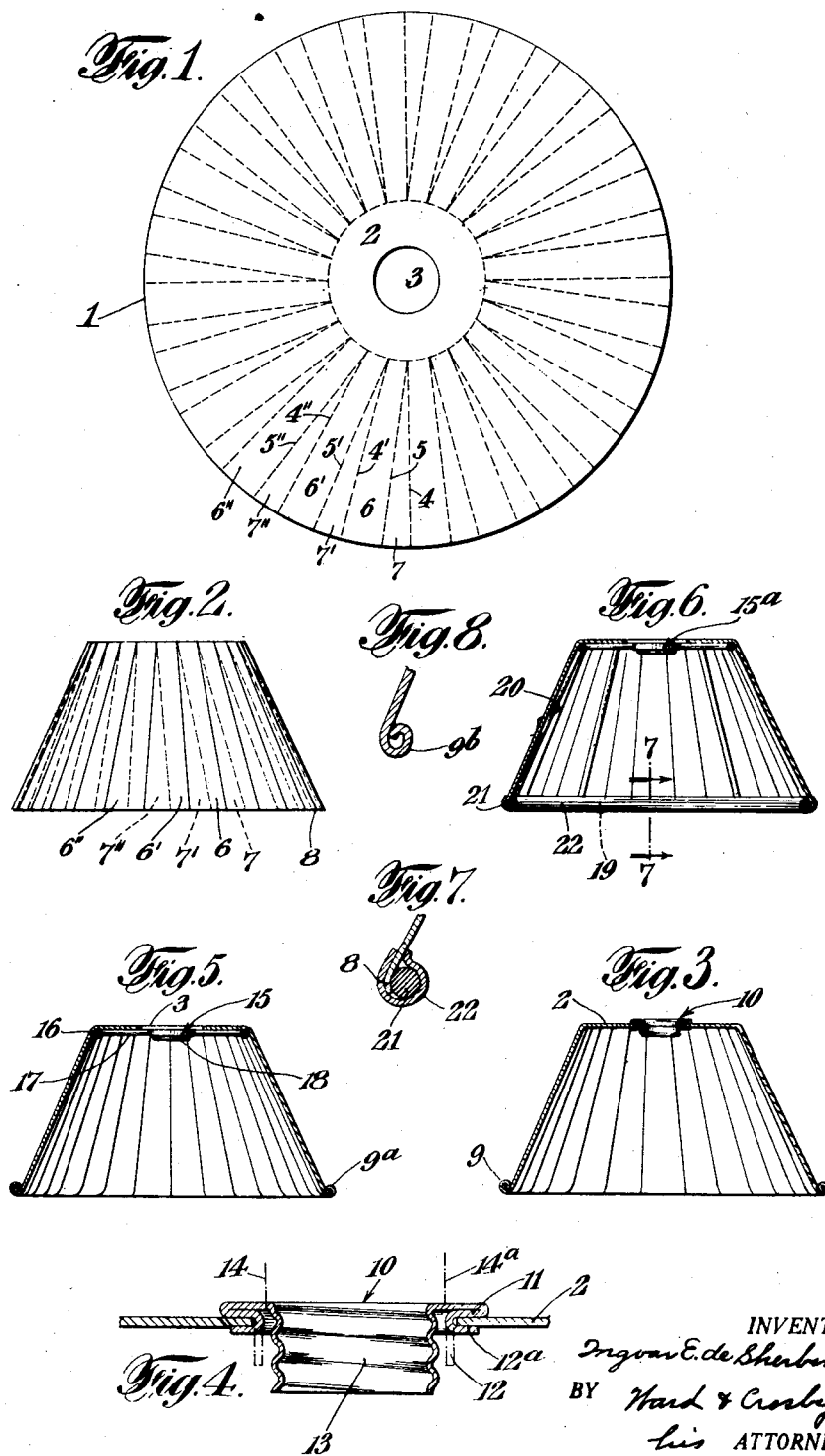
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LAMP SHADE

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UNITED STATES PATENT OFFICE

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LAMP SHADE

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This invention relates to lamp shades and more particularly to shades of this character which are made of parchment, paper or the like. The invention comprehends shades of that character which will be referred to as of frusto-conoidal form, which term is to be understood as including frustums of cones or pyramids and the like shapes having a plurality of sides.

The invention consists in the novel features, arrangements and combination of parts embodied by way of example, in the devices hereinafter described, as illustrating preferred forms of the invention, and the invention will be more particularly pointed out in the appended claims.

Various objects, features and advantages of the invention will appear from the following specification and claims taken in connection with the accompanying drawings, in which

Fig. 1 is a plan view of a developed blank illustrating the preferred manner of making the shade,

Fig. 2 is a side elevation of the blank in folded position,

Fig. 3 is a longitudinal vertical section through a finished shade,

Fig. 4 is an enlarged detail of Fig. 3,

Fig. 5 is a similar section showing a modified form,

Fig. 6 is a similar section showing a further modification,

Fig. 7 is an enlarged section taken at 7—7 of Fig. 6, and

Fig. 8 is an enlarged section showing a variation of the rolled edge.

