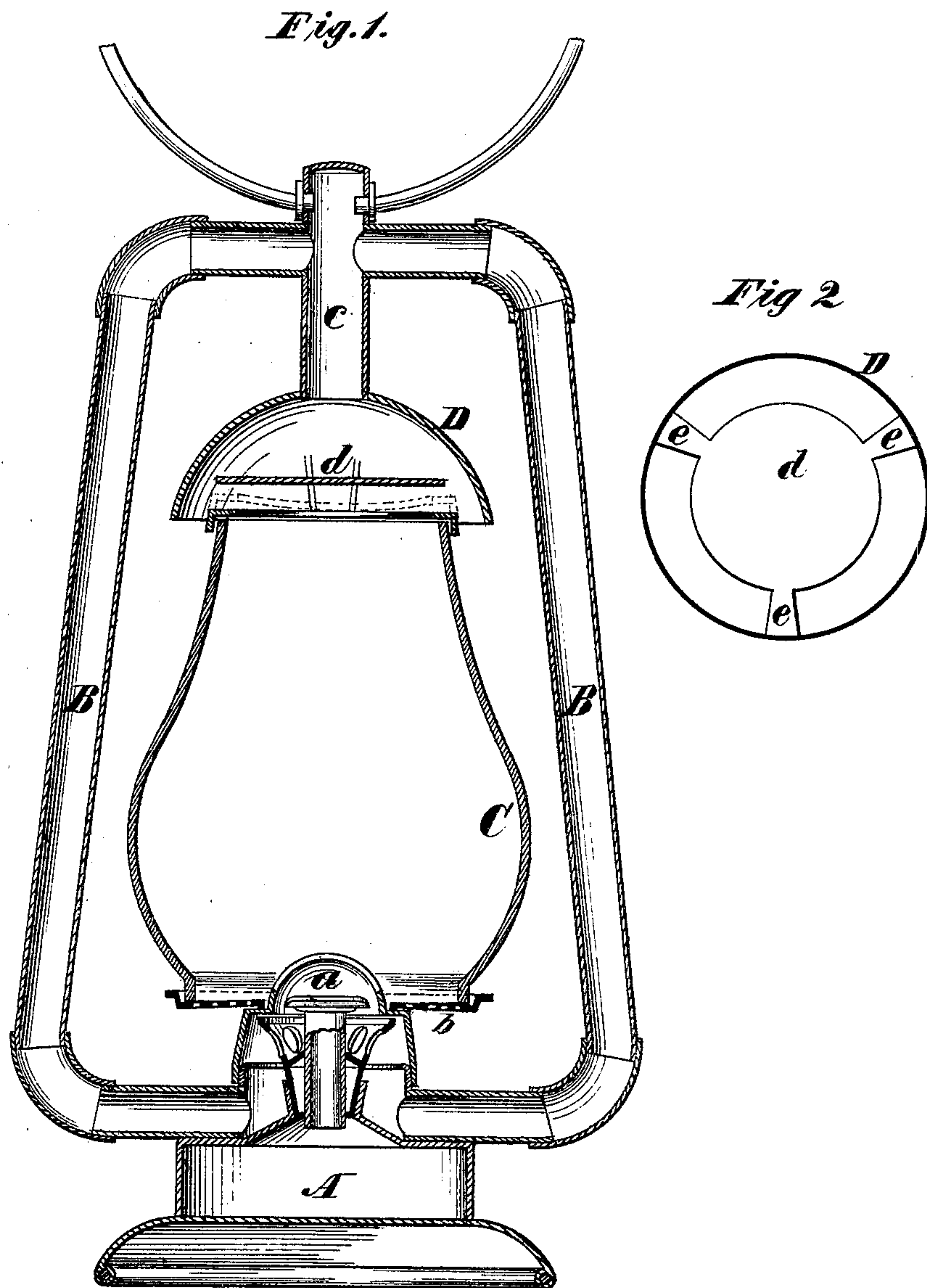


CHARLES J. SYKES.

Lantern.

No. 126,345.

Patented April 30, 1872.



*Witnesses.*

*W. Bond.*  
*William Westlake.*

*Inventor.*

*Charles J. Sykes.*  
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*His Atty's.*

# UNITED STATES PATENT OFFICE.

CHARLES J. SYKES, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN LANTERNS.

Specification forming part of Letters Patent No. 126,345, dated April 30, 1872.

I, CHARLES J. SYKES, of Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Lanterns; and the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a vertical section. Fig. 2 is a plan view of the disk.

My invention relates to that class of lanterns known as "tubular." Its objects are to produce better combustion, a steadier flame, and shorten the tubes, which I accomplish by placing over the top of the globe, at a little distance therefrom, a disk of metal, as herein-after specified.

In the drawing, A represents the base; B, the tubes; *a*, the burner; *b*, perforated plate, on which the globe C rests; all of which parts are constructed in the usual manner. *c* is a short tube, communicating with the tubes B. To the lower end of *c* is secured a piece of metal, in the form of an inverted cup, the largest diameter of which is a little greater than the diameter of the top of the globe. *d* is a disk of metal, its diameter being the same, or about the same, as that of the top of the globe. The disk is about half an inch above the globe, and is secured to the cup D by means of the bars *e* or other suitable means, leaving a space between *d* and D. The globe can be held in place upon the plate *b* by means of a metal ring and springs or other well-known devices.

This lantern is designed for hydrocarbon

oils, the flame of which is very sensitive, and it is well known that slight changes in the construction of this class of lanterns are often attended with important results. The central portion of the current of air passing up through the globe is not as pure as that at the outside of the column. This ascending column, coming in contact with the disk *d*, is deflected from its course, and cannot pass directly into the tube *c*, but must first pass over the edge of the disk *d*, up into the cup D, and the carbonic-acid gas, coming to the edge of the globe, and being heavier than the pure air, is more likely to be separated from the pure air than when a strong current is ascending directly into the tube *c*, as is the case in tubular lanterns now in use; hence purer air passes into the tube *c* to be carried to the flame, and combustion will be more perfect. The large body of air in the cup above the disk *d* also has a tendency to equalize unsteady currents and neutralize the effect of sudden movements of the lantern.

I find that the use of the disk *d* enables me to shorten the tubes B about two inches, which improves the appearance of the lantern materially.

What I claim as new is as follows:

The disk *d*, in combination with the inverted cup D, tubes B B, and base A, substantially as and for the purposes specified.

CHARLES J. SYKES.

Witnesses:

E. A. WEST,  
O. W. BOND.