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PATENTED FEB. 9, 1904.

W. G. HUGHES.  
MANTLE AND SUPPORT.  
APPLICATION FILED MAY 2, 1903.

NO MODEL.

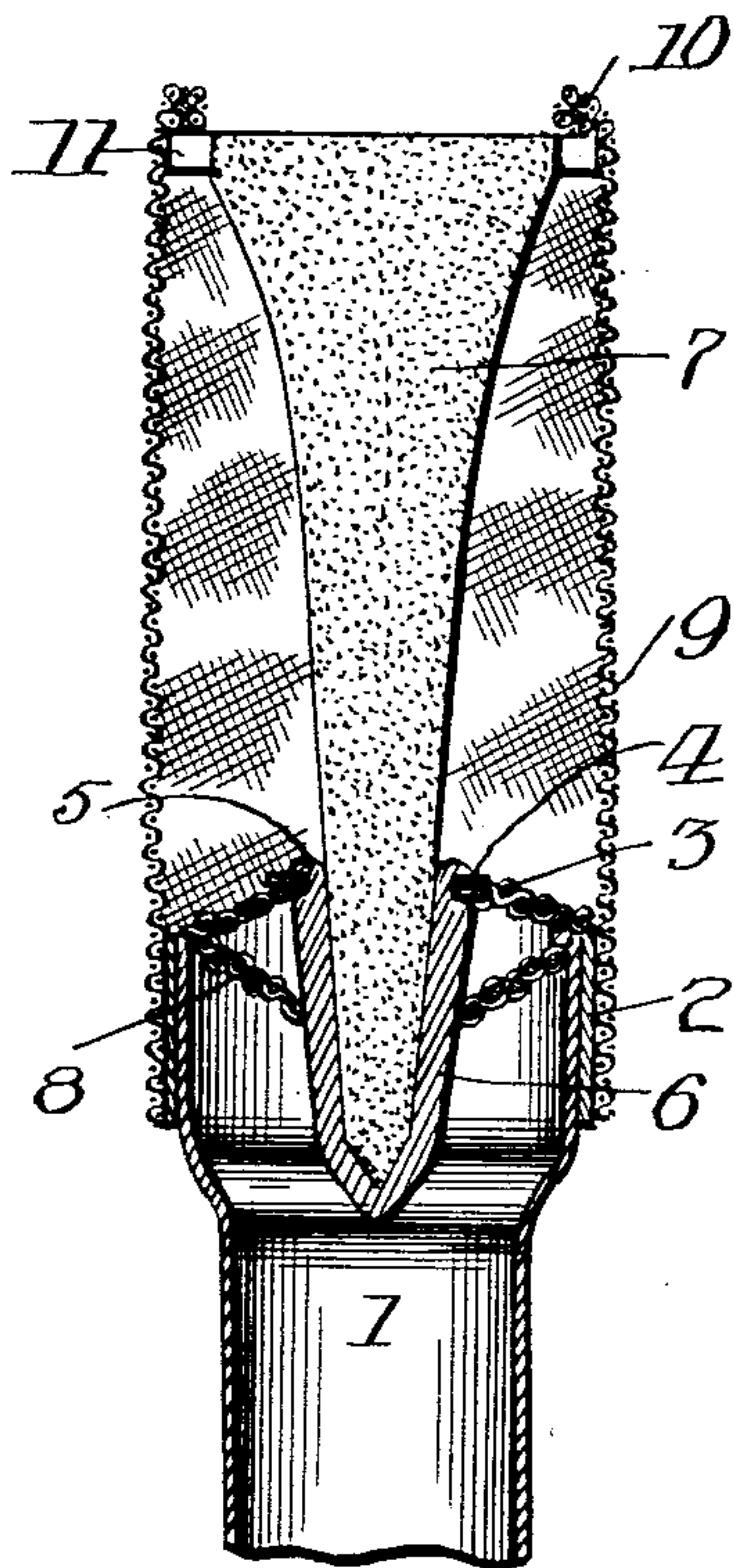


Fig. 1.

