

(No Model.)

3 Sheets—Sheet 1

W. A. JONES.

ELECTRIC LIGHT REFLECTOR OR REFLECTORS.

No. 344,532.

Patented June 29, 1886.

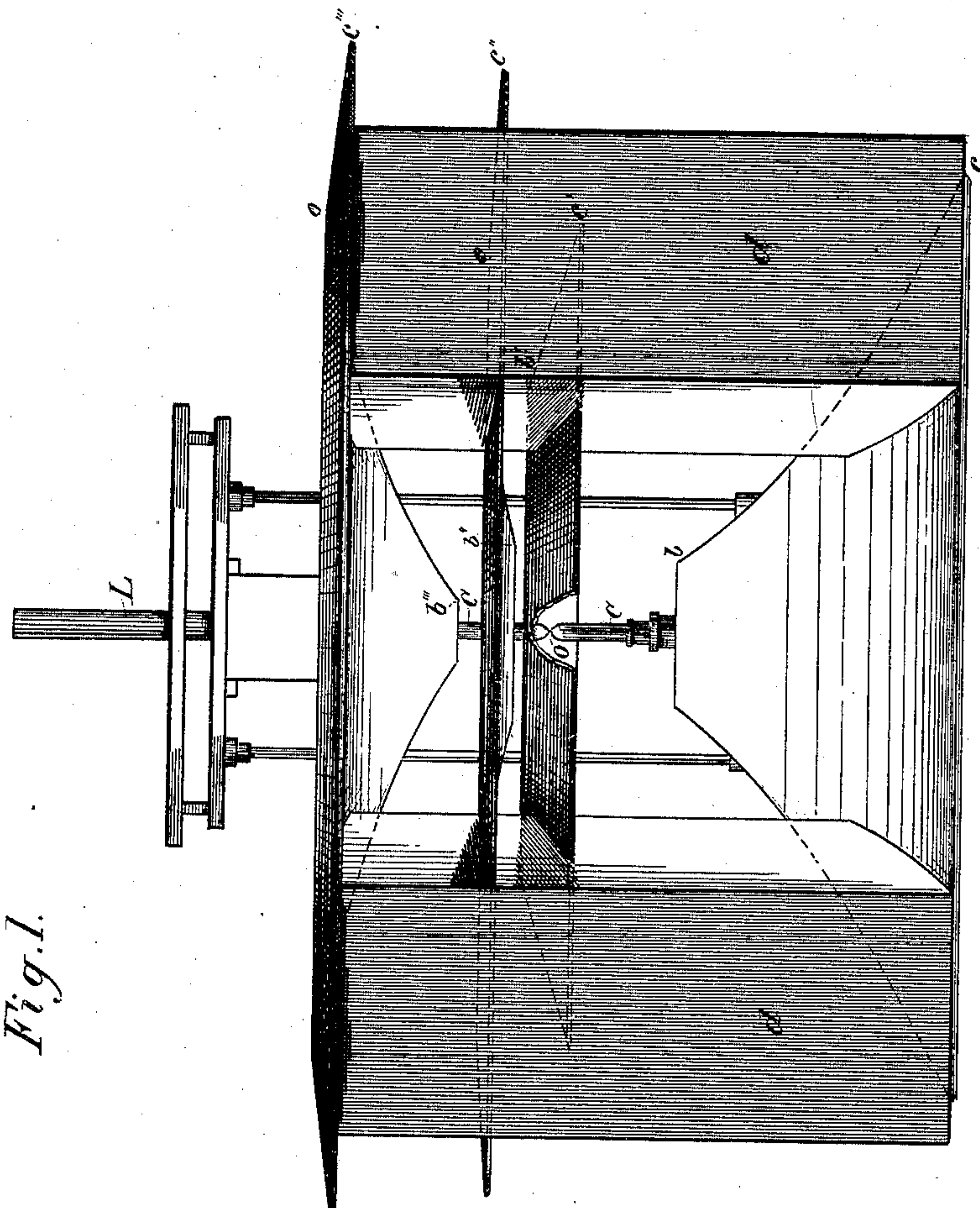


Fig. 1.

