

Oct. 12, 1926.

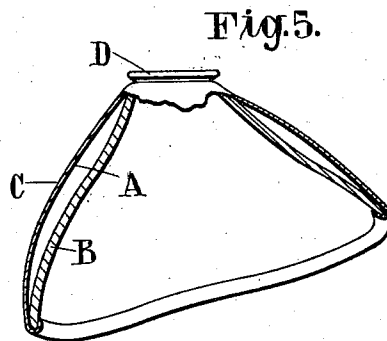
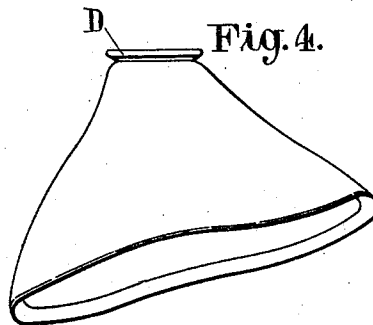
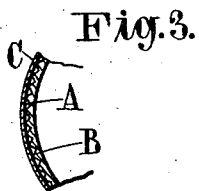
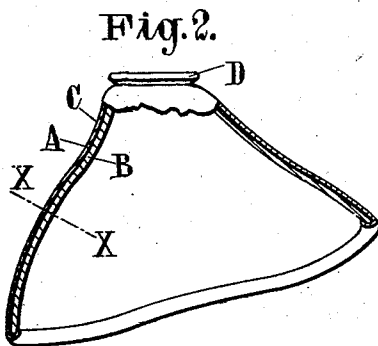
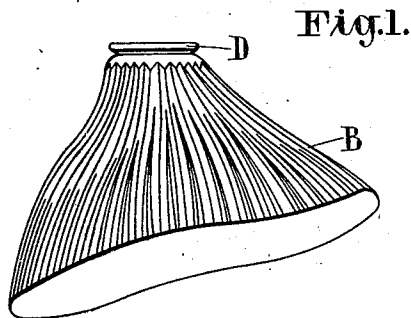
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COVERING FOR GLASS LAMP SHADES OR REFLECTORS

Filed May 19, 1925

2 Sheets-Sheet 1



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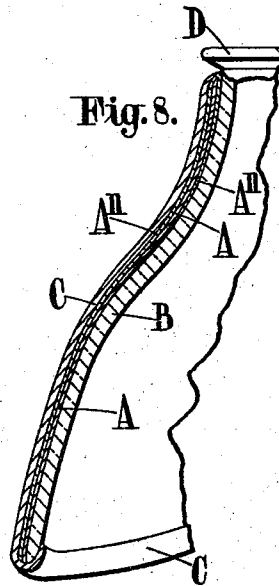
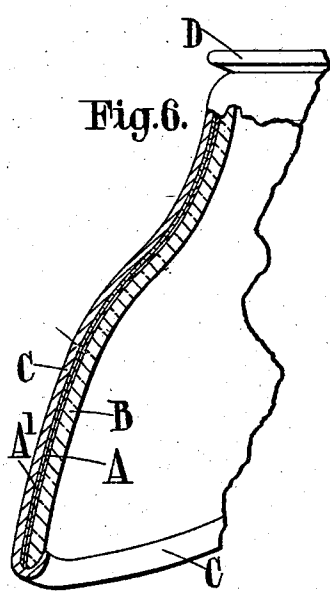
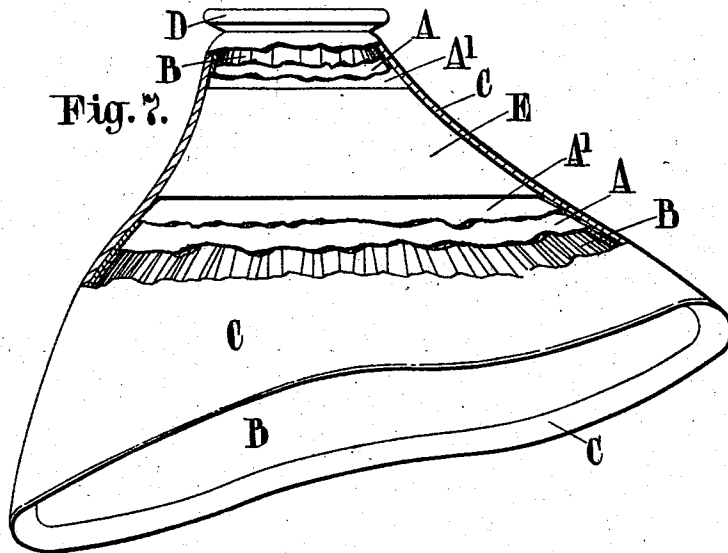
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UNITED STATES PATENT OFFICE.

