

(No Model.)

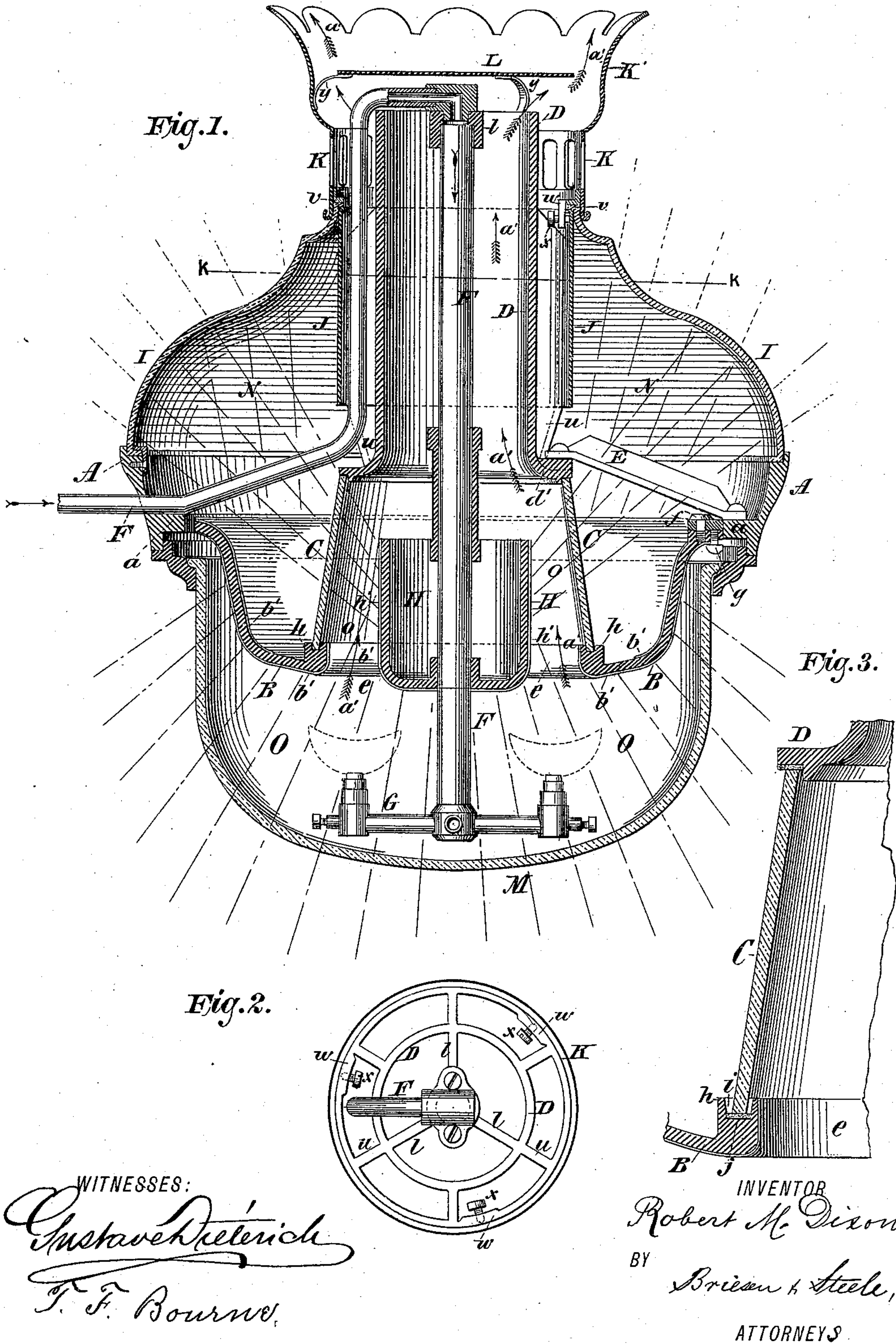
2 Sheets—Sheet 1.

R. M. DIXON.

GAS LAMP.

No. 373,057.

Patented Nov. 15, 1887.



(No Model.)

