

J. T. LISTER.
SUPPORT FOR INVERTED INCANDESCENT MANTLES.
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963,910.

Patented July 12, 1910.

Fig. 1.

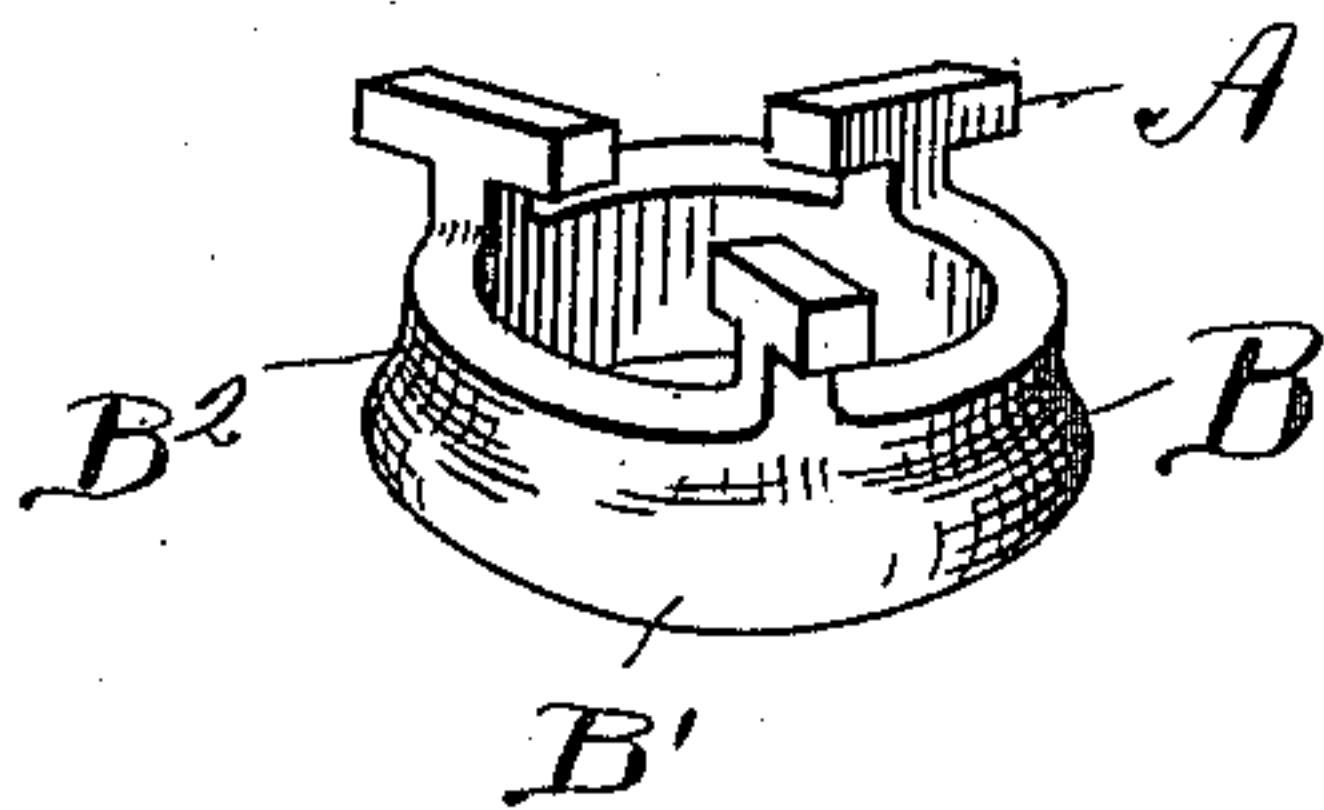
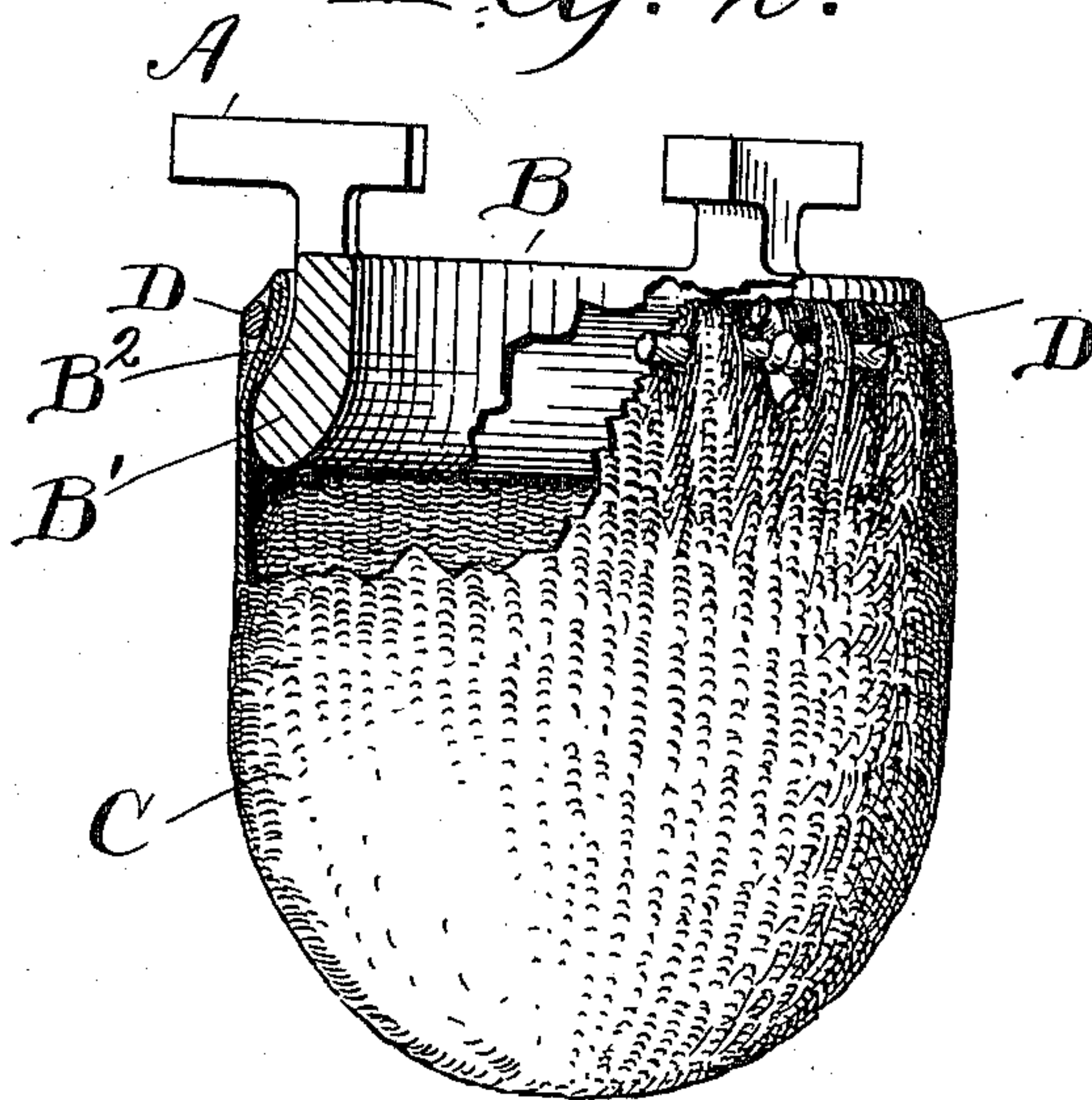


