

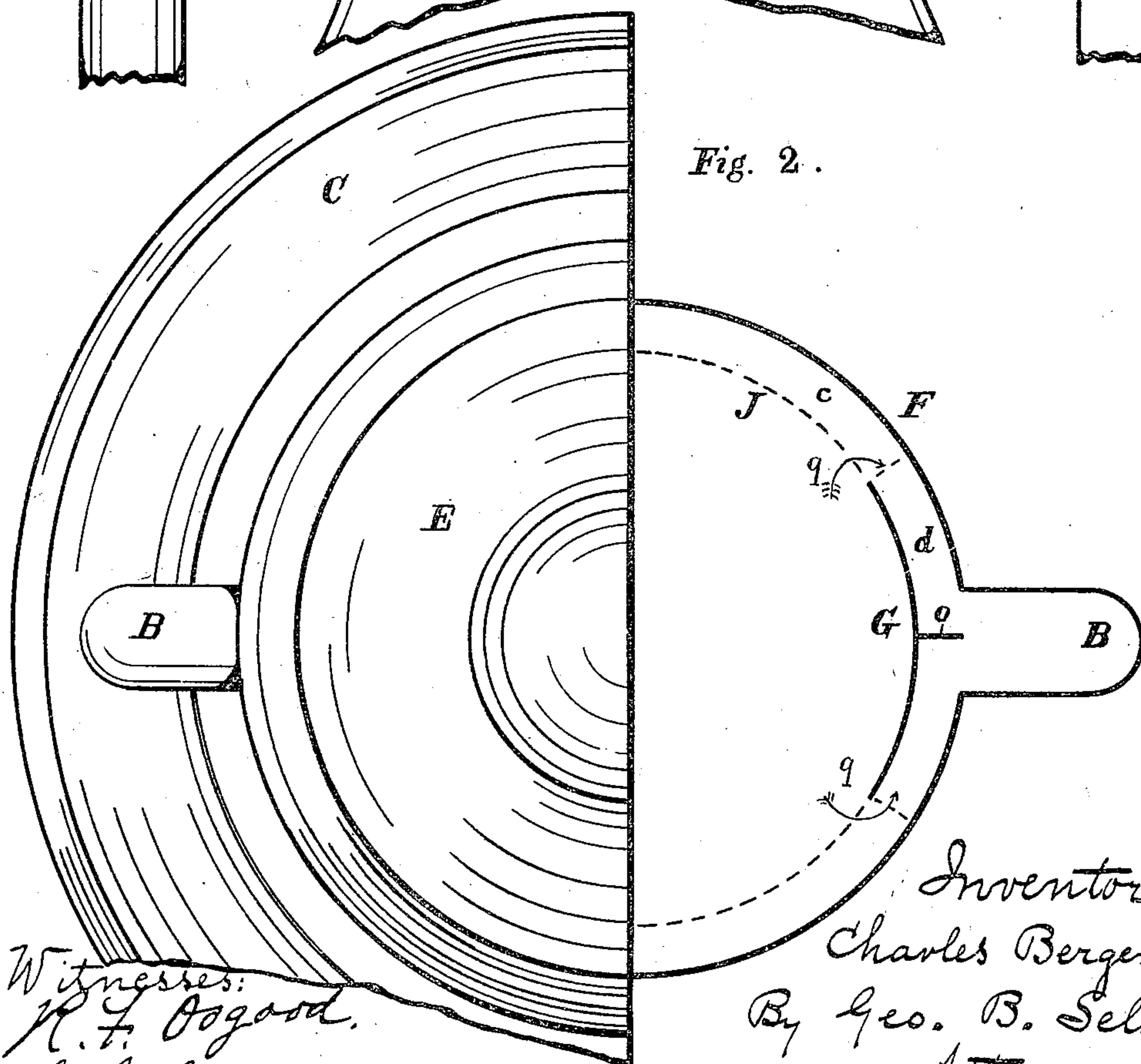