2 Sheets—Sheet 2.

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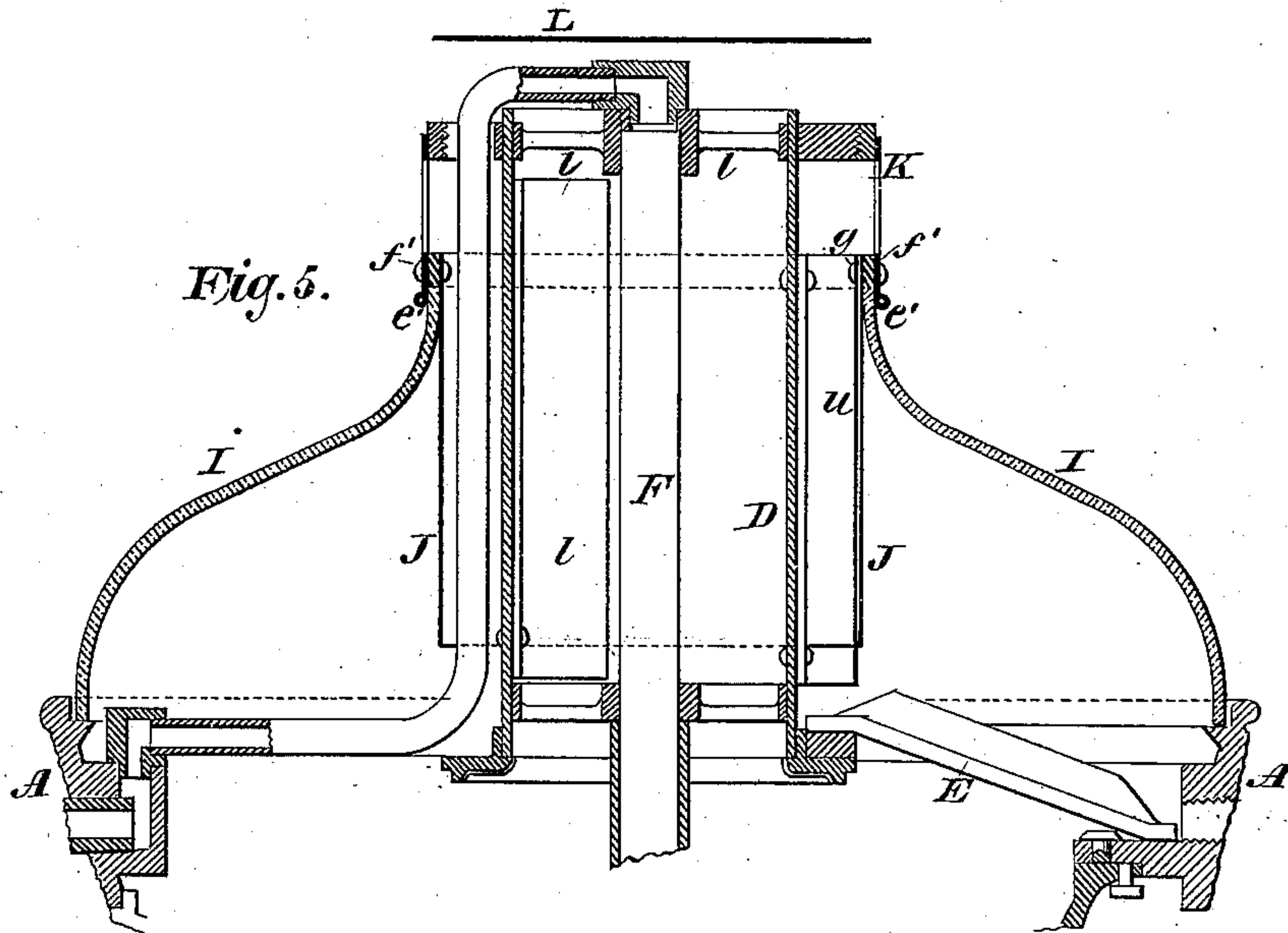
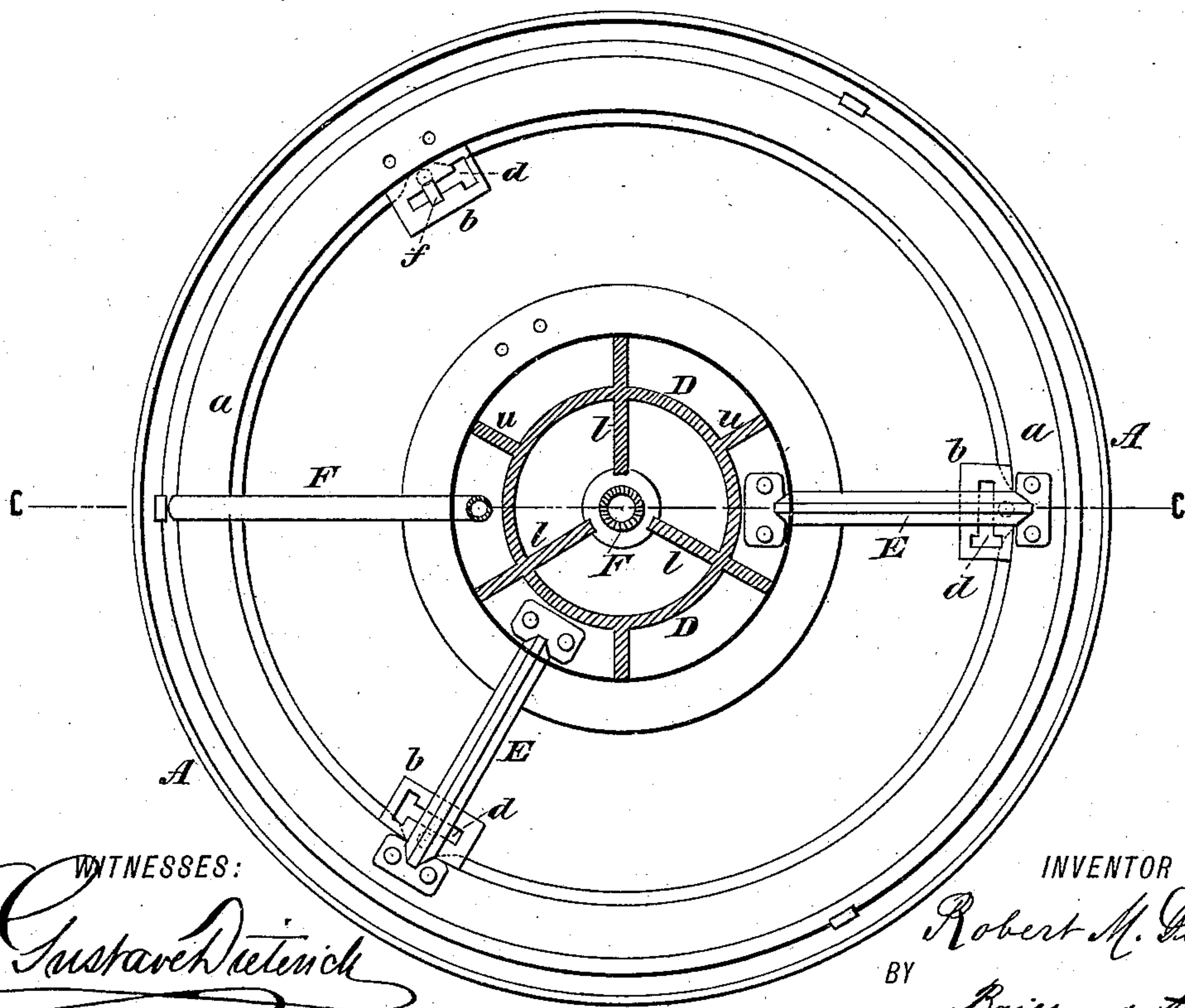


