

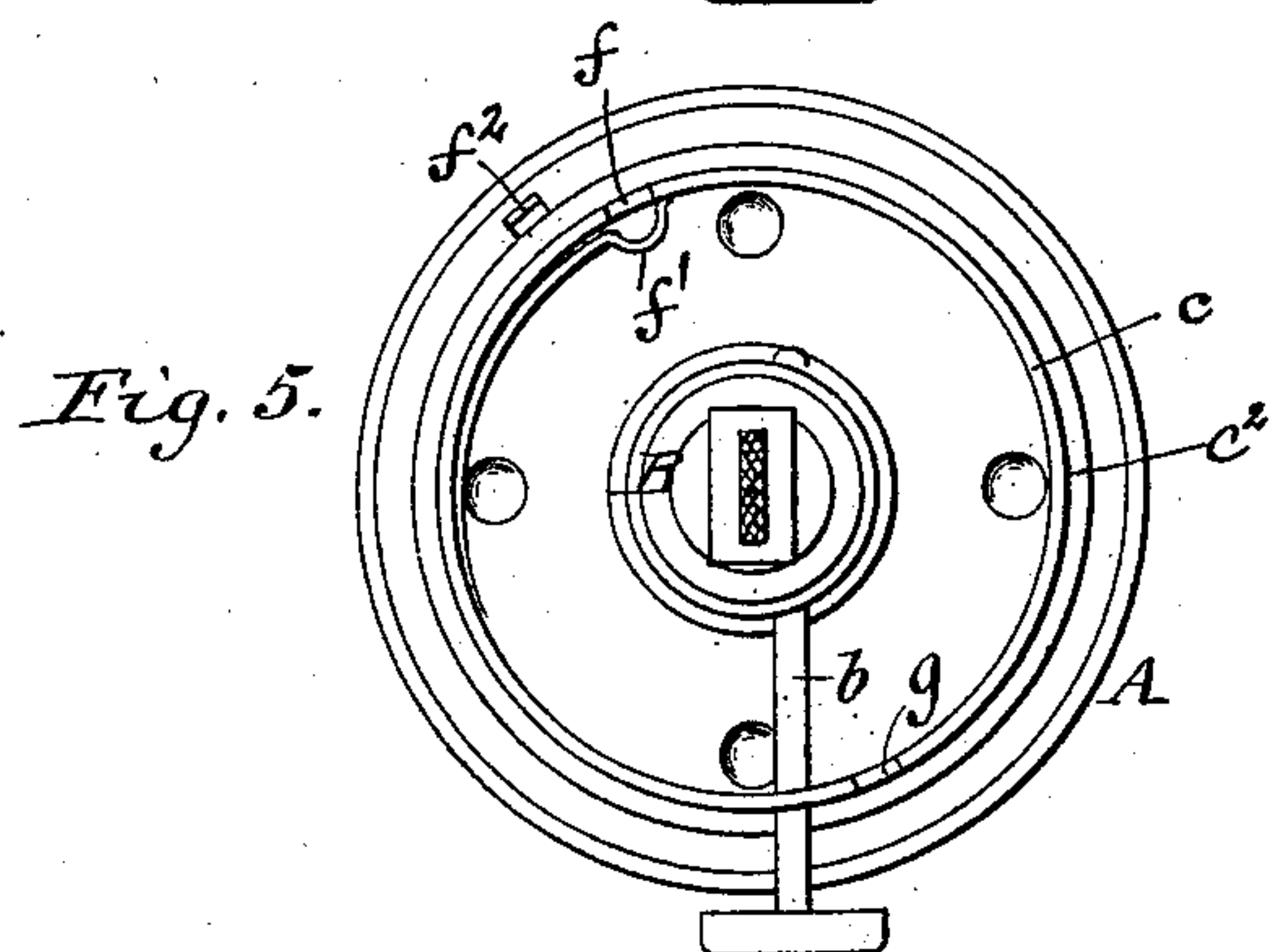
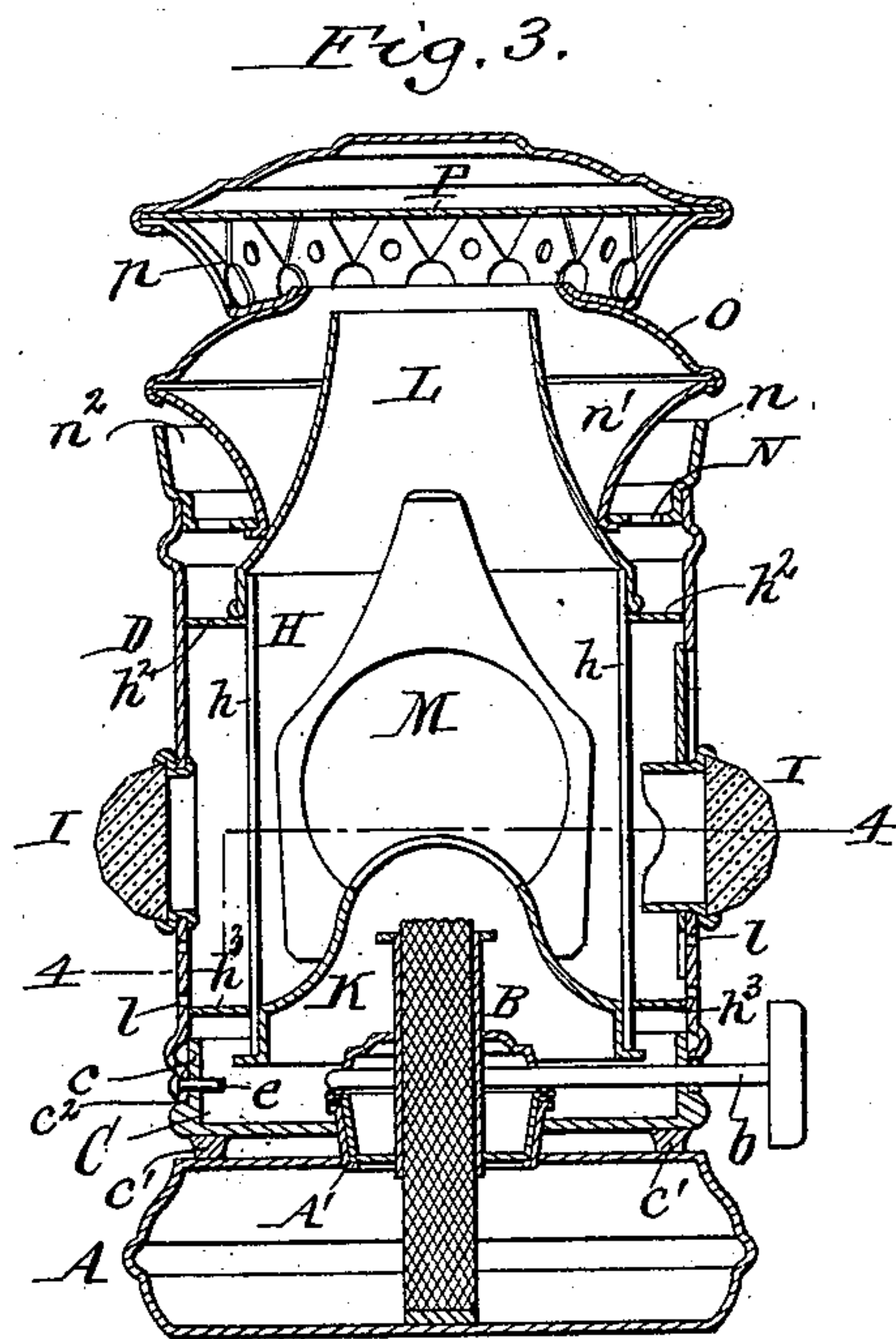
