G. WALLINGFORD.

Lantern.

No. 132,995. Patented Nov. 12, 1872.

Fig. 1.

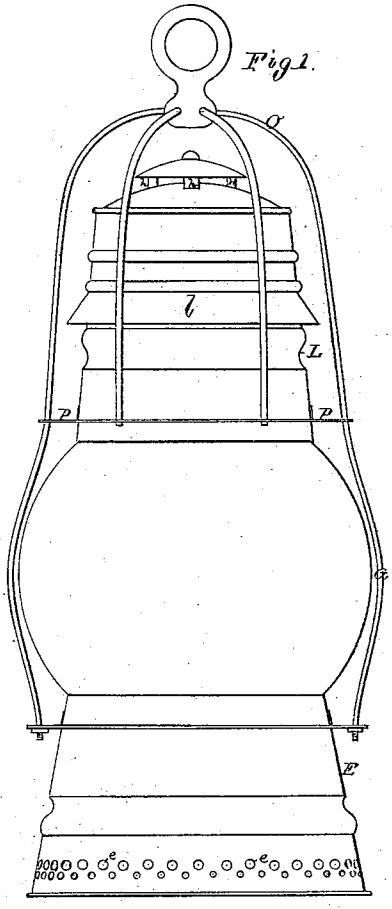


Fig. 2.

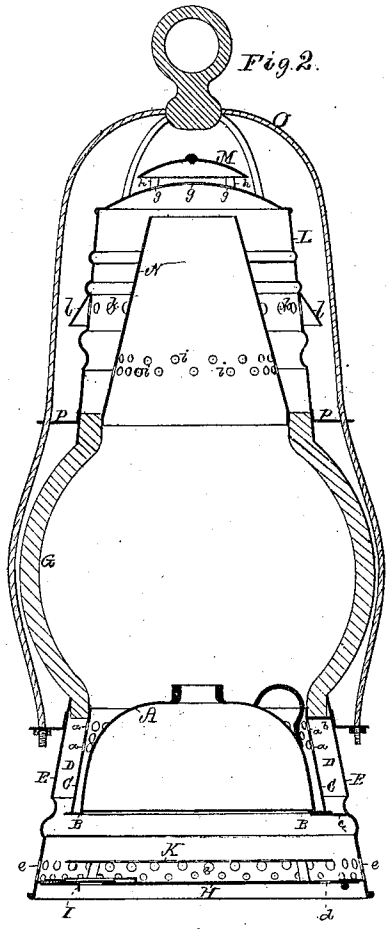


Fig. 4.

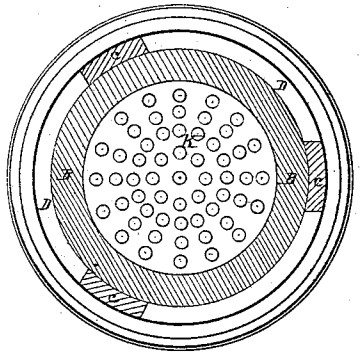
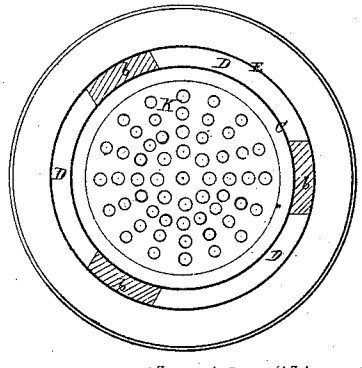


Fig. 3.



Witnesses.

S. N. Piper

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R. H. Eddy

UNITED STATES PATENT OFFICE.

GILBERT WALLINGFORD, OF CHARLESTOWN, ASSIGNOR TO HIMSELF AND SAMUEL F. HOLT, OF SOMERVILLE, MASSACHUSETTS.

IMPROVEMENT IN LANTERNS.

Specification forming part of Letters Patent No. **132,995**, dated November 12, 1872.

To all whom it may concern:

Be it known that I, GILBERT WALLINGFORD, of Charlestown, of the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Lanterns; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is an elevation, and Fig. 2 a vertical section of one of my improved lanterns.

It is intended especially for use on railways as a signal-lantern.

In the drawing, A denotes the lamp resting upon a flat annulus or circular shelf, B, from which there is extended upward, concentrically with the lamp, a hollow frustum, C, there being an air-space, D, extending about the lamp and between it and the frustum C. The upper part of the frustum is perforated with numerous holes, *a a*, &c., and the frustum and shelf are supported in position within and concentric with the outer bottom case E by two series of arms, *b c*, extended from such frustum and shelf to the case.

Figure 3 is a horizontal section taken through one series of each arm; and Fig. 4 is a horizontal section taken through the other series of them.

The lower part or foot of the glass globe G rests upon the upper arms, and fills the space which is above them and between the frustum C and outer case E. The said outer case has a circular door-way through its bottom, to which a circular door or cover, H, is hinged, it being provided with a slide-bolt, I. Over and parallel to the door is a disk, K, supported by standards erected on the door. Through the door there is a circular range of air-holes, *d*, and there is also one or more ranges of air-holes, *e*, made through the case E opposite to the space which is between the door and the disk. The disk is also perforated with numerous holes.

From the above it will be seen that the air to supply the flame of the lamp has to enter the lantern through the holes *d* and *e*, from whence it passes into the space between the disk; thence up through and around the disk; thence up into the space around the frustum, and thence through the holes of the latter, whereby it becomes so divided into numerous currents as to be equally distributed upon the flame, and in a manner to prevent it from flickering, however the lantern may be moved—viz., whether upward or downward or laterally. The hood or that part of the lantern which is above rests upon the glass globe, is composed of a case, L, having holes *g* in its top, and over the same a circular concavo-convex cap, M, upheld by standards *h*. Within the said hood and extending upward from the glass globe is a hollow conic frustum, N, open at top and bottom and having ranges of holes, *i*, arranged through its sides. There is also a range of holes, *k*, made through and around the hood at or about its middle, said range being provided with a deflector, *l*, arranged with them, as shown. A spider, O, formed as shown, extends up from a flange, P, projecting from the lower part of the hood. The smoke and volatile products of combustion will escape through the upper end and the holes *i* of the frustum N and pass off through the holes in the top and sides of the hood, which, being provided with the cap M and deflector *l*, as described, will be protected from rain, snow, or ice. The hood, its air-holes, and their caps, and the frustum with its perforations, all arranged as described, have been found, in practice, to admit of the free escape of the smoke and volatile products of combustion, and not to affect the steadiness of the flame of the lamp, however the lantern may be moved or swung about or be exposed to atmospheric currents.

I claim—

1. In the said lantern, the perforated frustum C, the annular shelf B, the outer case E, perforated as described, the perforated disk K, and the door H, arranged, constructed, and combined substantially in manner as described.

2. The perforated frustum N and lantern-hood L, the cap M, and deflector *l*, constructed, arranged, and combined substantially as specified.

GILBERT WALLINGFORD.

Witnesses:
R. H. EDDY,
J. R. SNOW.