

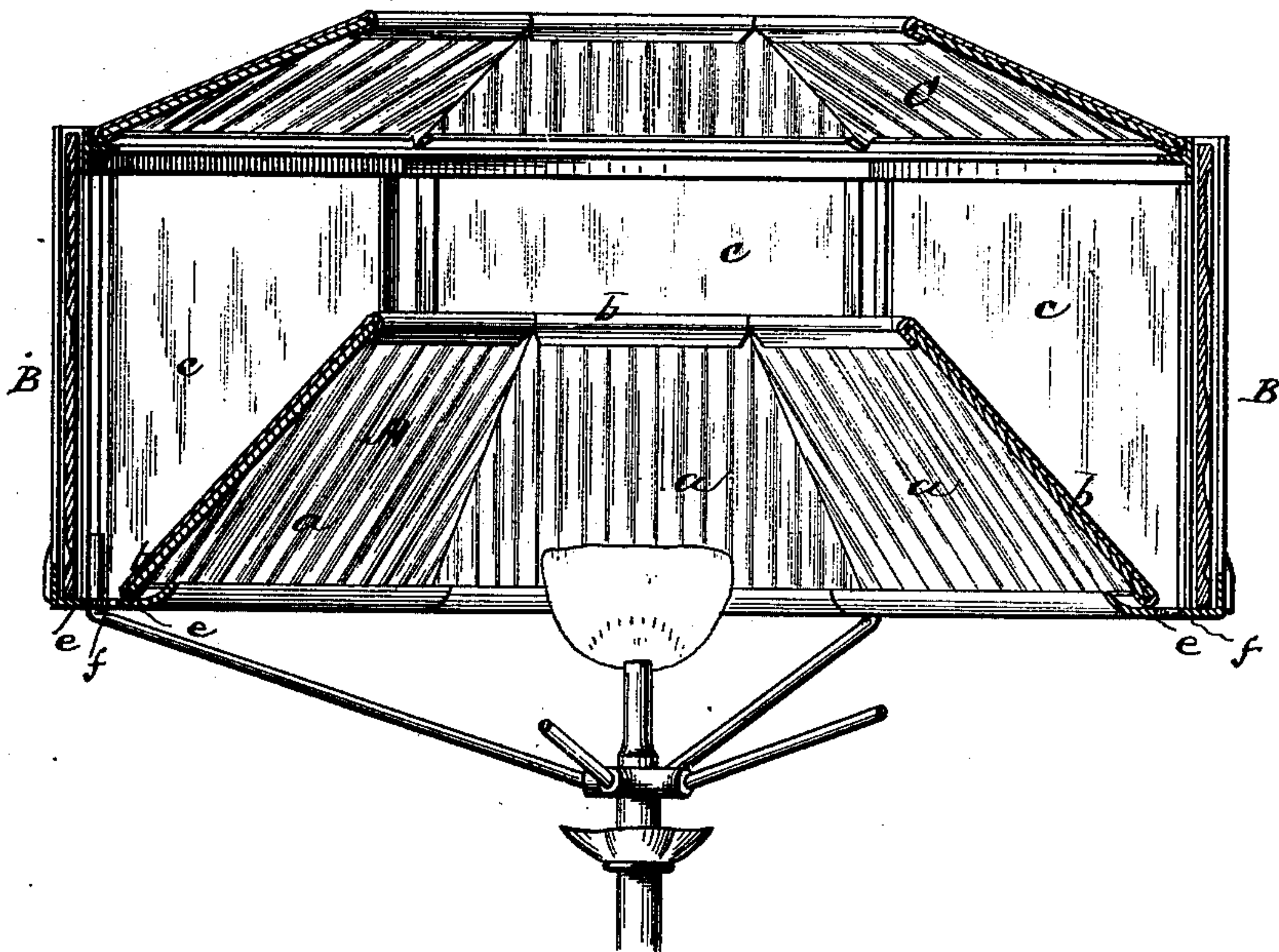
(No Model.)

