

(No Model.)

E. S. RITCHIE.

REFLECTOR FOR STREET LAMPS.

No. 270,339.

Patented Jan. 9, 1883.

Fig. 1.

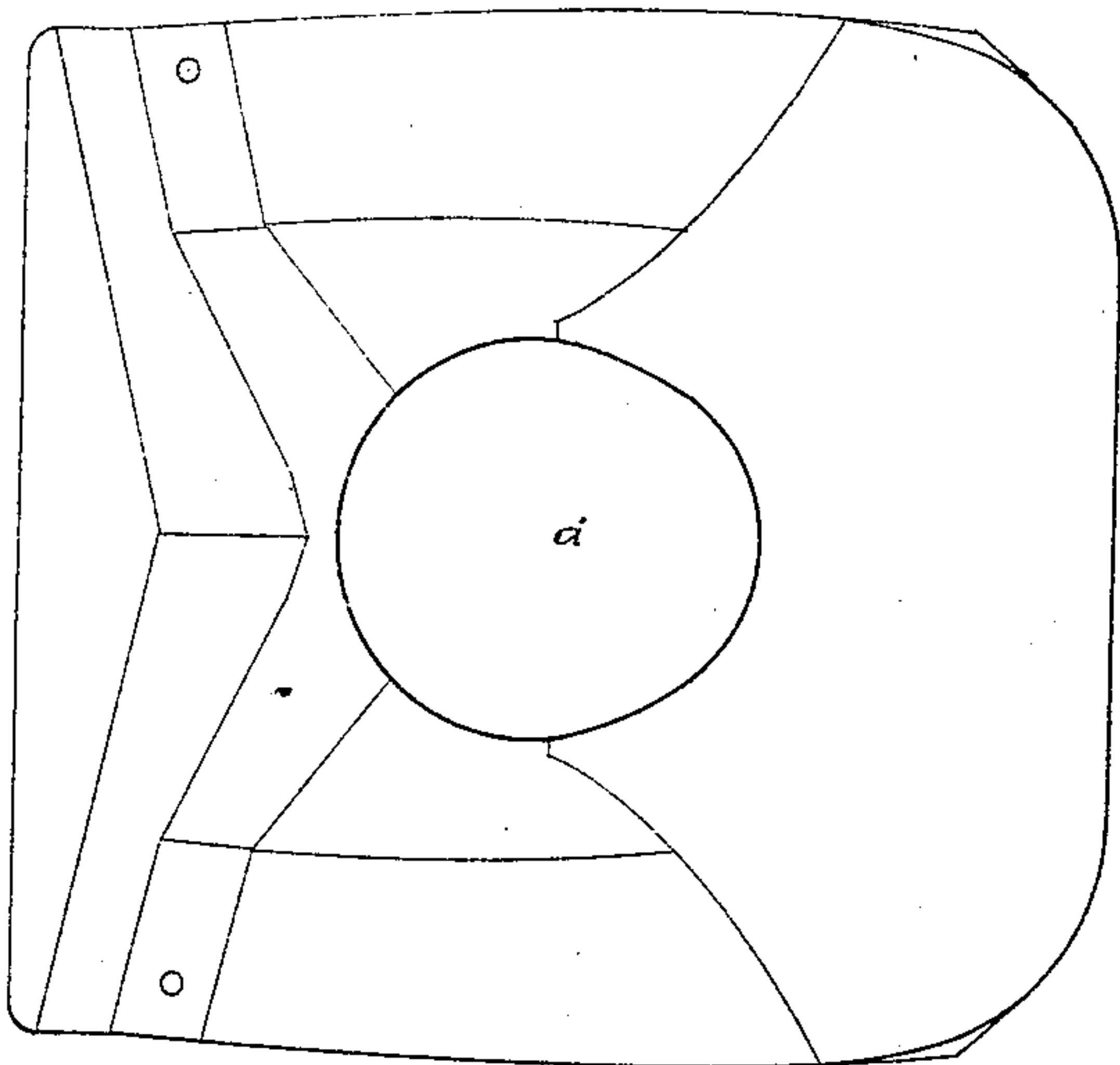


Fig. 2.

