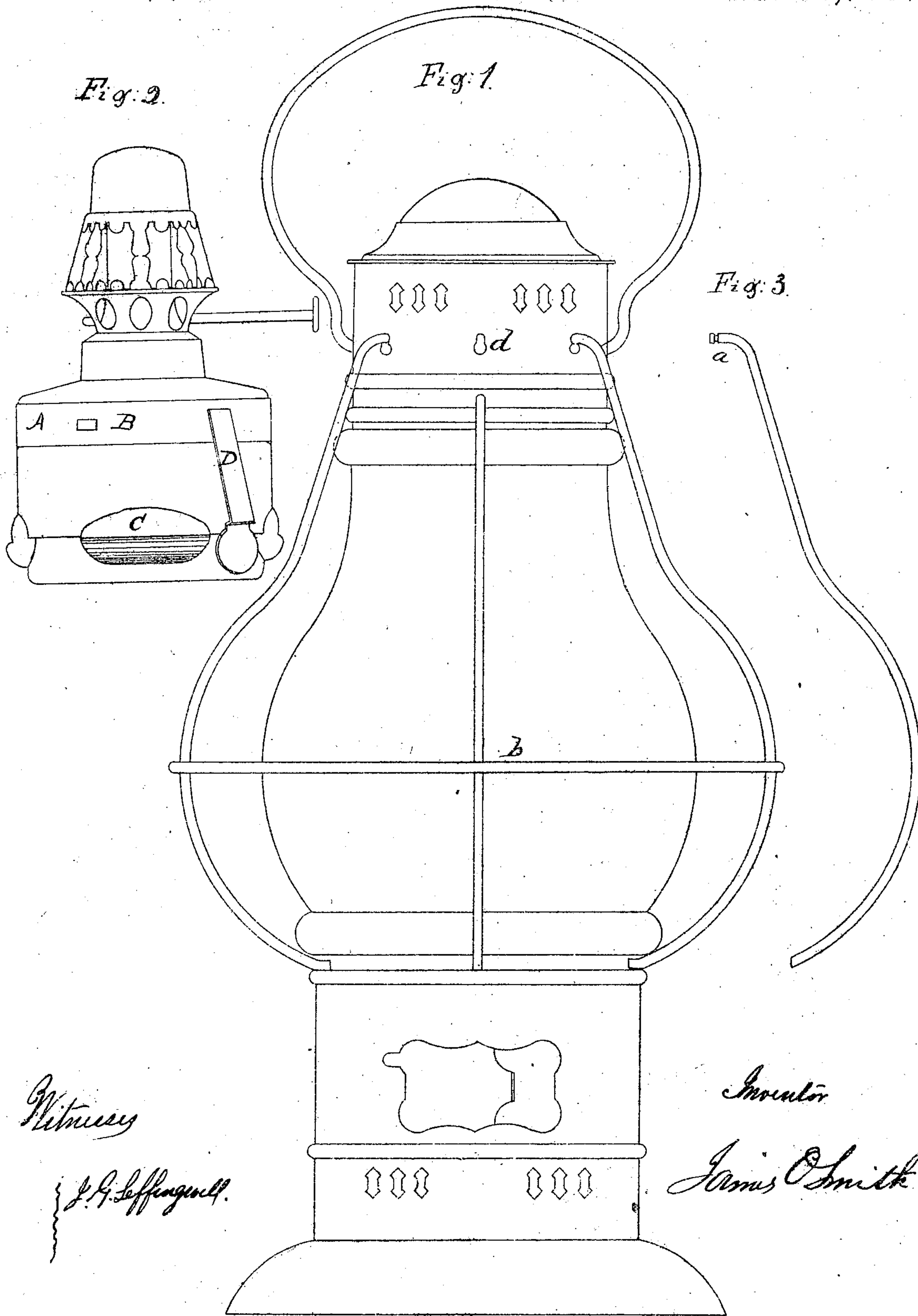


J. O. Smith.

Lantern.

N<sup>o</sup> 72759

Patented Dec. 31, 1867.



