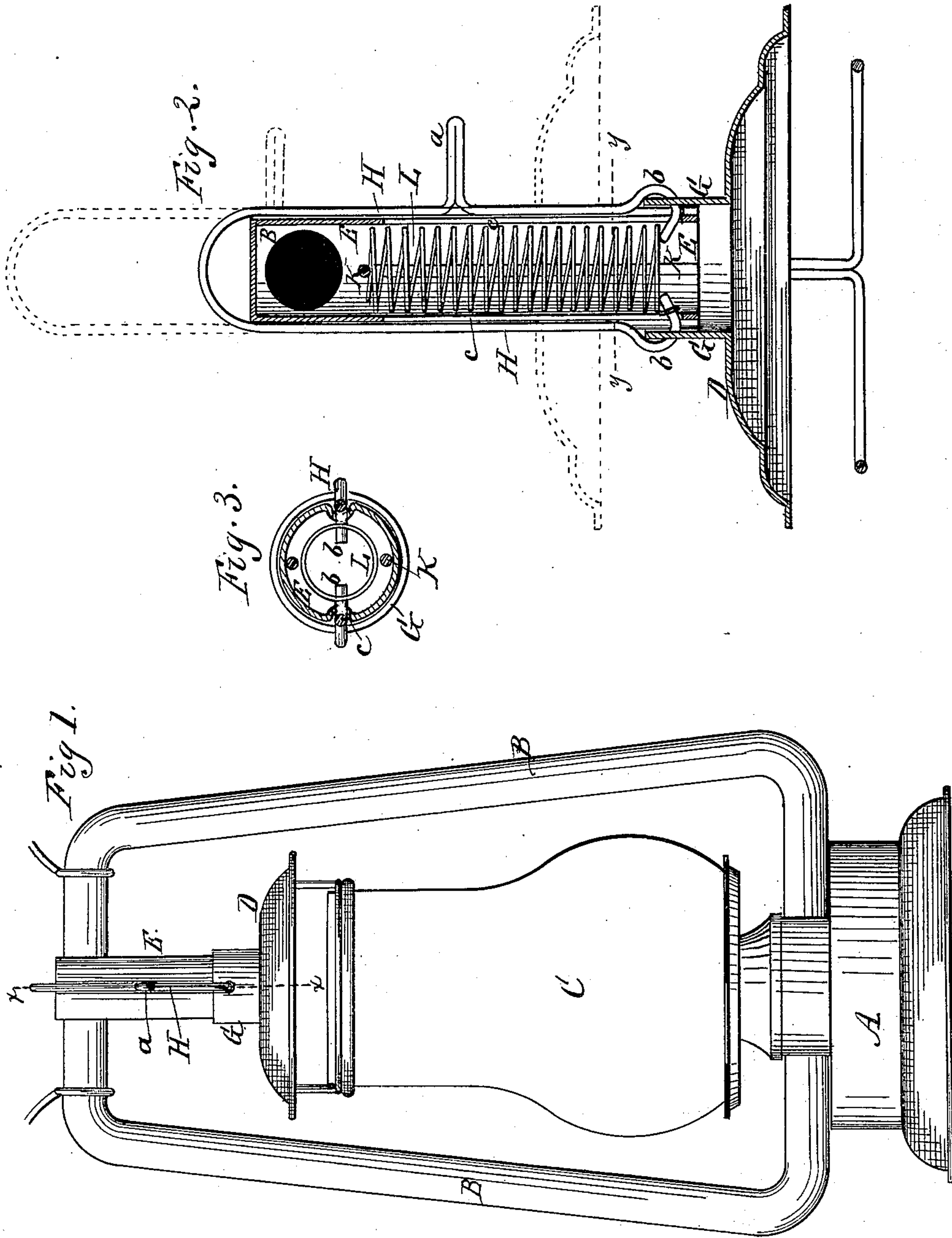


(No Model.)

C. BERGENER.  
TUBULAR LANTERN.

No. 356,442.

Patented Jan. 25, 1887.



Attest.