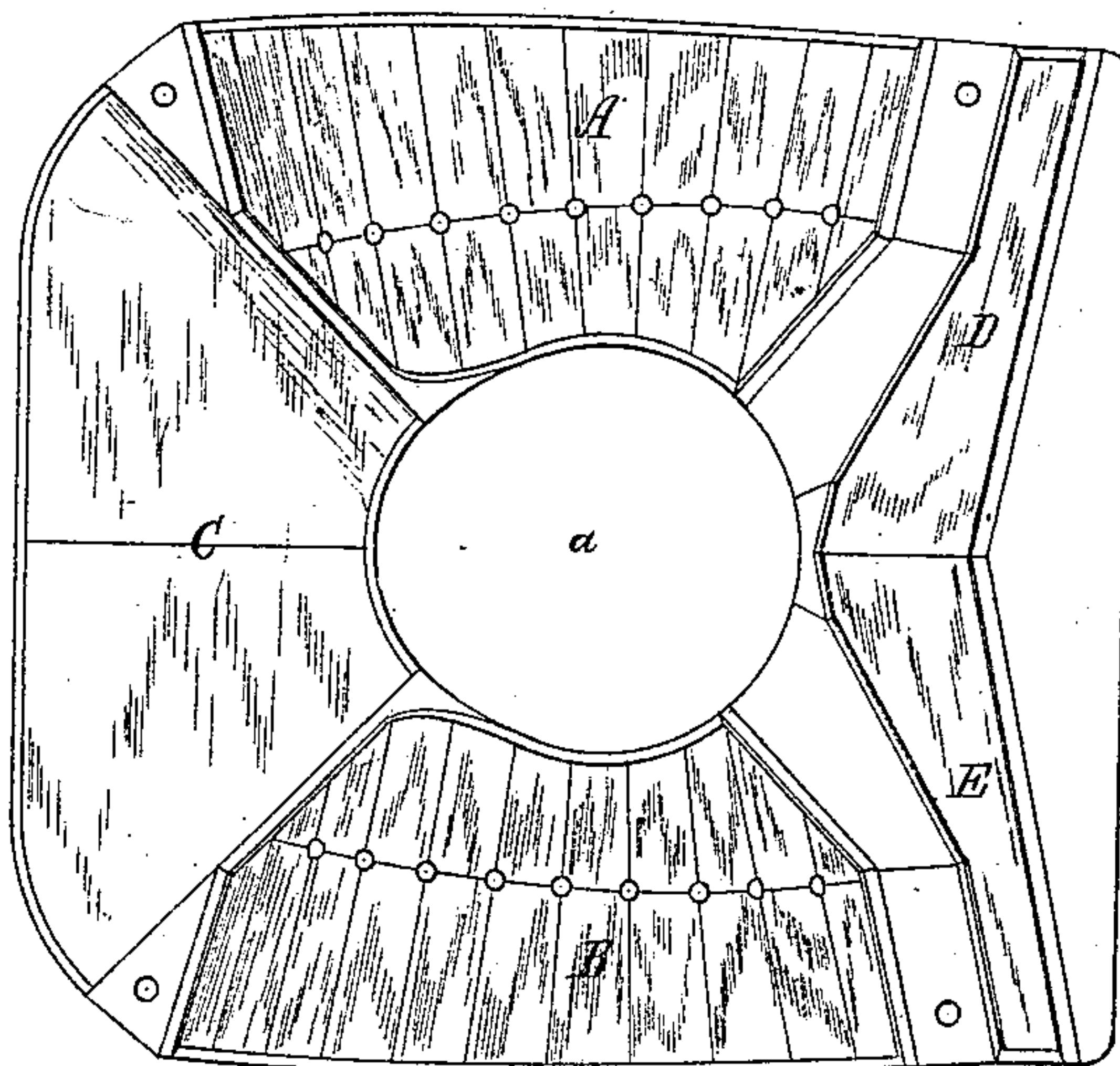


Fig. 3.