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COVERING FOR GLASS LAMP SHADES OR REFLECTORS.

Application filed May 19, 1925, Serial No. 31,425, and in Great Britain May 30, 1924.

This invention relates to reflecting coverings for prismatic, ribbed, corrugated or other (e. g. plain) glass lampshades or reflectors and has for its object to produce a dust proof covering, which has a high efficiency as a reflector, is light and is capable of being ornamented in many ways.

According to the invention, the glass lampshade or reflector has a reflecting covering secured to its exterior surface by means of a layer of papier mâché or like plastic material, which will hereinafter be referred to as papier mâché. This inner reflecting covering may advantageously consist of a layer of paper which in the case of prismatic, ribbed or like shades or reflectors (hereinafter referred to as ribbed reflectors) rests on the angles or crests of the prisms or ribs of the shade or reflector and is not in optical contact with the remaining parts of the exterior surface of such shade or reflector. The inner or reflecting layer or portion of the covering is preferably made separately from the remaining portion of the covering and is placed in position on the glass shade or reflector in a dry condition. The reflecting surface may be formed by the material of the inner layer itself or by pigment applied thereto in any suitable manner.

In some cases a layer of resilient material, such as asbestos fibre, is arranged between the inner or reflecting layer or portion of the covering and the layer of papier mâché or like material. Moreover the covering may be reinforced, e. g. at the parts where the surface is curved inwards, by means of strips, bands or layers of textile or other material of greater mechanical strength, or by metal rings or frames.

In a further modification, the inner layer may be dispensed with and the reflecting surface may be formed by papier mâché or like plastic material either alone or treated with a suitable heat resisting pigment and so arranged as to form an airtight and dust-tight joint with a prismatic, ribbed or corrugated shade or reflector at the top and bottom borders thereof.

In the accompanying drawing:—

Figure 1 shows a glass shade of a known type having a prismatic outer surface.

Figure 2 is a view of the same shade,

shown partly in vertical section, and having the improved reflecting covering applied thereto.

Figure 3 is a fragmentary section on the line X—X, Figure 2.

Figure 4 is a side view of the complete shade.

Figure 5 is a view similar to Figure 2 of a modified form of shade.

Figure 6 is a vertical section of a portion of a shade embodying a further modification.

Figure 7 is a side elevation, partly in section and with parts broken away, of another modification, and

Figure 8 is a vertical section of a still further modification.

In carrying the invention into practice, the inner reflecting layer or portion A of the covering, which may be white or coloured, is prepared on a suitable former which may be of the same shape, e. g. as in Figures 2, 3 and 4, as the glass shade or reflector B, or it may be of different shape, e. g. as in Figure 5, to such glass reflector, so that the distribution of light is varied. This inner layer or portion of the covering is placed in position on the glass shade B in a dry condition, means being provided in some cases for preventing the passage of moisture through it to the space or spaces between the covering and the surface of the glass, for example the surface of such layer is treated with a suitable waterproof varnish or compound A' (Figure 6) to render it impermeable. In some cases, the inner reflecting covering may be made of a suitable composition or material which becomes plastic when heated, such as a non-inflammable celluloid known as celastoid, such name being a registered trade mark.

The papier mâché or other plastic material C forming the outer layer or portion of the covering is made in a mould to fit the exterior of the inner layer or portion of the covering, and while in such mould and when partially dry the inner layer or portion is placed in position. The glass shade or reflector is then placed therein and the papier mâché covering while still moist turned over the bottom edge of the glass reflector. The upper edge of the papier mâché covering fits closely up to the annular

rib or flange D on the glass for engaging the screws or clips of the gallery. The mould is then removed and the papier mâché shape dried. In drying it shrinks so that it tightly grips the glass reflector, while the inner layer or portion of the covering adheres to both the glass and to the papier mâché covering, sealing up the joints at the top and bottom of the glass reflector and enclosing the outside of the glass reflector in an air-tight and dustproof covering.

In a modification the papier mâché layer is formed directly on the outside of the inner layer or portion of the covering after the latter has been dried as above mentioned.

In cases where the reflecting layer A next the glass is formed of non-inflammable celluloid or similar material, an intermediate layer A' (Figure 6) of paper or other suitable material is arranged between the celastoid or similar material and the outer layer C of papier mâché. If a reinforcement, e. g. of textile material E (Figure 7) is employed, it may be advantageously arranged between the layer of paper and the outer covering of papier mâché.