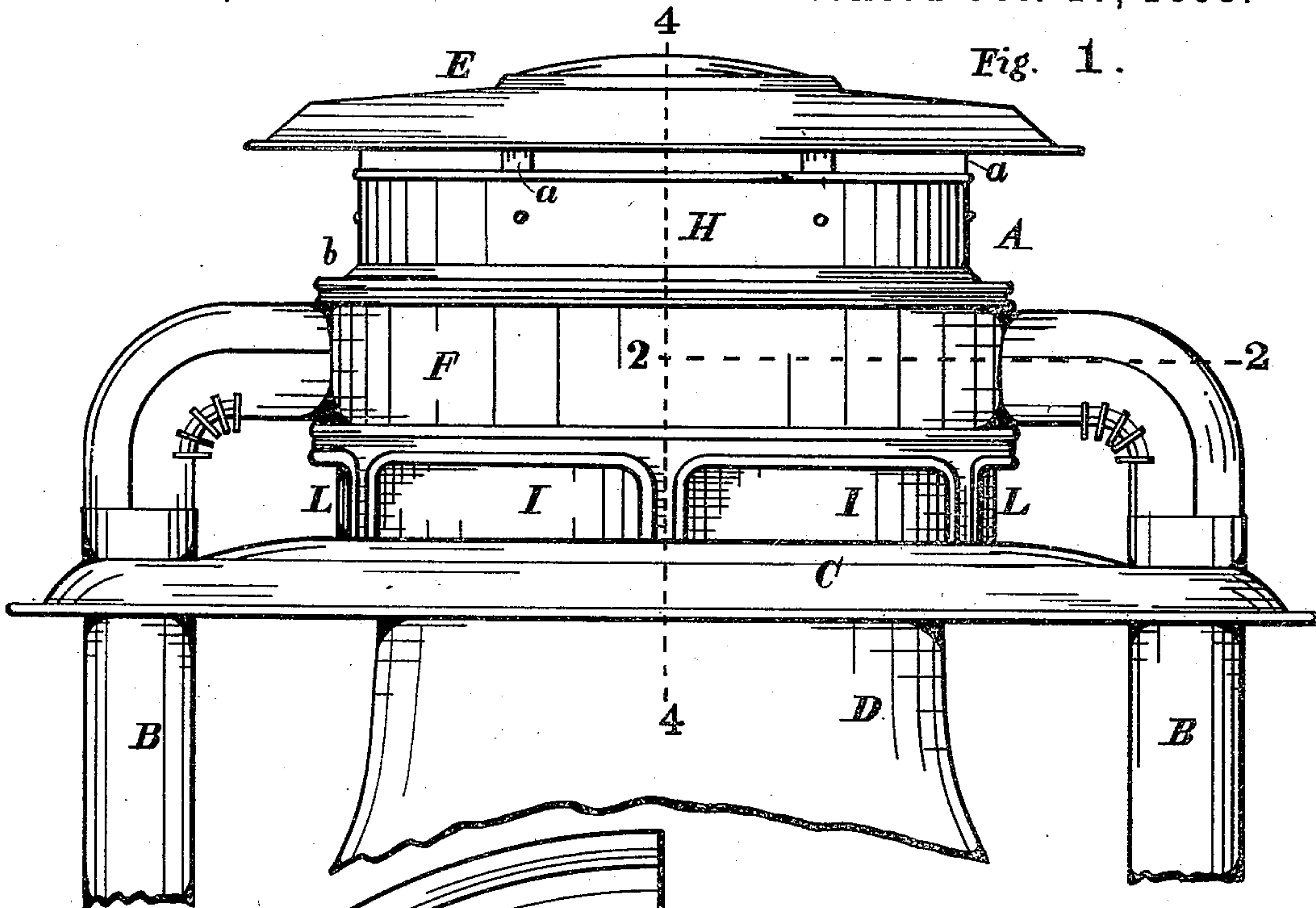
(No Model.)

