W. R. UNDERHILL.
Street-Lamp.

No. 207,371 Patented Aug. 27, 1878.

Fig. 1.

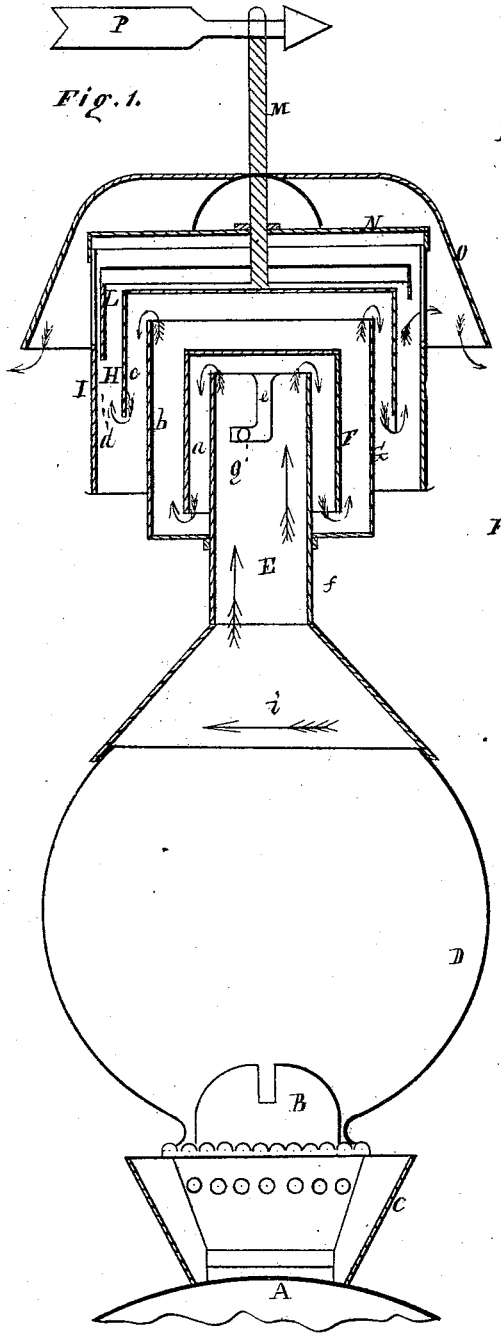


Fig. 2.

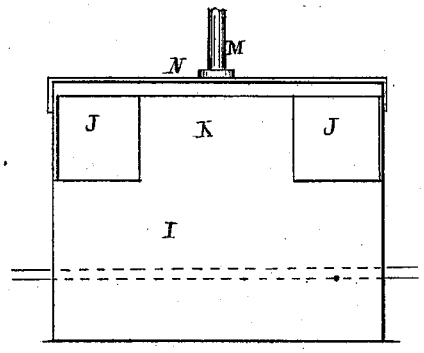


Fig. 3.

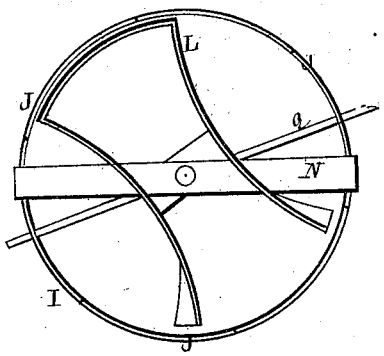
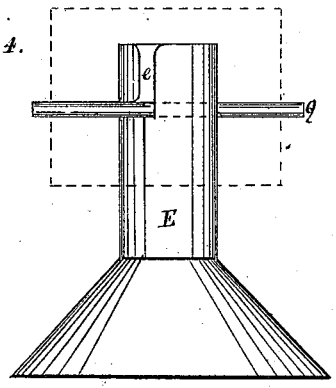


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM R. UNDERHILL, OF VAN WERT, OHIO.

IMPROVEMENT IN STREET-LAMPS.

Specification forming part of Letters Patent No. **207,371**, dated August 27, 1878; application filed April 19, 1878.

To all whom it may concern:

Be it known that I, WILLIAM R. UNDERHILL, of Van Wert, in the county of Van Wert and State of Ohio, have invented new and useful Improvements in Street-Lamps, of which the following is a description, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a vertical transverse section. Figs. 2, 3, and 4 represent detached parts.

Like letters of reference refer to like parts in the several views presented.

The nature of this invention relates to a street oil-lamp; and the object of the same is to produce a lamp that cannot be blown out by the winds, and which at the same time may have free and proper ventilation and an unobstructed radiation of light.

