(No Model.)

J. B. DE LÉRY.

GAS LIGHTING.

No. 578,934. Patented Mar. 16, 1897.

Fig. 2.

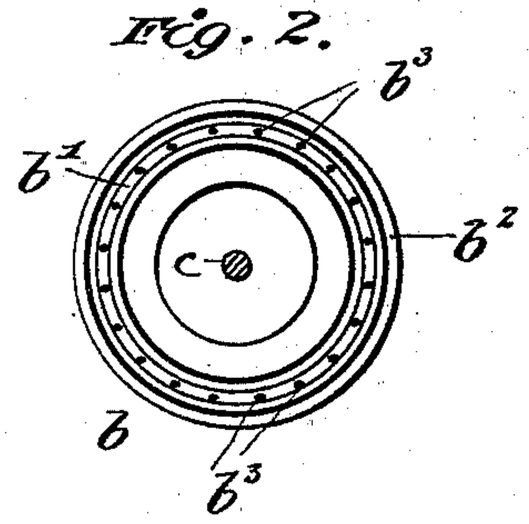


Fig. 3.

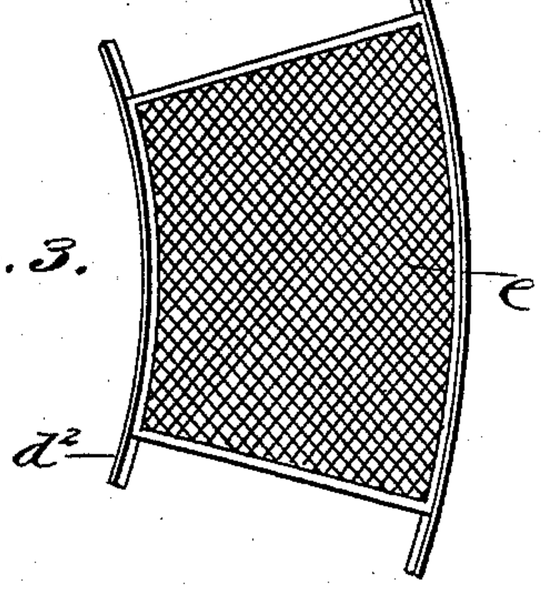
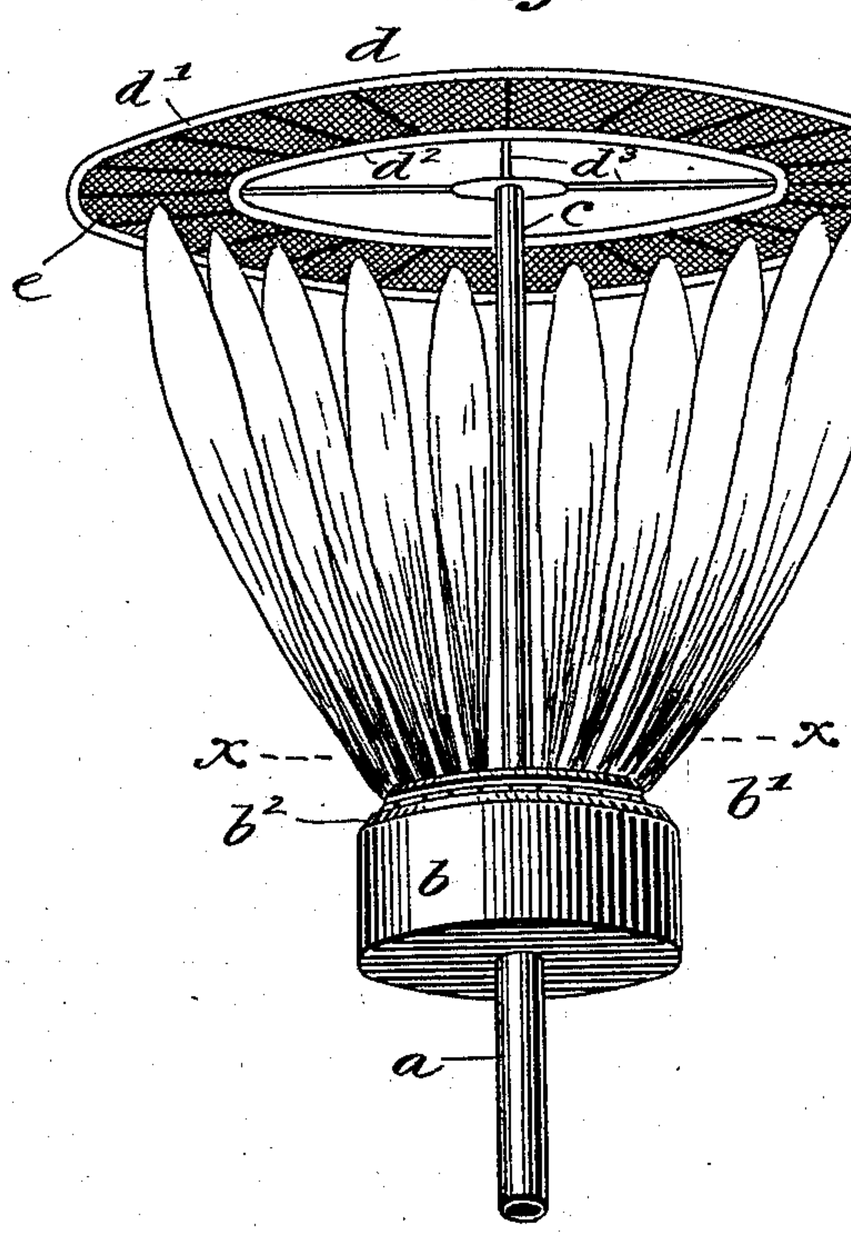