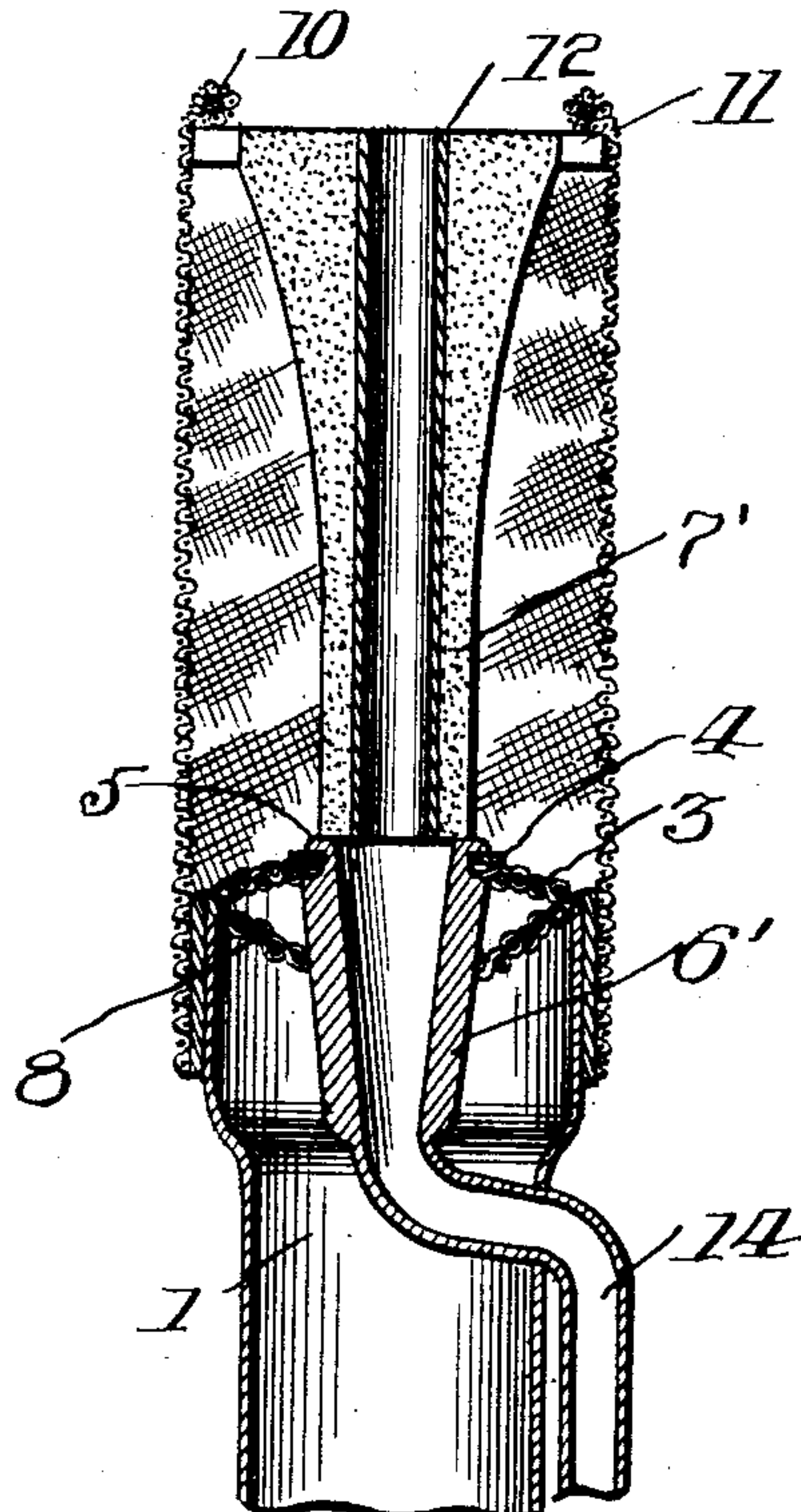


Fig. 2.

