

No. 775,128.

PATENTED NOV. 15, 1904.

H. DEWEY.

MANTLE FOR INCANDESCENT GAS BURNERS.

APPLICATION FILED JULY 9, 1904.

NO MODEL.

Fig 1

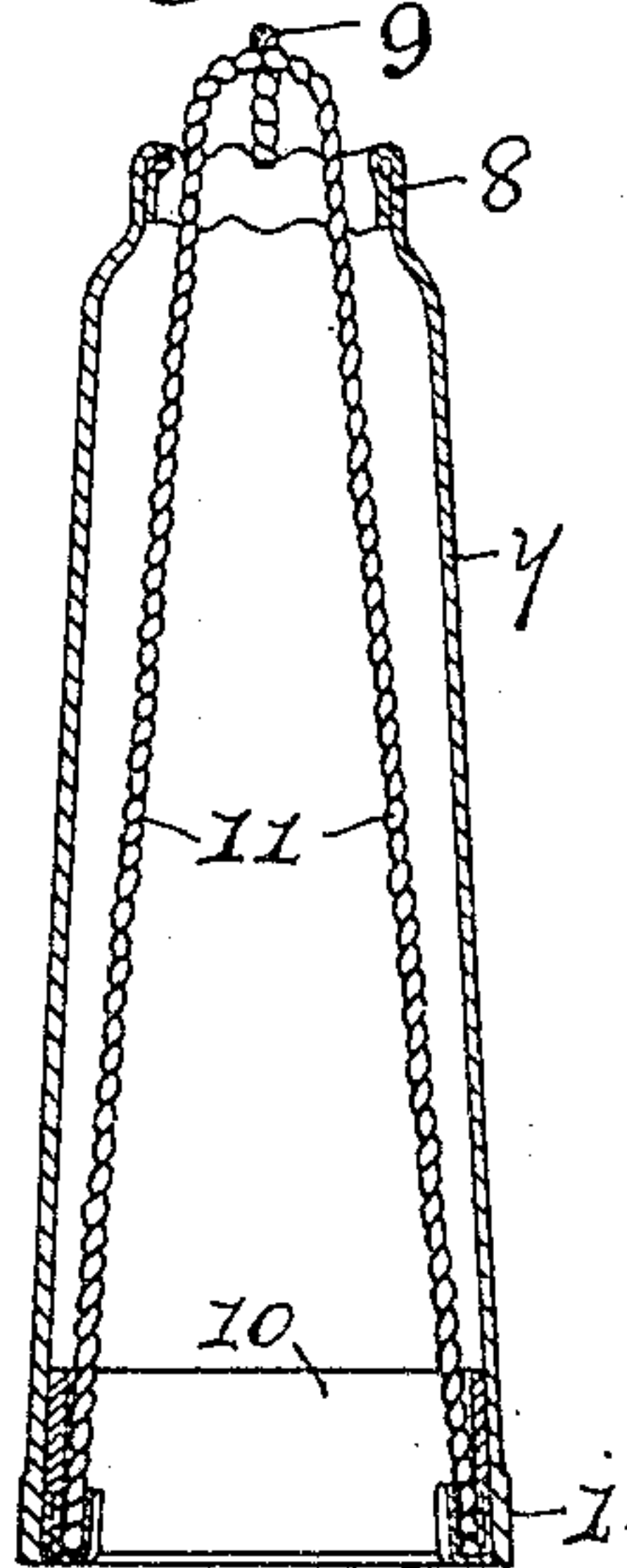


Fig 2

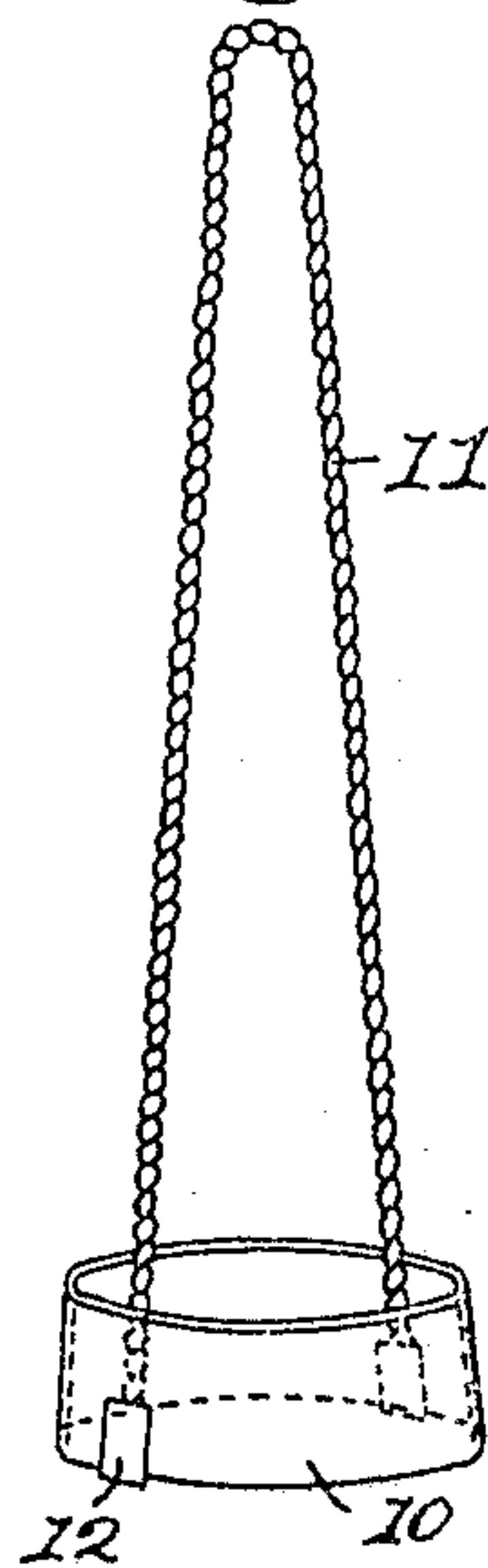


