

F. LANGE.
Street Lamp.

No. 84,952.

Patented Dec. 15, 1868.

Fig: 1.

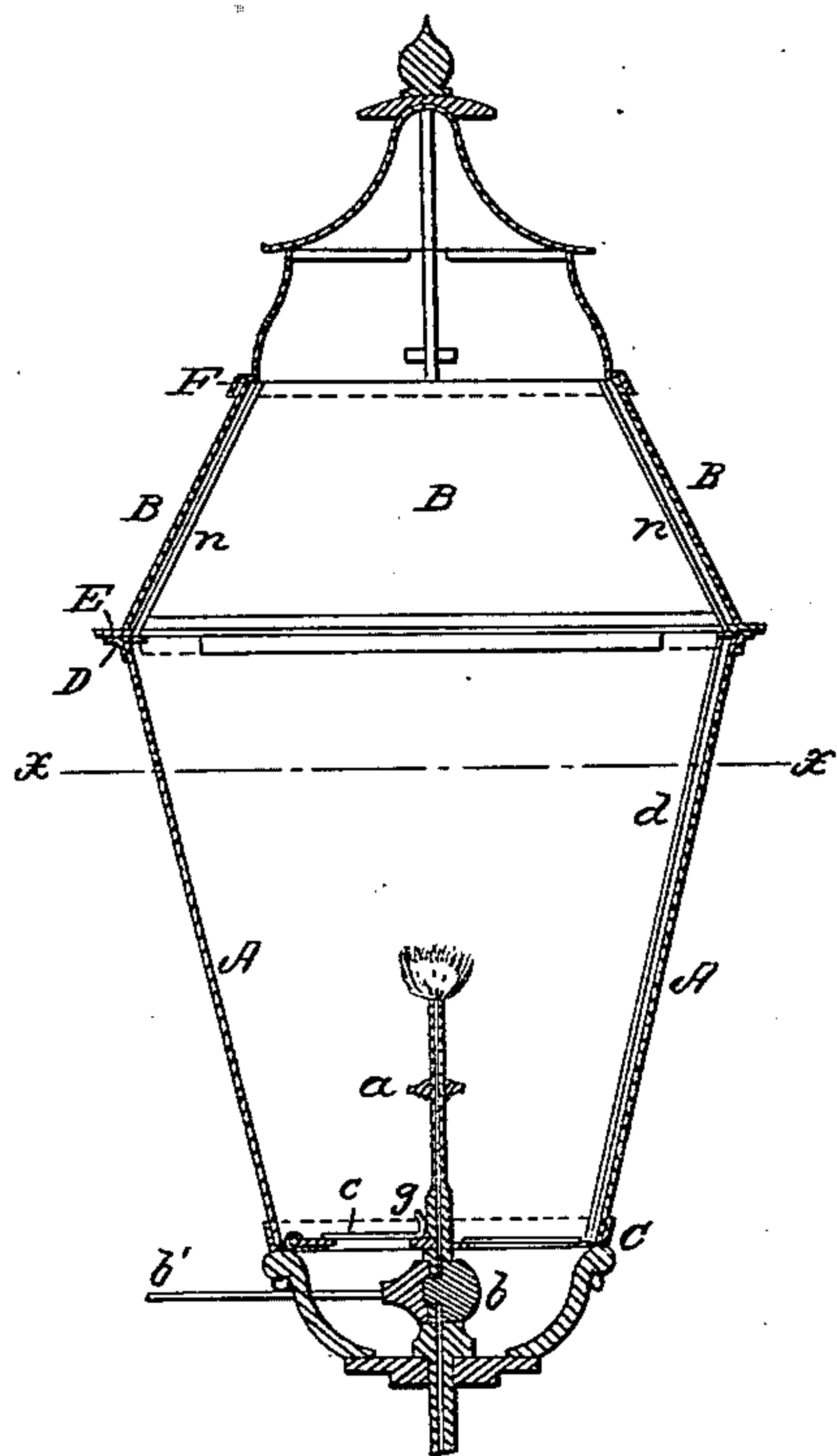


Fig: 2.