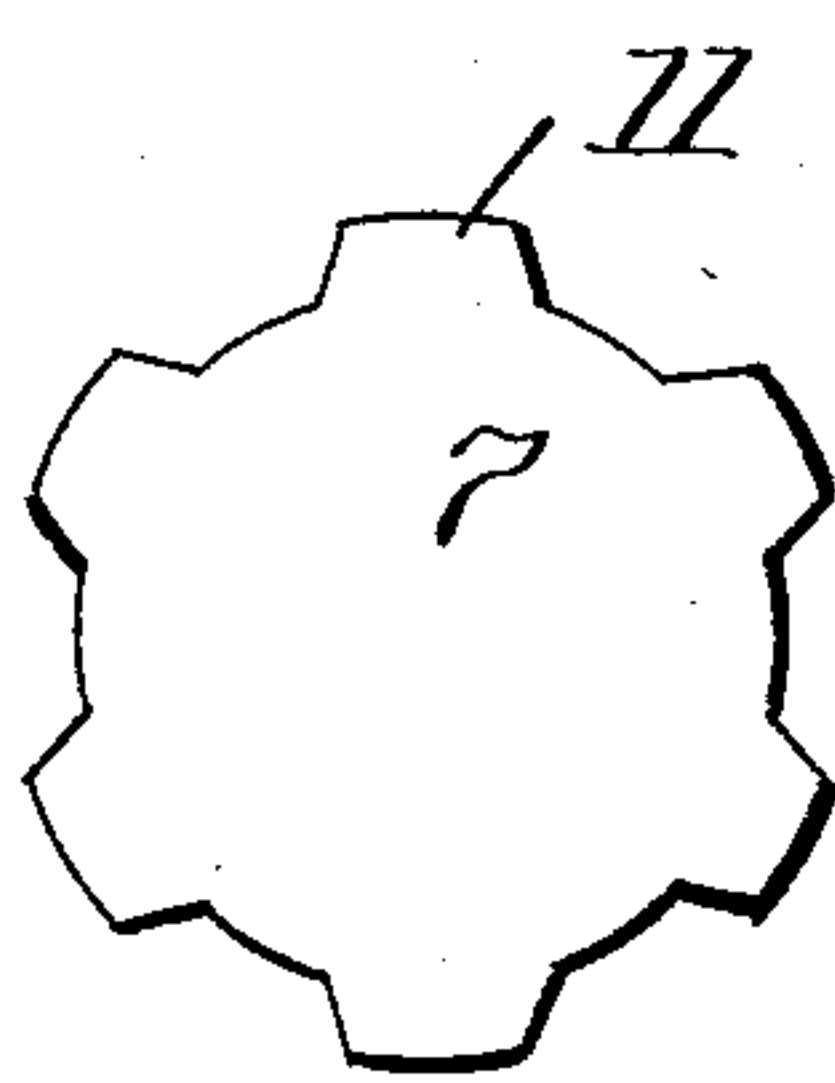


Fig. 3.

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# UNITED STATES PATENT OFFICE.

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## MANTLE AND SUPPORT.

SPECIFICATION forming part of Letters Patent No. 751,856, dated February 9, 1904.

Application filed May 2, 1903. Serial No. 155,284. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM G. HUGHES, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Mantles and Supports, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in mantles and supports; and the object of the invention is to construct a flat-top mantle and to provide novel and effective means for the convenient supporting of the same.

Briefly described, my invention comprises an incandescent mantle which is of substantially equal diameter throughout, the upper edge of the mantle having a crimp to engage over lugs carried on the upper end of the mantle-support. The mantle-support is composed of clay or clay and other refractory material, being somewhat conical in form, with its smaller end extending downwardly and seated in a socket provided therefor and supported by the gauze of the burner-tube. In connection with my improved support I may make the same hollow, whereby to extend the vapor-tube therethrough, and thus heat the vapor prior to its being discharged at the point of ignition in the burner.

In describing the invention in detail reference is had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a central vertical sectional view of the preferred form of mantle and support. Fig. 2 is a central sectional view of a modified form of construction. Fig. 3 is a top plan view of the mantle-support.

In the accompanying drawings, 1 indicates the burner, on the upper end of which is fitted a sleeve or ring 2, which carries a burner-gauze 3, this burner-gauze at its inner annular edge carrying a ring 4, which fits in the groove 5 provided therefor in the periphery of the socket 6, which socket forms a seat for the mantle-support 7. In order to firmly

brace and secure the supporting-socket 6, I preferably provide the gauze 8 below the gauze 3 and through which the socket 6 extends. The mantle 9 is of substantially equal diameter throughout, and instead of having its upper end drawn together and tied, as in the usual form of construction with incandescent mantles, the edge of the mantle at the top is simply crimped over, as shown at 10, and this crimped edge lies upon the lugs 11, formed integral with the mantle-support 7, peripherally of the upper end of the latter.

In Fig. 2 I show a mantle-support 7' provided with a central opening extending there-through from end to end, whereby to receive the vapor-conducting tube 12. In such construction the mantle-support may be seated on top of the supporting-socket 6, the latter in this construction being hollow and connected to or made a part of the conducting-tube 14, which discharges the vapor into the burner at a suitable or desired point. With this construction of device, which permits of the conducting of the generated vapors through the mantle, these vapors are discharged into the burner in a highly-heated state, and the combustion is materially increased.

In construction the mantle-support is made of a composition which practically becomes incandescent under the heat, and the tapered shape of this mantle serves to throw off the rays of light to all sides thereof.

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

In combination with the burner, a socket, gauze interposed between the burner and socket, a mantle-support having its upper end enlarged and provided with lugs projecting beyond its sides, and a mantle having its upper edge crimped over said lugs.

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

WILLIAM G. HUGHES.

Witnesses:

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A. M. WILSON.