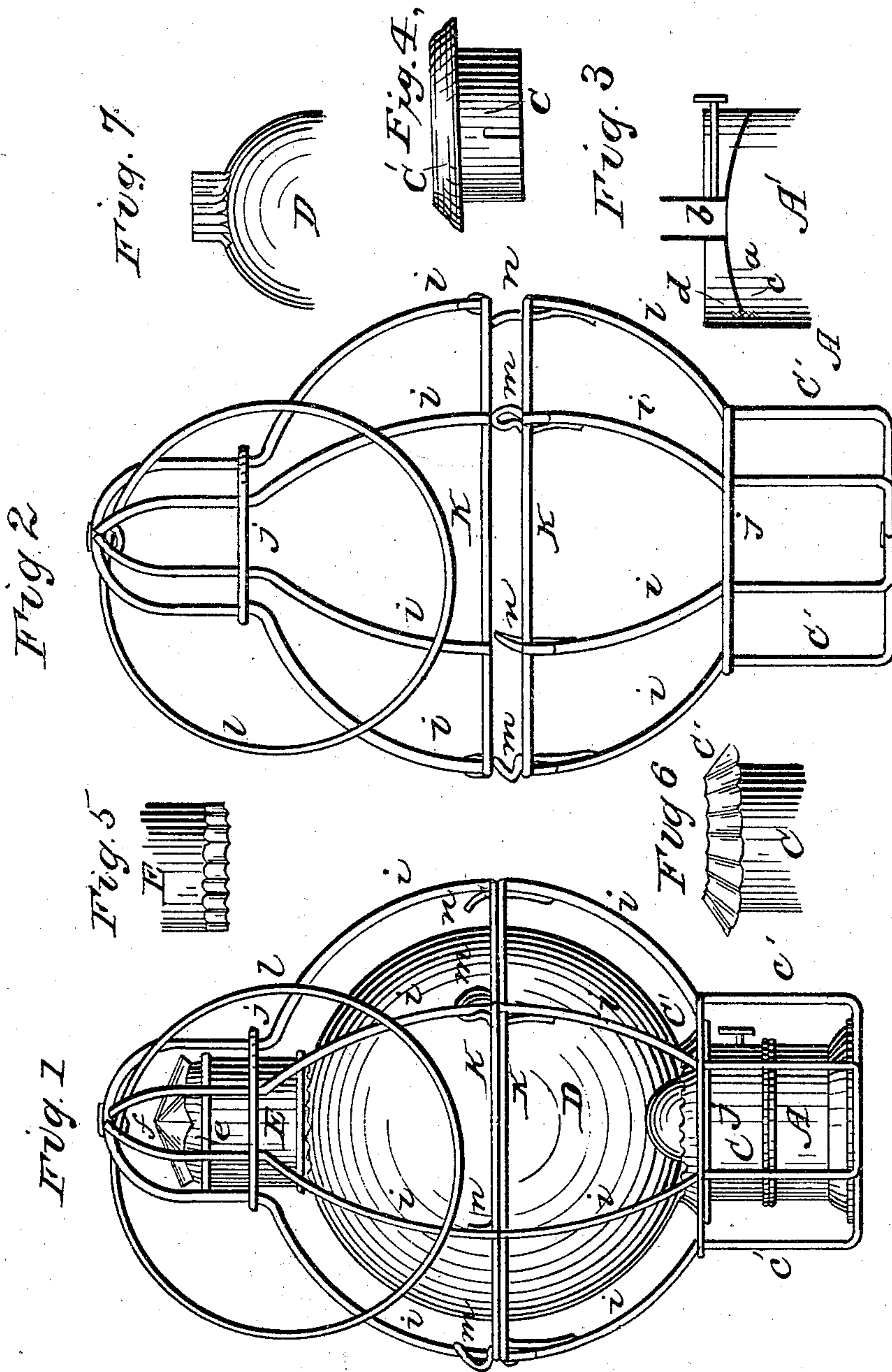


T. HOUGHTON
Lantern.

No. 88.713.

Patented April 6, 1869.



Witnesses:
Geo. Rothwell
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THOMAS HOUGHTON, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 88,713, dated April 6, 1869.

IMPROVEMENT IN LANTERNS.

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, THOMAS HOUGHTON, of the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Lanters; and I do hereby declare the following to be a full, clear, and exact description thereof, sufficient to enable those skilled in the art to which my invention appertains, to fully understand the same, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a side elevation of the lantern complete.

Figure 2, a similar view of the guard.

Figure 3, a vertical section of the reservoir and lamp.

Figure 4, a side view of the lower mounting.

Figures 5 and 6, partial side views, showing modifications of the upper and lower mountings, respectively.

Figure 7, a partial view of the globe, to be hereinafter referred to.

My invention is an improvement in lanterns, whereby the ventilation is improved; access is given for the introduction of a lighter, and the construction of the reservoir; guard, and the springs for holding the parts of the guard together, is simplified, and otherwise made better.

My invention consists in the construction, arrangement, and combination of parts, as hereinafter described.

In order to enable others so to understand the invention, as to be able to construct and use my improved lanterns, I will now proceed to describe the same in detail, referring to the drawing, wherein similar letters indicate corresponding parts in the several figures.

A represents the base of the lantern, which also forms an oil-reservoir for the lamp.

This reservoir is represented by A', and it is covered by a convex plate, *a*, having a central opening, in which a wick-tube, *b*, is fixed.