Fig 3

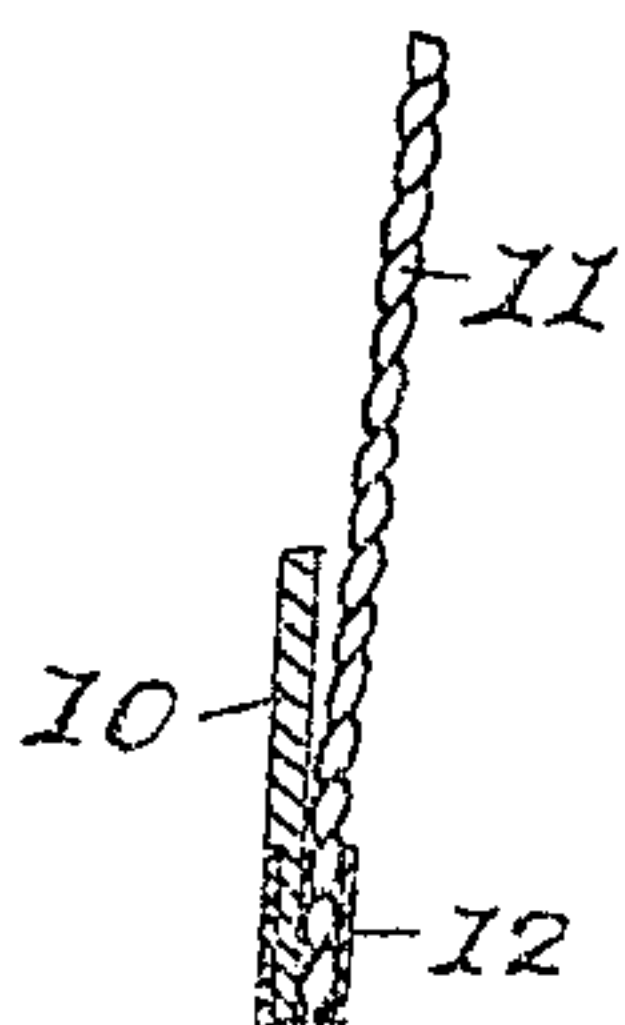


Fig 4

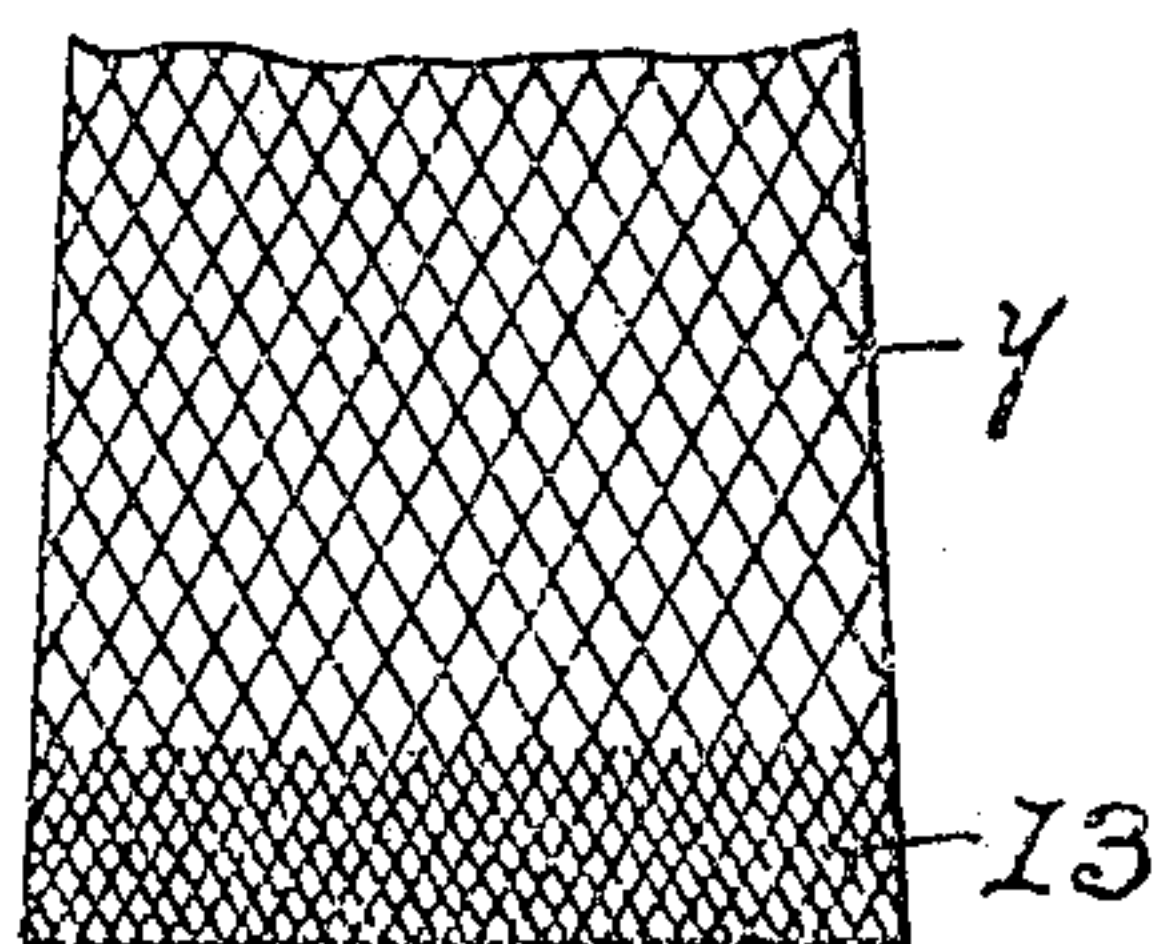