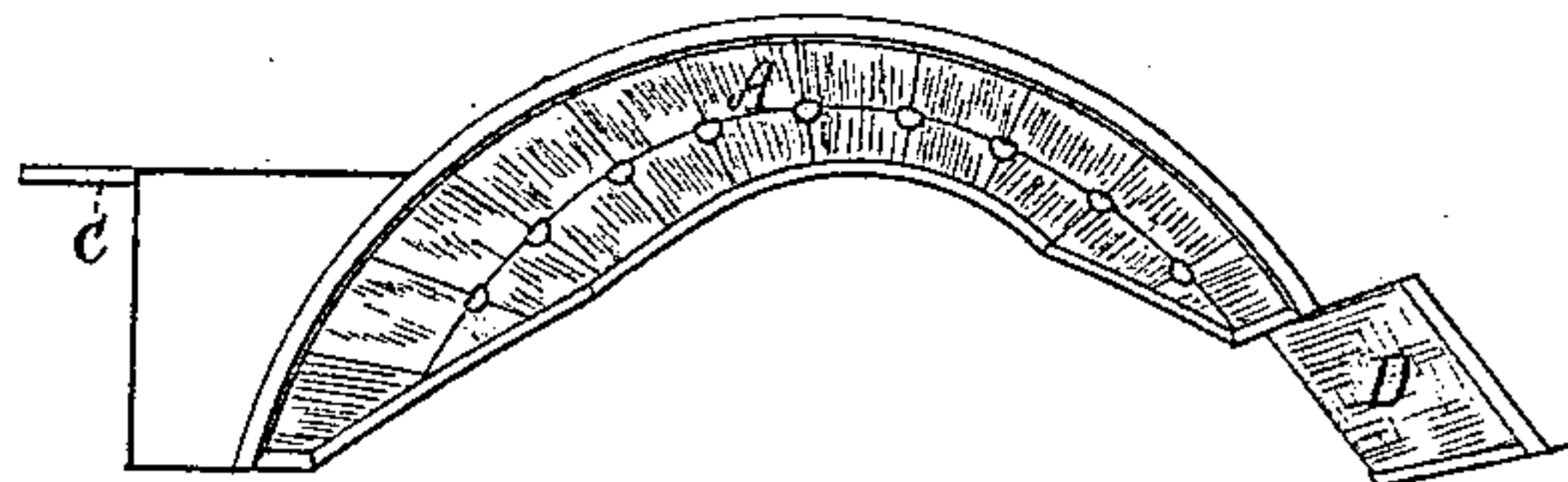


Fig. 5.

