

(No Model.)

J. B. DE LÉRY.
INCANDESCENT GAS BURNER.

No. 597,803.

Patented Jan. 25, 1898.

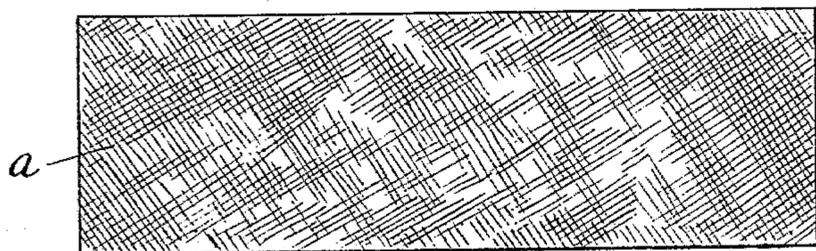


Fig. 1.

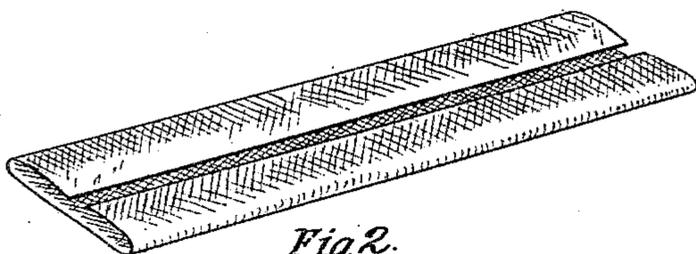


Fig. 2.

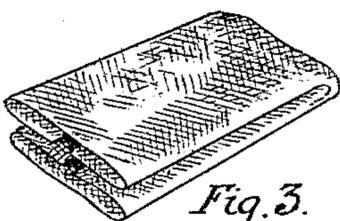


Fig. 3.

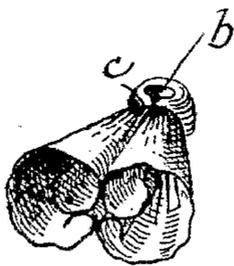


Fig. 4.

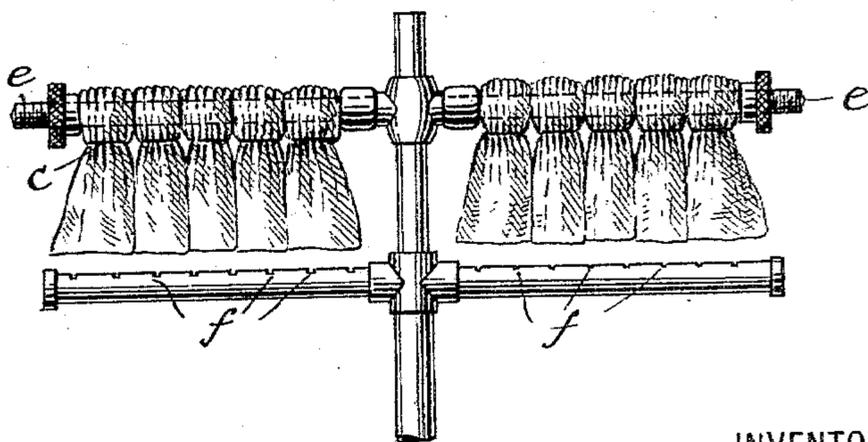


Fig. 5.

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JOSEPH B. DE LÉRY, OF NEW YORK, N. Y.

INCANDESCENT GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 597,803, dated January 25, 1898.

Application filed October 14, 1897. Serial No. 655,167. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH B. DE LÉRY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Incandescent Gas-Burners, of which the following is a full, clear, and exact description.

This invention relates to incandescent gas-burners; and it consists of an improved construction for the tufts or bunches of the incandescent material described in Patent No. 583,187 issued to me May 25, 1897. In the patent referred to the incandescent material is supported upon a ring, it being formed of sheets or layers bunched and secured together along one edge to be in supporting contact, while at the other edge the layers are separated to admit the heat of the flame and furnish as large a surface as possible for incandescence. In the use of this device I have discovered that it is quite necessary to form these tufts of the incandescent material in a definite manner, with a view to opening the lower edges and forming them into a series of open-ended cones or caps similar in shape to the well-known hood or mantle for single burners; and the present invention consists of the incandescent material folded or adjusted in such a manner as to produce open or partially open ended cones into which the gas-flame may rise.

In the accompanying drawings, Figure 1 is a plan of the blank sheet or layer of incandescent material before it is folded. Fig. 2 is a perspective view after the first folding. Fig. 3 is a perspective view after the second folding. Fig. 4 is a perspective view of the finished tuft ready to go to its place in the burner, and Fig. 5 shows a series of tufts arranged in place above the gas-outlets.

A sheet of ordinary fabric *a* impregnated with the oxid of a rare earth or other suitable incandescing material of oblong or similar rectangular shape is folded, first, inward along both of the longer edges until the two outer edges nearly meet along the center line of the strip. The strip is then folded transversely at the middle to bring the folded edges together, as shown at Fig. 3. The sheet thus folded may then be saddled over a short tube or spool *b* and securely tied or bound in

place thereon by threads *c*. This binding causes the free ends to open out and assume a conical shape, as shown in Fig. 4, with the apexes of the cones at the binding of thread. Each of these cones is similar in shape to an ordinary hood or mantle, except that it will be much smaller, and at its upper part it will rest against its mate or mates, one thereby furnishing a support for the other which sustains them against jars and vibrations. The group of cones or tufts thus formed may be used singly or with others, the latter being preferable. It may be supported upon a horizontal rod *e* in contact with others, as shown, and with gas-outlets *f*, arranged directly below them, so that the flames therefrom will extend upward into the cones and so bring to incandescence the entire cone from its base to the apex; but in whatever manner the groups of cones may be supported, whether singly or in a bunch with others, as in Fig. 5, the connecting together of a plurality of cones at their apexes for the purpose of mutual support still remains a prominent feature of the invention.

The particular number and kind of folds given to the sheet are not absolutely essential to obtain the conical formation. For instance, the longer edges might be folded two or three times or even curled and produce substantially the same results. As stated, the folded sheet assumes the conical shape by the mere binding of the thread, but this can be aided or improved by using a conical mandrel. Obviously it is not essential to saddle the folded sheet over a short tube, as described, since the binding at the fold will accomplish what is desired without it, and, furthermore, it may be desired to support the tuft in other ways.

Having thus described my invention, I claim—

1. An incandescent burner consisting of a plurality of conical mantles secured together at their apexes for mutual support, in combination with a gas-outlet arranged to direct its flame or flames into said cones, substantially as described.

2. An incandescent burner consisting of a plurality of conical mantles constructed from a single piece of fabric secured together at their apexes for mutual support, in combina-

tion with a gas-outlet arranged to direct its flame or flames into said cones, substantially as described.

3. An incandescent burner consisting of a
5 single sheet of incandescent material substantially rectangular in shape having two opposite sides folded toward each other and again folded transversely so that the other
10 two edges will be brought together, and provided with a binding thread or device adjacent to the transverse fold, substantially as
and for the purpose set forth.

4. An incandescent burner consisting of a single sheet of incandescent material substan-

tially rectangular in shape having two oppo- 15
site sides folded toward each other, in combination with a support over which the folded material is saddled and a binding device for
holding the material on the support and open- 20
ing the free edges of the material, substantially as described.

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

JOSEPH B. DE LÉRY.

Witnesses:

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