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C. M. LUNGREN.
ART OF MOUNTING A MANTLE.
APPLICATION FILED MAR. 6, 1905.

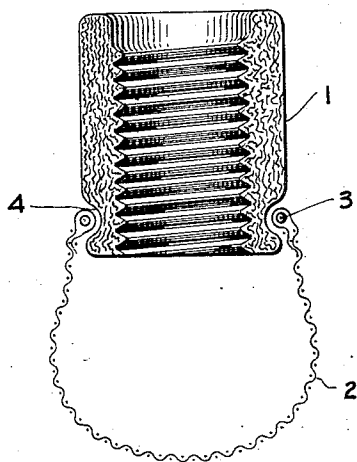


Fig. 1.

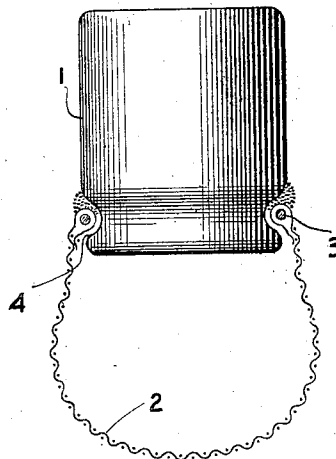


Fig. 2.

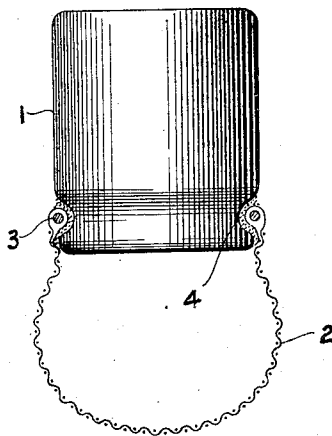


Fig. 3.

WITNESSES:
J. Clyde Ripley.
Robert S. Blair

INVENTOR
C. M. Lungren
BY
Wardell Smith
ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES M. LUNGREN, OF BAYONNE, NEW JERSEY, ASSIGNOR TO THE
SAFETY CAR HEATING & LIGHTING COMPANY, A CORPORATION OF
NEW JERSEY.

ART OF MOUNTING A MANTLE.

No. 845,185.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES M. LUNGREN, residing at Bayonne, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Art of Mounting a Mantle, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to the mounting of fragile articles of the nature of incandescent-lamp mantles, and more particularly to the mounting of gas-lamp mantles in car-lighting systems.

One of the objects thereof is to provide an art whereby articles of the above nature may be simply and yet securely and efficiently mounted upon their means of support.

Another object is to provide an art whereby there is attained a mounting of the above nature which shall be unaffected by the action of heat, moisture, or sudden changes of temperature and which will efficiently cushion the mantle against the effect of shocks and vibrations of the member from which it is supported.

Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the several steps, the order of the same, and relation of one or more of the same with reference to one or more of the others thereof which will be exemplified in the art herein set forth and the scope of the application of which will be indicated in the following claim.

In the accompanying drawings, wherein is illustrated one of various possible methods of practicing my art, Figure 1 is a sectional elevation of a mantle and a supporting member. Fig. 2 is an elevation showing the same parts at a later stage of this art. Fig. 3 is a similar view of a completely-mounted mantle.

Similar reference characters refer to similar parts throughout the several views.

As tending to give a better understanding of the matter hereinafter set forth, it may here be noted that I have found that if a mantle be loosely mounted with relation to the member supporting the same any shock or vibration will tend to swing the mantle with reference to its supporting member and either through cracking or gradual wear at the points of contact will be likely to destroy the same within a short time. The above

and other defects are obviated and a secure and durable means of mounting provided by an art of the nature of that hereinafter described.

Referring now to the drawings, upon a supporting member 1, which is herein shown as of a tubular shape, a mantle 2 is secured, as by means of a flexible string or thread 3. This thread is preferably secured to the mantle by means of hemming the free end thereof about the same, as indicated in the drawings. The string 3, with the mantle attached to it, is then placed upon the supporting member 1, preferably within a groove 4, and drawn tightly into place. In the above steps it is assumed that the mantle has not been burned, and therefore comprises merely a suitably-impregnated piece of cotton or other fabric. If the mantle be now burned or otherwise prepared for use, the thread 3 will be found to be loose, owing largely to the shrinkage of the threads of the fabric with the defects above indicated. I propose to obviate this and other defects principally by means of a filling of a suitable paste or cement inserted between the grooved portions of the supporting member and the adjacent parts of the mantle.

It may here be noted that the term "cement" is used throughout the following claim, in a broad sense, as denoting any substance adapted to be interposed between the adjacent surfaces of two adjacent members and to adhere to these surfaces, thus joining the corresponding members one with another.

In the preferred method of practicing my art I apply the cement at the upper portion of the mantle between the same and the adjacent portions of the supporting member when the mantle has been tied in position. Upon completing the preparation of the mantle for use the cement, which is subjected to a high degree of temperature, is rendered viscous or even liquid and flows down into the joint, the mantle then cooled, and the cement hardens, holding the former in fixed position with relation to the supporting member and rendering it far better able to withstand the effect of vibration and jars than when loosely supported thereon. This action is due in a measure to the prevention of the mantle swinging with relation to the comparatively rigid supporting member and

subsequent shock thereto and severe attendant stresses. With the upper portion of the mantle held firmly in position the same may be vibrated at its free end without bringing such severe stresses to bear upon the portions thereof adjacent the supporting member.

The form of cement which I preferably use comprises a refractory oxid—as, for example, thoria or magnesia—mixed to a cream with a material that will burn out on heating, such as glue. If desired, however, the oxid may be mixed with silicate of soda or “water-glass,” the same being well adapted to act as a flux.

Although I prefer to practice my art as above described, certain advantageous features of my invention may be realized by first completely preparing the mantle, which, as above described, will thus be loosely mounted upon a supporting member and then applying cement and heating the same as above described.

Although I have herein shown the mantle as dependent from a supporting member, nevertheless this invention contemplates, broadly, the mounting of a mantle upon a supporting member irrespective of the relative positions of these parts. However, this art is peculiarly adapted for use in connection with the suspension of pendent mantles having a closed lower end.

It will thus be seen that I have provided an art for suspending a mantle in such manner as materially to lengthen the life thereof

by protecting the same from the deleterious effects of any shocks or vibrations which might be transmitted thereto, and also that the art provides a form of suspension which is unharmed by the effects of moisture, extreme heat, or rapid changes in temperature. Moreover, the art is of a simple character and may readily be carried on without the employment of skilled labor, machinery, or expensive tools.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The art of mounting a mantle consisting in placing a flexible string around said mantle adjacent the open end thereof, providing a tubular support of relatively refractory material and having a peripheral groove near one end thereof, then placing the open end of said mantle over said support end with the string in registry with said groove, then drawing said string tight whereby the underlying portion of said mantle will be forced into said groove, then introducing a fusible cement into the accessible crevices between said parts, and finally applying heat whereby said cement may flow into and fill all interstices and rigidly secure said mantle against movement relative to said support.

In testimony whereof I affix my signature in the presence of two witnesses.

CHARLES M. LUNGREN.

Witnesses:

A. C. MOORE,
J. A. DIXON.