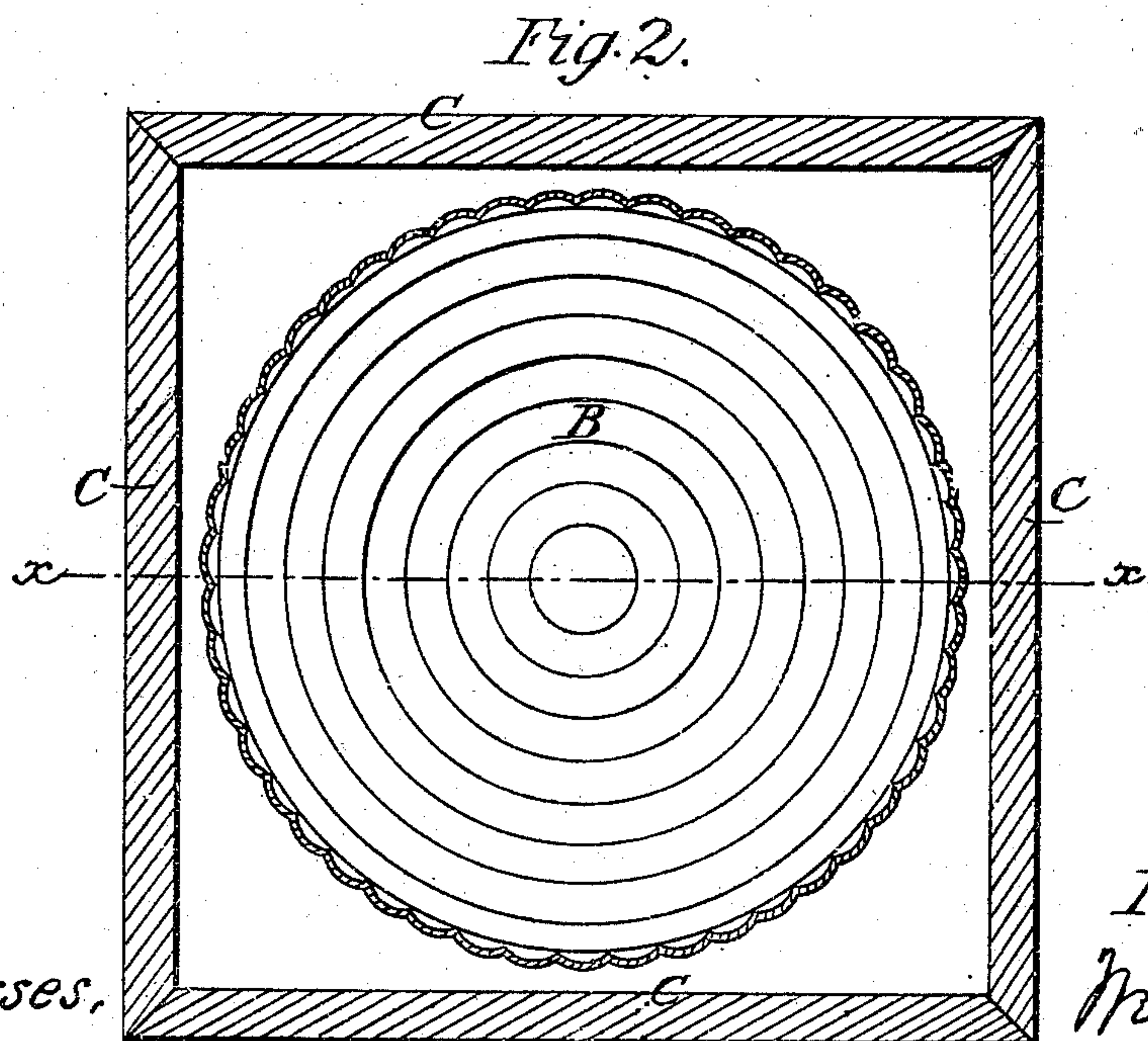
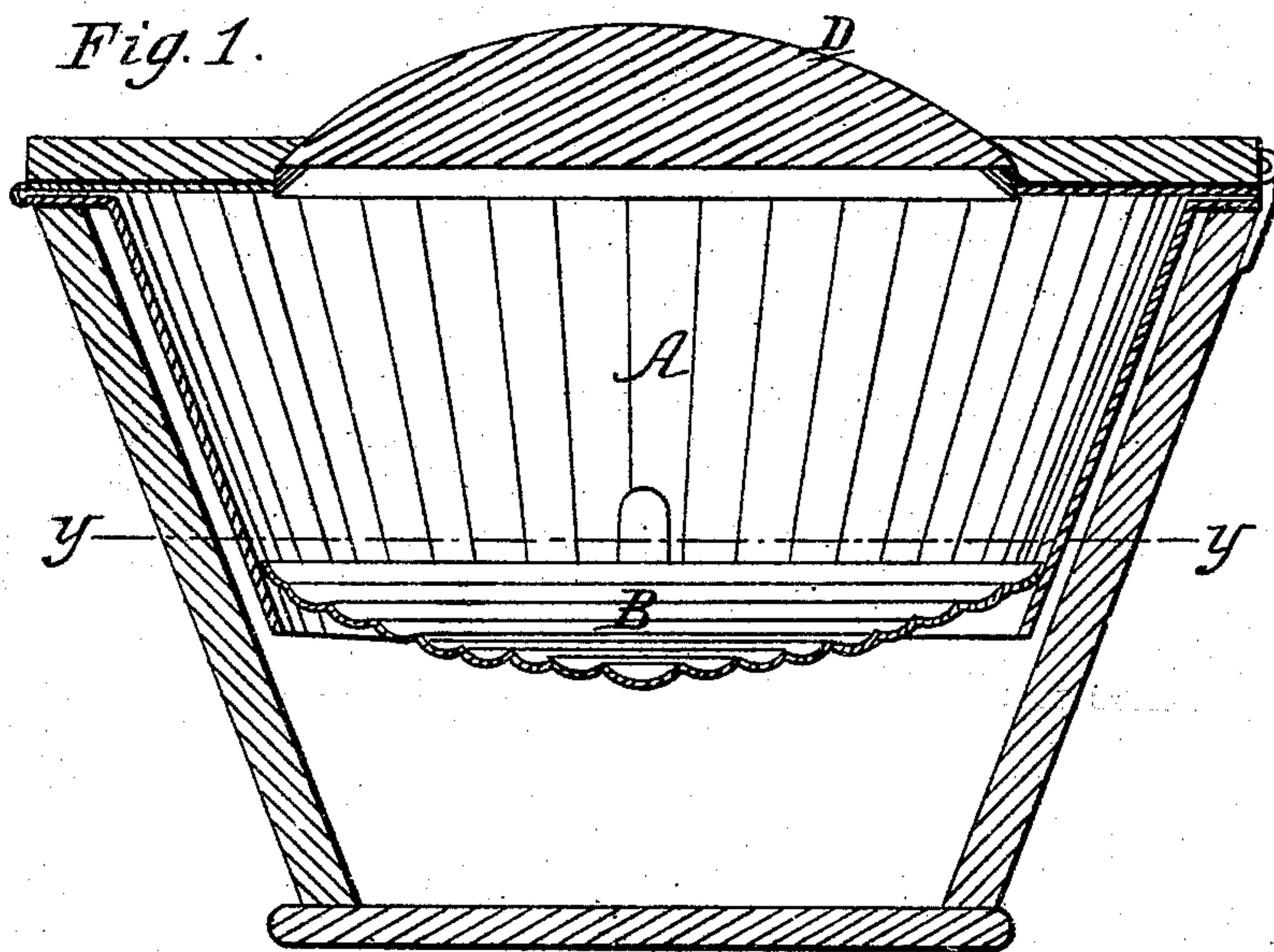