One advantage of applying the papier mâché covering as above mentioned is that the papier mâché does not shrink into the spaces between the prisms, ribbings or the like on the outer surface of the glass reflector, but rests only on their outer edges, thus avoiding optical contact with the surfaces of the prisms. The glass reflectors covered may be of all the shapes used in practical work.

By using a composite reflector consisting of a glass reflector having a prismatic or ribbed outer surface, and a paper mâché covering or shape lined with a white or other colour reflecting substance the efficiency of the shade as a light reflector is increased; and the outside of the glass reflector having prisms, ribbings or the like is kept perfectly clean, so that the prisms are maintained at their highest efficiency, which would not be the case if they were to become dirty.

Moreover the composite reflector weighs less than would be the case if the outer covering were of metal thus putting less strain upon the fittings holding it.

In order to prevent cracking of the outer papier mâché layer during the contraction of the same which takes place during the drying, a layer of asbestos A'' (Figure 8) or other resilient material may be arranged between the inner (A) and outer (C) layers or parts of the covering. Such asbestos layer A'' may also be continued inwards, as shown, so as to form the uppermost part of the inner layer, i. e. at the place where the shade fits closely round the holder of the glow lamp and the temperature is consequently a maximum.

By treating the exterior surface of the outer covering with a suitable waterproof enamel, paint or varnish, the covering may be adapted for use in the open air.

The covering may be reinforced preferably by one or more layers of open mesh textile fabric, as at E, Figure 7; or by means of metal rings or frames spun to fit the exterior surface of the inner or outer layer. Such metal rings or frames may have fingers or lugs formed thereon to engage the flange D so as to retain them in position.

The papier mâché may be decorated externally in any colour, or coated to imitate bronze or other metal.

I claim:

1. A light reflector for illumination devices, comprising in combination a glass lampshade having an externally ribbed surface, a layer of material having a reflecting surface resting on the crests of the ribs and out of optical contact with the remainder of the glass lampshade, and a covering of papier mâché applied in a plastic condition around the layer of reflecting material so as to enclose the same and also moulded in a plastic condition directly on to the glass lampshade so as to form a permanent air-tight and dustproof joint therewith at the upper and lower borders thereof.
2. A light reflecting shade for illumination devices, comprising a glass lampshade having an externally ribbed surface, a layer of paper having a reflecting surface resting on the crests of the ribs and out of optical contact with the rest of the glass lampshade, and a covering of papier mâché arranged around said layer of paper so as to enclose the same and to secure it upon the said glass lampshade, said layer of papier mâché forming an air-tight and dustproof joint with the glass lampshade at the top and bottom borders thereof.
3. A light reflecting shade for illumination devices, comprising a glass lampshade having an externally ribbed surface, a layer of paper having a reflecting surface resting on the crests of the ribs and out of optical contact with the rest of the glass lampshade, a covering of papier mâché arranged around said layer of paper, said covering of papier mâché forming an air-tight and dustproof joint with the lampshade at the top and bottom borders thereof, and a reinforcing strip of textile material arranged underneath the papier mâché.
4. A light reflecting shade for illumination devices, comprising a glass lampshade having an externally ribbed surface, a layer of paper having a reflecting surface resting on the crests of the ribs and out of optical contact with the rest of the glass lampshade, a layer of resilient material arranged around the layer of reflecting material and a covering of papier mâché around said layer of

resilient material, said covering of papier mâché forming an air-tight and dust proof joint with the lampshade at the top and bottom borders thereof.

- 5 5. A light reflecting shade for illuminating devices, comprising a glass lampshade having an externally ribbed surface, a layer of material having an inner reflecting surface resting on the crests of the ribs of said glass lampshade and out of optical contact with the remainder of the adjacent surface of said lampshade, a covering of papier mâché enclosing said first-named layer and forming an air-tight and dustproof joint with said lampshade at the top and bottom borders of the latter, and a layer of reinforcing material arranged between said

first-named layer and the layer of papier mâché.

6. A light reflecting shade for illuminating devices, comprising a glass lampshade having an externally ribbed surface, a layer of material having an inner reflecting surface resting on the crests of the ribs of said glass lampshade and out of optical contact with the remainder of the adjacent surface of said lampshade, a covering of papier mâché enclosing said layer and forming an air-tight and dustproof joint with the lampshade at the top and bottom borders of the latter, and a reinforcement of textile material arranged substantially at the inner surface of the layer of papier mâché.

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