

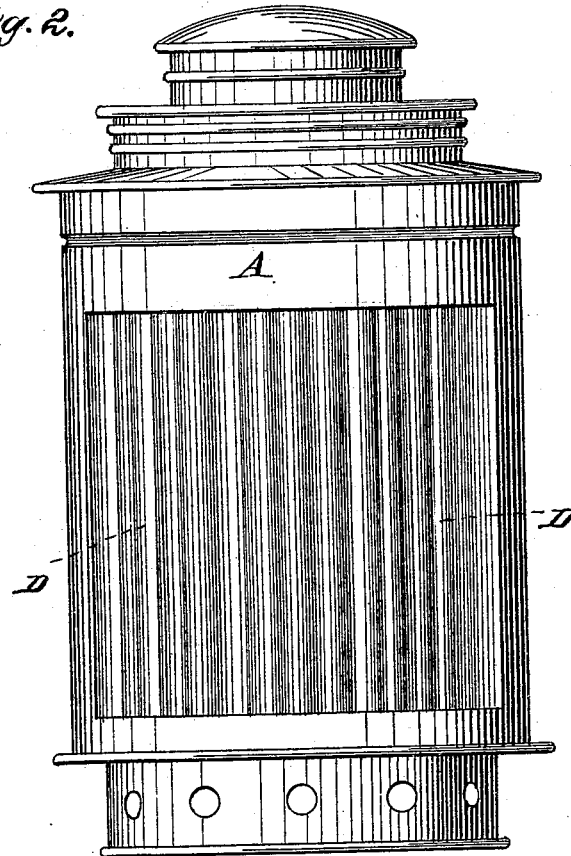
H. C. FELTHOUSEN.

Reflector.

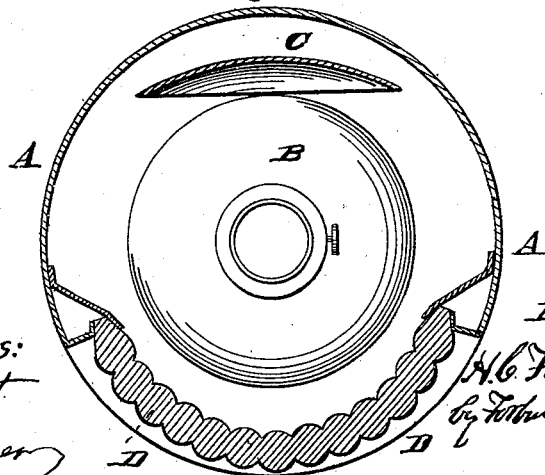
No. 110,449.

Patented Dec. 27, 1870.

*Fig. 2.*



*Fig. 1.*



Witnesses:

*P. B. Davenport*  
*John J. Donner*

*Inventor.*

*H. C. Felthousen*  
*By F. H. M. M. M. M.*

# United States Patent Office.

HENRY C. FELTHOUSEN, OF BUFFALO, NEW YORK.

Letters Patent No. 110,449, dated December 27, 1870.

## IMPROVEMENT IN LENSES OR GLASSES FOR HEAD-LIGHTS.

The Schedule referred to in these Letters Patent and making part of the same.

I, HENRY C. FELTHOUSEN, of the city of Buffalo, in the county of Erie and State of New York, have invented an Improved Lens or Glass for Head-Lights, of which the following is a specification.

A front glass for head-lights has been heretofore used, composed of a series of hollow tubes filled with a liquid, and arranged vertically side by side in the form of an arc corresponding to the curve of the front portion of the lantern wherein they are placed. It has been found extremely difficult to arrange these tubes so closely together as to prevent the light radiating between them. The fitting of the tubes and properly securing them in place involve considerable care and labor, while there is a liability of the tubes breaking from the expansion of the liquid therein.

The object of my improvement is to overcome these defects; and

The invention consists in casting the glass solid in one piece, so that it will present the appearance of a series of cylinders, arranged in the manner of the tubes before described, but joined together at their point of contact so that a horizontal section thereof will be bounded on each side by a succession of convex lines intersecting each other with the convex surfaces which they bound on the two sides opposite to each other, as hereinafter more particularly shown and described.

In the accompanying drawing—

Figure I is a horizontal section of a lantern provided with my improved glass.

Figure II is a front elevation thereof.

Like letters of reference designate like parts in each of the figures.

A represents an ordinary lantern of cylindrical form for a head-light;

B, the lamp;

C, the reflector in the back; and

D, my improved glass or lens in front, arranged so as to form a segment of the lantern-case.

The section shown in Fig. I is a correct representation of its form, while both figures show its arrangement in the lantern, which is similar to that of the front glass or lens employed in ordinary head-lights.

My improved glass is readily cast of the hereinbefore-described form, and can be produced at a much less cost than a glass composed of tubes, and is less liable to be broken or to get out of order, while it remedies the defects of the latter, as before stated.

What I claim as my invention is—

A front glass for head-lights as a new article of manufacture, when cast solid in a single piece, and of the form shown and described.

Witnesses:

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JNO. J. BONNER.

H. C. FELTHOUSEN.