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M. H. FOWLER.

Lantern for Burning Coal Oil.

No. 37,394. Patented Jan'y 13, 1863.

Fig. 1.

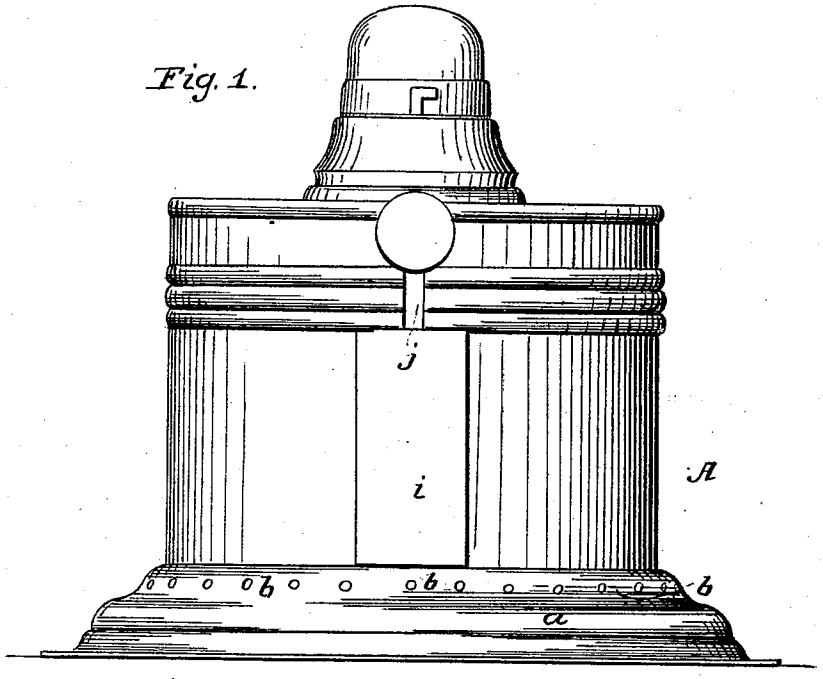

Fig. 2.

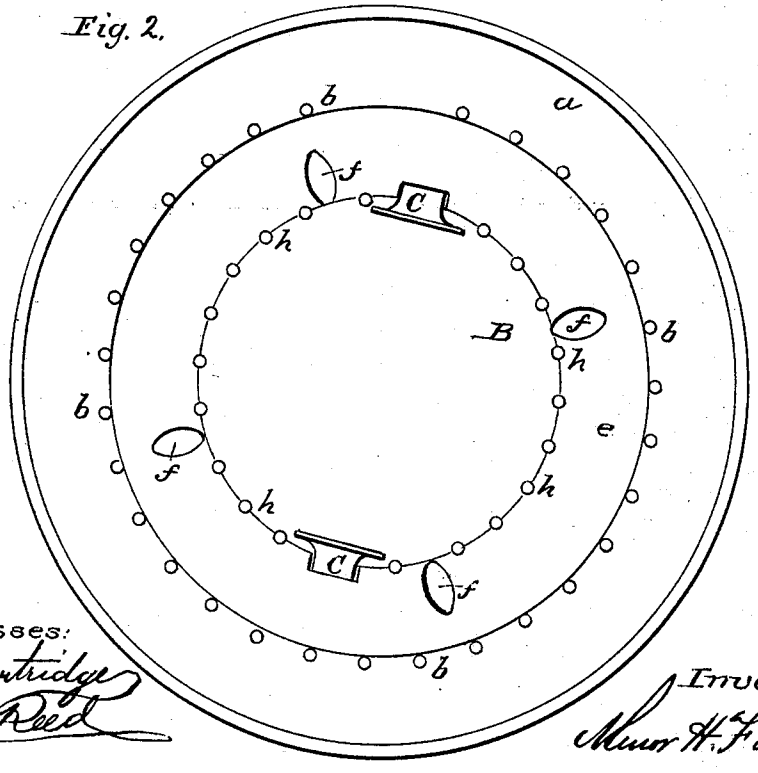

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Fig. 3.