W. H. SMITH.  
Reflector.

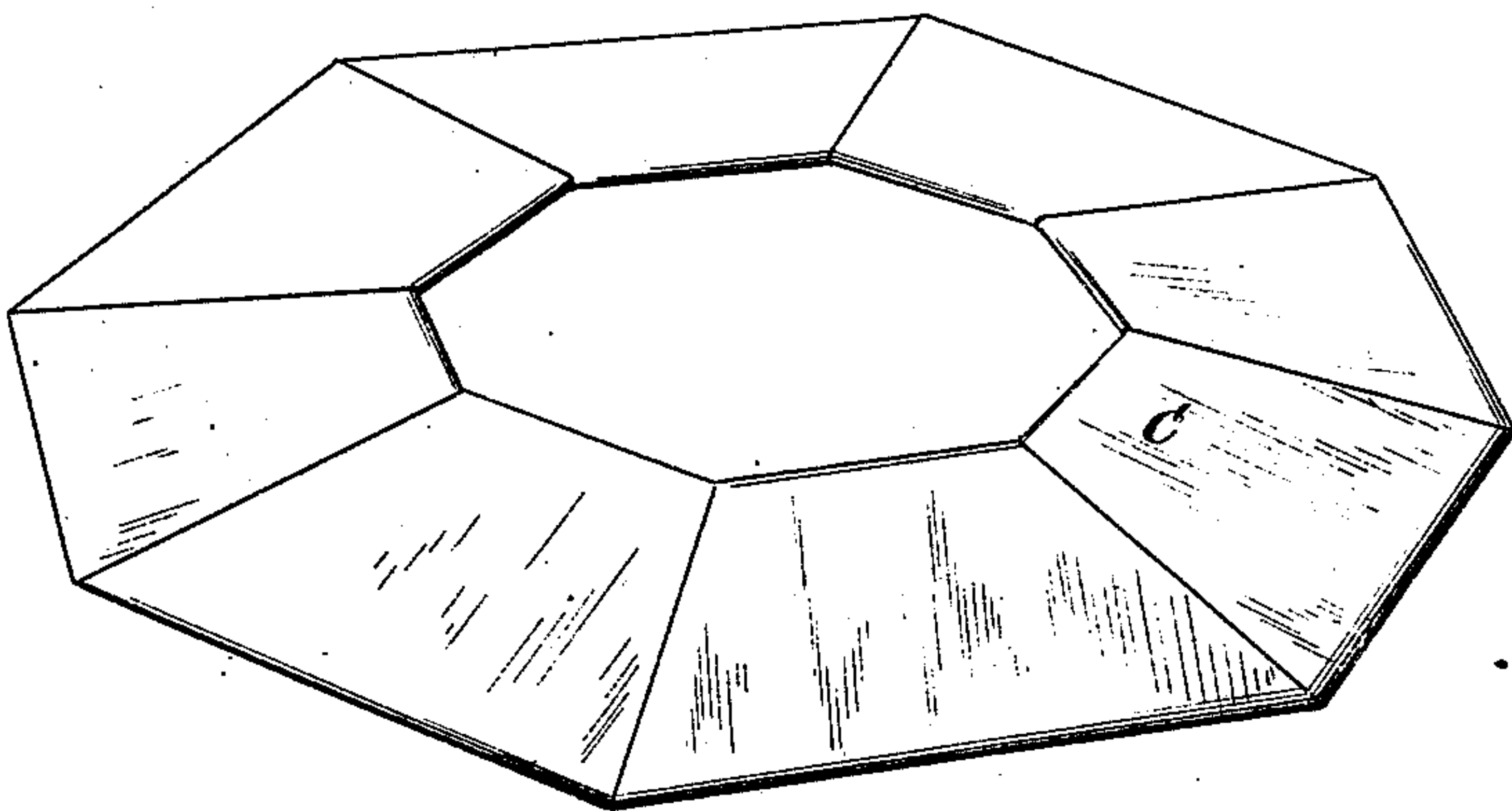
No. 235,306.