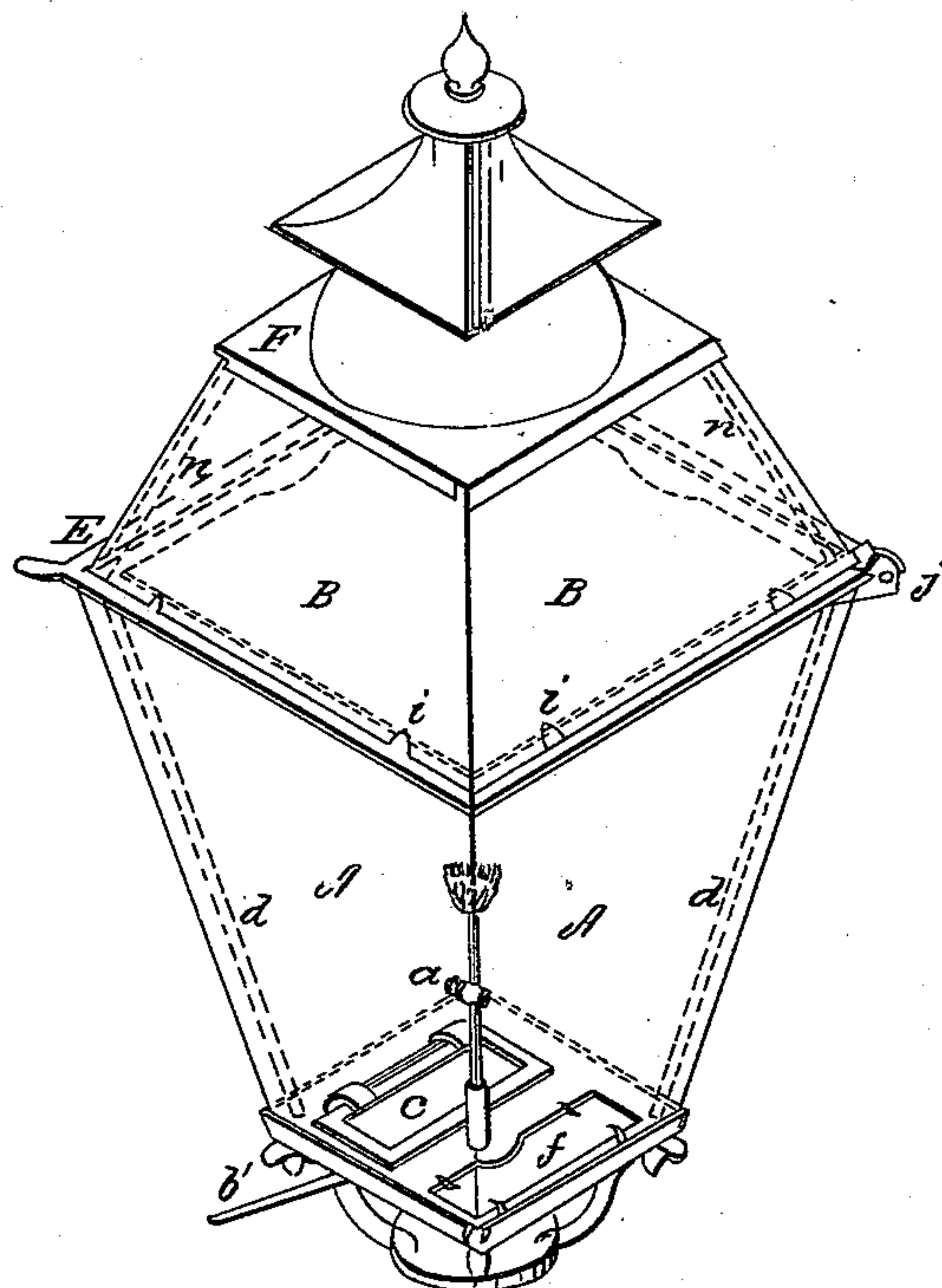