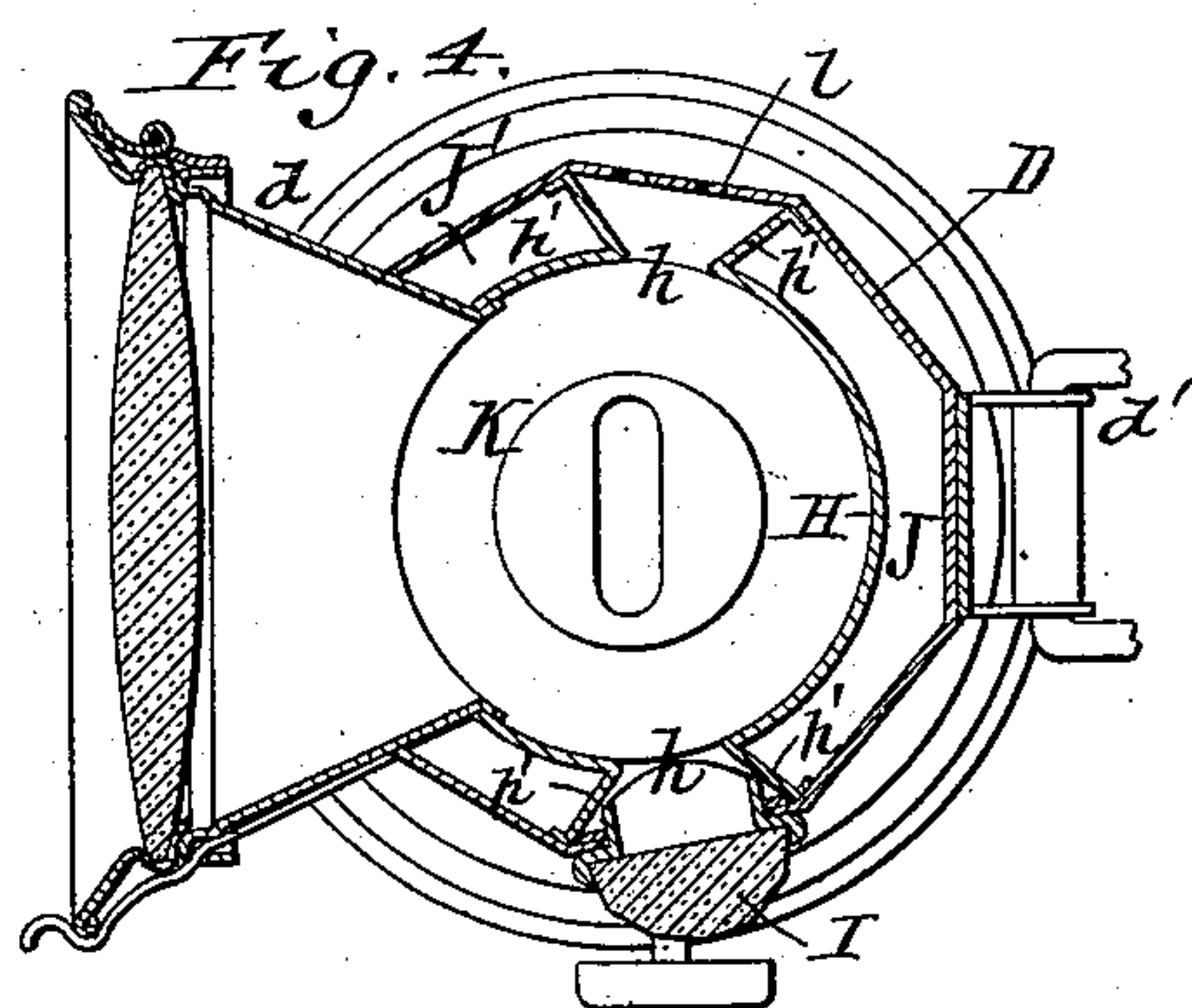
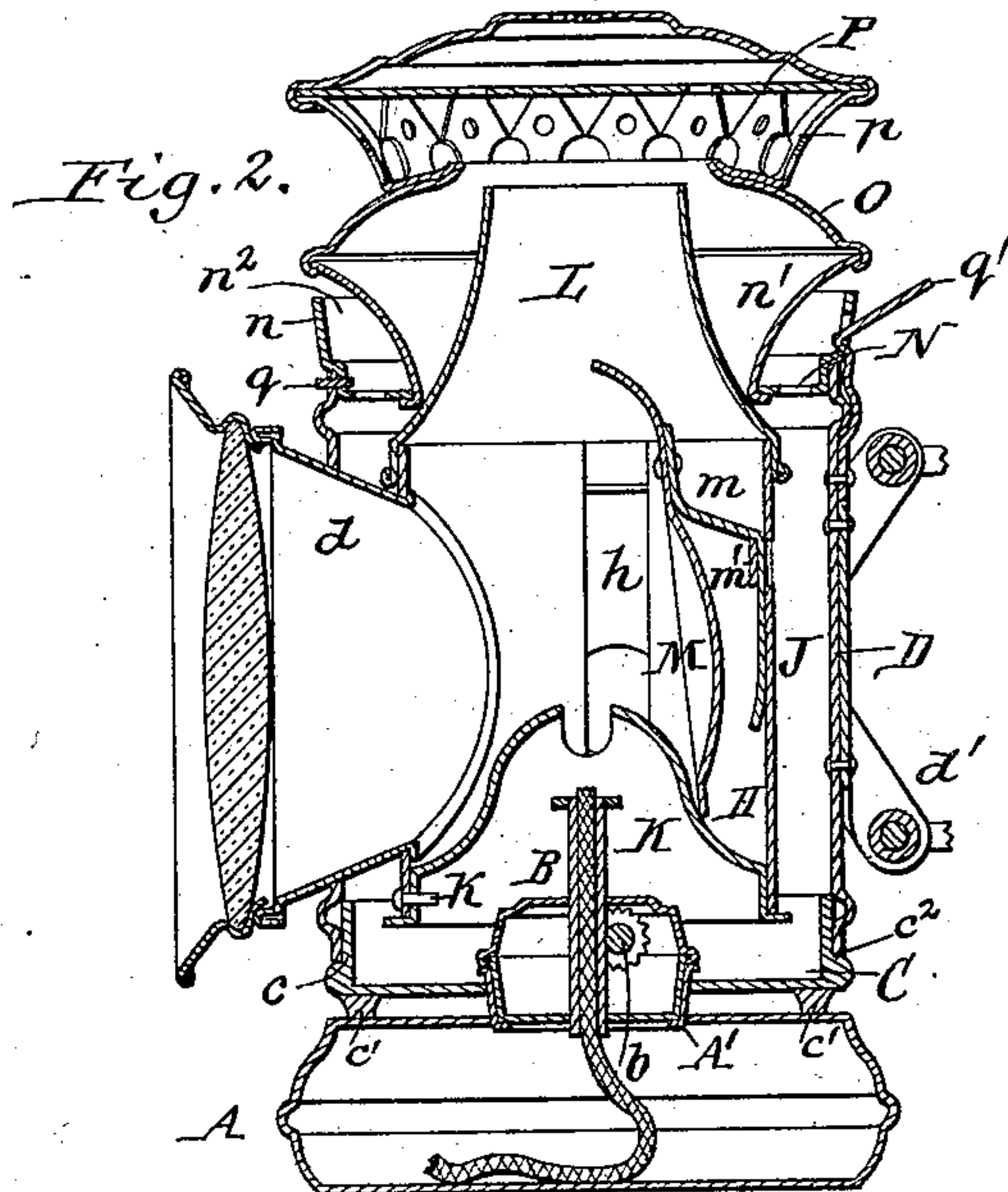
