

(No Model.)

J. B. DE LÉRY.  
INCANDESCENT GAS BURNER.

No. 581,867.

Patented May 4, 1897.

Fig. 1.

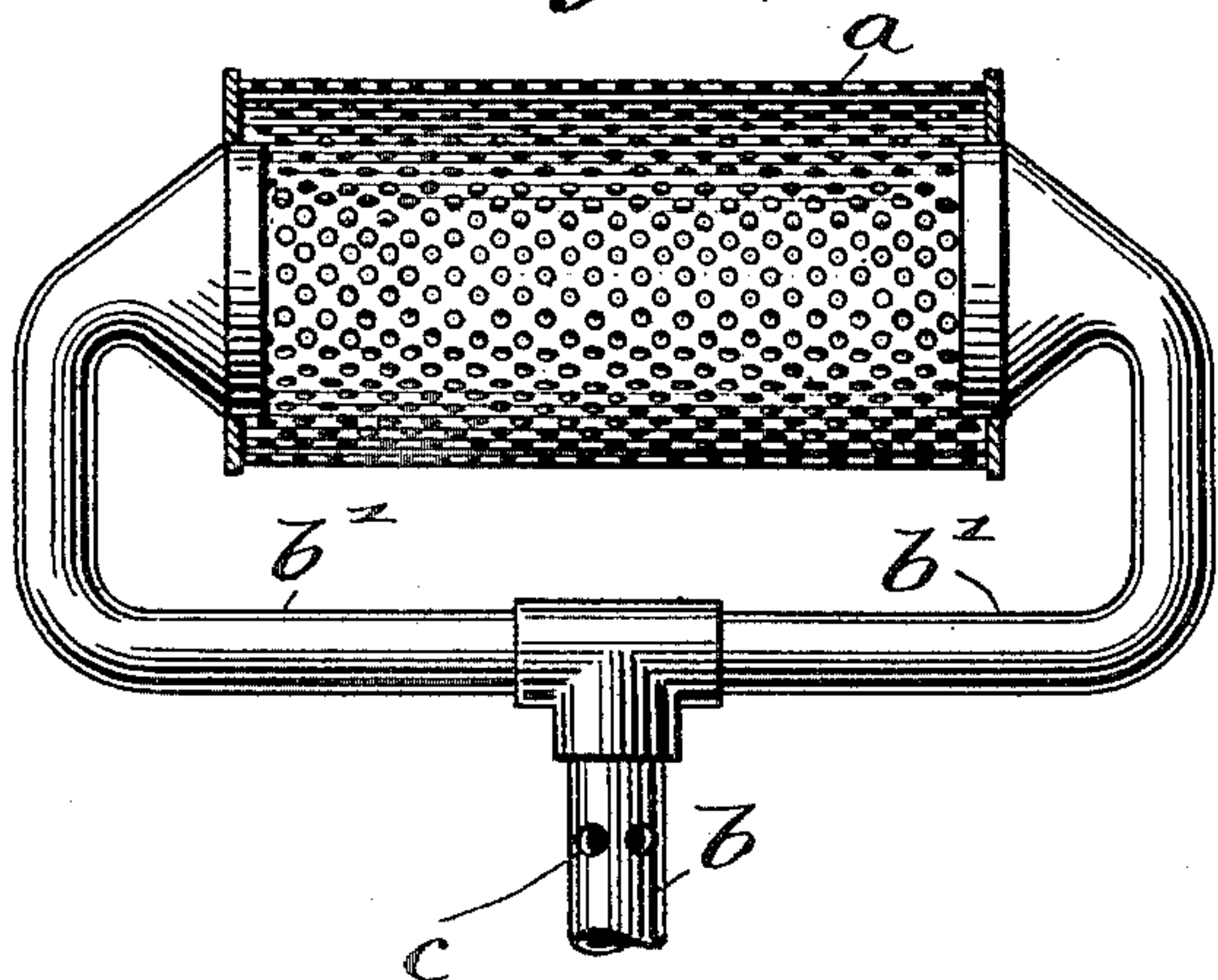
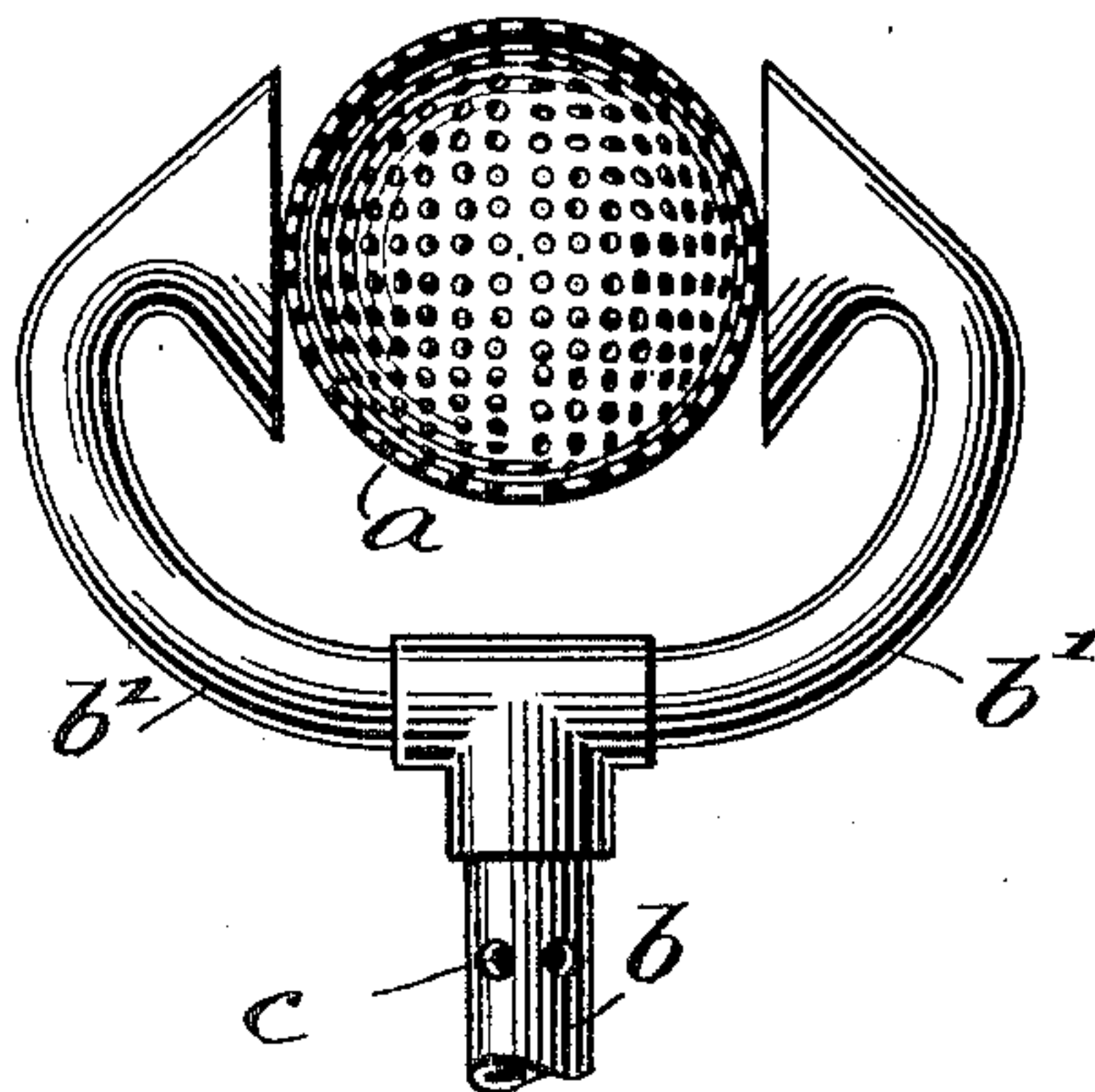


