

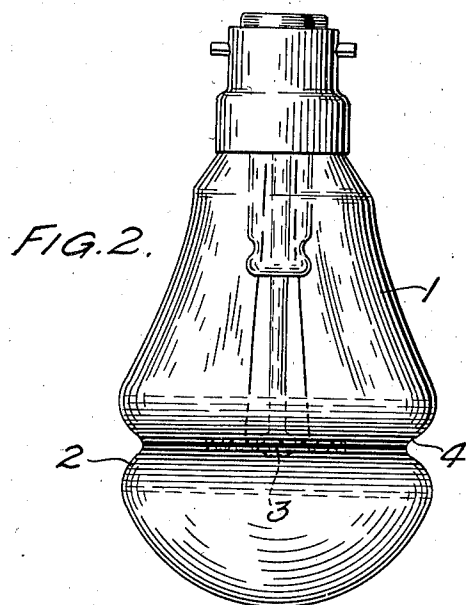
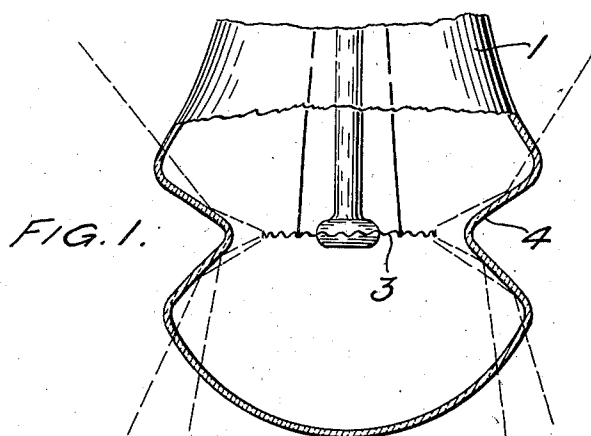
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2,116,722

ELECTRIC LAMP

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ELECTRIC LAMP

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1 Claim. (Cl. 176—16)

This invention relates to electric lamps and its object is to provide a lamp in which excessive intensity of the light in certain directions is minimized with a view to improving the general distribution of the light.

Another object is to increase the light given out in certain directions where it is most useful.

With this object in view the invention consists in an electric lamp in which the wall of the bulb is indented towards the luminous element in an area where the radiation is stronger than necessary for optimum distribution, the sides of the indentation being formed at such an angle as to reduce the amount of light passing directly therethrough by reflecting some of it in other and more useful directions.

The invention is particularly applicable to the type of electric lamp in which the luminous element consists of a filament which is bent or curved in one plane, for example, in the form of a part circle or polygon in a horizontal plane, in which case more light is radiated in the plane of the filament than in other directions, and a bright line or band is liable to be thrown on the walls or on adjacent objects in the plane of the filament, and in the case of a horizontal filament most light is radiated in the least useful direction, i. e. in a horizontal plane.

In this case the excess radiation in the plane of the filament is reduced in accordance with the invention by forming the indentation partly or wholly around the bulb adjacent the filament and in or near the plane thereof, whereby some of the horizontal radiation is reflected upwards and/or downwards by the walls of the indentation.

The invention is illustrated by way of example in the accompanying drawing, in which

Fig. 1 shows partly in section an electric lamp in accordance with the invention, and Fig. 2 shows a modification.

Referring to the drawing, the glass bulb 1 of the lamp shown in Fig. 1 is formed with an indentation 4 opposite and surrounding the filament 3, the apex of the indentation being approximately in the plane of the filament. Owing to the acute angle of incidence of the light on

the sides of the indentation 4 a considerable proportion of the light will be reflected upwardly or downwardly as shown by the dotted lines and considerably less light will be directly transmitted horizontally, thus reducing the illumination in and near the plane of the filament and increasing the illumination of the working plane below the lamp and of the ceiling above the lamp.

In the modification shown in Fig. 2 a diffusing band 2 is formed on the glass wall of the bulb in the area of indentation, whereby the amount of light directly transmitted through the indented part of the bulb is further reduced by absorption and the amount reflected upwardly or downwardly from the sides of the indentation 4 is increased by the relative opacity of the glass. The diffusing band 2 is preferably, but not necessarily, graduated at its edges as shown, to avoid any sudden changes in the intensity of the illumination of different areas.

The apex of indentation need not be exactly in the plane of the filament. For instance if it is desired to increase the amount of light reflected downwardly and to decrease relatively the amount of light thrown upwardly on to the ceiling, the deflecting indentation might be formed with its apex slightly above or behind the plane of the filament. Alternatively the upper and lower sides of the indentation might be formed at different angles to the plane of the filament.

It will be obvious that the dimensions and proportions of the indentation may vary widely according to the circumstances.

What I claim is:—

An electric lamp having a luminous element and a transparent bulb enclosing said luminous element, said bulb being formed with an indentation of substantially V-shape in cross section longitudinally of the bulb, the apex of the inner face of said indentation being so positioned with respect to said luminous element as to be located in the zone of the greatest intensity of illumination from said luminous element when the same is rendered luminous by an electric current.

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