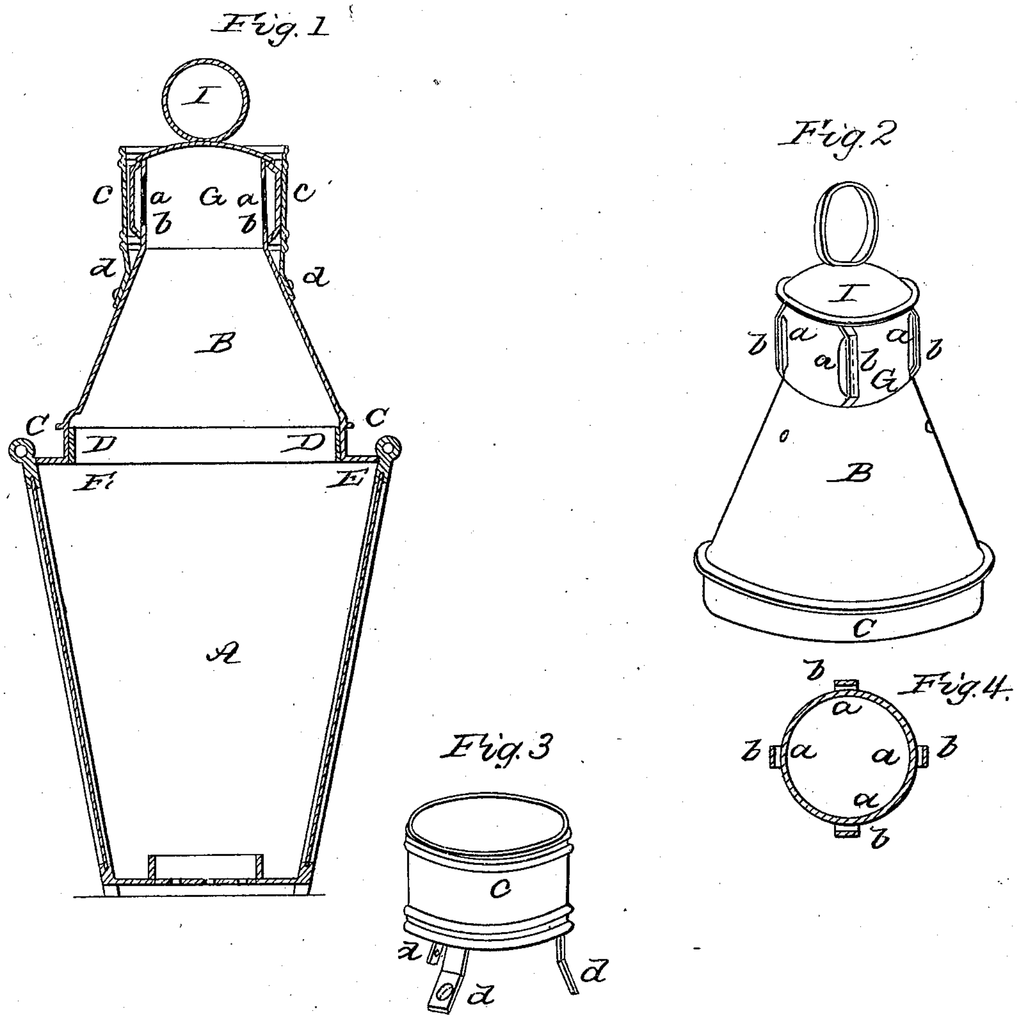
J. BINNEY.

Street Lamp.

No. 46,631. Patented March 7, 1865.



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UNITED STATES PATENT OFFICE.

JOHN BINNEY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN STREET LAMPS, LANTERNS, &c.

Specification forming part of Letters Patent No. **46,631**, dated March 7, 1865.

To all whom it may concern:

Be it known that I, JOHN BINNEY, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Street Lamps or Lanterns; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a sectional elevation of a street-lamp constructed in accordance with this my invention. Figs. 2 and 3 are perspective views of parts of the same detached; and Fig. 4 a horizontal section through the chimney of the lamp, the annular shield or sleeve shown in Fig. 3 being removed.

Street lamps as usually constructed are surmounted by a conical, pyramidal, or other equivalently shaped covering, terminating at top in a chimney, provided with suitable apertures for the escape of the consumed or vitiated air. These apertures were, however, so adapted as to admit of currents of air entering the interior of the lamp, causing unsteadiness or flickering and occasional extinguishment of the illuminating-flame. To remedy this numerous devices were applied with but little success owing to the deflection of the currents of air when striking the surfaces of protecting-shields with which the apertures were mostly provided.

The object of this invention, therefore, is to so construct lamps exposed to winds or changeable currents of air that the winds or currents of air shall not affect the steadiness of the flame, and this I have accomplished by the construction of a street lamp or lantern in the manner substantially as follows:

The lamp A, which may be cylindical, conical, or in the form of an inverted truncated pyramid, as those most generally in use, is surmounted by a cap or roof, B, of metal or glass, or of both metal and glass combined. In this instance it is composed of a truncated cone, B, provided at its lower end with a flange, C, fitting an interior upright flange, D, fast on the top or covering plate, E, of the glass case or lantern proper, A. To the upper end of the cone is secured the chimney G—that is an upright tube having elongated vertical openings *a*. This chimney is closed on top by a spherical cap, L. Over each opening *a* is fastened at its ends a metal band or strip, *b*, in such manner as to allow egress from within the lamp of the vitiated or consumed air, while currents of air coming in an upward or downward direction from without the lamp and a point above or below the opening are excluded.

To prevent currents of air coming horizontally, or at an angle with the horizontal plane, but laterally in relation to the opening—*i. e.*, between the band or strip *b* and the tube G—from entering the interior of the lamp-case or lantern, I provide an additional shield, consisting of an annular band, *c*, of a diameter somewhat larger than the tube G, and so as to include the strips *b*, and of such a height as to entirely inclose the tube overlapping its upper and lower edges. This annular band is held concentrically with the tube G by means of metal tongues *d* projecting from below and riveted to the cone B, as shown in the drawing.

The operation of this combination of devices will be understood by supposing the currents of air striking in any of the directions above indicated. For instance, the wind coming along a horizontal plane from either side will be deflected by means of the annular shield *c*, which entirely incloses the chimney, without, however, interfering with its functions as a chimney—*i. e.*, the aiding the discharge of consumed air. On the other hand, supposing the wind to strike the lamp at an angle with the horizontal in such manner as to enter the annular space between the shield *c* and the tube G, then the current will be deflected by the bands *b*. In this way I have succeeded in combining and constructing a lamp in which it is impossible to extinguish or even cause to flicker the flame by currents of air of whatever intensity or direction.

Having thus fully described my invention and the manner in which the same is or may be carried into effect, I claim—

1. The construction and arrangements of street lamps or lanterns or other lamps ex-

posed to winds or currents of air, substantially as herein described.

2. A lantern or street lamp cap composed of a chimney provided with apertures and overhanging bands, in combination with an annular shield, the whole being constructed for operation in the manner and for the purpose set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

JOHN BINNEY.

Witnesses:

A. POLLOK,
JAS. B. ROBB.