Fig. 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOSEPH B. DE LÉRY, OF NEW YORK, N. Y.

## INCANDESCENT GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 581,867, dated May 4, 1897.

Application filed May 15, 1896. Serial No. 591,601. (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 lighting by incandescence from gas and hydrocarbon vapors. In such methods of lighting it is the practice to use mantles or shells of non-combustible material located in the flame to be heated and become highly incandescent. These mantles are usually placed directly over a burner, so that the gas enters one end only, the result being that the lower portions of the mantle are more highly incandescent than the upper portions, and a graduated or unequal source of light is the result.

The object of my invention is to provide means for making the mantle, shell, or other incandescent body equally luminous throughout, and thus impart to it the appearance of a ball of light or of a center of light from which the rays radiate equally in all or substantially all directions. This has heretofore been impossible on account of the fragile nature of the mantle or shell, but I have invented a method of forming these which permits of their being used in the manner specified.

The method referred to is partially described in my application filed April 28, 1896, Serial No. 589,459, in which it is stated that the oxids of the rare earths constituting the refractory material are combined or incorporated in a pasty or gelatinous mass and then given a final shape by molding or other suitable process. The incandescing element used herein is preferably hollow and made of a shape similar to a cylinder or sphere. It is preferable and easiest to form such an element by the method described in said application.

The invention consists of an incandescent gas-burner having two gas or vapor outlets directly opposed to each other in combination with a hollow incandescing element interposed between them, the fuel from the openings being admitted to the interior of the incandescing element.

The invention also consists in providing a

special form of incandescing element in combination with the opposed burners.

In the accompanying drawings, Figure 1 shows an incandescing element in the form of a hollow cylinder, the two gas-outlets entering opposite ends thereof. Fig. 2 shows the incandescent element in the form of a hollow sphere, the gas from the outlets striking opposite sides thereof.

*a* indicates the incandescing element; *b*, a gas or vapor supply pipe, from which branch two pipes *b' b'*, running to opposite sides or ends of *a*. Openings *c* are provided to admit air. The incandescing element may be supported in any desired manner, the means here shown not being essential. The gas entering both ends of the cylinder, Fig. 1, meets at the center and spreads to all parts equally, thus insuring uniform incandescence.

In the form shown in Fig. 2 the gas strikes the outside of the sphere at opposite points and flows half around, meeting at an equatorial line, thus covering and heating the entire surface.

Various modifications in the shape of the incandescing element and details of construction may be adopted without departing from the spirit of my invention, the essential feature of which is placing the hollow incandescing element between two opposing burners.

Having thus described my invention, I claim—

1. In an incandescent gas-burner, the combination of two gas or vapor outlets directly opposed to each other and a hollow spherical incandescing element interposed between them.

2. In an incandescent gas-burner, the combination of two gas or vapor outlets directly opposed to each other, and a hollow incandescing element interposed between them, said gas or vapor outlets admitting the fuel to the interior of the incandescing element, substantially as and for the purpose set forth.

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

JOSEPH B. DE LÉRY.

Witnesses:

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