Fig. 1.



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JOSEPH B. DE LÉRY, OF NEW YORK, N. Y.

GAS-LIGHTING.

SPECIFICATION forming part of Letters Patent No. 578,934, dated March 16, 1897.

Application filed June 29, 1896. Serial No. 597,405. (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 Gas-Lighting, of which the following is a full, clear, and exact description.

This invention relates to gas-lighting, the object being to utilize that portion of the heat from the gas-flame which is now wasted to increase the illuminating power of the flame.

A further object is to produce an ornamental and beautiful effect.

In carrying out my invention I combine ordinary gas-lighting with gas-lighting by incandescence, which is accomplished by locating a web or network of incandescing material at such a point adjacent to the gas-burner that the flame projecting from the latter will impinge at its outer tip against the incandescent web or net. This arrangement permits of the diffusion of all the light-rays from the flame itself and creates additional light-rays from the incandescing body.

The preferred form in which my burner is embodied is shown in the drawings and described in the specification which follows.

Referring to the drawings, Figure 1 is a perspective view of the burner. Fig. 2 is a plan at line $x\,x$ of Fig. 1. Fig. 3 is a plan of one of the segments of the incandescing web.

a is a gas-pipe, upon the end of which is supported a cylindrical box or drum b, having considerable capacity in order to form a heating-chamber for the gas immediately before it is consumed. Around the upper edge of the cylinder a groove b' is formed in an inclined surface b^2. In the bottom of this groove is formed a series of gas openings or outlets b^3, extending around the cylinder. The openings are placed a short distance apart and the series of flames emanating therefrom have a crown shape, as illustrated in Fig. 1.

Projecting centrally from the upper side of the drum is a standard c, upon the upper end of which is fixed a horizontal circular frame d, concentric with the drum. This frame consists mainly of two rings d' d^2 and a set of spokes d^3. The two rings are separated to form an annular space across which is placed a webbing or network of refractory material e, forming a part of a disk and capable of becoming incandescent from the heat of the gas-flame. This incandescing web is preferably made in segments, one of which is shown in Fig. 3, so that in case of the destruction or disablement of a portion of the web it does not necessitate the loss of the entire web. These incandescing elements being very fragile and expensive, this construction in segments becomes a valuable feature of my invention. In case one of the segments becomes destroyed it is only necessary to remove and replace the injured member, which may be done by simply lifting the member out of the frame and dropping a new one into place.

The frame d is located in the same plane with the very tips of the flames emanating from the burner b, at which point the incandescing material is subjected to a very high heat. Thus when the burner is in operation light is shed from the flames themselves to the same extent as would be the case if the incandescing web were not present; but with the web heated to a state of incandescence from the heretofore wasted heat of the flame an additional illumination is obtained.

Besides the additional illumination the source of light, taken as a whole, is beautiful because in addition to the jets of the flame forming the crown each jet terminates in a bright spot of light, which may be likened to the jewels of the crown.

It is obvious that a single conical flame projecting from the burner and impinging at its upper edge annularly against the incandescing web would serve my purpose to some extent, but this is not a preferred arrangement because the heat obtained is not so great and the flame would smoke to some extent. The division of the flame into jets offers an opportunity for closer mixture with air and thus promotes combustion and increases the heat.

Having thus described my invention, I claim—

The combination with a gas-burner adapted to throw a series of flames into the form of a crown, of a circular or disk-like web or netting of incandescing material arranged above the crown of flame in a horizontal plane, at such a level as to be struck by the tips of the flames only, substantially as described.

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

JOSEPH B. DE LÉRY.

Witnesses:

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