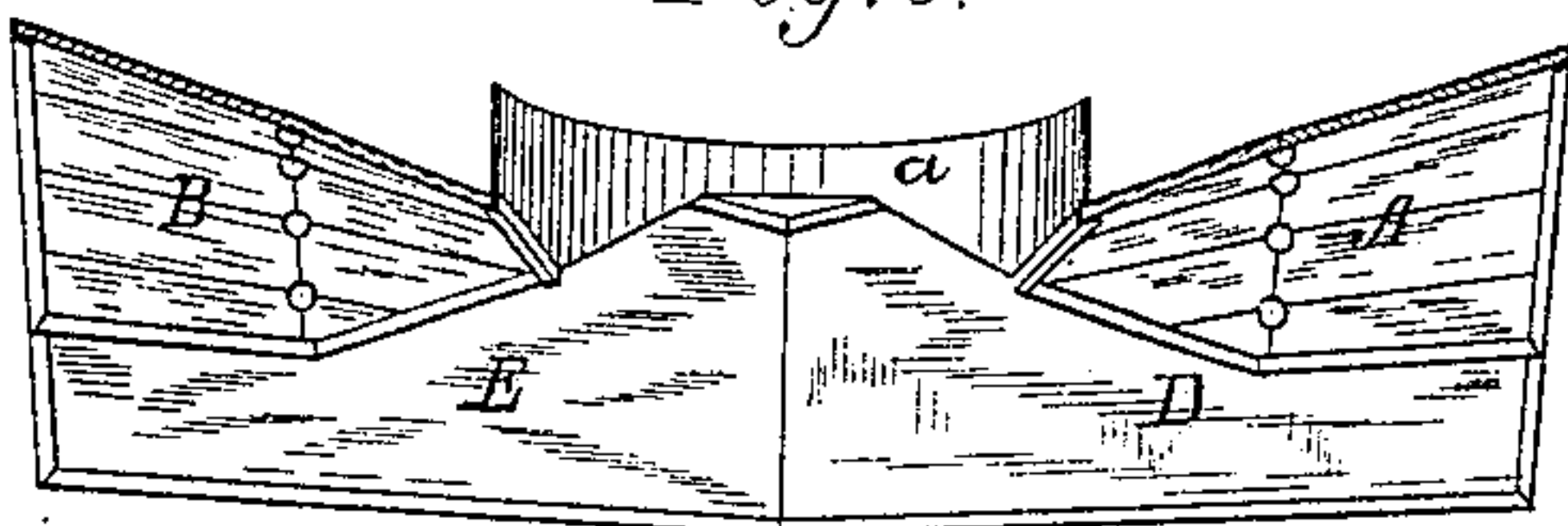
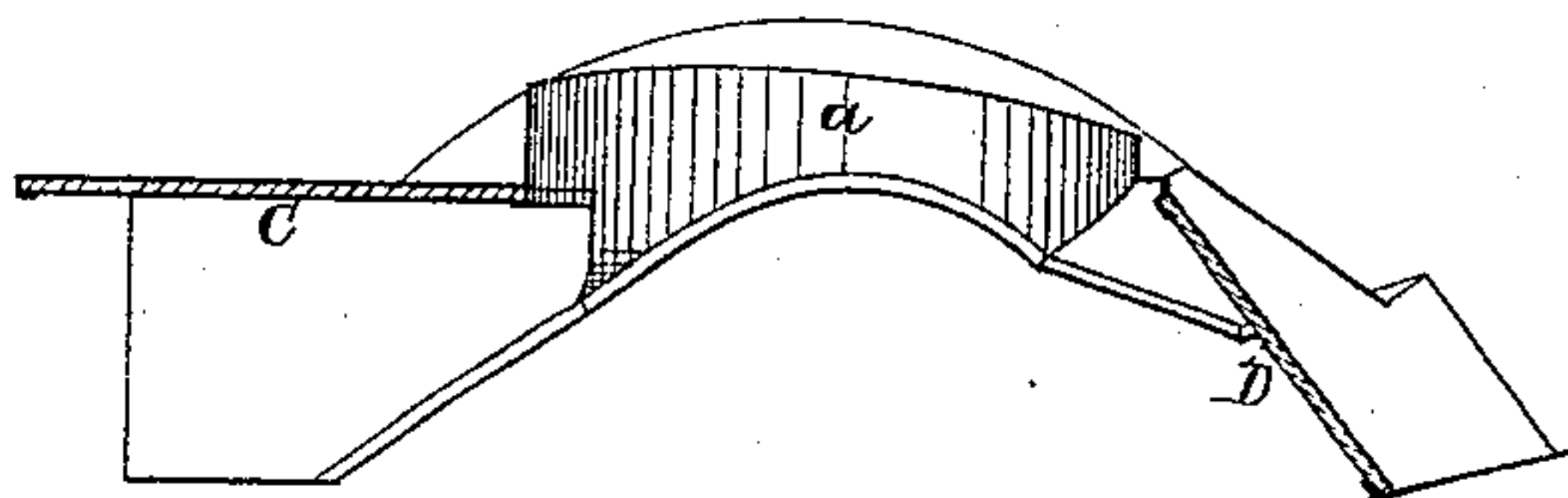


Fig. 4.