2 Sheets—Sheet 1.

C. BERGENER.
STREET LAMP.

No. 506,968.

Patented Oct. 17, 1893.



Witnesses:
R. F. Osgood.
C. G. Cramell.

Inventor:
Charles Bergener,
By Geo. B. Selden.
Atty.

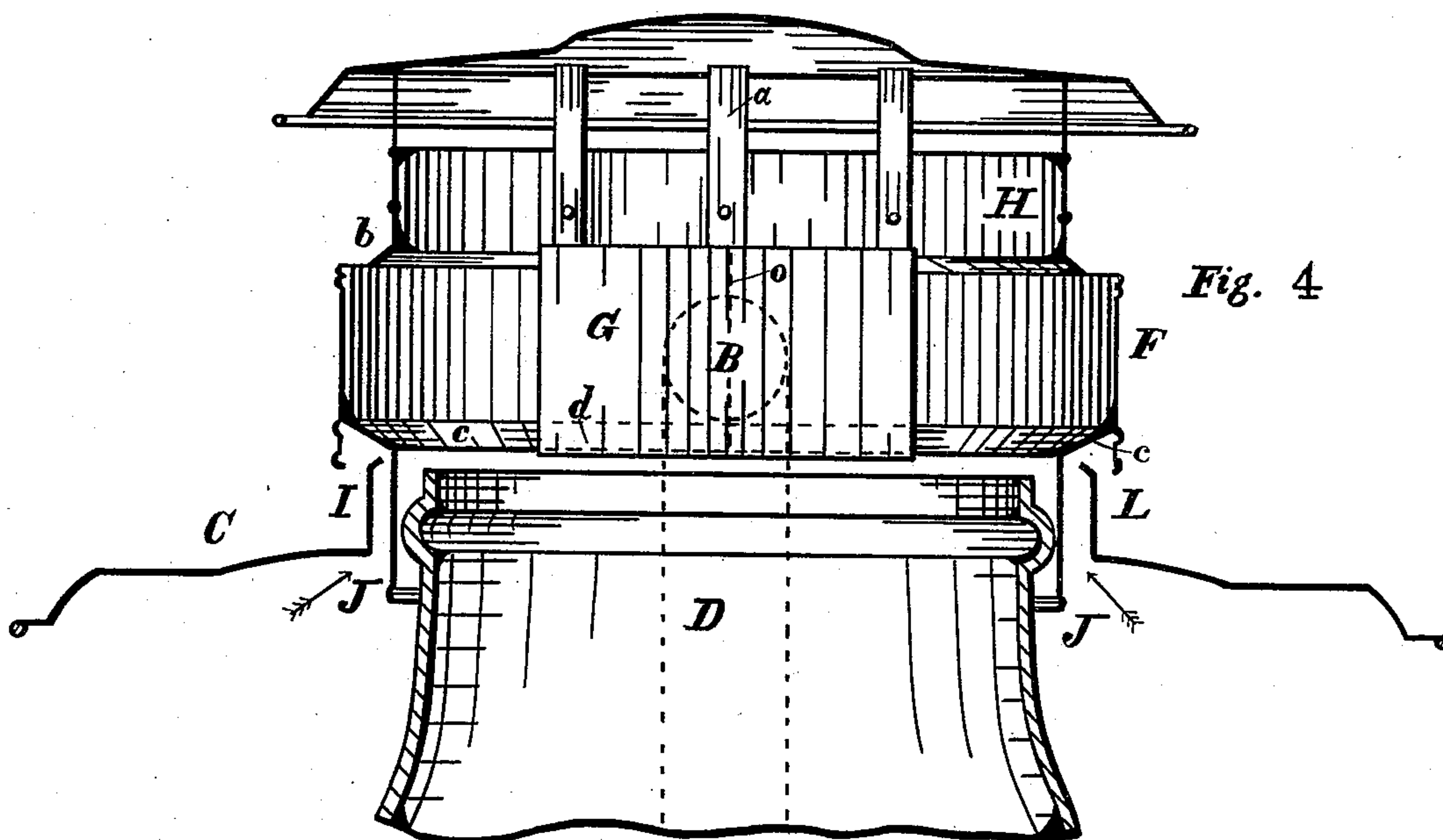
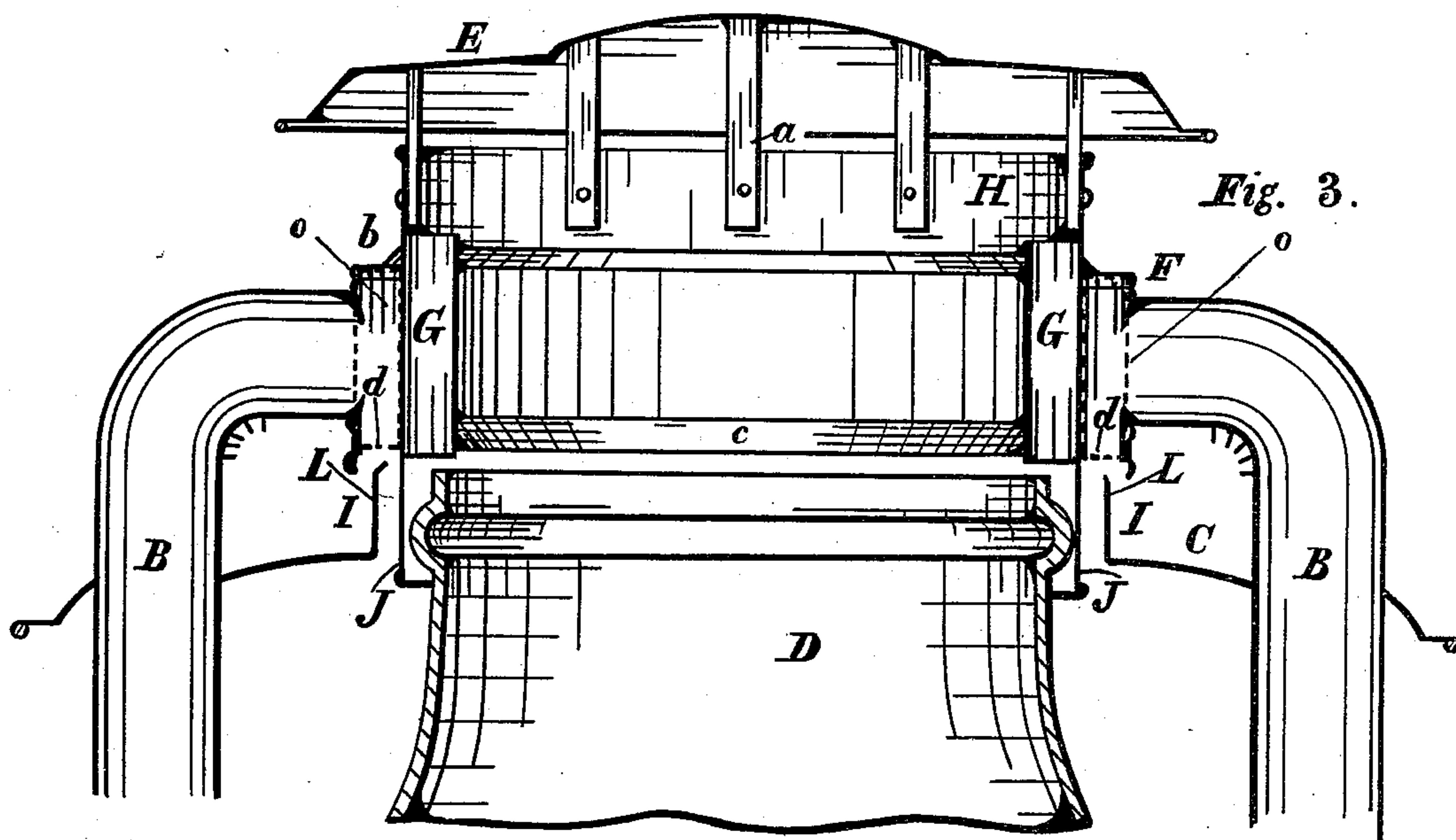
(No Model.)