The construction of the aforesaid lamp is substantially as follows, it being an improvement of a lamp for which a patent was granted to me October 10, 1876.

In the drawing, A, Fig. 1, represents a section of the fount or bowl of the lamp, to which the burner and cap B are secured in the ordinary way. Around the base of the burner, and resting on the fount, is an inverted conical shield, C, the purpose of which is to prevent gushes of wind from entering directly into the burner and flickering or extinguishing the light. D is the globe of the lamp, which is or may be an ordinary glass one. On the top of the globe stands a chimney or stack, E, a detached view of which is shown in Fig. 4. Said chimney is provided with a flaring-shaped mouth, forming a base, whereby it is supported upon the top of the globe without being fixed thereto, for a purpose hereinafter shown.

To the top of the chimney is attached a ventilator, constructed as follows: Surrounding the upper end of the chimney is a shell or case, F, Fig. 1, closed at the top. Between said shell and the chimney is formed an annular chamber or flue, *a*, open at the bottom around the chimney. Surrounding the shell F is a shell, G, between which and the shell F is formed an annular flue, *b*, closed at the bottom and open at the top. H is a shell, surrounding the upper part of the shell G, between which and the shell G is annular flue, *c*, closed at the top and open at the bottom. I is an outer shell or case, between which and the shell H is an annular flue, *d*, open at both ends. In the upper end of the case or shell I are made three openings, J, Figs. 2 and 3, leaving a wall between the openings, as seen at K, Fig. 2. Said openings are closed at times by the automatic revolving governor or damper L, Figs. 1 and 3, secured to the lower end of a spindle, M, supported in position upon a cross-piece, N, attached to and extending across the top of the case, as seen in the drawing. O, Fig. 1, is a hood, covering the arrangement of ventilating-flues above described. Up through the center of said hood the spindle M projects, surmounted by a vane, P.

The shells F, G, and H of the ventilator may be secured to each other by any appropriate means, and are supported, together with the outer case and hood, upon the chimney by means of a suspension-rod, Q, passing through the diameter of the ventilator, as shown in Fig. 3, also in Fig. 1. In each of two sides of the upper end of the chimney is made a right-angled slot, *e*, Figs. 1 and 3. On pushing the end of the chimney up into the shell F the vertical part of the slot receives the rod, which, when it is at the bottom of said part, may, by turning the chimney, be brought into the transverse part of the slot, as shown in Fig. 1.

The outer shell or case, I, is not attached to the inner shells, but is supported around them by means of the rod alluded to, which also passes through the case, as shown in the drawing. By not attaching the outer shell or case, I, to the inner shells said inner shells and chimney can be rocked or vibrated on the rod in one direction, for a purpose presently shown.

As aforesaid, this lamp is for street use. To this end the lamp is to be inclosed in a lantern, the upper part of which reaches to the lower part of the ventilator at *f*.

In order to obtain access to the lamp when within the lantern for lighting it or other purpose, the chimney can be slid, in direction of the arrow *i*, off on one side of the globe, and vibrated by virtue of its peculiar attachment to the ventilator—viz., the rod Q and bayonet-lock. This partial vibration and removal of the chimney from the globe allow ample room for the globe to be removed from the burner, and

thereby give access thereto. This tilting of the chimney and the inner section of the ventilator in no way disturbs the outer case or shell, I, and hood O, which remain undisturbed in their connection with the lantern.

The arrows in the ventilator indicate the direction of the draft, which, as will be seen, flows up through the chimney into the flue *a*, down which it descends into the flue *b;* thence upward through the open top to the flue *c*, down which to the flue *d;* from thence upward, and escapes therefrom to the outside through the side openings J under the hood. One or more of the openings J are open at all times; hence a free passage is continued open for the escape of smoke, gas, &c., from the lamp.

To prevent the wind from blowing through the side openings J is the purpose of the damper L alluded to, which is turned around by the vane P as the wind may affect it. The damper closes the opening on the side to which the vane points, and prevents the wind from blowing therein, while the openings on the opposite side are free for ventilation.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In street-lamps, the combination of the automatic governor or damper L, spindle M, hood O, case I, and openings J, substantially as herein set forth.

2. The suspension-rod Q, in combination with the adjustable chimney E, pivoted to and suspended from said rod, and having right-angled slots *e*, in the manner as and for the purpose specified.

3. The adjustable and vibrating stack or chimney E, having right-angled slots *e*, and suspension-rod Q, in combination with the shells F G H and case I, substantially as described.

4. The case or cylinder I, suspension-rod Q, for hanging and supporting the shells F, G, and H and chimney within said case, substantially in the manner as described, and for the purpose set forth.

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