

W. J. BERRY.

Lanterns.

No. 142,984.

Patented September 23, 1873.

Fig. 1.

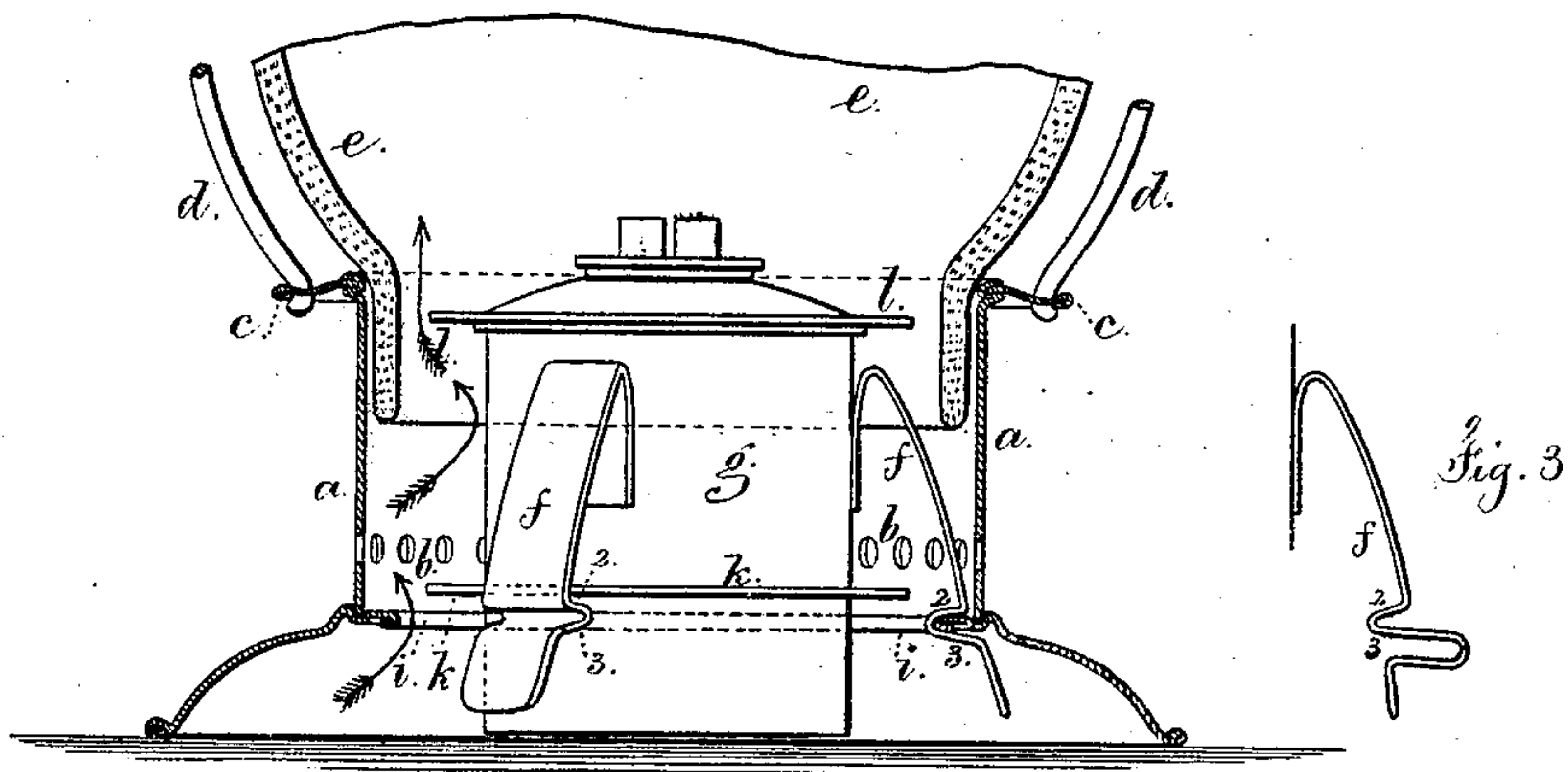
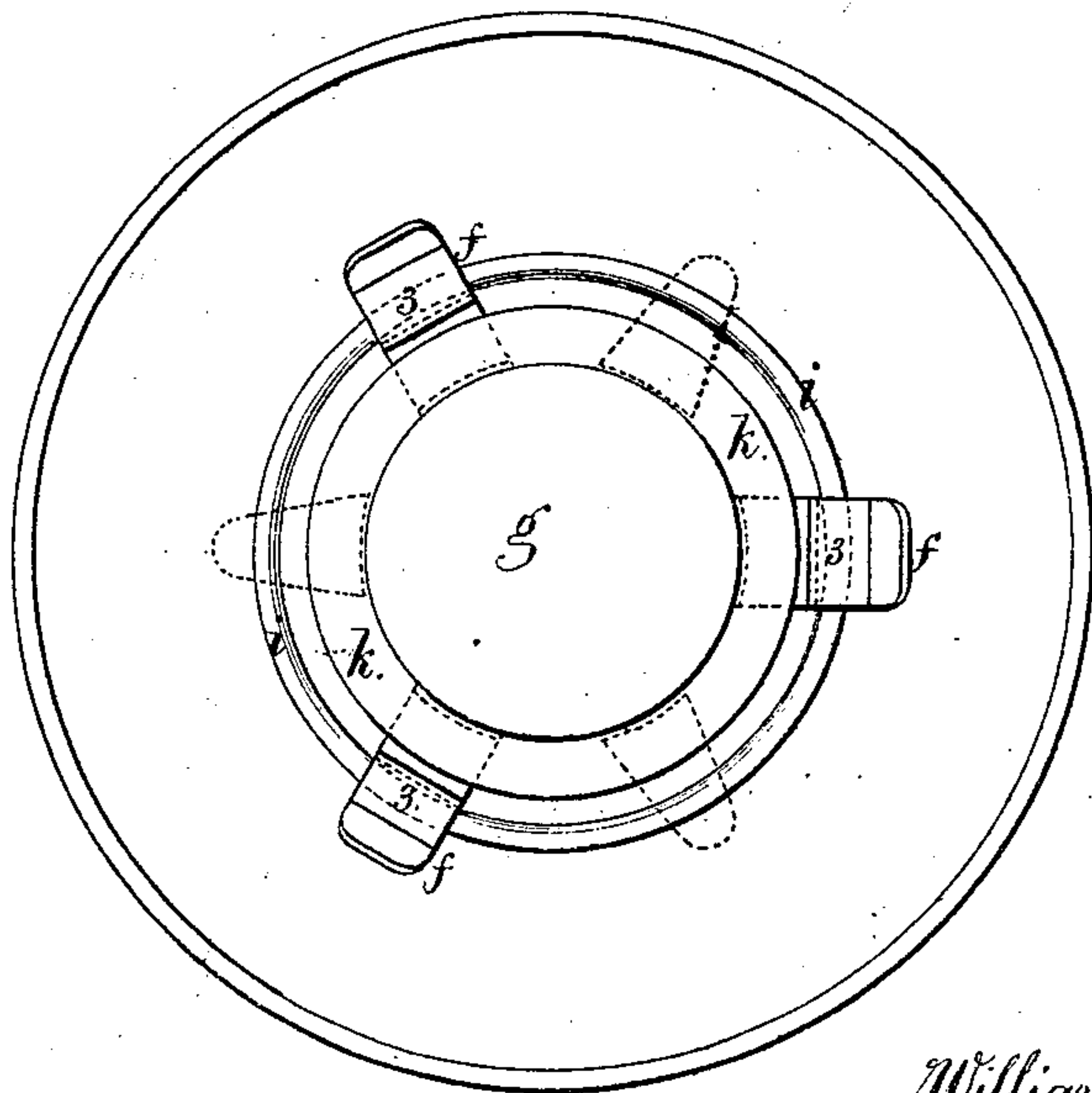


Fig. 2.