Witnesses.

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# UNITED STATES PATENT OFFICE.

EDWARD S. RITCHIE, OF BROOKLINE, MASSACHUSETTS.

## REFLECTOR FOR STREET-LAMPS.

SPECIFICATION forming part of Letters Patent No. 270,339, dated January 9, 1883.

Application filed November 28, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD SAMUEL RITCHIE, of Brookline, in the county of Norfolk, of the State of Massachusetts, have invented a new and useful Improvement in Reflectors for Street-Lamps; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a bottom view, Fig. 3 an end view, and Figs. 4 and 5 cross-sections in planes at right angles to each other, of a reflector embodying my invention.

This reflector at its central part has an opening, *a*, extending through it to receive the chimney of a lamp when the reflector is used with a lamp, or to allow the smoke of a gas-flame to pass upward through such reflector when it is used with such a burner.

It is customary to have a reflector provided with concave surfaces to receive light from a flame, and to reflect in condensed or diagonal beams the rays thereof in nearly opposite directions directly upon a street, and by concave surfaces to reflect the rays nearly vertically downward upon a plane mirror to be again reflected upon the street.

The usual forms for direct reflection are shown in the drawings at A and B, as arranged on opposite sides of the opening *a*, each reflecting-surface being arched or an ellipsoidal segment or truncated cone or an approximate thereto.

In front of the opening *a*, and between the two curved and tapering reflecting-surfaces A and B, is a flat or plane reflecting-surface, C, which is horizontal, or may be very slightly inclined either upward or downward. It increases in width as it extends from the opening *a*. This reflecting-surface C is designed to illuminate the street in front and for an angular space of about ninety degrees in front of the lamp; but there would be spaces on the street between the portions illuminated by the reflecting-surface C and that which can receive rays from the lateral reflectors A and B. I place in rear of the opening *a*, and for the illumination of these spaces, and between the two lateral reflecting-surfaces A and B, two plane reflecting-surfaces,

D E, arranged at an obtuse angle with each other, and each inclined downward, in manner as represented.

Each of the two rear reflectors may be made in two or more planes, slightly inclined to each other, in order to disperse the rays over a wider space than a single plane reflector would do.

A reflector made as hereinbefore described will operate in practice to great advantage in lighting a street or space in front of and extending in lateral directions relatively to a lamp or gas burner.

I do not claim in a reflector having two arched and tapering reflecting-surfaces arranged to reflect light in opposite directions from a flame arranged between them; but

I claim—

1. A reflector, essentially as described, consisting of the concave or ellipsoidal or arched reflecting-surfaces A and B, and the plane reflecting-surfaces C, arranged substantially as set forth.

2. A reflector, essentially as described, consisting of two concave tapering ellipsoidal or arched reflecting-surfaces, A and B, and the rear plane or nearly plane reflecting-surface, D and E, arranged with each other, substantially as described.

3. A reflector, essentially as described, consisting of the concave or arched reflecting-surfaces A and B, the plane reflecting-surface C, and the auxiliary plane reflecting-surface D and E, arranged with each other, and an opening, *a*, substantially as set forth.

4. A reflector provided with a hole, *a*, at its central part, and with concave or arched reflecting-surfaces A and B, and a plane reflecting-surface, C, disposed substantially as set forth.

5. A reflector provided with a hole, *a*, at its central part, and with two concave arched reflecting-surfaces, A and B, and two rear plane reflecting-surfaces, D and E, arranged with each other and the said hole, substantially as set forth.

EDWARD SAMUEL RITCHIE.

Witnesses:

R. H. EDDY,  
E. B. PRATT.