Fig 5

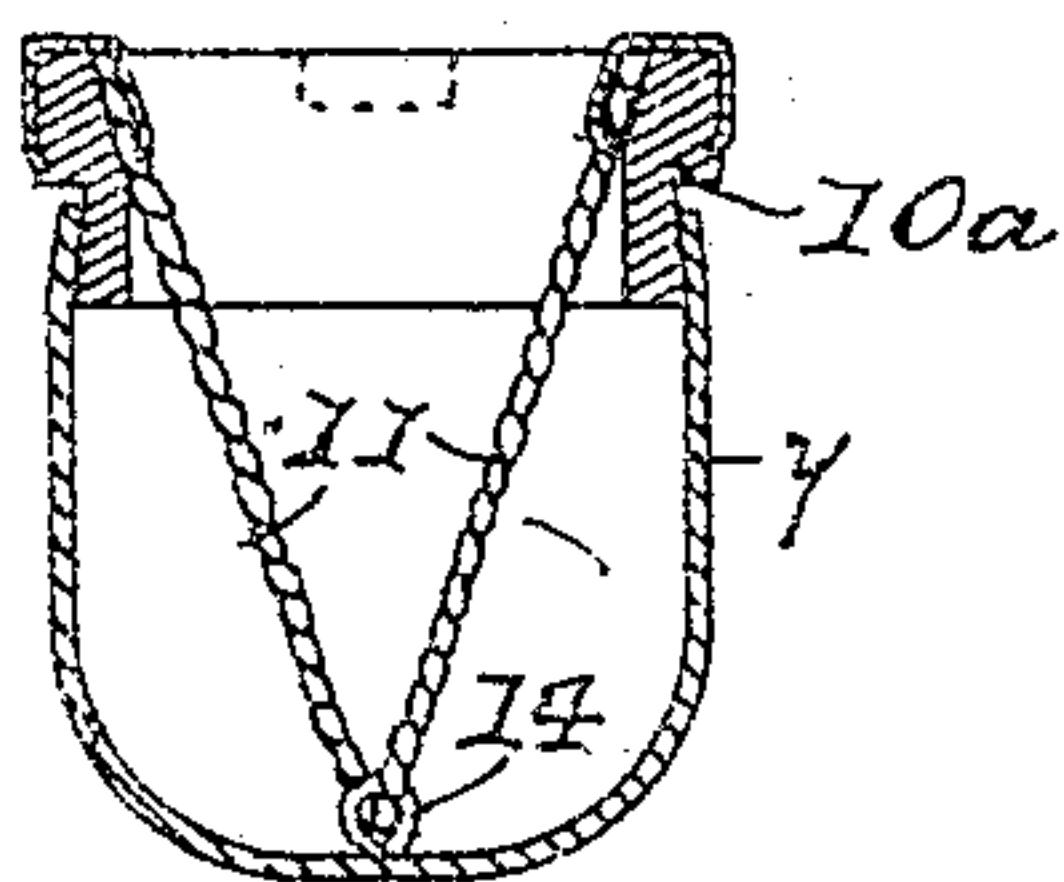
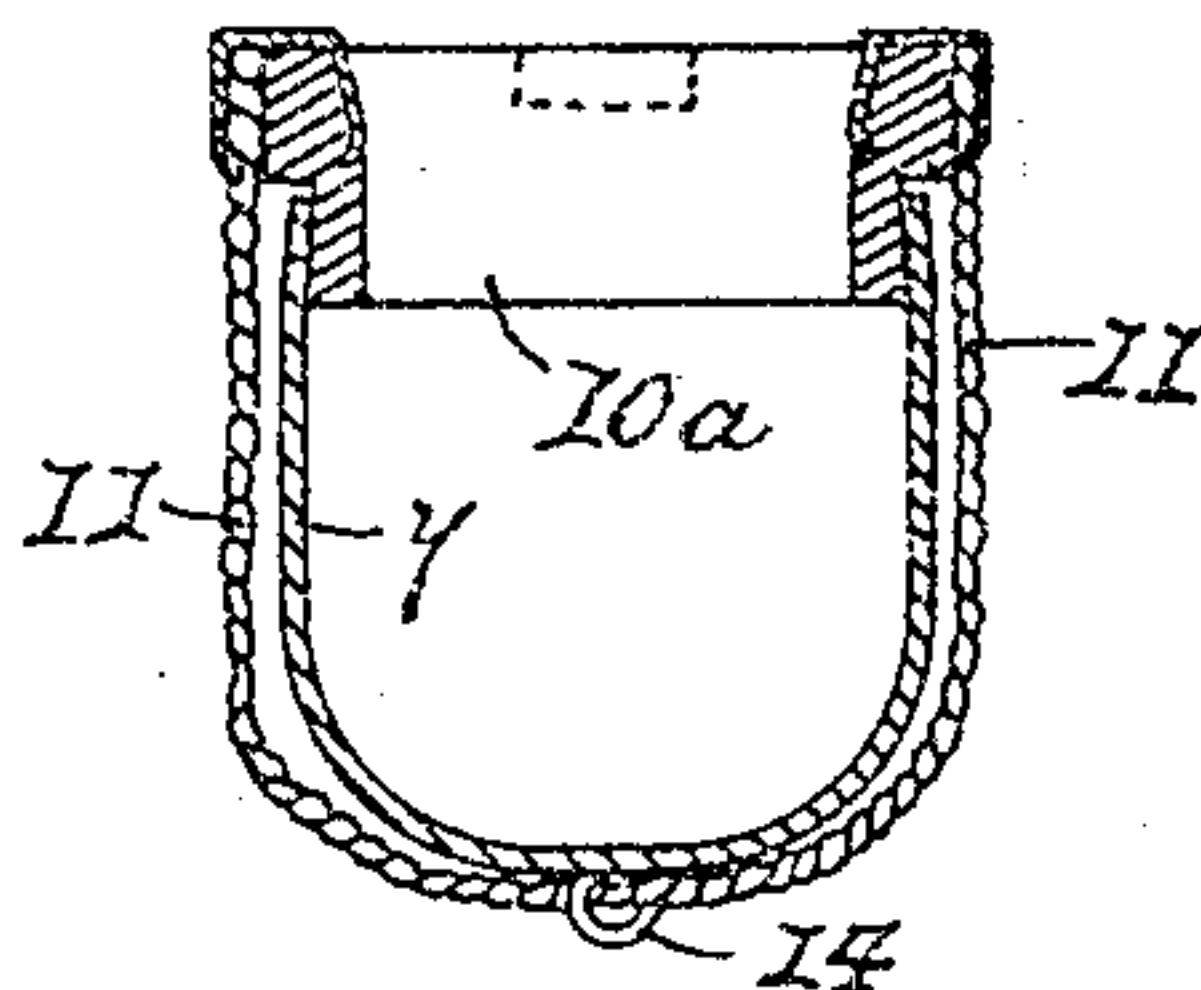