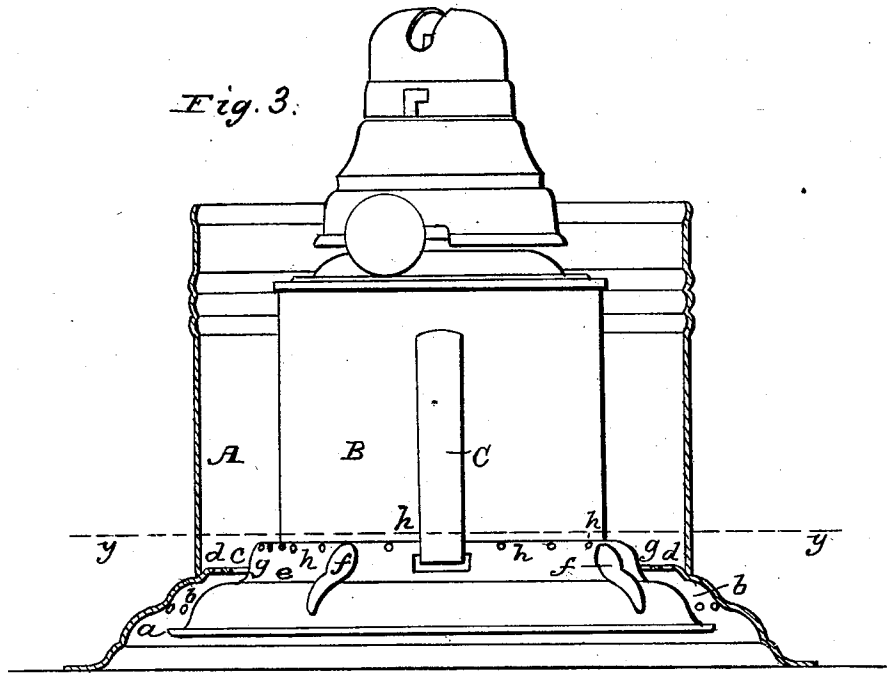
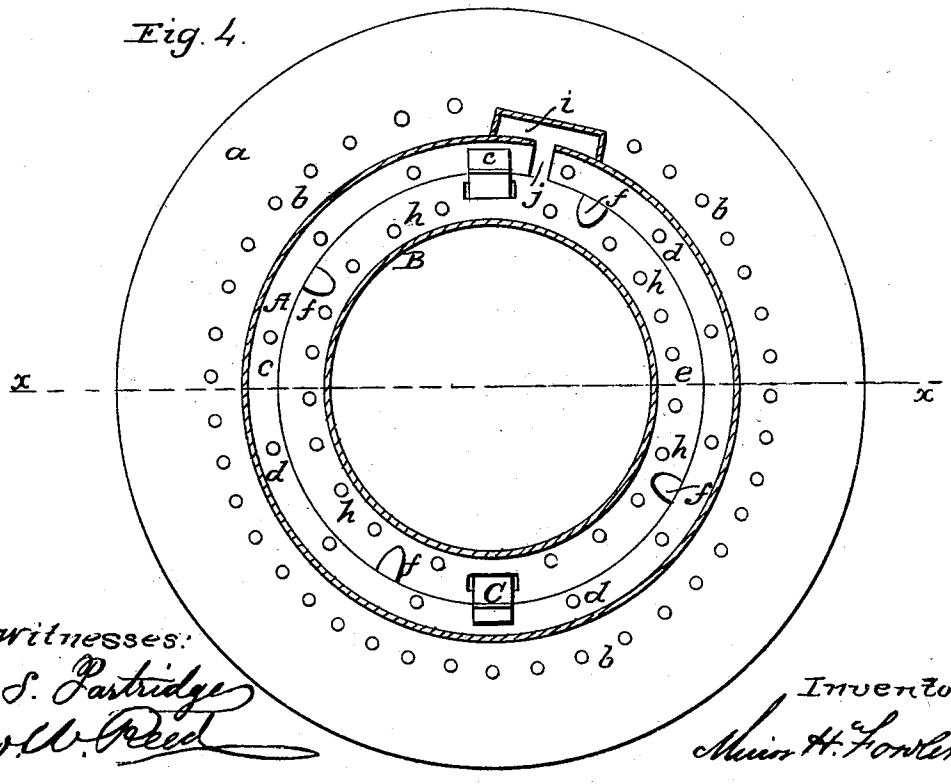


Fig. 4.



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3 Sheets—Sheet 3.

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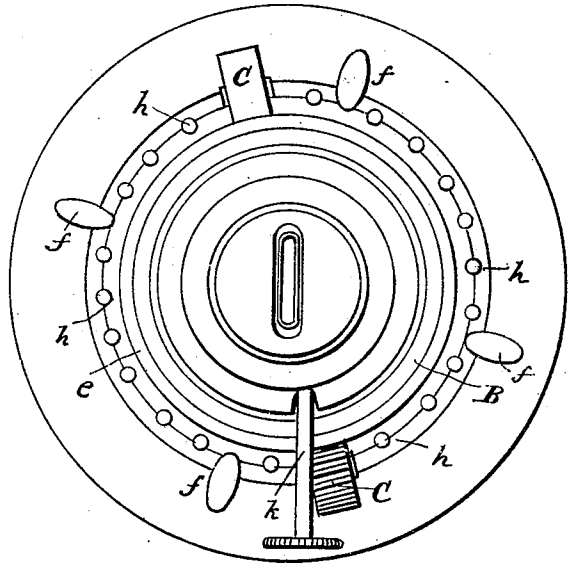
Fig. 5.



