F. A. ANDREWS & T. G. ALLEN.

ILLUMINATING APPLIANCE.

APPLICATION FILED NOV. 9, 1915.

1,230,645.

Patented June 19, 1917.

3 SHEETS—SHEET 1.

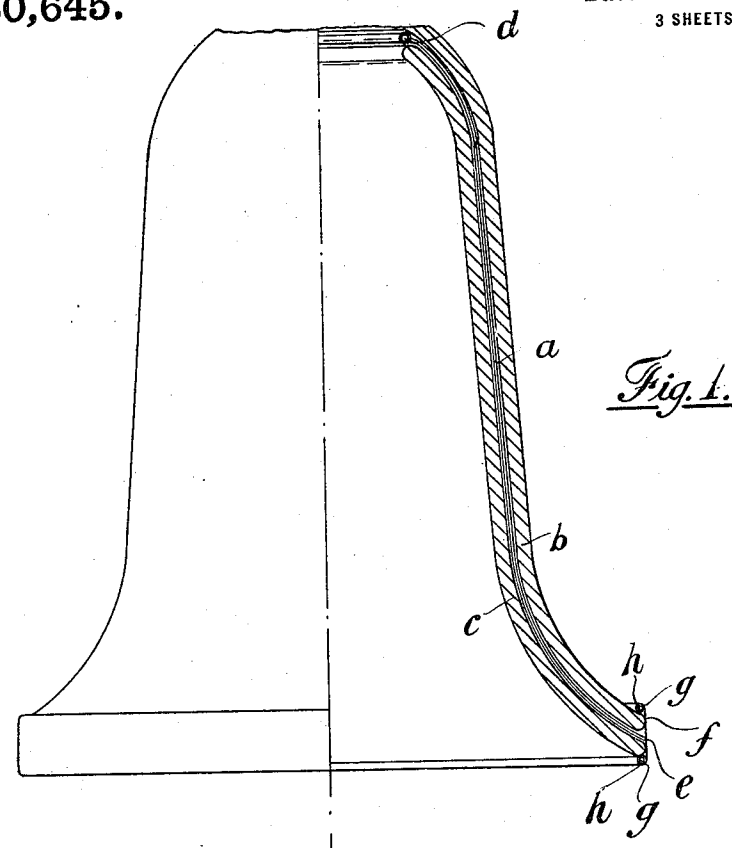


Fig. 1.

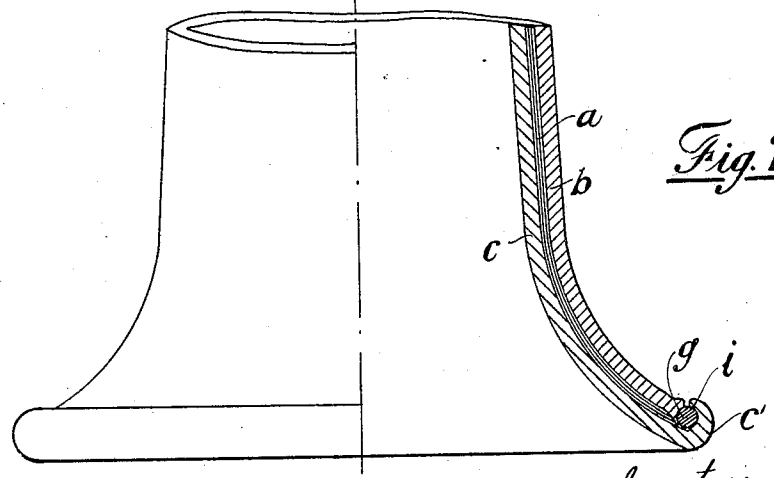


Fig. 2.

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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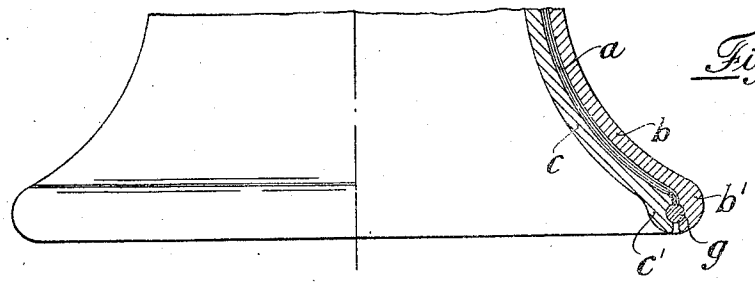


Fig. 3.