Patented Dec. 7, 1880.

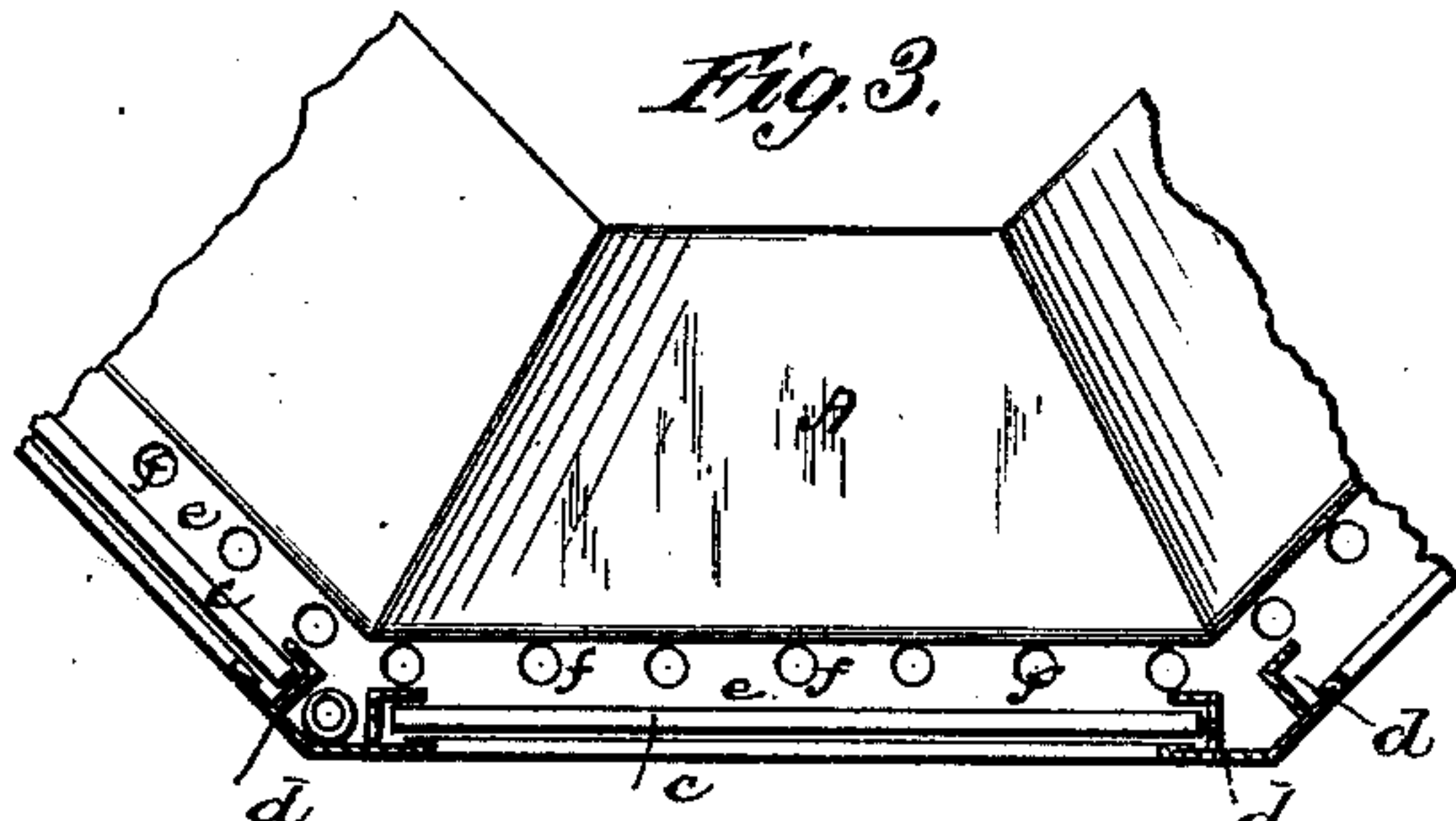
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses.