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UNITED STATES PATENT OFFICE.

MINOR H. FOWLER, OF NEW YORK, N. Y.

IMPROVEMENT IN LANTERNS FOR BURNING COAL-OIL.

Specification forming part of Letters Patent No. **37,394**, dated January 13, 1863.

To all whom it may concern:

Be it known that I, M. H. FOWLER, of the city, county, and State of New York, have invented a new and useful Improvement in Lanterns for Burning Coal-Oil; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of the lower part of a lantern constructed according to my invention; Fig. 2, a bottom view or inverted plan of the same; Fig. 3, a vertical section of the same, taken in the line *x x*, Fig. 4; Fig. 4, a longitudinal section of the same, taken in the line *y y*, Fig. 3; Fig. 5, a detached plan or top view of the lamp.

Similar letters of reference indicate corresponding parts in the several figures.

This invention is designed to obviate the difficulty attending the retarding or fluctuating of the draft produced by the swinging of the lantern or the sudden raising and lowering of the same, movements which will almost invariably extinguish the flame of a coal-oil lamp, and which will, if the lantern be but gently swung or raised and lowered, cause the lamp to smoke and emit a very unpleasant odor.

The invention consists in perforating the base of the lantern and also the base of the lamp, and having the base of the lamp provided with ledges or small vertical bearings, all arranged in such a manner that the flame of the lamp will be supplied with air, which is admitted into the lantern at the bottom thereof, no lateral perforations being required at the side. By this mode of constructing the lower part of the lantern the difficulty above mentioned is fully obviated, and without augmenting the cost of manufacture.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the lower part of a lantern, which is of cylindrical form and constructed of sheet metal. This part A is provided with a flange or base, *a*, which is perforated all around with holes *b*, just below the junction of *a* with A. The flange or base *a* projects a short distance within the part A of the lantern, so as to form an annular rim, *c*, all around the inner side of A, and this rim *c* may, if desired, also be perforated all around with holes *d*.

B is the lamp, the main portion of which may be constructed in the usual manner and provided with any of the approved coal-oil burners in use. The flange or base *e* of the lamp is unlike those of the ordinary kind. It has four ledges or bearings, *f*, on its upper surface. These ledges or bearings may be produced by swaging at the same time the flange or base is struck up. They are at equal distances apart, and, when the lamp is fitted in the part A, bear against the rim *c*, and admit of spaces *g* between the flange or base *e* and the rim *c* through which spaces air is admitted into the lantern. (See Fig. 3.) The upper part of the flange or base *e* is perforated all around with holes *h*, and the lamp may be secured in A by means of spring-catches C C or other suitable fastening. By this mode of construction it will be seen that a large amount of air will be admitted into the lantern at its bottom—none being admitted through the side of the part A. The lantern therefore may be swung without materially affecting the flame. The perforations *b* in the flange or base *a* of A perform an important function, as they admit of air passing into the bottom of the lantern when the flange or base *a* rests on a level surface. If the perforations *b* were not employed no air could enter the lantern when placed on a smooth surface. The perforations *h* in the base *e*, in connection with the air-spaces *g*, formed by the ledges or bearings *f*, with or without the perforations *d* in the rim *c*, will admit of the flame being supplied with a requisite amount of air to support proper combustion, and in case the lantern be suddenly raised and lowered, a free passage of air is admitted through the lantern, so that no vacuum can be formed to extinguish the flame. The ordinary lanterns that are supplied with air through the side of the part A do not admit of a large volume of air into the lantern, and consequently, when the latter is suddenly lowered and raised, the flame is invariably extinguished if coal-oil be used as a burning material. I would remark that the part A of the lantern may be provided with a side tube, *i*, so applied as to cover the greater portion of a vertical slot, *j*, in A. This slot *j* and the

tube *i* admit of the rod *k*, on which the wheels are placed, which raise and lower the wick, extending through A, so that the wick may be adjusted from the outer side of the lantern. This feature, however, is not new, it having been previously used, but arranged with different parts from those shown in my invention.

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

1. The perforations *b* in the flange or base *a* of the part A of the lantern, when used in connection with perforations *h* in the base *e* of the lamp B, or with other suitable air-spaces in the bottom of the lantern, and with or without the perforations *d* in the rim *c*, as and for the purpose herein set forth.

2. Constructing the base *e* of the lamp B with ledges or bearings *f*, substantially as shown and described, in connection with the rim *c*, or other equivalent bearing, attached to the part A, for the purpose of admitting air-spaces *g* around the base *e*, as set forth.

3. The combination of the perforations *b* in the flange or base *a* of the part A of the lantern, the perforations *h* in the base *e* of the lamp, the air-spaces *g*, formed by the ledges or bearings *f* on the base *e*, and the rim *c*, or its equivalent, all arranged as and for the purpose herein set forth.

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