2 Sheets—Sheet 2.

C. BERGENER.
STREET LAMP.

No. 506,968.

Patented Oct. 17, 1893.



Witnesses:
R. F. Osgood.
C. G. Crannell.

Inventor:
Charles Bergener,
By Geo. B. Selden,
Atty

UNITED STATES PATENT OFFICE.

CHARLES BERGENER, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE C. T. HAM MANUFACTURING COMPANY, OF SAME PLACE.

STREET-LAMP.

SPECIFICATION forming part of Letters Patent No. 506,968, dated October 17, 1893.

Application filed September 13, 1890. Serial No. 364,842. (No model.)

To all whom it may concern:

Be it known that I, CHARLES BERGENER, a citizen of the United States, residing at Rochester, in the State of New York, have invented certain Improvements in Street-Lamps, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to certain improvements in the construction of the top of globe-street-lamps, which improvements are fully described and illustrated in the following specification and the accompanying drawings,—the novel features thereof being specified in the claims annexed to the said specification.

In the accompanying drawings, representing the upper part of a street-lamp, embodying my improvements,—Figure 1 is a side elevation of the top of the lamp. Fig. 2 is a partial top view and also a section on the line 2—2 Fig. 1. Fig. 3 is a central vertical section through the air supply tubes. Fig. 4 is a central vertical section on the line 4—4, Fig. 1.

The construction of my street lamp, will be understood from an examination of the accompanying drawings, in which A represents the top of the lamp, B B, the air supply tubes, C the reflector, and D the globe. The base of the lamp, (not shown in the drawings,) is of any ordinary or preferred construction,—the globe being arranged to slide up and down in the top of the lamp to permit the removal of the oil pot, to which the burner is attached. The air supply tubes, are also of any ordinary construction, being arranged to receive air from the top of the lamp and to deliver it to the air chamber below. The top of the lamp consists of the collar F to which the air tubes are attached,—there being placed inside the collar and opposite the openings of the air tubes the plates G, Figs. 3 and 4, which serve to control the currents of air. The top of the lamp is provided with the usual cap or cover E sustained on suitable braces *a*, so as to permit the escape of the burnt gases from the top of the lamp. The cover E is attached by the braces *a* to a collar H placed above the collar F and of somewhat smaller diameter;—the annular space where the two collars join,

is tightly closed, as represented at *b*. Below the lower edge of the collar F and above the reflector are formed the openings I, through which a supply of air is permitted to enter the top of the lamp,—the annular gallery between the lower part of the collar F and the collar J, in which the globe slides, being closed at its top as represented at *c*, Figs. 3 and 4, except opposite the plate G. Between the collar F and the plates G the gallery is open into the top of the lamp, as indicated at *d*, in Figs. 2 and 3. Above the reflector and outside the collar J is placed the annular deflector L, which partially closes the openings I and thus serves to control the currents of air passing through. The annular space between the collar J and the deflector L is open all around as indicated in Figs. 3 and 4,—the reflector terminating with its inner edge at L. At its upper margin the deflector L may be turned inward to restrict the passage of air into the gallery. It will be perceived that the partition *c* which closes the top of the gallery except between the collar F and the plates G, extends outward, so that the air chamber within the top of the lamp is enlarged above the upper part of the collar J. The width of the plates G is not material, so long as they cover the openings into the tubes B and prevent the passage of any excessive amount of air out of or into them, but I prefer to make them of a width equal to about three times the diameter of the tubes as represented in the accompanying drawings, particular reference being made to Fig. 4. The plates G extend from the top of the collar J to the top of the collar F, and they serve also as guides to the top of the globe when it is raised above the collar J. Rivets may be employed to secure the plates G, in place, but I have found that soldering is ordinarily sufficient.