*Robert Everett*  
*Ed. Dick*

*Inventor.*  
*Wm. H. Smith*  
*by W. Bailey*  
*his Attorney.*



# UNITED STATES PATENT OFFICE.

WILLARD H. SMITH, OF BROOKLYN, NEW YORK.

## REFLECTOR.

SPECIFICATION forming part of Letters Patent No. 235,306, dated December 7, 1880.

Application filed October 28, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, WILLARD H. SMITH, of Brooklyn, Kings county, New York, have invented certain new and useful Improvements in Reflectors, of which the following is a full, clear, and exact description.

My object, primarily, in this invention has been to produce a cheap, effective, and ornamental reflector for general use adapted to be employed with gas-burners or oil or other lamps.

The ordinary reflector, consisting of a metallic frame with a facing composed of glass or other material, while effective, is nevertheless objectionable, particularly for household use, on account of its cheap and unsightly appearance. Under my invention a reflector of this kind can be made available, the structure concealing all that is unsightly and objectionable in the reflector. To this end I combine with a reflector of ordinary or suitable construction an inclosing transparent or translucent case, and a second reflector placed above the first, with its reflecting-surface at such angle that the rays of light reflected from it will be directed against the inside face of the reflector-inclosing case.

The nature of my invention and the manner in which the same is or may be carried into effect will be understood by reference to the accompanying drawings, in which—

Figure 1 is a vertical central section of a reflector embodying my improvements. Fig. 2 is a perspective view of the upper or case-illuminating reflector detached. Fig. 3 is a top view, partly in section, of a portion of the structure with the upper reflector removed.

A is the main reflector, of any suitable construction, consisting, in this instance, of silvered-glass panels or sections *a*, held in the metal annular frame *b*, of truncated-conical form. A reflector of this kind is not novel with me.

I now proceed to describe my improvements.

Surrounding the reflector A is a case, B, which is open at the top, with sides or walls which are joined at the bottom to the outer rim of the deflector, or to a flange, *e*, projecting therefrom, and are of sufficient height to inclose and shield from view the reflector. The walls are made, in whole or in part, of transparent or translucent material, which may be variously designed, so that when illuminated from the inside it will have a very

ornamental appearance. The case shown in the drawings is represented as composed of porcelain or bisque panels *c*, which slide in vertical guide-retaining grooves *d*, formed for them in the skeleton metallic frame of the case, and are removable therefrom.

Surmounting the case, and at such height above the reflector A as to also receive the rays of light, is a second reflector, C, with a reflecting-surface, but slightly inclined, the angle of inclination being such that the rays of light which it receives will be reflected against the inner face of the walls of the case, thus illuminating the interior of the case.

The upper or case-illuminating deflector is removable, so that it may be taken off any time—when, for instance, it is desired to clean the interior of the case.

In order to prevent accumulation of heated air in the annular chamber formed by the upper and lower reflectors and the case, I form at the lower part of the structure air-admission openings *f*, leading from the exterior to the interior of the case. These openings I prefer to form in the bottom ring or flange connecting the main reflector A and the case, said openings being formed at a point intermediate the main reflector and the case.

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

1. The combination, substantially as herebefore set forth, with the main reflector, of an inclosing-case, transparent or translucent in whole or part, and an upper case-illuminating deflector.

2. A reflector surrounded by a transparent or translucent case, and provided, in addition to its usual reflecting-surface, with a surface arranged to reflect the rays of light into the interior of the case, substantially as set forth.

3. The combination, substantially as set forth, of the main reflector, the upper case-illuminating reflector, and the transparent or translucent case, having at its lower parts air passages or openings, substantially as and for the purposes set forth.

In testimony whereof I have hereunto set my hand this 22d day of October, A. D. 1880.

WILLARD H. SMITH.

Witnesses:

E. A. DICK,  
M. BAILEY.