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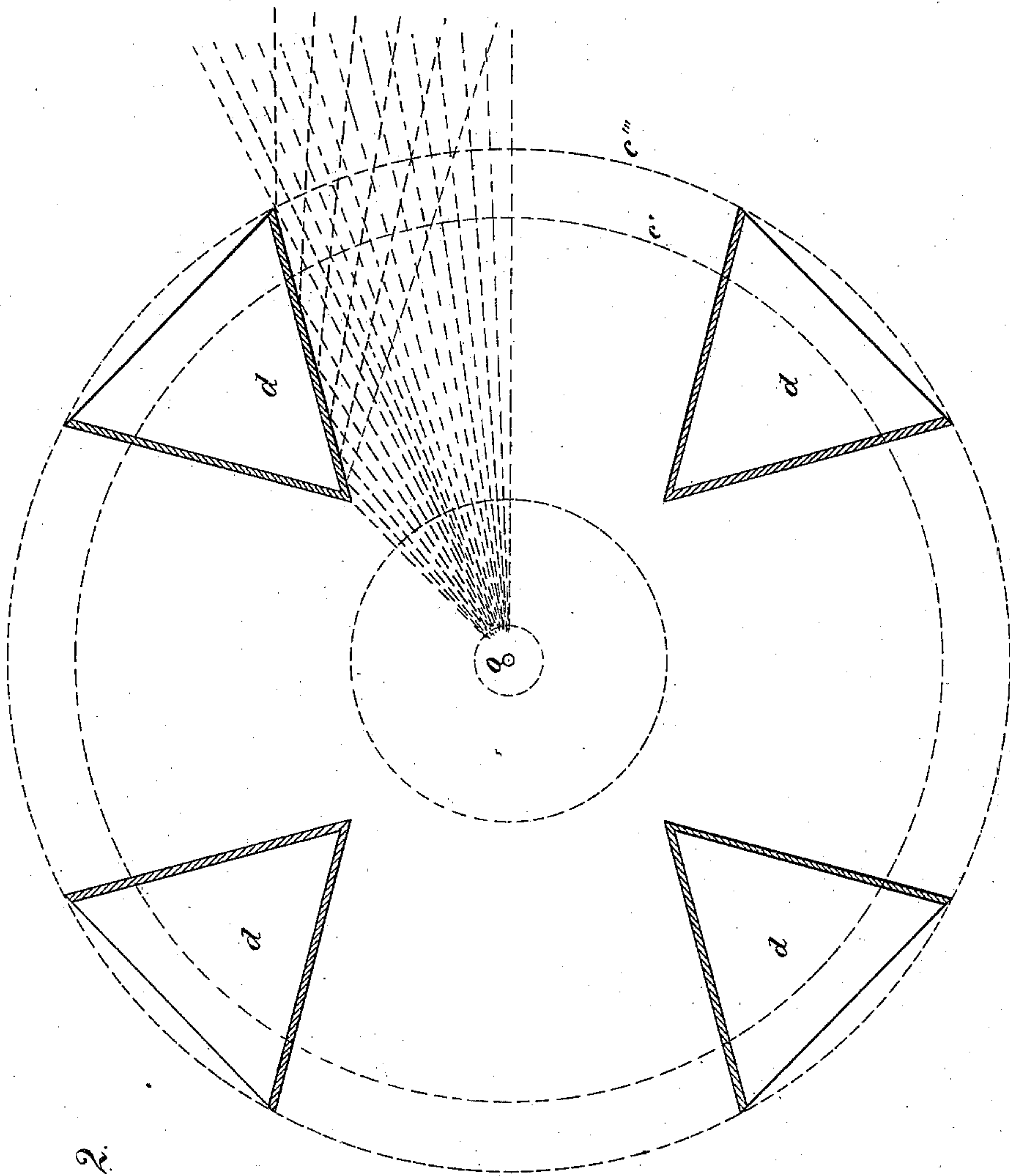


Fig. 2.