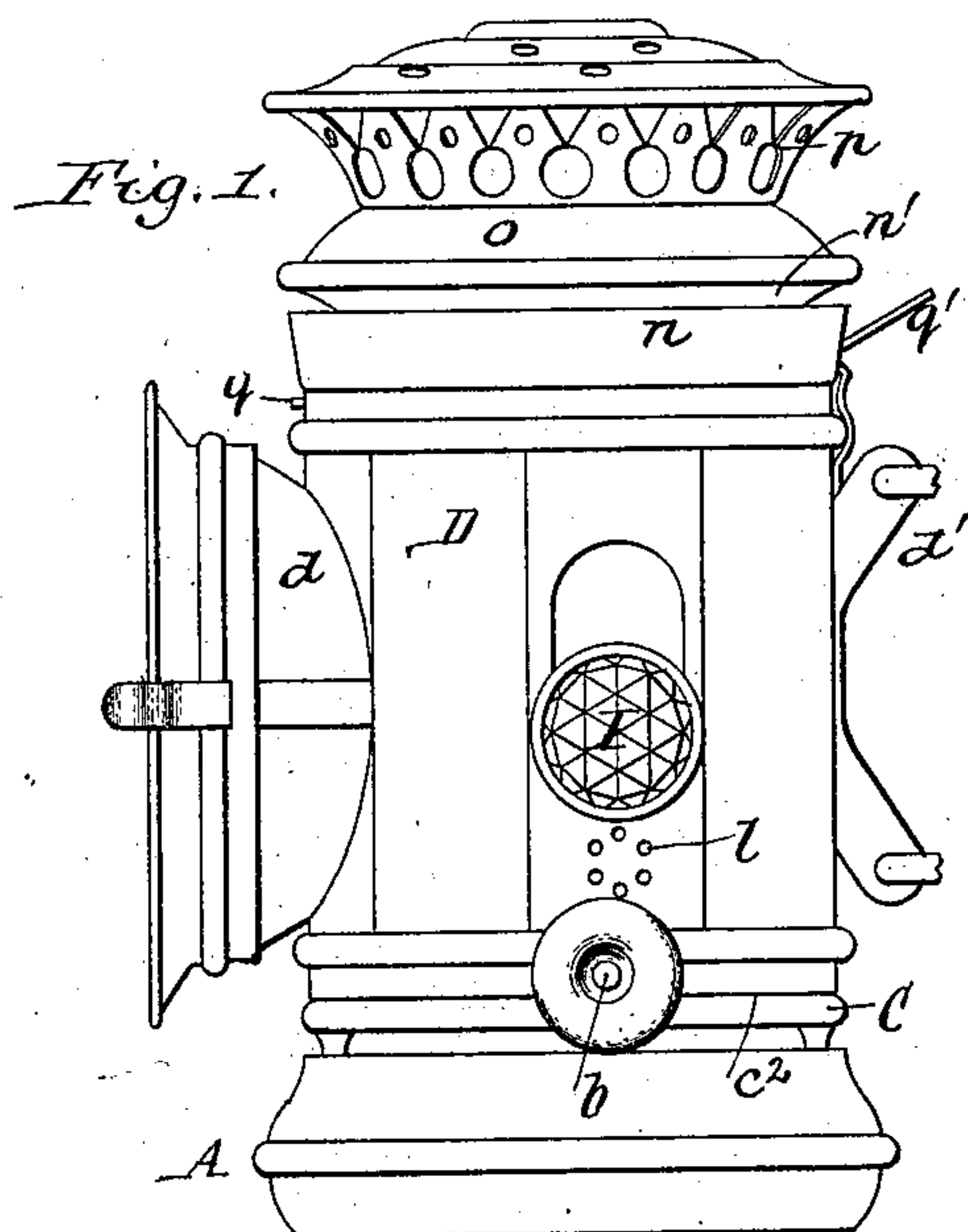
(No Model.)