A small hole, *c*, is made through the plate *a*, and in this hole is placed an absorbing-wick, *d*.

The wick-tube is enclosed in a burner, or cone.

The plate *a* forms the convex bottom of an open reservoir, B', the object of which is to receive all the surplus oil which may be brought up, and return the same to the reservoir A', through the absorbing-wick.

This reservoir B' also serves as a receptacle for the trimmings of the wick, and any other dirt.

By the use of this reservoir, and the absorbing-wick, oil is entirely prevented from reaching the outside of the lamp, which, for this reason, is always kept clean.

C represents a collar, of sheet-metal, having a flange, C', around its top, and adapted to fit over the base A. The upper edge of this collar, and its flange, where it comes in contact with the globe, is scalloped, as shown in fig. 1, forming channels, for the passage of air, to support combustion, and to keep the mountings and oil cool, in order to prevent explosions.

The globe D rests on the collar C, its flange fitting loosely into the opening of said collar.

E represents the upper mounting, which rests on top of the globe, and encircles the upper flange of the same. The lower edge of this mounting is scalloped, like the collar C, and for the same purpose.

e represents a plate, partially covering the cap E.

It is formed with a central annular opening, over which the corrugated plate *f* is fixed.

Instead of simply scalloping the upper and lower mountings at the points where they come in contact with the globe, they may also be corrugated as shown in figs. 5 and 6.

I desire at this point to mention that, instead of corrugating and scalloping the mountings, as above described, the globe itself may be corrugated, as shown in fig. 7, so as to admit air.

All these parts, the lamp, upper and lower mountings, and globe, are enclosed in a cage, or guard, which is shown clearly in fig. 2.

This guard is made in two parts, an upper and a lower section. These sections are composed of bent wires, *i*, connected with rings *j* *k*. The upper and lower sections are nearly alike, the only difference being that the upper section is rounded on top while the lower section has a flat bottom, so as to support the lamp.

l represents a ring, or handle connected with the upper section.

The two sections are held together by means of spring-catches attached to the ring *k* of the lower half. Two kinds of catches are employed.

The catches *m* are each made of a piece of spring-metal, or wire, so bent as to form an open loop.

This latter projects upward from the ring, while the ends of the wire are soldered to one of the wires, *i*, of the section.

The free portions of these open springs are bent, as shown in fig. 2, so as to enclose the wires *i* of the upper section, as clearly shown in fig. 1.

Alternating with the open springs *m*, are placed single bent springs *n*, secured like the catches *m*, and serving, by pressure against the lower ring of the upper section, to hold the latter in place.

In this instance, I have shown a glass, of globular form, and a guard which opens in the middle; but I wish it understood that the glass may be egg-shaped, or of any other form in ordinary use, and the guard be so constructed that the joint between the sections shall occur either above or below the centre.

To detach the upper from the lower section, the open spring-catches are pushed in one by one, by the left hand, while, with the right, the upper section is lifted, until entirely freed. It may then be removed bodily, and the several parts of the lantern, the upper and lower mountings, lamp, globe, and guard, separated immediately one from the other.

There is left sufficient space in the top of the upper section of the guard, to admit of an upward movement of the globe and upper-mounting.

To light the lamp, when all the parts of the lantern are in position, it is only necessary to raise the globe sufficiently to allow the application to the wick of a lighted match, between the globe and mounting.

The sectional wire guard acts both as a protector and holder for all parts of the lamp, avoiding the use of all kinds of springs and fastenings on the lamp.

Among the general advantages secured by my improvements are cleanliness, durability, and economy; and one of the chief recommendations of the lantern is, the facility with which it may be lighted, without detaching any part.

I do not claim broadly, a wire guard, made in two or more sections. I am also aware that openings have been made in the lower parts of lamps and lanterns, for the introduction of a match, so as to light the wick without taking the lamp or lantern apart; but this I do not claim, as it forms no part of my invention.

I do not claim the cage, when attached in any way to the lamp or mounting.

I am further aware of the patent granted to Deaves & Archer, dated June 21st, 1864, for a lantern, in which provision is made for the supply of air, by the employment of corrugated aprons, and in which a sunken annular groove is made in the top of the lamp, surrounding the burner, for preventing the overflow of oil, while the lamp is being filled. Therefore, I do not claim broadly, either providing means for ventila-

tion, by corrugating or scalloping the mountings, or returning surplus oil to the reservoir; but,

What I do claim as new, and desire to secure by Letters Patent, is—

1. The cage *i i, j k c'*, when so constructed as to contain the lamp, globe, and mountings, without being in any manner attached to them; also, permitting the vertical movement of the globe and upper mounting, to allow the insertion of a match, all substantially as herein described.

2. A lantern, in which the upper and lower mountings, the lamp, and globe, are entirely separate from each other, and contained in an open wire cage, so constructed as to hold all the parts together without being attached thereto; as well as to allow the vertical movement of the globe, as and for the purpose herein set forth.

3. The lantern, composed of the upper and lower mountings, E C, the lamp A, the wire guard, holder, or cage, and a globe, when the mountings or globe are provided with channels for the admission of air, and all the parts are constructed and arranged as and for the purposes herein set forth.

To the above, I have signed my name, this 14th day of December, 1868.

Witnesses: THOMAS HOUGHTON.

W. A. WIEDERSHEIM,
H. M. WIEDERSHEIM.