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(No Model.)

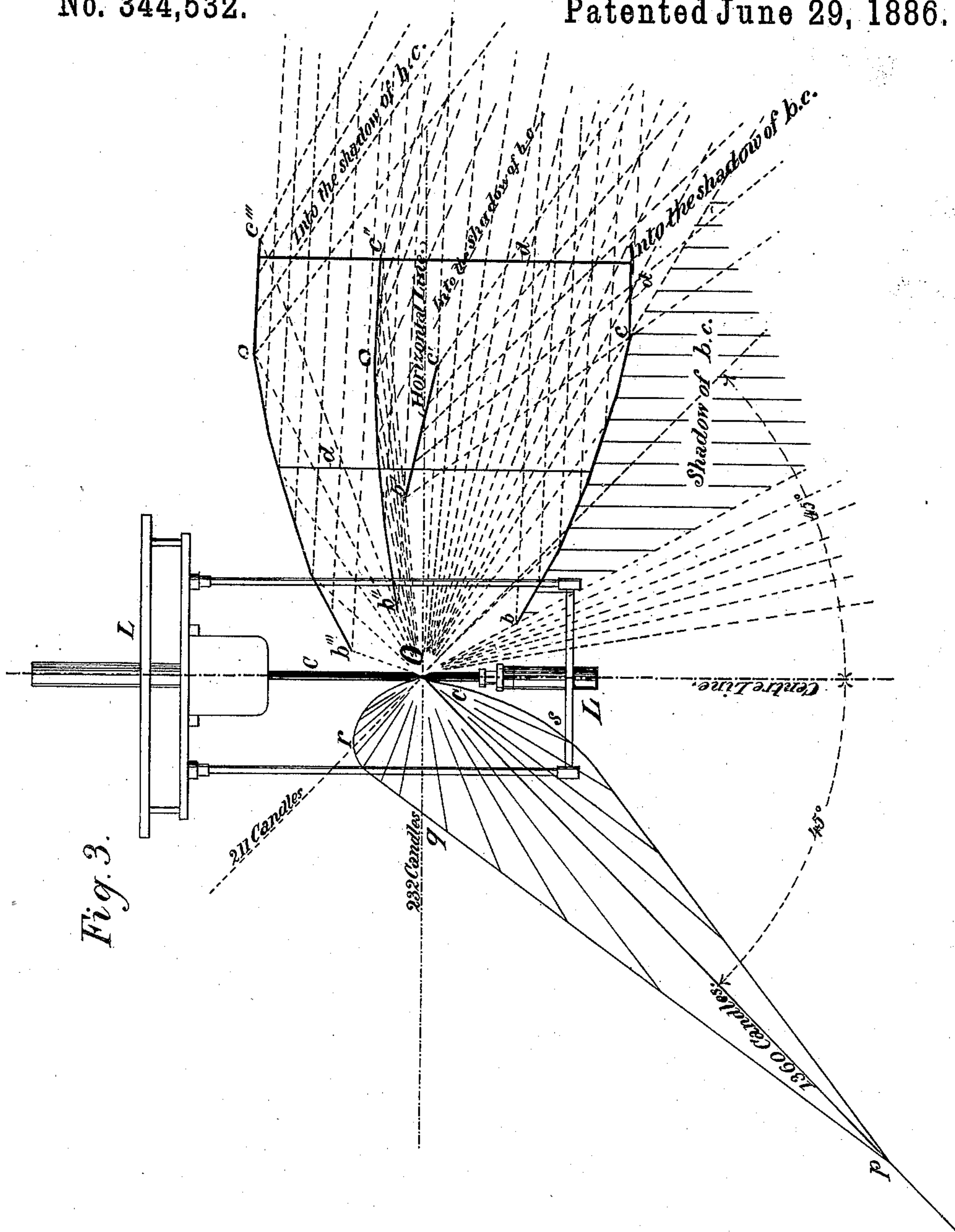
3 Sheets—Sheet 3.