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN T. LISTER, OF CLEVELAND, OHIO, ASSIGNOR TO THE CLEVELAND GAS MANTLE AND SUPPLY COMPANY, A CORPORATION OF OHIO.

SUPPORT FOR INVERTED INCANDESCENT MANTLES.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN T. LISTER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Supports for Inverted Incandescent Mantles, of which the following is a full, clear, and exact description.

10 The object of the present invention is to provide an improved support for inverted incandescent mantles which is, in conjunction with the mantle applied thereto in the manner set forth, more efficient in action
15 than the structures now familiar to the art.

The present method in supporting inverted incandescent mantles involves the use of a support provided with projecting sustaining lugs having depending therefrom an annulus which is externally grooved. On each side of the groove is a projecting circular flange, each flange being of the same diameter and having faces in the same vertical plane. The mantles are secured to this old type of support by means of an asbestos cord run back and forth from the inside to the outside of the mantle near the upper edge of the same, the ends of the cord being left on the outside so that they may be tied together.
20 In order that the mantle shall be held to this old form of support, it is necessary that the cord should be drawn very tightly and be under considerable strain, since the two flanges on the opposite sides of the groove
25 tend to hold the mantle away from the groove and to draw the cord out of the same. This method of attaching obviously fails to securely place the fabric of the mantle permanently within the groove since the portions immediately adjacent to the cord
30 are held out and only those portions which are encircled by the cord and held between it and the wall of the support can be said to be drawn actually within the groove.
35 After the mantle is in use the heat crystallizes the asbestos cord which is under tension and it frequently breaks, simultaneously crushing the fragile fabric held between it and the wall of the support, leaving the
40 mantle without any support other than that derived from the portions thereof which happen to project within the groove. The amount that projects within the groove is quite small and furthermore the shrinking
45 of the fabric under crystallization causes