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*Att'y.*



# UNITED STATES PATENT OFFICE.

CHARLES BERGENER, OF ROCHESTER, NEW YORK.

## TUBULAR LANTERN.

SPECIFICATION forming part of Letters Patent No. 356,442, dated January 25, 1887.

Application filed April 19, 1886. Serial No. 199,294. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES BERGENER, of the city of Rochester, county of Monroe, and State of New York, have invented a certain new and useful Improvement in Lanterns; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this specification.

My improvement relates to side-tube lanterns, and of that kind where the top cap or ring is held down on top of the chimney by a coiled spring, which can be compressed when the chimney is raised for the purpose of removing the same or for lighting the lantern. In common lanterns this spring has usually been located outside the tube or neck that extends down from the top of the side tubes to hold the cap in place; but in some instances it has been located on the inside of said tube, or in a drum or band at the top of the lantern. In my device it is located on the inside, to be out of the way; and my invention consists in the special combination and arrangement of parts hereinafter described, whereby it is in compact form and made simple and effective in operation.

In the drawings, Figure 1 is a side elevation of a lantern, showing my improvement applied thereto. Fig. 2 is an enlarged longitudinal vertical section in line *x x* of Fig. 1. Fig. 3 is a cross-section of Fig. 2 in line *y y*.

A indicates the oil-fount, B B the side tubes, C the chimney, and D the top cap or band that holds the chimney down, all of ordinary construction.

My improvement is as follows:

E is a neck-tube attached permanently to the top of the side tubes, and G is a short thimble or socket attached to the cap D and sliding freely up and down outside of the permanent neck-tube E.

H is a guide-loop attached to the thimble G on opposite sides and extending up outside the tube E, being made in the form of a staple, closed at the top and provided on one side with a projecting handle, *a*, by which it, together with the cap D, to which it is attached, may be raised and slid upon tube E. The sides of the tube E are preferably grooved, and the sides of the guide-loop rest in these grooves

flush with the surface of the tube; but, if desired, the grooves may be dispensed with and the guide-loop rest outside the tube. The lower ends of the sides of the guide-loop are carried through holes in the thimble G and are bent in across the inside, forming hooks *b b*, that serve as the shoulder or support for the lower end of the spring. These hooks run in slots *c c*, made vertically in the tube E, of such length as to allow the necessary vertical movement in raising the cap to release the chimney or to light the burner.

K is a stay-wire, also in the form of a staple, permanently attached on the inside of the tube E and extending up nearly to the top of the tube, the closed end being below the opening of the side tubes.

L is a spiral spring inside the tube, one end being attached to and resting on the hooks *b b*, and the other end resting against the closed end of the stay-wire K. The tendency of the spring is to force the cap down on top of the chimney; but the spring will yield and allow the cap to rise to release the chimney.

This device is in simple and effective form, as the spring is entirely inside and out of sight, and can be raised by the operator, who simply takes hold of the handle *a* of the guide-loop at the top of the lamp. This guide-loop serves as a guide in sliding over the tube, a handle to raise the cap, and as the lower shoulder for the spring to rest on.

It has been customary to use a spring on the outside of the tube to press the cap down; but it is objectionable, not only on account of its appearance, but also for the reason that it interferes more or less with the raising of the thimble, as it has to come outside the thimble and, when compressed, tends to close against the tube. To locate the spring inside, as above described, necessitates a peculiar construction of the tubes and wires, consisting of the slots in the inner tube, the hooks on the guide-loop resting in the slots and supporting the bottom of the spring, and the stay-wire inclosing the spring and supporting its top, as before set forth.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination, with a tubular lantern, of

the neck-tube attached to the side tubes, the cap provided with a thimble resting on the neck-tube, the guide-loop attached to the thimble and provided with hooks that run in slots  
5 of the neck-tube, a stay-wire attached inside the neck-tube, and a spiral spring between the stay-wire and hooks of the guide-loop, as herein shown and described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES BERGENER.

Witnesses:

R. F. OSGOOD,  
P. A. COSTICH.