Witness

J. G. Leffingwell.

Inventor

J. O. Smith

# UNITED STATES PATENT OFFICE.

JAMES O. SMITH, OF NEW YORK, N. Y.

## LANTERN.

Specification forming part of Letters Patent No. 72,759, dated December 31, 1867.

Specification of certain Improvements in Lanterns, invented by JAMES O. SMITH, of the city, county, and State of New York.

### *Nature and Objects of the Invention.*

The first part of my invention relates to the manner of securing the wire guards of the lantern at the top, by which much greater permanence is obtained, and the use of solder for this purpose dispensed with.

The second part of my invention relates to the construction of the body of the lamp, with projections cast or molded thereon, as hereinafter more fully set forth, to regulate the admission of air to support combustion, and by the aid of which the lamp is secured firmly in position, substantially as and for the purpose set forth.

### *Description of the Drawings.*

Figure 1 is a side view of the lantern. Fig. 2 is a side view of the lamp, with the spring-catches attached which secure it to the lantern, a burner being also attached to it. Fig. 3 is a side view of one of the guards detached, or before it is placed in position, showing how it is constructed to facilitate its attachment at the top to the lantern.

### *General Description.*

The first part of my invention is a device intended to obviate a long-felt difficulty in attaching the guards at the top to the lantern. In the usual mode of construction they are attached by soldering; but this mode is open to the serious objection that the heat of the flame frequently melts the solder and destroys the connection between the guard and the top of the lantern.

My device for obviating this difficulty consists in the combination of a guard having a grooved upper end with a shell for the top of the lantern, having a hole so formed therein that when the guard is pressed up into the proper position the grooved portion will be forced up into a contracted part of the hole in such a manner as to prevent its displacement.

In this construction a groove, *a*, is formed in the upper end of the guard, as shown in Fig. 3, and a hole, *d*, is made in the shell of

the lantern to receive it, the lower portion of said hole being round and of sufficient size to allow the end of the guard to pass through it. The upper part of this hole is made narrower, as shown in Fig. 1, and of the proper size to embrace the neck of the guard at the groove *a*. In attaching the guards, the upper end is first inserted in the hole *d*, and the neck of the guard being pressed up into place, the lower end of the guard is brought to its place on the base of the lantern and soldered to it. When all the guards of the lantern are thus attached, the stiffening-wire *b* is put into place and attached to the guards in the usual manner, and the guards are by that means prevented from being pulled out of place at the top.

In constructing the lamp of the lantern, I make it almost entirely of glass, and to the upper part of the glass body of the lamp I attach a ring or band of metal, *A*, and combine with it spring-catches *D*, to secure the lamp in position by catching over a rim in the base of the lantern, in the manner described in the patent granted to Hugh and James Sangster, June 10, 1851. To facilitate the attachment of this ring *A* to the body of the lamp, I form a recess in the upper part of said body, into which I fit said metal ring; or projections may be formed on said body for the same purpose and to the same effect. I also cast projections on the body of the lamp, and form corresponding indentations in the band *A*, as shown at *B*, to prevent said band from turning round on the lamp; or an indentation in the glass, with an inwardly-projecting indentation in the band, will answer the same purpose.

Instead of attaching a metal flange to the base of the lamp, to bear against the flange in the lantern over which the spring-catch *D* catches, I form projections, *C*, of glass upon the glass body of the lamp, near its base, the upper portions of which projections are so formed as to fit inside of the flange over which the spring-catch *D* catches, and the lower portion of which projections extends out under the said flange, so as to keep the lamp from passing up too far into the lantern. These projections are so formed as to leave space be-



tween them to admit air to support the combustion of the lighting material used.

*Claims.*

I claim as my invention—

1. The combination of the guard, having a groove, *a*, in its upper part, with the top of the lantern, having slotted holes *d* to receive said guards, as described, said guards being attached to the base of the lantern by soldering or equivalent means, by which combination and construction of parts the guards are

firmly secured to the lantern, and without liability of being detached at the top by heat.

2. The formation of the projections *C* upon the base of the lamp, as described—that is to say, said projections being made a part of said glass body, and so formed as to accomplish each of the several results set forth.

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Witnesses:

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