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**ELECTRIC LIGHT REFLECTOR OR REFLECTORS.**

No. 344,532.

Patented June 29, 1886.



*Witness.*

*Clement Winstanley.*

Hercules F. Price

*Inventor,*

W. A. Jones



# UNITED STATES PATENT OFFICE.

WILLIAM A. JONES, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO GEORGE W. PERCY, OF SAME PLACE.

## ELECTRIC-LIGHT REFLECTOR OR REFLECTORS.

SPECIFICATION forming part of Letters Patent No. 344,532, dated June 29, 1886.

Application filed October 27, 1884. Serial No. 146,606. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. JONES, of the city and county of San Francisco, and State of California, have invented an Improvement in Electric-Light Reflector or Reflectors; and I hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to certain new and useful reflectors for electric lights, and to their proper and peculiar arrangement or disposal in regard thereto; and my invention consists in the combination of devices, which I shall hereinafter fully explain by reference to the accompanying drawings, in which—

Figure 1 is a front elevation showing the reflectors in their relation to the lamp. Fig. 2 is a horizontal section of the same. Fig. 3 is a vertical section, one half of which shows the disposition of the reflectors, and the other half illustrates the direction in which the rays of light are thrown to show the maximum intensity.

It is the main object of my invention to correct the unequal distribution of the light peculiar to electric-arc light, and at the same time to increase the projectile power of the rays by relieving them from the law of angular projection. This will enable it to illuminate portions of the distant field with greater effect.

Secondary objects are, by the proper disposition of intervening reflectors, to catch the rays and divert them, so as to illuminate the shadow of the annular reflectors in the lower field.

L L is the lamp, and C the carbon. I first place one or more annular reflectors,  $b c$ , in the field of maximum intensity below the light O. I have here shown but one such reflector. This diverts the rays, as shown in Fig. 3. I then place two or more annular reflectors,  $b''' o c'''$ , and  $b'' o c''$ , &c., in the upper field, as shown. These reflectors are in two parts, joining at  $o$ . The inner part throws the rays in horizontal or other desirable directions, while the outer part throws them downward into the shadow of those in the lower field. The reflector  $b'' o c''$  has for its object to intercept those rays that would be lost in the upper field beyond  $c'''$ . Another annular reflector,  $b' c'$ , I interpose directly in the horizontal

field, as shown, for the purpose of diverting the rays downward into the inner limits of the shadow of the reflectors in the lower field.

All of these reflectors, heretofore mentioned, are formed by the revolution of the lines  $b''' o c'''$ ,  $b'' o c''$ , &c., about an axis through the point O. These lines may be straight or curved. When an electric light, provided with these reflectors, is placed in an open area, the result effected, namely, of projecting the rays in a sheet upon the surface, is the result desired; but when the light is placed where only a portion of this field is to be illuminated, as at the intersection of two streets, it is manifest that the projection of the rays all around the horizon is not desirable, as many of them will be upon the corners. For the purpose of diverting them solely in beams in the required directions, with increased projectile power, I collect, substantially, the whole of the light proceeding from the inner reflectors into any desirable number of beams proceeding at any desirable angles by means of a system of vertical reflectors, such as I have represented by  $d$  in Fig. 2.

I do not claim as new annular reflectors, single, or in groups, in either the lower or the upper fields of light, except those for projecting into the shadow of reflectors in the lower field.

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

1. The reflectors  $b c$  and  $b' c'$ , in combination with the reflectors  $b'' o c''$  and  $b''' o c'''$ , substantially as and for the purpose described.

2. The combination, with the reflector  $b' c'$ , of the reflectors  $o c'' o c'''$ , and the reflector  $b c$  in the lower field, substantially as herein described.

3. The reflectors  $o c''$ ,  $o c'''$ , and  $b c$ , in combination with the reflector  $b' c'$  and the vertical reflectors  $d$ , substantially as herein described.

In witness whereof I have hereunto set my hand.

WILLIAM A. JONES.

Witnesses:

C. D. COLE,  
J. H. BLOOD.