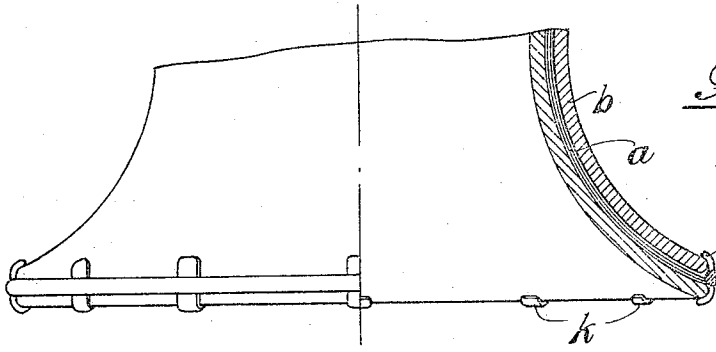


Fig. 4.

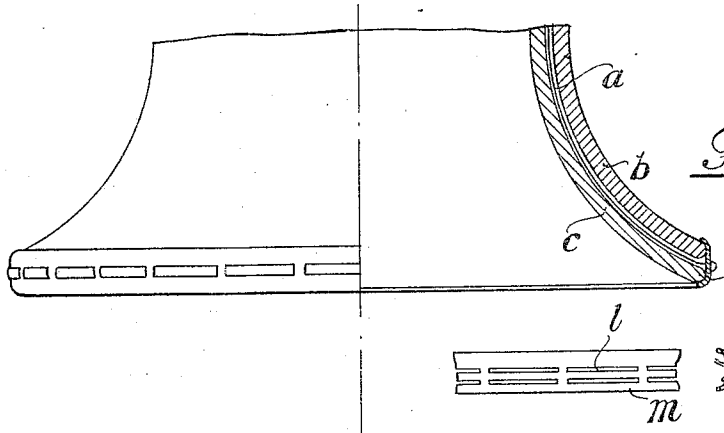


Fig. 5.

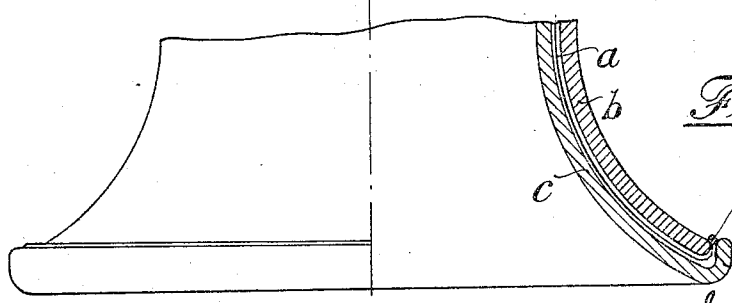


Fig. 6.

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3 SHEETS—SHEET 3.

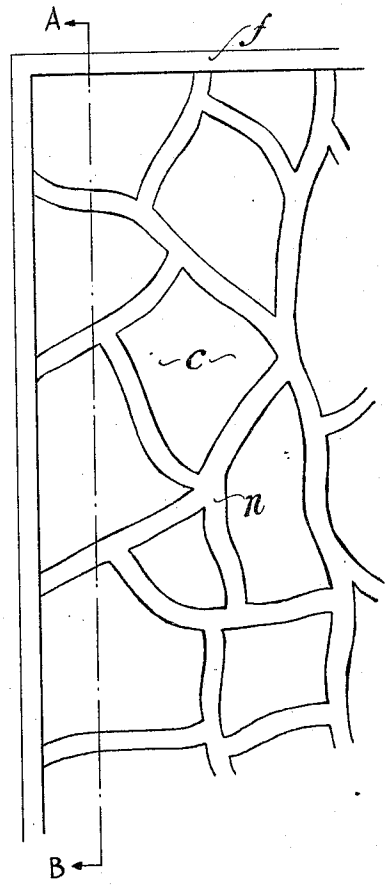


Fig. 7.

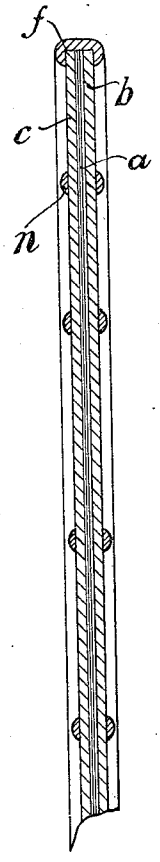


Fig. 8.

Inventors:-
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UNITED STATES PATENT OFFICE.

FREDERICK AUGUSTUS ANDREWS AND THOMAS GASKELL ALLEN, OF WESTMINSTER, LONDON, ENGLAND.

ILLUMINATING APPLIANCE.

1,230,645. Specification of Letters Patent. **Patented June 19, 1917.**

Application filed November 9, 1915. Serial No. 60,612.

