L. COSTA.

Combined Globe and Reflector for Illuminating Burners.

No. 205,057. Patented June 18, 1878.

Fig. 1.

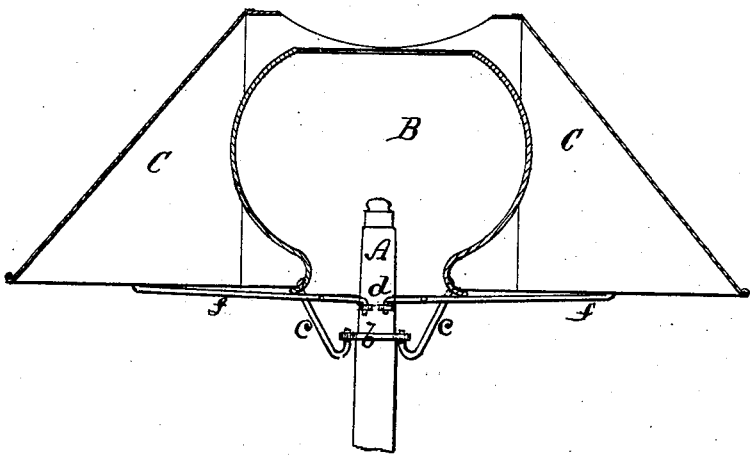
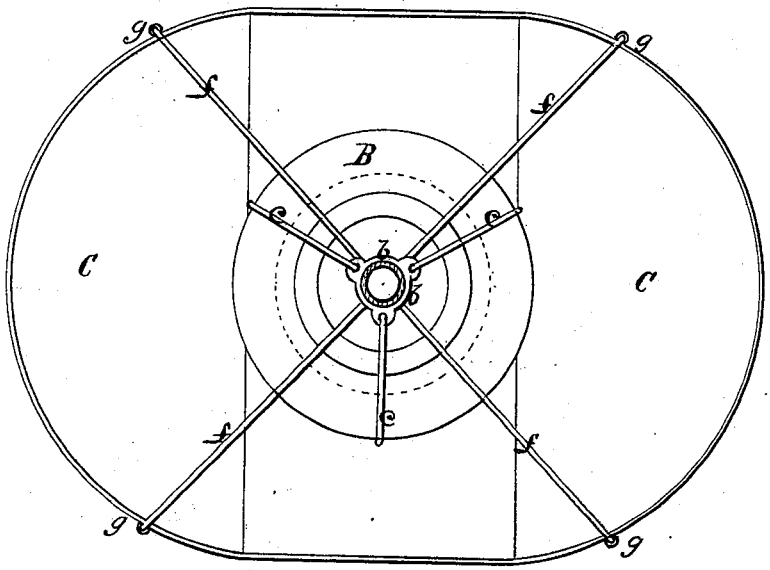


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN COMBINED GLOBE AND REFLECTOR FOR ILLUMINATING-BURNERS.

Specification forming part of Letters Patent No. **205,057**, dated June 18, 1878; application filed September 19, 1877.

To all whom it may concern:

Be it known that I, LOUIS COSTA, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improved Combined Globe and Reflector for Gas-Light and Lamp Burners; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a central vertical section of the combined globe and reflector, as applied to a gas-burner; Fig. 2, a bottom view of the same.

Like letters designate corresponding parts in both figures.

My invention consists in the combination of a translucent globe and a reflector surrounding the same, substantially as and for the purposes hereinafter specified.

In the drawings, A represents a gas-burner, to which is applied a globe, B, to surround the burner and flame, and outside of the said globe is applied a reflector, C, surrounding the same, opaque, and having its inner under surface reflecting.

The reflector extends, substantially, the entire height of the globe, its lower edge being generally arranged on about an even plane with the bottom of the globe, and its upper edge extending as high as, or a little higher than, the upper edge of the globe. Its form is nearly a truncated cone, widest at the bottom, as shown; and it is made large enough to allow a free air-space around the globe, thereby causing a separate upward current of air around the globe, and thus ascending in a flue concentrically surrounding the draft proper of the light. Thus the true draft is increased, and the light made more steady by excluding side currents from the draft. This effect is irrespective of the quality of the globe.

The translucent globe B is suitably made of porcelain or of ground glass, and of globular, cylindrical, or other suitable form; and it diffuses the light in all directions from its outer surface. The greater part of the light thus diffused impinges on the reflecting surface or surfaces of the surrounding reflector C, which throws out the light mainly from beneath the lower edge thereof, and partly through the flame-aperture in the top of the reflector. This reflector may be of a spherical or other concave form; but I prefer the oblong shape represented in the drawings, especially in positions where it is desirable to throw more light in one direction and its opposite than in directions lateral thereto.

I do not confine myself to any particular mode of applying the combined globe and reflector to a burner; but the method represented in the drawings is convenient and secure. The burner A has fixed around it a flange or flanges, *b*, from which project upward and outward arms *c c c*, the upper ends of which hook around the lower edge of the globe, holding the same by a spring-pressure clasp, thus retaining the globe securely, but allowing it to be easily detached by drawing back one of the said slender arms. Above this flange a socket, *d*, fits around the burner A, from which socket rods or wires *f f f f* extend outward to the lower edge of the reflector C, and have upturned ends, which enter sockets or eyes *g g g g* on the outside of the reflector. When the globe B is secured in place in its clasping-arms it rests, or may rest, upon the rods *f f f f*, thereby holding the reflector securely upon the burner.

The advantages of the combined globe and reflector, as herein described, are, first, the light, by its diffusion and reflection, is distributed very evenly and completely wherever it shines; second, the shade is applied just where, and only extends where, it is desired for shielding the eyesight; third, the light, by its diffusion and reflection, is very steady and free from glare; fourth, the light, by its diffusion and reflection, is largely deprived of its heating rays, while the light-giving rays are exceeding soft and grateful to the eyes; fifth, the light being so completely diffused and reflected where required, a greater saving of gas or oil, and economy in its use, to produce equivalent illumination, are effected than usually by simple reflectors.

I am aware that it is not new to combine a transparent or clear glass globe with a shade, or with a partial side or top reflector, and

that such globes, shades, and reflectors have been variously combined; and I do not claim them; but

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

1. The combination of a ground-glass or equivalent translucent globe and a shade-reflector surrounding the globe in horizontal directions, substantially from top to bottom, and having its interior reflecting-surface flared outward and downward, substantially as and for the purpose herein specified.

2. The combination of a globe, as herein described, and a reflector surrounding the globe on all sides from top to bottom, there being a free air-space between the globe and reflector for producing an upward current of air between them, substantially as and for the purpose herein specified.

3. The combination of the spring-clasping arms *c c c*, socket *d*, rods *f f f f*, and outside sockets *g g g g*, for securing the combined globe and reflector to the lamp or burner, substantially as and for the purpose herein specified.

The foregoing specification signed by me this 18th day of August, 1877.

LOUIS COSTA.

Witnesses:
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GEO. W. ROBERTS.