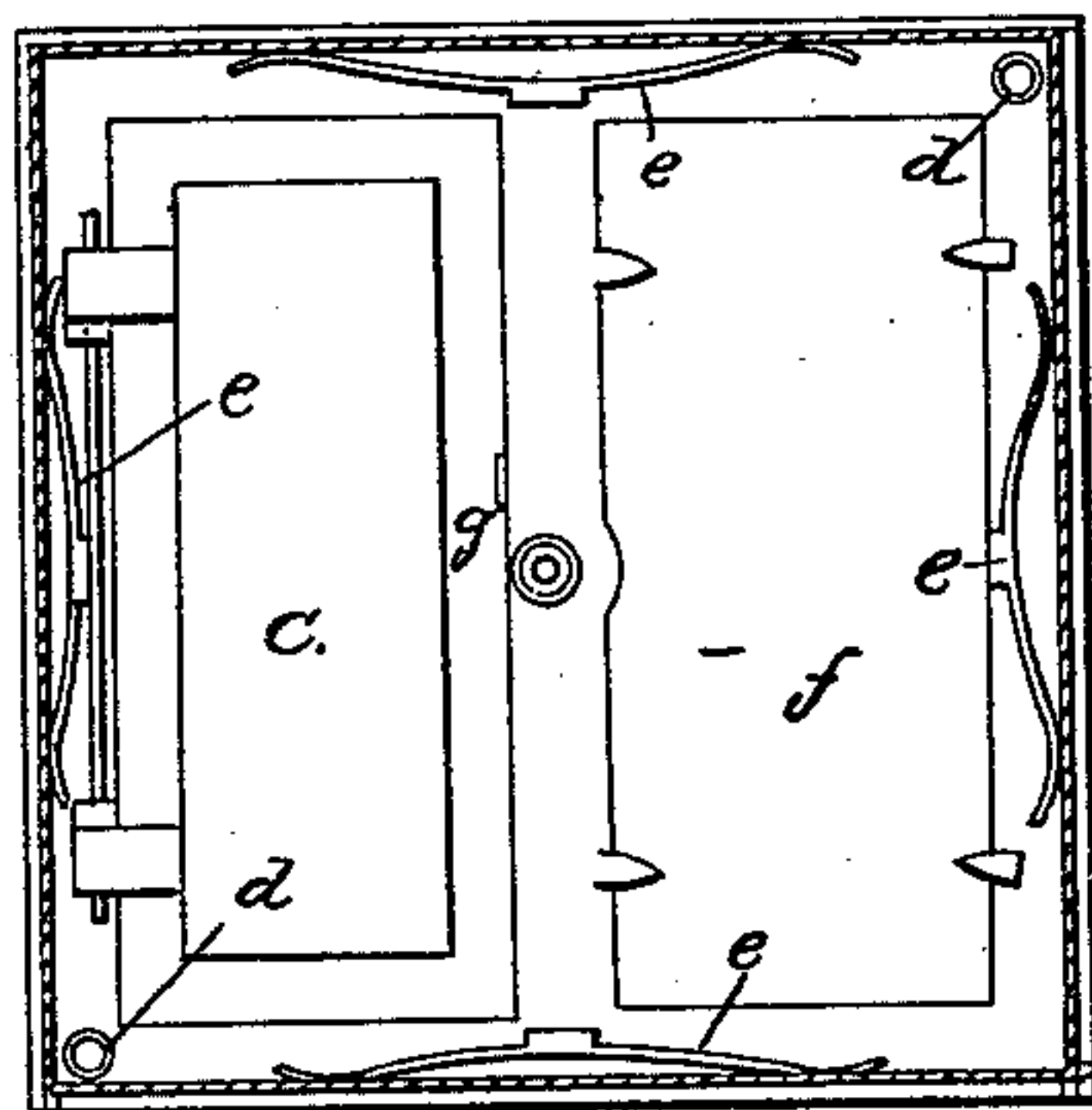