To all whom it may concern:

Be it known that we, FREDERICK AUGUSTUS ANDREWS and THOMAS GASKELL ALLEN, residing at Westminster, London, S. W., England, have invented certain new and useful Improvements in Illuminating Appliances; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to the manufacture of a new article suitable for obtaining transmitted or reflected light effects, and is characterized by interposing textile materials, paper that is perforated or translucent or opaque sheet material such as thin metal, paper or cloth that is perforated to obtain silhouette effects, between protective transparent or translucent parts, such as glass, and binding or framing said protective parts with the interposed materials to form a composite unit.

The invention is capable of a large number of applications, but finds an extensive field of utility in connection with lamp shades, window and casement lights, or where similar transmitted or reflected color effects are desired. At the present time the materials ordinarily employed for lamp shades and the like are exposed to the risk of fire and deterioration from dust and wear; furthermore their surfaces usually have in themselves very little reflective power on the light they inclose. The invention as applied to these articles consists in inclosing the said materials between protective or reflective parts of glass and the like, arrangements being made whereby the glass parts and the material inclosed are fastened together so as to form a complete unit. Lamp shades and the like articles may be so made of curved or hemispherical shape, and in cases where the invention is applied to flat composite units it is necessary that the external dimensions of the covering parts conform the one with the other. That is to say, that if the covering sheets of glass are rectangular, then the edges of the said parts are in alinement. If on the other hand the covering parts are curved hemispherical or globular, the one part is made to lie within the other, and conform therewith in shape.

The invention will however be better understood by reference to the accompanying drawings in which:—

Figure 1. shows the invention as applied to an ordinary electric lamp shade.

Figs. 2, 3, 4, 5 and 6. show alternative methods whereby the protective parts are interlocked.

Figs. 7 and 8. show in elevation and part section respectively a panel unit made in accordance with this invention.

Referring to the drawings, the ordinary lamp shade or like material *a* is inclosed between protective glass parts *b* and *c*, the one part *c* being made to conform and lie within the outer part *b*, the interposed material *a* which in such application is preferably of a textile nature, is secured over the inner glass part *c* the upper part being provided with a hem or stitched portion *d*. The material *a* may be secured over the glass part *c* in a stretched, plaited or puckered condition, and arranged so that its ends *e* protrude at the base. At this latter point a ring *f* attached to or forming part of the same material is formed, and provided with edgings *g*, which may be reinforced if required with a ring of wire, rubber or the like material *h*. The upper edging *g* is adapted to engage the upper surface of the rim of the outer protective part *b*, while the lower edging *g* is adapted to engage the inside of the rim of the inner glass part *c*.

In operation it will be seen that by these means the parts *a*, *b*, and *c* are interlocked against unintentional relative displacement, the material in this case acting in conjunction with the edging *g* as a binding material. In Fig. 2 an alternative method is provided in which the lower rims of the parts *b* and *c* are caused by means of an insertion to interlock. To effect this the rim of the inner protective part *c* is extended and curved upward as at *c'*, and is provided with a notch or groove *i*, a similar notch or groove *i* being formed in the lower rim of the outer protective part *b*. The material *a* secured within these two protective parts is formed with a single edging *g* which in this case is preferably reinforced with rubber or the like material which can be squeezed into the notches and when once in place will serve to lock the parts *a* and *b* against unintentional disengagement. Alternative methods of securing these are shown in Figs. 3, 4, 5 and 6. In Fig. 3 the method of locking the

parts *a* and *b* is identical with that of Fig. 2 except that the parts *b'* and *c'* which are notched to retain the interlocking medium *g* curve downwardly as shown.

In Fig. 4 the lips or rims of the protective parts *b* and *c* are left plain as in Fig. 1, and are interlocked against disengagement by means of cleats *k* which are passed through the edging *g* and then bent in a plurality of instances to grip the two parts *b* and *c* together. In Fig. 5 plain lips or rims are again employed, but the fabric *a* protruding from the said parts is threaded between slots *l* in metal or the like strips, *m* which strips are secured and bent up around the lips of the continuous clip. In this form of the device the material may be tensioned prior to inclosing same in the clip rim *m*. In Fig. 6 is shown a further modification whereby the inner protective part *c* is bent up with a single plain lip or gutter *c''* to accommodate the lower rim of the outer protective part *b*, the interposed material *a* being provided with an external edging *g* which in this form serves to lock the two parts from disengagement. In lamp shades of this formation which are adapted to be secured by means of the holding rings of the lamp shade holders, the lower edges of the fabric need not necessarily protrude and a somewhat heightened and improved artistic effect is produced if the fabric *a* is left without any decided termination, such as a metal band or ring to accentuate the outline of the shade. This may be effected in the case of an electric or like lamp shade by securing the outer protective parts *b* and *c* with a gripping collar (not shown) separate from or forming part of the lamp holder thus securing the said parts in relative fixity when the material may terminate within the confines of the shade parts and may be sealed therein in a dust free condition by inserting copal varnish or like transparent medium that may also be of an adhesive character into the space between the glass shade parts.