The division-plates *o o*, Figs. 2 and 3, are attached to the plates G, and extend vertically the whole depth of the collar F, and laterally to or nearly to the openings of the air-tubes B B. These plates serve still further to control the passage of air through the air-tubes, and assist materially in maintaining a steady flame. The plates G G without the

division plates will however produce a satisfactory operation of the lamp.

It will be perceived from the construction that air from the upper part of the globe can only pass into the tubes, by traveling around the edges of the plates G, as indicated by the arrows *q* in Fig. 2, that a small amount of air can pass between the top of the globe and the interior of the collar J, as the globes do not ordinarily fit said collar tightly, that air entering the annular space outside the collar J and inside the deflector L can only enter the top of the lamp through the openings *d*, outside the plates G,—the partition *c* closing the upper part of said annular space, except opposite the plates G, and that air entering the openings I, on the sides between the plates G, will be compelled to pass over the deflector L, and annularly partially around the top of the lamp, before it can obtain access to the openings *d*.

The inventions herein described may be used on other styles of tubular lamps.

I am aware that in a prior lantern having exterior tubes and a reflector, air was admitted to a lantern-dome both above and below the reflector, the lantern globe being surmounted by a tube perforated above the mouths of the air tubes to permit the passage of gases and also that the mouths of air tubes made to communicate with an annular chamber closed at bottom have been divided by plates as shown in Patent No. 229,452, granted to Orphy, and such matters are not of my invention. In my present construction the globe is vertically movable within the main exit flue, which latter is entirely supported and fixed upon the tube and has the lateral subsidiary exits *d* in communication both with said tubes and with the outer air near their mouths. The reflector which divides the air currents entering the space inclosed between plates G and collar F is also supported independently of the globe. Air entering about the edge of the reflector counterbalances to some extent that which may ascend the tubes as in case the lantern is suddenly lowered and that which enters the lantern top through openings *d* has a circumferential path outside of the circumference of the globe and of the current of gases ascending therefrom. The construction avoids the use of a spring and movable top such as set forth in my Patent No. 378,648, dated February 28, 1888 and secures

a more equable action of air and gas currents.

I claim—

1. In a lantern the tubes B, the collars H and J, the collar F closely connected at its top to collar H and also to air tubes and closed at its bottom by gallery *c* having perforations *d*, and plates G having close connections at their top and bottom to collars H and J respectively and disconnected at their vertical edges at *q* whereby air currents ascending outside of collar J can pass into tubes B or into the lantern top and whereby in the latter case they are compelled to pass circumferentially about said plate G, substantially as set forth.

2. The combination of the air tubes B, the collars H and J, the exterior collar F closely connected to collar H and to the said tubes, the gallery *c* closing the space at the foot of collar F except near the mouths of the tubes as at *d*, the plates G and the lantern globe situated within collar J and freely movable therein whereby air may pass between the globe and collar J and also through perforations *d* into the lantern top, substantially as set forth.

3. The combination of the air tubes B, the collars H and J, the exterior collar F closely connected to collar H and to said tubes, the gallery *c* closing the space at the foot of collar F except near the mouths of the tubes as at *d*, the plates G and the lantern globe situated within collar J and freely movable therein whereby air may pass between the globe and collar J and also through perforations *d* into the lantern top, and deflector L situated between collars F and J to provide two passages for air, substantially as set forth.

4. The combination of the air tubes, the reflector supported thereby, the main exit flue of the lantern top composed of the collars or rings J, F and H, and interior plates G, the latter being fixed within collar F and joined at the bottom to collar J to provide subsidiary lateral exits *d*, said collar F being closely connected to collar H and also to collar J except at the foot of plates G and made larger in circumference than said collars H and J, substantially as set forth.

CHAS. BERGENER.

Witnesses:

GEO. B. SELDEN,
C. G. CRAMSELL.