Inventor ..

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Witnesses.

Chas. H. Smith

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN LANTERNS.

Specification forming part of Letters Patent No. **142,984**, dated September 23, 1873; application filed February 8, 1873.

To all whom it may concern:

Be it known that I, WILLIAM J. BERRY, of Brooklyn, E. D., in the county of Kings and State of New York, have invented Improvements in Lanterns, of which the following is a specification:

In all lanterns now in use the flame is frequently, and even generally, extinguished by the entrance of any rapid and strong current of air through one or more of the apertures necessarily made or left in the lantern for the purpose of ventilation. This extinguishment more frequently occurs to the hand-lanterns used by brakemen upon railroads, farmers, teamsters, and others who are compelled to remain in the open air during storms. My improvement is especially available for use by the parties aforesaid; and it is designed to permit the air to enter the lantern for producing a free combustion, and consequently a brighter light, and to so direct the currents of air in their entrance to, and egress from, the lantern that they cannot in any case extinguish the light, no matter at what rate of speed, or with what force, the blast may enter the lantern. My invention is made to prevent the rush of air passing through the lantern from either top or bottom extinguishing the flame; and this part of my invention consists in deflectors applied around the lamp that act to check any sudden rush of air and return it upon itself without checking the atmospheric circulation or interfering with the free combustion of the lamp.

In the drawing, Figure 1 is an elevation of the lamp-pot, with the surrounding lower portions of the lantern in section; and Fig. 2 is an inverted plan of the lamp and lantern-base.

The lantern-base is made with the metallic cylinder *a*, perforated at *b b* as usual, and with a flaring ring, forming the base or support. The flange *c* at the upper end may be provided for the wires *d*, forming a guard to the glass *e*. The inward flange *i* is made for receiving the springs *f f*, that are attached to the sides of the lamp pot or reservoir *g*. There are, preferably, three of these springs *f*, as seen in Fig. 2, and each spring has a double bend to form the shoulders 2 and 3, that come

above and below the flange *i*, and thereby hold the lamp from passing too far in or falling out. By this construction, an opening is left around the lamp-pot, between that and the flange *i*, instead of the same being closed, as heretofore usual, by the lamp-bottom forming a stop that sets against such flange *i*. In order to prevent sudden currents of air passing up into contact with the flame through the opening between the flange *i* and lamp-pot *g*, I make use of the flange or deflector *k*, that surrounds the said pot *g*, and tends to check the rush of air, deflecting the same outwardly into the space between the base of the lantern and the lamp, and the air further reacts against the second flange or deflector *l*, which prevents the rush of air influencing the flame, and directs the air toward the glass. When a rush of air comes down from the upper part of the lantern there is opportunity for a free escape at the bottom, between the base *a* and annular deflectors *k* and *l*, thereby lessening the risk of the flame being extinguished by the products of combustion being thrown down upon the light without a free escape. Where the flanges or deflectors *k* and *l* are employed around the lamp-pot, there might be a stop or stops to limit the movement of the lamp-pot as it is inserted into the lantern. In this case the second bend 3 in the spring will be unnecessary. In Fig. 2, stops of this character are represented by dotted lines; and I remark that where stops are used it will only be necessary to employ two springs. In place of bending the springs in the form shown in Fig. 1, there may be a return bend, as illustrated in Fig. 3.

I claim as my invention—

The flanges or deflectors *k l* surrounding the lamp-reservoir, and within the lantern, for regulating the direction of the currents of air and preventing the lamp being extinguished, as set forth.

Signed by me this 4th day of February, A. D. 1873.

WM. J. BERRY.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.