Fig 6



Witnesses.  
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# UNITED STATES PATENT OFFICE.

HARRY DEWEY, OF BIRMINGHAM, ENGLAND.

## MANTLE FOR INCANDESCENT GAS-BURNERS.

SPECIFICATION forming part of Letters Patent No. 775,128, dated November 15, 1904.

Application filed July 9, 1904. Serial No. 215,920. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY DEWEY, a subject of the King of Great Britain, residing at 9 Bromsgrove street, Birmingham, England, have invented certain new and useful Improvements in Mantles for Incandescent Gas-Burners, of which the following is a specification.

This invention relates to improvements in or connected with the mantles for incandescent gas-burners, and refers to improved means whereby such mantles are strengthened and whereby the lower parts of such mantles are protected against damage.

In mantles of present make it is frequently found that they become broken and damaged around or near to their lower edge, and the primary object of this my invention is to prevent this difficulty.

In order to more clearly explain this my invention, I have appended hereunto illustrative drawings, upon which are figures and numbers of reference, similar numbers referring throughout the several views to the same thing or part, and in which—

Figure 1 is a sectional view of an incandescent mantle treated according to this my invention. Fig. 2 shows the internal supporting-cords and bottom supporting edge or band. Fig. 3 is an enlarged sectional view showing the means for attaching the cords to the bottom band. Fig. 4 is an enlarged view of the lower part of the mantle, showing how its lower edge may be further strengthened. Fig. 5 shows my invention as applied to an inverted mantle. Fig. 6 shows my invention as applied in a modified form to an inverted mantle.