Fig: 3.



Witnesses:
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United States Patent Office.

FREDERICK LANGE, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF AND EGMOND LICHTENBERGER, OF SAME PLACE.

Letters Patent No. 84,952, dated December 15, 1868.

IMPROVEMENT IN STREET-LAMPS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, FREDERICK LANGE, of Chicago, in the county of Cook, and State of Illinois, have invented certain new and useful Improvements in Street-Lamps; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

This invention relates to street-lamps, and consists in making a lamp without the usual metal frame, which greatly obstructs the light; also in providing a trap-door in the bottom, through which to light the lamp, instead of the ordinary door in the side; and further, in providing the gas-pipe with two cocks, one of which is to shut off the gas, and the other to regulate the amount to be consumed, all as hereinafter described.

In the accompanying drawings—

Figure 1 is a longitudinal vertical section through the centre;

Figure 2 is perspective view; and

Figure 3 is a horizontal cross-section, on the line *x-x* of fig. 1.

Street-lamps, of the ordinary construction, are provided with a metal frame, an inch and a half in width, in which the glass is permanently secured by tin clips, putty, &c., one side of the body being hinged, so as to open and allow of access to the interior.

To these lamps there are many objections, the greatest of which is the obstruction of light by the metal frame, which is very considerable. Also, the liability of the glass in the hinged side or door to be broken by the wind swinging the door, if accidentally left open or unfastened, and the difficulty of replacing the glasses when broken, it being customary to remove the lamp from the post, and carry it to the shop, and there have the glass inserted.

Great objection is also made to the labor of climbing up on the lamp-post, opening the door, turning on and lighting the gas, and then having to again close the door and fasten it—an operation which not only occupies considerable time, but is very laborious, when a single man is required to light several hundred in succession.

In constructing my improved lamp, which is of the ordinary shape, I form the body of four glass plates *A*, supported at their upper and lower ends only by metal frames *C* and *D*, said frames being provided with flanges or ribs, which fit over the edges of the glass at top and bottom, on the outside, and thus hold the four glasses together, as shown.

The glass is held from the inside by springs *e* and *e'*, attached to the metal frames, as shown in fig. 3, there

being two springs to each glass, one on frame *C*, to hold the bottom, and one on frame *D*, to hold the top of the glass.

In the flanges of the metal frames, directly opposite the edge of the glass *A*, on each side, I cut a notch, *a'*, of proper size to permit the glass to be slid out edge-wise, when broken, and another inserted in its place, the glass used being somewhat heavier and stronger than that ordinarily used.

The two frames *C* and *D* are held together by two small iron rods *d*, in diagonally-opposite corners of the lamp, as clearly shown in figs. 1, 2, and 3, said rods being the only obstruction to the light on the sides of the lamp.

In the frame *C*, forming the base or bottom of the lamp, on one side of the burner, I place a stationary glass, *f*, and on the other side of the burner a door, *c*, (also provided with a glass,) which is hinged on its outer edge, and opens inward, said door having on its back an arm, *g*, which, when the door is turned up back, strikes against the glass *A*, and prevents the door from going so far back that it will not fall down and close automatically as soon as released.

The upper portion or cap of the lamp is constructed in a somewhat similar manner to the lower, the glasses being secured between the hood *F* and the frame *E*, which frames are held together by four, instead of two, iron rods, as in the lower part of the body, and, instead of springs to hold the glasses, they are held at the lower edges on the inside by flanges on *D*, and on the outside by projections *i*, as shown in fig. 2, and at the upper edges by the rods *n* on the inside, and on the outside by flanges on *F*.

This upper part of the lamp is secured to the lower by a hinge, *j*, at one corner, and may be turned over back, thus exposing the whole interior, and affording great facilities for cleaning the glass, repairing burners, &c.

The hinge *j* is provided with a suitable shoulder, to prevent the top from falling so far back as to strike against the lower part of the body and break the glass.

The burner enters through the bottom of the lamp, as usual, but the cock for shutting off the gas is placed below the lamp, on the outside, as shown at *b*, figs. 1 and 2, and is operated by a horizontal swinging arm or lever, *b'*, projecting out to one side of the lamp, as shown in figs. 1 and 2.

Inside of the lamp is another cock, *a*, intended to be set permanently, to regulate the amount of gas consumed, while cock *b* shuts it off entirely.

A lamp thus constructed, possesses many advantages over the ordinary form, as it does not obstruct the light. The glasses may be replaced in a moment, by simply sliding the new ones in from the side, the flanges being cut away at the corners for that purpose, and it is not

necessary to climb up on the post to light it, as a man, provided with a suitable torch on a handle, may, while standing on the walk, operate the lever *b* with it, and then, pushing the torch up through the door *c*, light the gas, the door closing as soon as the torch is withdrawn.

Having thus described my invention,

What I claim, is—

1. A lamp, having the side glasses *A* held in position by means of the metal frames *C* and *D*, and the rods *d*, arranged as described.

2. The springs *e*, arranged to bear against the glasses, and hold them in position, and, at the same time, permit their ready removal and replacement, substantially as shown and described.

3. The combination of the gauge-cock *a*, located within the lamp, and the supply-cock *b*, located below the lamp, all arranged to operate as described.

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Witnesses:

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