

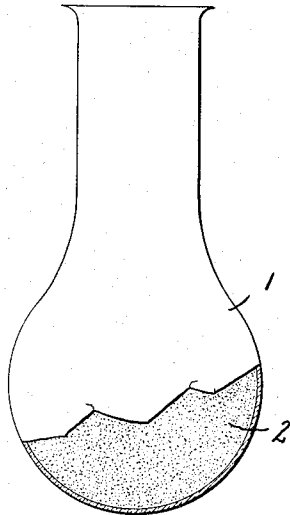
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K. FUWA ET AL

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ELECTRIC LAMP BULB

Filed Dec. 27, 1928



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# UNITED STATES PATENT OFFICE

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## ELECTRIC LAMP BULB

Application filed December 27, 1928, Serial No. 328,762, and in Japan July 14, 1928.

Our invention relates to illuminating glass-ware and more particularly to bulbs and other enclosures for electric lamps. Still more specifically, our invention relates to inside  
5 frosted bulbs for electric lamps. According to our invention the inside surface of the bulb or other glass enclosure is covered with minute pieces of glass or other vitreous material which is united to the glass by means of a  
10 binder. According to the preferred form of our invention the binder which is used is a comparatively low fusing material which when fused becomes nearly transparent.

In the drawing the figure shown is an elevation partially broken away of an incandescent lamp bulb made according to our invention.

As shown in the drawing, the bulb 1 has a coating 2 on the inner surface thereof. This  
20 coating is made by mixing minutely ground pieces of glass with a binding agent which is insoluble in water but which has a comparatively low fusing point and which becomes nearly transparent when melted. Examples  
25 of such binding materials are lead borate or borosilicate, and lead or sodium phosphate. In some cases it is desirable to add nitrocellulose, starch, glue or rosin. The mixture is coated evenly on the inner surface of the bulb  
30 and dried. It is then heated to fuse the binding material, care being taken not to heat it high enough to soften the glass. The nitrocellulose, starch, glue or rosin will be driven off. The binding material becomes almost  
35 transparent and therefore the absorption is low while the diffusion is very good.

What we claim as new and desire to secure by Letters Patent of the United States, is:

1. An electric lamp bulb having a surface  
40 thereof covered with a mixture of minute pieces of glass and a material of lower melting point fused to said surface.

2. An electric lamp bulb having a surface thereof covered with a mixture of minute  
45 pieces of glass and a material of lower melting point fused to said surface, said material being such that when fused it is substantially transparent.

3. An electric lamp bulb having a surface  
50 thereof covered with a mixture of minute

pieces of glass and a lead salt fused to said surface.

In witness whereof, we have hereunto set our hands this 5th day of December, 1928.

KITSUZO FUWA.

YUICHIRO SHIRAISHI.

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