the adjacent portions of the mantle, which bear against the annular flanges, to draw the fabric together and straighten it out so that scarcely any of it remains within the aforesaid groove. The result is that a slight jar
50 will cause the mantle to drop; which of course destroys the mantle.

I have devised a structure and method of attaching inverted mantles which overcomes the defects above noted in such manner that
55 the mantle may be not only as readily applied as by the old method, but may in fact be more easily applied and decidedly more permanent in its effect. Additionally the use of my structure and the method of securing the mantle eliminates the chance of
60 splitting the fabric along the lower edge of the support, which splitting frequently occurs in the old form due to the tension under which the fabric is bound in that zone.
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Referring to the accompanying drawings which illustrate the embodying of my invention—Figure 1 is a perspective view of my improved form of support. Fig. 2 is an enlarged elevation partly in section showing the support and mantle secured together in conformance with my inventive idea.
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The support which I have invented comprises preferably the usual sustaining lugs A projecting laterally and having dependent there-beneath an annulus B having the proper internal diameter. The exterior surface of the annulus is smooth finished and without projections or sharp corners of any kind to contact with the mantle, the essential feature being that at the lower portion thereof there be a spreading well rounded smooth skirt B' above which is a zone B² of less diameter and of sufficient width to permit the upper edge of the mantle C to be
75 drawn in so as to lie over the spreading skirt, before mentioned, and rest thereon without the usual securing cord D being tightly drawn. Preferably, as shown in the drawing, this securing zone has no projection above the same which might hold the upper edge of the mantle outward. Instead, the fabric will be drawn inward so as to lie over the bell skirt and hang securely thereon with a very loose tying of the asbestos cord. It is plain also that the mantle may be secured in like manner by means of what is known as gathering or forming the edge into a few folds which are sewn together after the mantle is placed over the
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support. It will be seen that with the mantle thus lying rather loosely and yet securely upon the skirt of the support without the asbestos cord being under tension there will, in the first place, be no breaking of this cord or crushing of the fragile fabric when crystallization occurs, due to the high temperature, and, in the second place, even should the cord break, the upper edge of the mantle, being already drawn in and lying over the skirt and being hardened and shrunk by the crystallizing process, will hang upon the skirt throughout its normal life of use.

It being noted that the characteristic feature of my support is that it is unnecessary to draw the cord tightly, it will be evident that the mantle will be under no strain about the lower edge of the support and consequently there will be no splitting of the mantle in this zone.

The advantages of the structure as above outlined will be sufficiently obvious to those skilled in the art without further detailed description. It may be added, however, that it is unnecessary with this new structure to in any manner vary the internal diameter of the support so as to interfere with its use upon the standard burners.

Having thus described my invention, I claim:

1. A support for inverted gas mantle, comprising an annulus, the upper portion of the outer surface of which is cylindrical and of smaller diameter than the lower portion and gradually swelling outwardly and merging into said lower portion with smooth

ogee curves having no sharp corners to contact with the mantle, the lower edge of the annulus being smoothly curved and merging into the inner and outer surfaces thereof.

2. A support for inverted gas mantle, comprising an annulus, the upper portion of the outer surface of which is cylindrical and of smaller diameter than the lower portion and gradually swelling outwardly and merging into said lower portion with smooth ogee curves having no sharp corners to contact with the mantle, the inner surface of the annulus being cylindrical at its upper portion and gradually curving and swelling outwardly toward its lower edge, which lower edge is curved and smoothly merges into the curves of the inner and outer surfaces thereof.

3. A support for inverted gas mantle, comprising an annulus provided with elevated radially disposed supporting arms, the upper portion of the outer surface of the annulus being cylindrical and of smaller diameter than the lower portion and gradually swelling outwardly and merging into said lower portion with smooth ogee curves having no sharp corners to contact with the mantle, the lower edge of the annulus being smoothly curved and merging into the inner and outer surfaces thereof.

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

JOHN T. LISTER.

Witnesses:

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H. R. SULLIVAN.