By means of the foregoing it will be observed that shades for lamps made or manufactured from materials ordinarily employed may be protected from risk of fire, or from contact with dust, while the original colors may be preserved. The invention also has the advantage that artistic effects are obtainable thereby which are not obtainable in shades or the like constructed wholly of glass, porcelain or the like. In a modified form the colors may be improved upon or supplemented, as for instance, the inner shade part *c* may be made transparent, the material *a* be colored, and the protective parts *b* be made from translucent or tinted glass, so that when light is transmitted the observer has the effect of the combination of the colors possessed by *a* and *b*. In Figs. 7 and 8 panels are shown, in which the protective parts *b* and *c* are employed inclosing the material *a*. These parts *b* and *c* are made to conform the one with the other so far as their external dimensions are concerned, and are bound or framed according to the application of the invention, with metal, wood, paper or the like binding or framing material *f*. In this case, or in any of the foregoing applications the effect of a leaded light may be obtained by superimposing a patch work outline *n* of opaque material. A composite unit of rectangular shape may be employed for window lighting or for any scheme of decoration, or again these individual panels may be of small dimensions, secured the one to the other and made up into shades, or the like devices for transmitting light.

It will be understood that the glass covering parts may be bent or molded into any desired shape, and the material placed between same, so long as a composite unit is produced. Again these composite units may be mounted in a suitable framework, or may be bound together with wood, metal, paper or any other suitable binding material, and for economy in space for packing and portability these sections may be detachable from each other, and when assembled may be placed in their frame at such an angle in relation to the source of light as to secure a maximum of reflection in any desired direction. The interposed fabric may be continuous or interrupted, and the fabric where opaque, semi-opaque, transparent or translucent, may be perforated, or a combination of translucent material may be employed in conjunction with a perforated opaque material, whereby a silhouette effect is obtained with a colored background. In the event of the outer protective parts of the panel or shade being secured together by means other than the fabric itself, the material interposed may be secured by means of an adhesive to one or other of the said parts, or alternatively the fabric in a variety of colors may be made in sections, and caused to adhere to one shade of glass and then covered by the other shade, the patch work opaque edge *n* as shown in Figs. 7 and 8 being secured to the one or the other of the parts *b* and *c*, so as to disguise the joins in the material *a*, and give a more realistic representation of stained glass. Again in the event of applications where the light is only required to be shaded in one direction, as is necessary for table decorations and office fittings, the shade may be made in two semi-cylindrical pieces of glass with the fabric placed between them. Furthermore the protective parts *b* and *c* may be made in mica, talc, horn, celluloid, casein or the like transparent or translucent material. The invention provides the means for considerable artistic development, for example articles of

furniture such as overmantles, sideboards, and the like may be fitted with panels made according to this invention and the room lighted without the need of independent illumination fittings. The invention also makes it possible to manufacture shades and the like of such material as will be suitable for and harmonizing with any particular color scheme or any particular period or type of furnishing employed.

We claim:—

1. An illuminating appliance comprising materials interposed between light transmitting protective parts, and means for securing said parts, said means comprising a binder integral with the protruding interposed material so arranged that same can be made to embrace said parts.

2. An illuminating appliance comprising materials interposed between light transmitting protective parts, means for securing said parts together, said means comprising a rim formed on one of said parts and adapted to engage the other part, and means for locking said parts against unintentional relative movement.

3. An illuminating appliance consisting of an inner glass light transmitting part, an outer glass light transmitting part, said parts being of curved form, an interposed layer of flexible material, means for producing a leaded light effect thereon, and means for fastening these parts together.

4. An illuminating appliance comprising materials interposed between light transmitting protective parts, means for producing a leaded light effect thereon, said materials being inserted as a patchwork, and opaque strips applied to said protective parts and caused to follow the contour of the individual patches.

5. An illuminating appliance comprising materials interposed between light transmitting protective parts, means for securing said parts together, said means comprising a rim formed on one of said parts, and locking means adapted to engage said rim and the other part to lock said parts against unintentional relative movement.

In testimony whereof we affix our signatures in presence of two witnesses.

FREDERICK AUGUSTUS ANDREWS.
THOMAS GASKELL ALLEN.

Witnesses:
A. R. RAMSEY,
H. C. WESTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."