The blank 1 shown in Fig. 1 is made from a single sheet of material providing a top designated as 2 having a hole 3 therein for receiving a supporting member. The blank is creased as by scoring, or in any other suitable manner, along the lines 4, 5, 4', 5', etc. to thereby provide panels 6, 6', etc. and included segments 7, 7', etc.; the segments 7, 7', etc. being folded over above the respective lines 5, 5', etc. in overlapping position with respect to the panels 6, 6', etc., and in turn the segments 7', etc. fall between respectively adjacent panels 6, 6', etc. to thereby produce a folded blank as illustrated in Fig. 2.

The lower edge 8 of the blank so formed (Fig. 3) is rolled outwardly and upwardly and then inwardly and downwardly to provide a tight roll 9 in which the lower extremities of the pleats are included. Into this roll the side walls of the shade, including the pleated panels thereof, are given substantially a complete curl to thereby produce a stiff rugged lower edge which at any given point comprises three thicknesses of the side walls, and hence nine thicknesses of paper, due to the fact that the overlapping panels 6, 6', together with the included segments, such as 7', form three plies of material and due to the fact that the pleats are in substantial abutting engagement peripherally of said edge 9. It will therefore be seen that the rolled edge 9 is toughened or reinforced by the inclusion of the side wall pleats and in turn the rolled edge 9 serves to hold the pleats substantially throughout their length in flat overlapping position along the side walls of the shade. This construction provides a shade which is inherently stiffened laterally and longitudinally; the rolled edge 9 serving as a lateral stiffening means and the longitudinally extending pleats, which extend substantially throughout the length of the wall of the shade, serving to stiffen the shade longitudinally. As a means of imparting a pleasing finish to the shade it is preferably treated by dipping or coating, as for example by spraying, with a suitable compound, such as varnish, shellac or other medium, to impart the desired transparency and to serve as an additional stiffening means as well as for cementing the pleats in folded position.

It is to be understood that in the section shown in Fig. 3, as well as in Fig. 4 and Fig. 5, the thickness of the material has been exaggerated, and the size of the shade has been greatly reduced in order to clarify the construction and at the same time keep the sheets of drawings to a minimum.

The shade is provided with suitable means for attaching it to a supporting member such for example as a light fixture. The details of the attaching means 10 are clearly shown in Fig. 4. The holding means is preferably formed from sheet metal and is

in the general form of a grommet provided with an offset flange 11 and a depending sleeve portion 12 which is adapted to be inserted in the hole 3 (Fig. 1), after which the sleeve 12 is bent outwardly and upwardly, as indicated at 12a to thereby firmly clamp the top 2 between the flange 11 and bent-up sleeve 12a. The member 10 is further provided with means for attaching the same, such for example as the threaded sleeve 13, which in the present embodiment is adapted to be screwed on to an electric light socket provided with external threads, as is well understood in the art. If the shade is desired to be suspended from an electric light bulb itself the entire threaded sleeve 13 may be omitted and the member 10 may be provided with a hole indicated by the dash lines 14, 14a, the periphery of which will rest upon the lamp bulb to support the shade. The member 10 will in this instance simulate a grommet, and in either this or the threaded form will serve to strengthen the top 2 and to provide a finished relatively hard peripheral surface for the hole 3.

The shade heretofore described provides a unique construction which may be very cheaply and rapidly manufactured and which at the same time presents an extremely pleasing appearance.

Referring to Fig. 5, the shade illustrated is similar to that shown in Fig. 3, and made in a similar manner, except that the member 10 has been omitted and in place thereof the member 15 has been substituted. The member 15 comprises a ring 16 made of suitable material such for example as wire, to which is attached a plurality of radially inwardly extending ribs 17 which in turn are attached at their rear ends to an inner concentric ring 18, which is preferably provided with an interior threaded portion similar to that shown as 13 in Fig. 4, and serving to attach the shade to an electric light fixture or other support. If desired, the ring 18 may be made of such a size as to adapt it to be supported from the electric light bulb itself, as is well understood by those skilled in the art. The member 15 is preferably attached to the pleated shell in the position shown in Fig. 5 forming a rigid construction. It will therefore be seen that in the modification shown in Fig. 5 the lower edge of the shade is stiffened by the curled edge heretofore described, and which will be designated in this modification as 9a; while the top of the shade is stiffened by the member 15.

