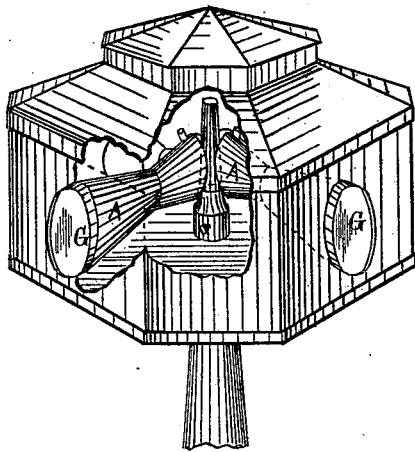


A. BOUCHARD.
Reflector.

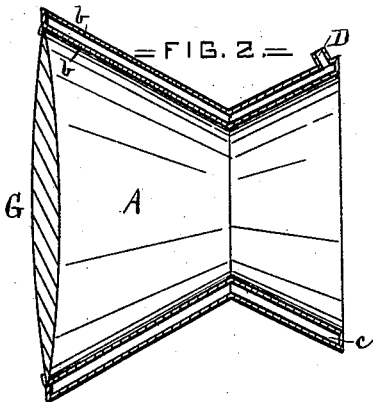
No. 211,648.

Patented Jan. 28, 1879.

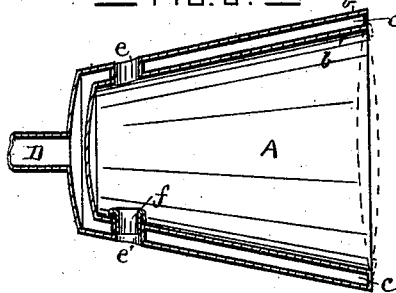
== FIG. 1. ==



== FIG. 2. ==



== FIG. 3. ==



WITNESSES.

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BY

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UNITED STATES PATENT OFFICE.

ADOLPHE BOUCHARD, OF NEW ORLEANS, LOUISIANA, ASSIGNOR OF ONE-THIRD HIS RIGHT, BY MESNE ASSIGNMENT, TO ROBERT J. CONNOLLEY; ALSO, ONE-THIRD TO SAMUEL H. HOUSTON, BOTH OF SAME PLACE.

IMPROVEMENT IN REFLECTORS.

Specification forming part of Letters Patent No. **211,648**, dated January 28, 1879; application filed July 2, 1878.

To all whom it may concern:

Be it known that I, ADOLPHE BOUCHARD, a resident of the city of New Orleans, parish of Orleans, and State of Louisiana, have invented a certain new and useful Improvement in Lamp-Reflectors; and I do hereby declare the following to be a full, clear, and correct description of the same, reference being had to the annexed drawings, making a part of this specification.

My invention consists in the production of a double glass shell, either conical or parabolic in form, with access to the space between each for the introduction of an amalgam, which is deposited on the glass, thereby converting the opposite sides of the same into mirror-like surfaces, the interior surface of the inner shell serving to throw to a great distance the luminous rays emitted from a lamp or other burner.

My invention will be readily understood by referring to the accompanying drawings, whereon Figure 1 represents a perspective view of a lamp and casing furnished with reflectors to throw the light in four different directions. Fig. 2 is an enlarged longitudinal section of one of the reflectors.

The form shown in Fig. 3 is especially adapted for use as a locomotive head-light.

On the drawing, A represents my reflector, which consists of a double glass shell, *b b*, with space between each, as shown at *c*. An orifice, D, is made in the side or rear of the outer shell for the introduction of the amalgam with which the inner surfaces of the shells are plated.

For street-lamps I propose making the re-

flectors in the form of a double cone, and to incase four (more or less) in a frame, as shown in Fig. 1, so that the light from a burner placed between them may be reflected in as many directions.

For a single head-light, the reflectors are made with concave backs, as shown at Fig. 3, and with openings *e e'* for the reception of a lamp or other burner, and for the escape of the heat arising therefrom. A detachable annular ring, *f*, also of glass, is fitted in the larger opening, *e'*, in order to keep this portion of the apparatus as cool as possible.

The inner reflecting-surface of my apparatus may be made of smooth or corrugated glass, and the outer ends or front of same provided with a lens, as shown at G, thereby intensifying the light emitted from the lamp.

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

1. As a new article of manufacture, a glass reflector having a double shell, *b b*, with space between each for the introduction through an orifice, D, of an amalgam, as described, and for the purpose specified.

2. In combination with the reflector A, an annular ring, *f*, as described, and for the purpose set forth.

In testimony whereof I have hereunto signed my name.

ADOLPHE BOUCHARD.

In presence of—
SAM. H. HOUSTON,
PETER FINNEY.