7 is a mantle which is gathered in somewhat at its upper end 8 in the usual manner and to which the usual bridge-cord 9 is secured after the ordinary manner.

The lower end of the mantle is provided with a thickened or strengthening band, as follows: 10 is a band which is made of any suitable incombustible material—such as asbestos, for instance. 11 11 are cords, two or more of which may be used, whose lower ends are secured to the bottom edge of the band 10 by means of thin metal clips 12, which are squeezed tightly upon the two substances and

which leaves practically the exterior surface of the band 10 undisturbed, so that when placed within the mantle 7 the latter may readily cling closely thereto. The said cords may be secured to the band in other ways, but the method and arrangement described and shown appears to answer best. The upper end of these cords 11 is tied by means of asbestos or other suitable cords to the bridge 9.

It is found in these mantles that when they are fired ready for use considerable shrinkage takes place, and consequently one of the points aimed at in this my invention is to provide for this shrinkage to be permitted in such a manner that subsequently the band 10 shall maintain its proper position to support the mantle without having caused any deformation thereto.

It will be noticed that the band 10 is somewhat tapered in shape, its greater diameter being at the bottom, the said band being made to fit the inside of the mantle 7. Now when the mantle is fired it is comparatively free to contraction in length, and should any inequality of contraction take place between that of the cords 11 and of the mantle 7 the lower end of the mantle will adjust itself upon the surface of the band 10 and in its contraction will further tend to close upon the said band, and also from time to time when the mantle is lighted any further inequality of expansion or contraction will thus be permitted.

In some cases, if desired, the metal clips 12 may be also made to take hold of the mantle itself, in which case the length of the cords 11 11 would initially be made slightly longer than the mantle, so that when fired they would shrink slightly more than the said mantle, and thus bring themselves taut. The former arrangement, however, appears to answer the best and is therefore preferred.

I find it also an advantage to apply to the lower edge of the mantle for a short depth an extra coating of refractory cement or the like, (indicated by thickened lines at 13,) by which it is strengthened and further rendered more adaptable to the treatment before described.

In the case of inverted mantles I may provide a loop 14 or the like at the lower part, to which the supporting-cords 11 11 may be



attached, their upper ends being secured to the usual band 10<sup>a</sup>. It will also be obvious that instead of having the cords inside the mantle they may be carried outside, (see Fig.

5 6) their upper ends being, as before, secured to the band 10<sup>a</sup> and their lower part supporting the under side of the lower part of the mantle.

What I claim as my invention, and desire to  
10 secure by Letters Patent, is—

1. An incandescent mantle, combined with a reinforcing-band therein and at one end thereof, and flexible supporting means for the mantle, connected with said band and with  
15 the opposite end of said mantle, said supporting means being free of the body of the mantle.

2. An incandescent mantle, combined with a reinforcing-band therein and at one end thereof, and flexible supporting-cords free of  
20 the body of the mantle and connected with the opposite end thereof, said cords being clipped to said band.

3. An incandescent mantle, combined with a reinforcing-band therein and at one end

thereof, a bridging-cord connected with the  
25 mantle at the opposite end thereof, and flexible cords connected with said bridging-cord and also with said band.

4. In incandescent mantles the combination of the mantle 7, having its lower edge 13 coat-  
30 ed and stiffened, the inner band 10, the supporting-cords 11 attached thereto, whose upper ends are secured to the top of the mantle, as set forth and shown.

5. An incandescent mantle, combined with  
35 a reinforcing-band therein and at one end thereof, the band being exteriorly tapered, and flexible cords connected with the opposite end of the mantle, free of the body of said mantle, and connected with said band.  
40

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HARRY DEWEY.

Witnesses:

J. BERNARD HAYWARD,  
T. VERNON FELLOWS.