W. A. BUTLER.
Reflector for Lanterns, &c.

No. 58,212.

Patented Sept. 25, 1866.



Witnesses.
Wm. Greun.
Thos. Fusch.

Inventor:
W. A. Butler
By *M. A. Co.*
Attys

UNITED STATES PATENT OFFICE.

WM. A. BUTLER, OF NEW YORK, N. Y.

IMPROVEMENT IN REFLECTORS FOR LANTERNS, &c.

Specification forming part of Letters Patent No. 58,212, dated September 25, 1866.

To all whom it may concern:

Be it known that I, WILLIAM A. BUTLER, of the city, county, and State of New York, have invented new and useful Improvements in Reflectors for Lanterns; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The present invention consists in a novel combination and arrangement of reflecting-surfaces for lanterns, whereby the reflection of light through the glass or open front of the lantern-case is greatly augmented and more concentrated than with the ordinary mode of arranging such reflecting-surfaces, as will be obvious from the following detail description thereof, reference being had to the accompanying plate of drawings, in which—

Figure 1 is a longitudinal section of the lantern, taken in the plane of the line *xx*, Fig. 2, and Fig. 2 a transverse section, taken in the plane of the line *yy*, Fig. 1.

To enable others skilled in the art to make and use my invention, I will now proceed to describe it.

Similar letters of reference indicate like parts.

C in the drawings represents the case or box of the lantern, which may be made of wood, metal, or any other suitable material, and of a square, round, or other shape, according as may be desired, having in its front side a glass plate, D, made either round, square, or polygonal, and with either plain, or flat, or plano-convex, as shown in the drawings, or in any other suitable form, the shape of the glass forming no part of the present invention.

The inside of the lantern-case C, upon all of its sides and its rear or back, is lined or covered with a series of reflecting-surfaces, which may be either corrugated or plane metal plates or sheets, such as are usually employed for the purpose, highly or brilliantly burnished or polished, so as to increase their reflecting power. The sides of the lantern-case are covered with one continuous sheet-metal strip, properly bent around the same, so as to flare outward, or, in other words, inclined from the rear or back side of the lantern-case to its front or open side, as plainly shown in the drawings, the back or rear side of the lantern-case being also covered with a reflecting-plate, B.

The lamp used for producing the light is placed in the lantern-case in any of the ordinary modes, so as to be between the rear and front sides of the same and at equal distances from each side.

From the above description of the combination and arrangement of the reflecting-surfaces in the lantern-case, it is plain to be seen that the reflection of the light produced by the lamp used is greatly augmented and concentrated.

I claim as new and desire to secure by Letters Patent—

The combination of the conical side reflector A, the concave back reflector B and the lens D, all constructed, arranged, and operating as and for the purpose specified.

The above specification of my invention signed by me this 3d day of June, 1865.

WM. A. BUTLER.

Witnesses:

M. M. LIVINGSTON,
C. L. TOPLIFF.