Fig. 4.



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GAS-LAMP.

SPECIFICATION forming part of Letters Patent No. 373,057, dated November 15, 1887.

Application filed April 13, 1887. Serial No. 234,667. (No model.)

To all whom it may concern:

Be it known that I, ROBERT M. DIXON, of East Orange, Essex county, New Jersey, have invented a new and Improved Gas-Lamp, of which the following is a full, clear, and exact description.

This invention relates to improvements in the kind of lamps described in United States Letters Patent Nos. 268,373, 242,974, and 280,761.

The object of my invention is to improve the above-named devices, so as to cause the lamp to throw the light in an upward, outward, and downward direction, thereby making the room more cheerful and avoid the throwing of shadow by the lamp. This I accomplish without lessening the amount of light thrown downward.

The invention consists in providing the lamp with reflectors for throwing the rays of the light in different directions, and the arrangement and combination of the various parts of the lamp, as will be more fully hereinafter set forth.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical sectional view of my improved lamp, taken on line *c c*, Fig. 4. Fig. 2 is a view looking down the chimney. Fig. 3 is an enlarged sectional view of the lower chimney, showing the manner of connecting it to the upper chimney and to the lower reflector. Fig. 4 is a horizontal section taken on line *k k*, Fig. 1; and Fig. 5 is a modification in section of the upper part of my improved lamp.

A is the body proper of the lamp, which may be attached to any suitable supports in the desired manner. Projecting from an annular flange, *a*, on body A are three or more lugs, *b*, each having a T-shaped opening, *d*, as shown.