2 Sheets—Sheet 1.

F. K. WRIGHT.
BICYCLE LAMP.

No. 599,088.

Patented Feb. 15, 1898.



Witnesses:
Ernest Pulsford.
Henry L. Deck.

F. K. Wright
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Attorneys.

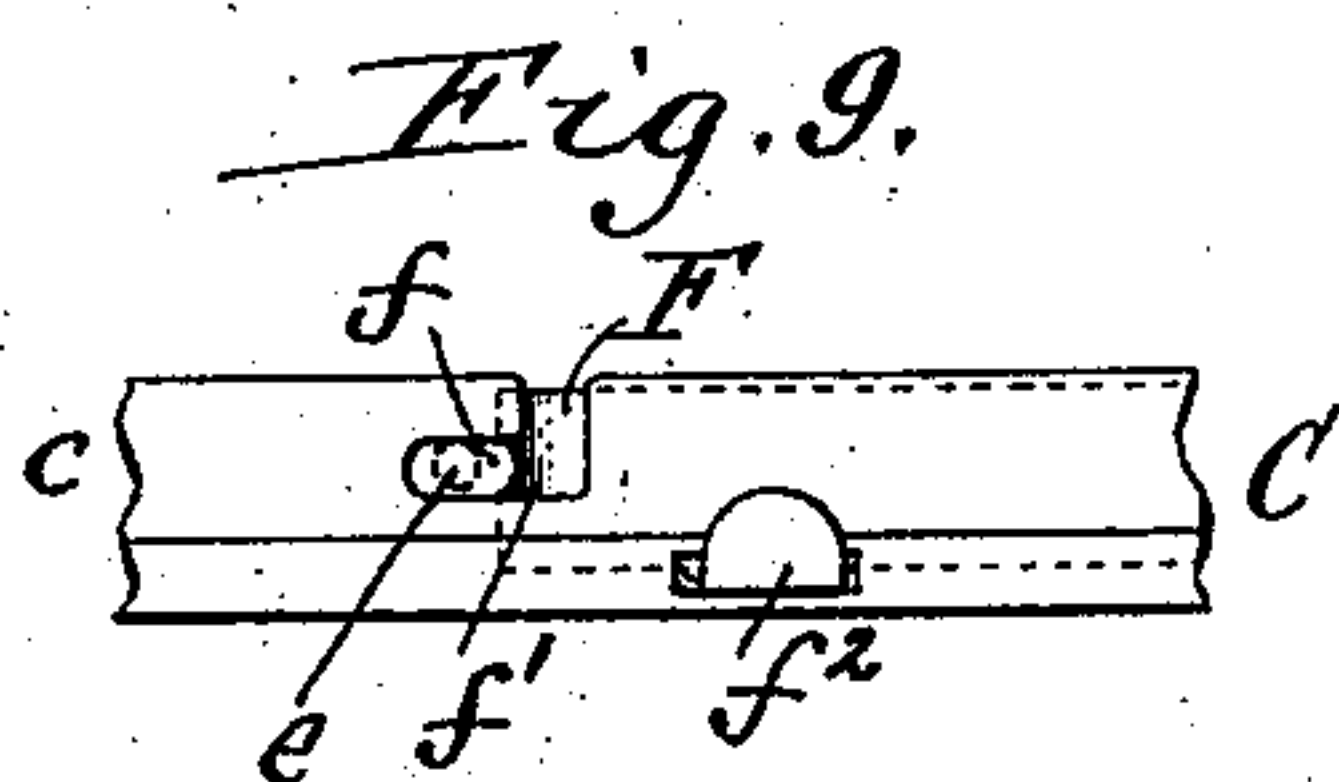