A further modification is shown in Fig. 6, in which the pleated form shown in Fig. 2 is utilized without rolling the lower edge of the same. This pleated form is placed over a suitable frame, such as 19, the top of which comprises a member similar to 15 in Fig. 5, and which will be designated herein as 15a. The member 15a is secured to a

plurality of downwardly extending ribs 20 attached at their lower extremities to a ring 21 to thereby form a rigid supporting frame of the general form of the pleated blank. The lower edge 8 of the pleated blank is fastened to the ring 21, such for example as by the binding strip 22 (Fig. 7) which surrounds the ring 21, and is attached to the lower edge 8 by an adhesive or in any other manner such as is well understood by those skilled in the art. This means of attachment, such as 22, serves also to hold the pleats flatly in position. The folded blank as indicated in Fig. 2, before attachment to the frame illustrated in Fig. 6, is preferably treated to give the desired degree of transparency, as described in connection with the embodiment illustrated in Fig. 3.

The pleats illustrated herein and the formation of which has been described hereinbefore are of the form known as plain pleats; but it is to be understood that the pleats may be of the form commonly known as box pleats, or of any character in which the folds of the pleats lie in flat position and are closely held adjacent each other. As is well understood by those skilled in the art, the blanks to be pleated are preferably tempered before the pleating operation; such tempering depending upon the character of the paper employed. However, since this matter of tempering the paper and of preparing the same for the pleating operation is well understood by those skilled in the art, this process will not be described herein.

While the various embodiments and forms of the shade herein disclosed closely approach the frustums of a cone, which comprise in reality a large number of faces, it is to be understood that the form of the shade may also be that of a frusto-pyramid in which the faces conform more nearly to plane surfaces. The variation between conical and pyramidal formation, and circular and polygonal formation, will depend largely upon the number of faces, i. e. pleats provided for: the greater the number of sides employed, the nearer will be the approach to a circular formation.

In Fig. 8 a variation of the rolled edge 9 is illustrated as 9b. In this form the edge 8 of the pleated blank is rolled inwardly instead of outwardly and in all other respects is the same as that described hereinbefore. This variation has the advantage of concealing the roll and providing a lower edge which appears as a smooth plain edge when viewed from without. In general the rolled edge 9b functions in substantially the same manner as the rolled edge 9.

Having thus described my invention with particularity with reference to its preferred form, and having illustrated certain modifications thereof, it will be obvious to those

skilled in the art, after understanding my invention, that other changes and modifications may be made therein without departing from the spirit and scope of my invention, and I aim in the appended claims to cover such changes and modifications as are within the scope of the invention.

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

1. A lamp shade of frusto-conoidal form made from a single blank having a top provided with a hole through which a supporting member is adapted to extend, pleated sides with overlapping portions and a curled lower edge into which are rolled the lower extremities of the pleated sides, whereby said shade is stiffened laterally by said rolled edge reinforced by said pleated portions and said shade is stiffened longitudinally by said pleats held in locked position by said rolled edge.

2. A lamp shade of frusto-conoidal form made from a single blank having a top provided with a hole through which a supporting member is adapted to extend, pleated sides with overlapping portions and a curled lower edge into which are rolled the lower extremities of the pleated sides, whereby said shade is stiffened laterally by said rolled edge reinforced by said pleated portions and said shade is stiffened longitudinally by said pleats held in locked position by said rolled edge, and an attaching member fixed to said shade and having an opening alined with said hole, said attaching member being carried by said supporting member.

3. A lamp shade of frusto-conoidal form made from a single blank having a top provided with a hole through which a supporting member is adapted to extend, pleated sides with overlapping portions and a curled lower edge into which are rolled the lower extremities of the pleated sides, whereby said shade is stiffened laterally by said rolled edge reinforced by said pleated portions and said shade is stiffened longitudinally by said pleats held in locked position by said rolled edge, and means attached to said shade and adapted for attachment to said supporting member.

4. A lamp shade of frusto-conoidal form made from a single blank having a top provided with a hole through which a supporting member is adapted to extend, pleated sides with overlapping portions, means for holding said pleats in closely folded position and for stiffening said shade, and means carried by said shade for supporting the latter from said supporting member.

5. A lamp shade of frusto-conoidal form made from a single blank having a top provided with a hole through which a supporting member is adapted to extend, pleated sides with overlapping portions, means for holding said pleats in closely folded position,

means for stiffening said shade laterally, and means carried by said shade for supporting the latter from said supporting member.

6. A lamp shade of frusto-conoidal form made from a single continuous blank having a top provided with a hole, pleated sides forming substantially polygonal faces, and means for holding the pleats of said sides in substantially flat position and for stiffening said shade.

7. A lamp shade of frusto-conoidal form made from a single continuous blank having a top provided with a hole, pleated sides forming substantially polygonal faces, and means for holding the pleats of said sides in substantially flat position and for stiffening said shade, said pleats extending substantially the entire length of said faces from the top to the lower edge of said shade.

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

INGVAR E. DE SHERBININ.