B is a reflector, preferably made of cast-iron, having a central opening, *e*. The reflector B from the opening *e* preferably slopes outward and upward, and upon its upper edge are secured buttons *f*, each having a head which will pass easily through the larger part of the T-shaped opening *d*. These buttons *f*

are so arranged on the reflector B as to register with the openings *d* in the lugs *b*, and when the heads of the buttons *f* are passed through the openings *d* the reflector B may be turned so that the shank of each button *f* will slide in the narrow part of its T-shaped opening *d*, the head of the button resting on the lug *b*, thus holding the reflector B in place. A set-screw, *g*, passed through the reflector B, when screwed up against one of the lugs *b*, serves to hold the reflector B in position. The edge of the reflector B at the opening *e* is turned up, or a ledge formed thereon, as at *h*, in the top of which ledge is formed a groove, *i*. In the bottom of groove *i* is placed a packing, *j*, preferably of asbestos. The lower edge of a chimney, C, of transparent glass, rests on the packing *j* in the groove *i*. Upon the upper edge of the chimney C rests the lower end, *d'*, of the upper chimney, D, to which it is fastened by asbestos or other suitable non-burning cement, and which chimney D is supported in the lamp by means of the braces E, secured to the chimney D and the flange *a* by rivets or other suitable means.

The gas-pipe F enters the lamp through the body A, and is carried up alongside the upper chimney, D, over the same, and down through the center of the two chimneys D and C, and has upon its lower end any desired number of burners G. The inner wall of the chimney D has radial arms *l*, by which the pipe F is centered.

A cup, H, surrounds the pipe F, to which it is secured in the lower chimney, C, the lower part of which cup H projects, by preference, slightly below the chimney C. The cup H, being somewhat smaller in diameter than the chimney C, forms a passage, *o*, between its outer walls and the inner walls of the chimney C, for the escape of heated air and products of combustion from the burners G.

The hood I of the lamps is of glass, preferably opal glass, and its lower edge rests upon the body A. An upright ring or tube, J, surrounds the chimney D and forms a passage for the air to enter the lamp from above. This ring J is held in place by means of braces *u*, to which it is secured, which braces *u* extend outwardly from the chimney D. An annular perforated cap, K,

having a flaring upper part, K', surrounds and projects partly below the upper part of the hood I.

A cover or plate, L, may be held above the chimney D in the flaring top K' of the cap K by means of braces y, secured to the inner wall of the top K' and to the under side of the plate or cover L.

The reflector B is covered on both sides with enamel b', or other highly-refractive substance, and the cup H is also covered with enamel h', or other refractive substance, in the same way. The rays of light from the burners G will strike the refractory surfaces b' and h' and be deflected downward and upward, as indicated in Fig. 1. The chimney C, being transparent, allows the rays deflected from the surface h' to be thrown upward through the hood I, thus lighting the upper part of the car or room.

The opening e is made sufficiently large to allow the rays of light to strike a large surface of the enameled portion h'.

The glass globe M is suspended downwardly from the body A in any convenient manner.

The air enters the lamp through the perforations in the cap K, passes downward through the passage formed between the chimney D and ring J and out into the chamber between B and I. From there it passes through holes in the body A into the combustion-chamber O. The products of combustion travel up through the opening e and chimney C D and out through the cap K, as indicated by the arrows in Fig. 1.

In passing up the chimney D the heated air heats the said chimney and its braces l and u, and the air entering in along the outer wall of the chimney D is heated to some extent. This furnishes to the burner heated air steady and even in volume, no sudden gusts of air being allowed to pass the burner, thus giving a steady brightly-burning flame.

In the modification shown in Fig. 5 the hood I has a vertical upper portion, e'. Upon this vertical part e' a ring, f', formed upon or attached to the cap K, rests. The lower part of

the cap K, below the ring f', projects slightly below the upper edge of the hood I.

Having now described my invention, what I claim is—

1. In a lamp, the reflector B, provided with oppositely-arranged reflecting-surfaces for reflecting the light upward and downward, combined with the central reflector, H, surrounded by the reflector B, and with the burners G, arranged to throw the light upon both reflectors at the same time, substantially as described.

2. In a lamp, the transparent chimney C and glass hood I, carried above said chimney, in combination with the central reflector, H, which is surrounded by said chimney, and with the burners G, placed to throw the light upon said reflector, substantially as described.

3. In a lamp, the reflector-cup H, combined with burners placed to throw the light upon said reflector, in combination with the chimney C, reflector B, having refractory surfaces b' on both sides and arranged around the reflector-cup H, the chimney C being between said reflectors, substantially as described.

4. The double reflector B, transparent chimney C, supported by the same, chimney D, above chimney C, and braced ring J, outside of the chimney D, and carrying cap K, in combination with the glass hood I, outside of chimney D, and ring J and the central reflector, H, substantially as described.

5. The chimney D, having braces l and u, glass chimney C and reflector B, the chimney D resting upon the chimney C, which in turn is supported by the reflector B, in combination with ring J, surrounding its upper part, with the cap K, carried by said ring J, hood I, connected to said cap and surrounding said chimney D, and inner flame-reflecting cup, H, surrounded by the chimney C and reflector B, and carried above the burners, and with the lower globe, M, substantially as described, and for the purposes set forth.

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