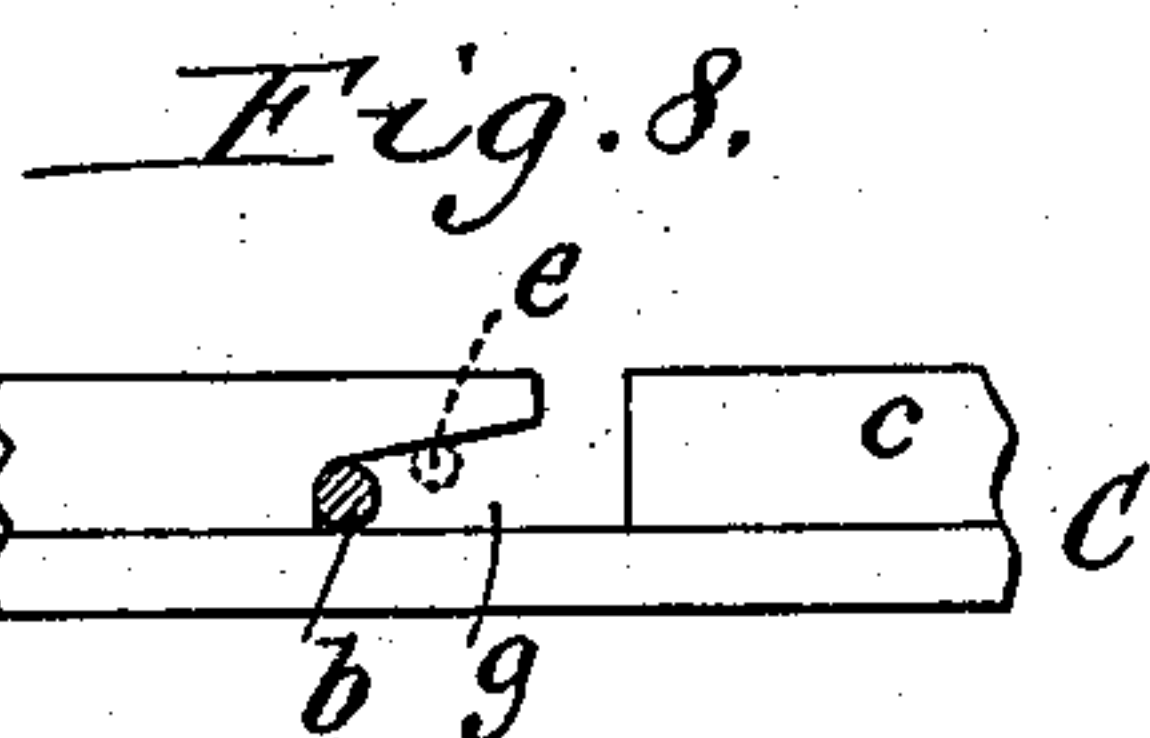
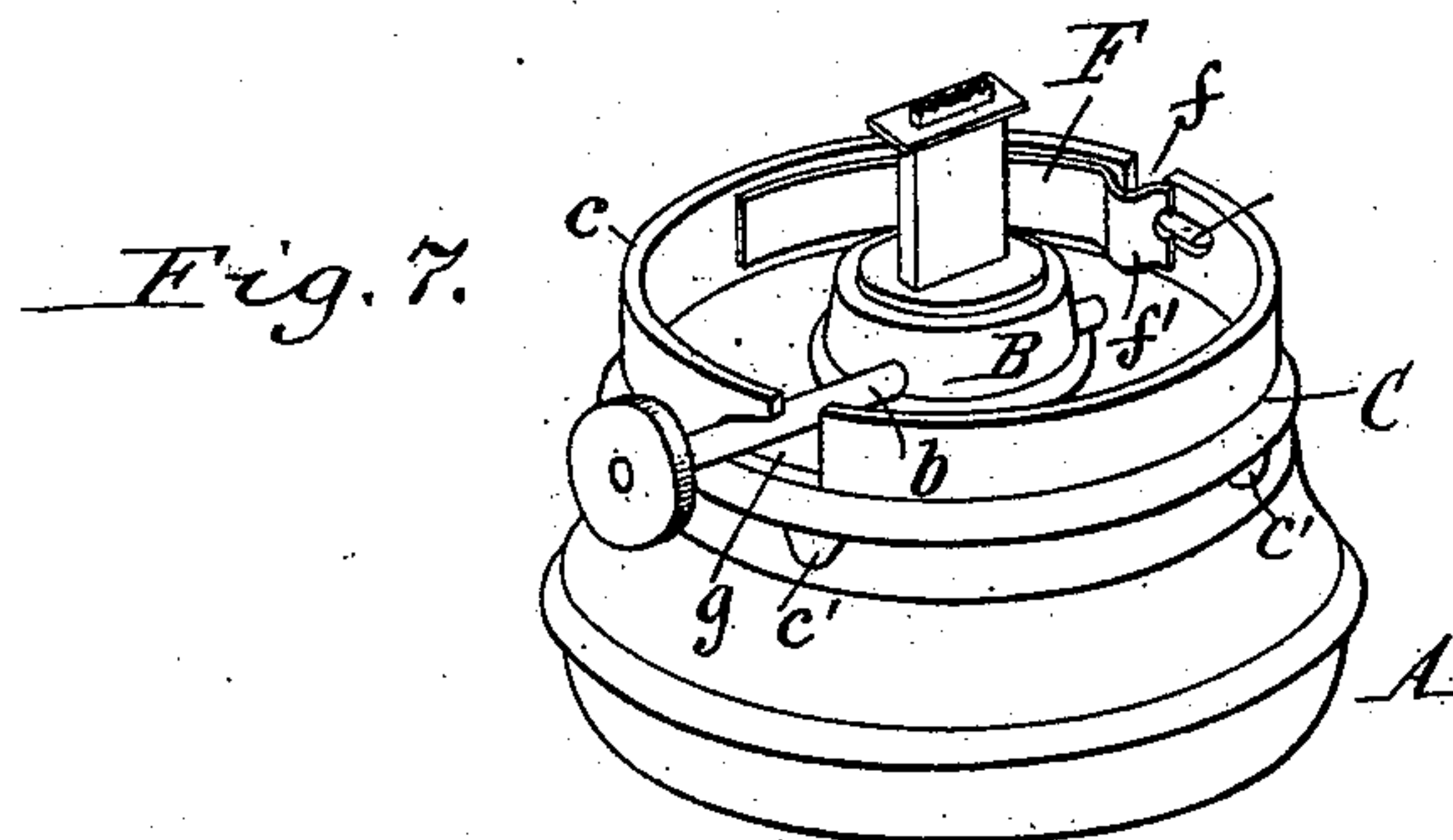
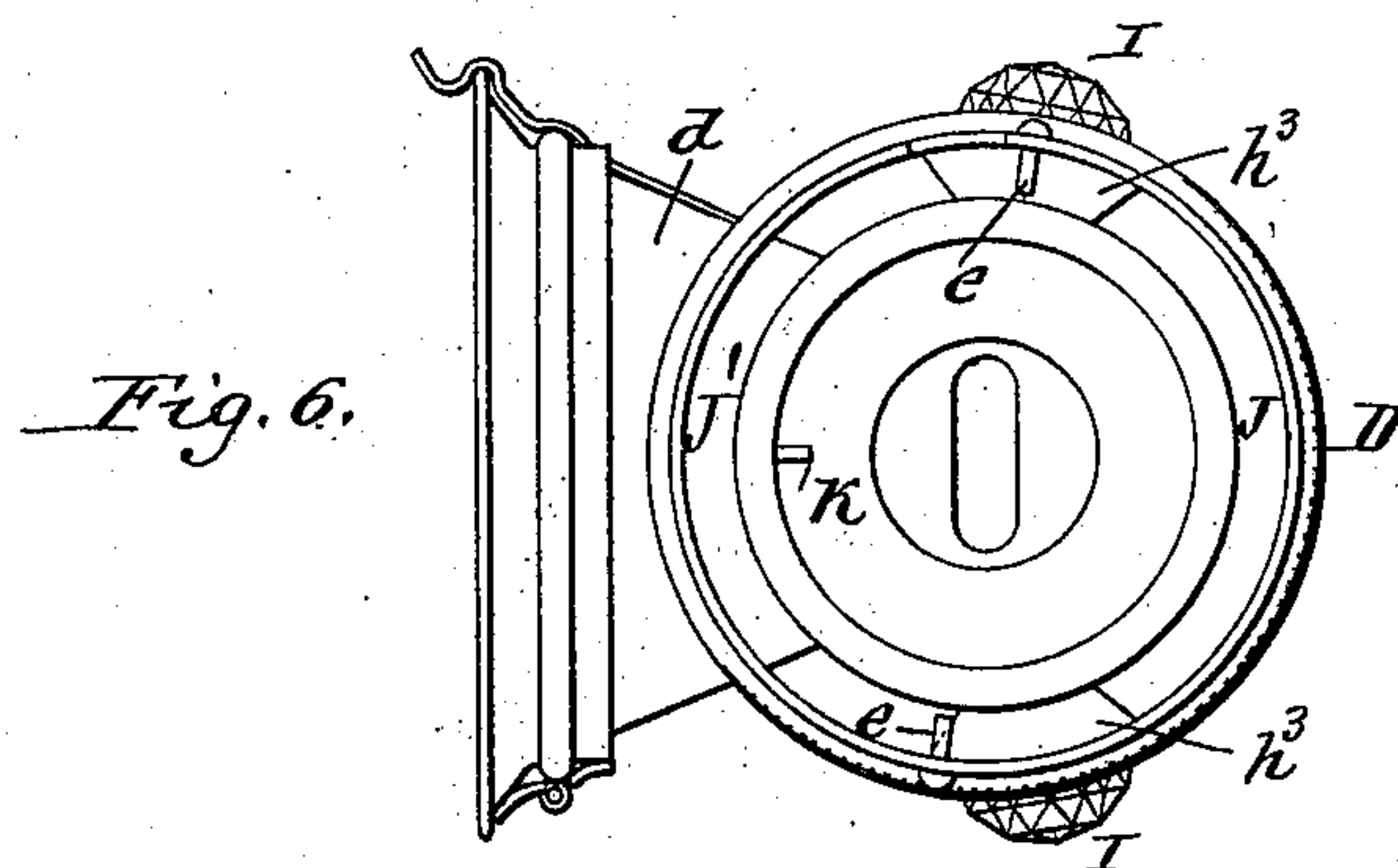
(No Model.)

2 Sheets—Sheet 2.

F. K. WRIGHT.
BICYCLE LAMP.

No. 599,088.

Patented Feb. 15, 1898.



Witnesses:
Emanuel Pulford.
Henry L. Deck.

F. K. Wright
Inventor.
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Attorneys

UNITED STATES PATENT OFFICE.

FREDERICK K. WRIGHT, OF SYRACUSE, NEW YORK, ASSIGNOR TO THE
STEAM GAUGE AND LANTERN COMPANY, OF SAME PLACE.

BICYCLE-LAMP.

SPECIFICATION forming part of Letters Patent No. 599,088, dated February 15, 1898.

Application filed January 25, 1897. Serial No. 620,669. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK K. WRIGHT, a citizen of the United States, residing at Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Bicycle-Lamps, of which the following is a specification.

The object of this invention is to produce a lamp for bicycles, carriages, and other vehicles in which a bright flame is maintained under the varying conditions of motion and exposure to air-currents under which such lamps are used, which does not become unduly heated and which is simple in construction and attractive in appearance.

In the accompanying drawings, consisting of two sheets, Figure 1 is a side elevation of my improved lamp. Fig. 2 is a vertical longitudinal section. Fig. 3 is a vertical transverse section. Fig. 4 is a horizontal section in line 4 4, Fig. 3. Fig. 5 is a top plan view of the oil-pot detached. Fig. 6 is a bottom plan view of the lamp-body, the oil-pot and the bottom of the lamp-body being removed. Fig. 7 is a detached perspective view of the oil-pot and the lamp-bottom secured thereto. Fig. 8 is a fragmentary side elevation of the lamp-bottom, showing the undercut notch in which the wick-raiser shaft is arranged. Fig. 9 is a similar view showing the notch on the opposite side behind which the locking-spring is arranged.

Like letters of reference refer to like parts in the several figures.

A represents the oil-pot, and A' the burner-socket secured centrally in the top plate of the same.

B represents the burner seated in said socket, and b the wick-raiser-shaft.

C represents the shallow cup-shaped bottom of the lamp-body, which is rigidly secured upon the oil-pot around the burner-socket and is held at a short distance above the oil-pot by feet c'.

D represents the upright case of the lamp-body made, preferably, of cylindrical or prismatic form and provided at its front side with a lens-collar d and at its rear side with supporting-brackets d' of any suitable construction.

The oil-pot is attached to the lower end of

the lamp-case D by the following devices:

The upwardly-projecting rim or flange c of the bottom C enters the lower end of the case and is provided with an external shoulder c², against which the lower edge of the case rests. The case is provided on its inner side, near its lower edge, with inwardly-projecting studs or rivets e, which stand on diametrically opposite sides of the case. The upright flange c of the bottom C is provided on one side with an undercut notch f for the reception of one of the studs e. F is a spring-catch which is secured to the inner side of the flange c and has its head or end portion provided on its outer side with a vertical recess f', formed by bending the spring and arranged opposite the notch f, so that the stud e, which enters the notch f, projects into this recess. The flange c is provided on the opposite side with a somewhat larger undercut notch g for the reception of the other stud e and the wick-raiser shaft b.

For attaching the oil-pot to the lamp-case the burner is first secured to the oil-pot and turned in its socket so that the wick-raiser shaft stands in the farther end of the notch g, as shown in Figs. 5 and 8. The oil-pot is then inserted with the flange c of the bottom into the lower end of the lamp-case in such manner that one of the studs e enters the notch f and the recess of the spring-catch and the other stud the notch g. The oil-pot is then slightly turned in the lamp-case in such a direction that the stud e, which projects into the recess f' of the spring, moves out of the recess and past the free end of the spring, whereby the stud e in the notch g is engaged underneath the overhanging lip of the notch and the other stud e is engaged underneath the overhanging lip of the notch f and moved past the head of the locking-spring F, whereby the oil-pot is secured in position.

As the locking-spring is arranged on the inner side of the bottom, it is concealed and protected and the studs in the lamp-case are also concealed, nothing being visible of the fastening devices except the thumb-piece f² of the locking-spring, which projects through an opening in the upright flange c of the bottom.

H represents the inner shell of the lamp-

body, which has the form of an upright cylinder with narrow upright openings h formed in its sides opposite the side lenses I, so that the light can reach these lenses through these openings. The inner shell H is secured to the outer shell by outwardly-flaring upright plates h' , which are arranged on both vertical sides of each opening h , and top and bottom plates $h^2 h^3$, which close the space between adjacent plates h' at the top and bottom. The upright plates h' and horizontal plates $h^2 h^3$ separate the air-passages J J', which are formed between the inner shell and the outer casing, from the spaces which are inclosed by these plates.

K represents the burner-cone, which is secured in the lower end of the inner shell, the lower flange of the burner-cone and the lower edge of the inner shell being arranged at a suitable height above the bottom C to allow the air which descends through the passages J J' to pass underneath the burner-cone. The burner-cone is attached to the inner shell H by a stud k , which is secured to the lower front portion of the inner shell and enters an opening in the lower front portion of the burner-cone, and by the removable reflector M, which bears against the rear side of the cone. The reflector is attached to the rear portion of the inner shell by an arm m , secured to the reflector and entering a loop m' on the shell.

l represents perforations which are formed in the lamp-case below the side lenses and through which external air is admitted to the spaces inclosed between the vertical plates h' and the horizontal plates $h^2 h^3$. These spaces or lateral passages open into the flame-space above the burner-cone, so that a limited supply of fresh air is furnished by these perforations directly to the flame-space above the burner-cone, whereby the combustion is improved and undue heating is prevented. The same passages also admit light to the side lenses.

L' represents an upwardly-contracted metallic chimney, which is removably mounted upon the inner shell H.

The top of the lamp is removable and contains the devices whereby fresh air is admitted to the descending air-passages J J', leading from the top to the under side of the burner-cone and the devices whereby the products of combustion are permitted to escape. This top consists of the following parts:

N represents the perforated bottom ring, which rests upon the upper edge of the lamp-case and extends across the space between the lamp-case and the lower portion of the chimney L.

n represents an upwardly-projecting annular flange rising from the outer edge of the perforated bottom ring N.

n' represents an upwardly-projecting outwardly-flaring wall secured to the inner side of the ring N. This inner wall n' extends

higher than the outer wall n and overhangs the latter, leaving an annular opening n^2 between the upper edge of the outer wall n and the overhanging upper portion of the inner wall n' , through which the external air enters the space between these walls. This air is deflected downwardly by the inner wall and passes through the perforations of the ring N into the passages J J', through which it descends into the bottom C of the lamp-body, whence it ascends through the burner-cone.

O represents an upwardly and inwardly extending annular wall which is secured with its lower edge to the upper edge of the outwardly-flaring wall n' and which terminates at a short distance outside of the upper end of the chimney L.

P represents the top plate, which surmounts the chimney and the central opening of the surrounding wall O and which is supported on the latter by a perforated gallery p , through which the products of combustion escape. This top is secured to the upper end of the case by a stud or lip q , which enters an opening in the front of the case, and a spring-catch q' , which is secured to the rear of the case.

I claim as my invention—

1. The combination with the lamp-case having inwardly-projecting studs at its lower end, of an oil-pot provided with an upwardly-projecting attaching-rim which enters said lamp-case and is provided on opposite sides with undercut notches which receive said studs, and a locking-spring secured to the inner side of said attaching-rim and provided at its head with a vertical recess arranged opposite one of said notches and accommodating the stud arranged in the adjacent notch, whereby upon turning the oil-pot for locking it to the case such stud is moved out of said recess and interlocked with the end of said spring, substantially as set forth.

2. The combination with the lamp-case having air-inlet openings in its side, of an inner shell arranged within said case and separated therefrom by descending air-passages, a burner-cone arranged in the lower portion of said inner shell and receiving air from said descending air-passages, and lateral air-passages connecting air-inlet openings in the side of the lamp-case with the space within the inner shell above the burner-cone, substantially as set forth.

3. The combination with the lamp-case having lenses in its side and air-inlet openings below said lenses, of an inner shell arranged within said case and separated therefrom by descending air-passages, a burner-cone arranged in the lower portion of the inner shell, and lateral air and light passages inclosing the lenses and side air-inlets and opening through the inner shell above the burner-cone, substantially as set forth.

4. The combination with the lamp-case and the inner shell secured within the same and terminating in an upwardly-tapering chimney, of a perforated horizontal ring extend-

ing across the space between the top of the case and the chimney, an upwardly-projecting flange rising from the outer edge of said ring, and an upwardly-flaring wall rising
5 from the inner edge of said ring and overhanging said flange, substantially as set forth.

5. The combination with the lamp-case and the inner shell provided at its lower front portion with a support for the burner-cone,
10 of a burner-cone resting with its front por-

tion on said support, and a reflector which is removably mounted in said inner shell and which holds the burner-cone on said support, substantially as set forth.

Witness my hand this 20th day of January, 15
1897.

FREDERICK K. WRIGHT.

Witnesses:

GEO. A. ALLEN,

ERNEST R. CHAMBERLAIN.