(No Model.)

W. J. SMART.

GAS LAMP.

No. 598,059. Patented Jan. 25, 1898.

Fig. 1.

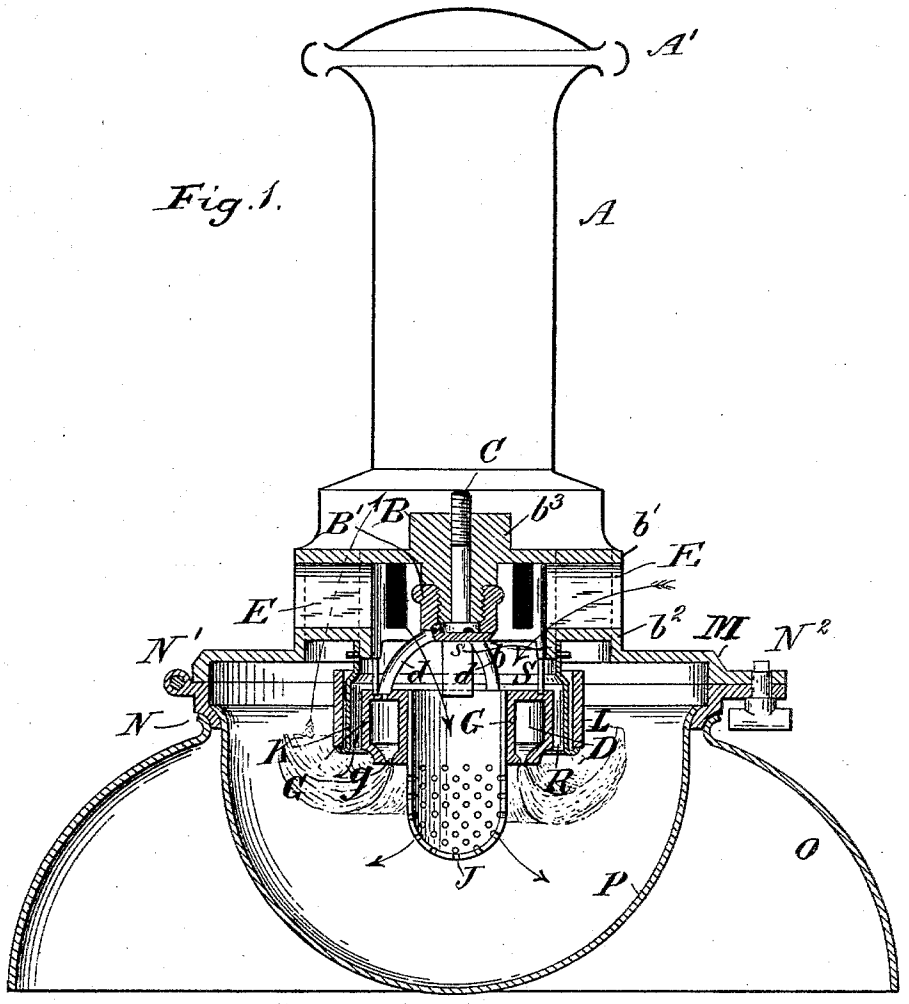
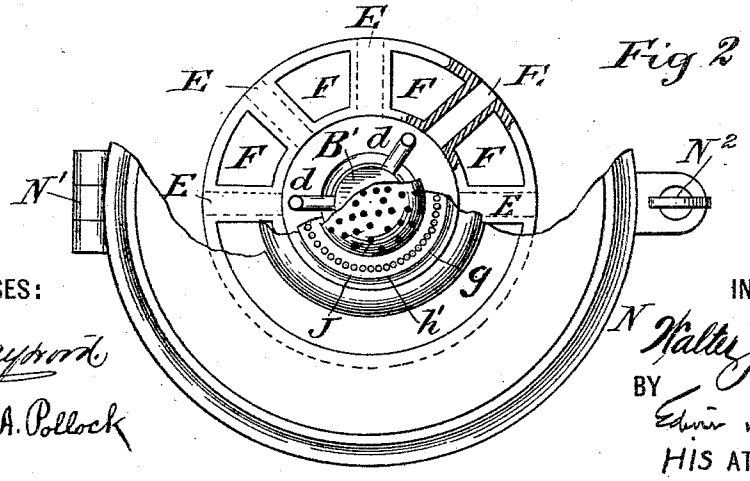


Fig. 2



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GAS-LAMP.

SPECIFICATION forming part of Letters Patent No. 598,059, dated January 25, 1898.

Application filed February 28, 1896. Serial No. 581,113. (No model.)

To all whom it may concern:

Be it known that I, WALTER J. SMART, of South Orange, county of Essex, and State of New Jersey, have invented a certain new and useful Improvement in Gas-Lamps, of which the following is a specification.

I will describe a lamp embodying my improvement and then point out the novel features in a claim.

In the accompanying drawings, Figure 1 is a central vertical section of a lamp embodying my improvement. Fig. 2 is partially an inverted plan and partially a horizontal section of the lamp, certain portions being wholly omitted.

Similar letters of reference designate corresponding parts in both figures.

A designates a pipe of suitable form and dimensions for removing the products of combustion from the lamp. It may be surmounted by a cowl A′ of desirable form.

B designates the lamp-body. It may be made of a single casting or formed in any desirable number of pieces. As shown, it is made in one piece, and is formed with circularly-arranged downwardly-projecting flanges or lugs *s*, a laterally-extending upper plate b', and a laterally-extending flange b^2. The upper plate b' is provided with an enlarged or hub-like portion b^3, extending on both sides of the plate, to which a gas-supply pipe C may be attached. The supply-passage is continued downward through the enlarged portion b^3 and opens outward through the lower surface of the same. The lower part of the enlarged portion b^3 is fitted to engage with a cap B′, here shown as engaging by screw-threads therewith. The cap B′ is hollowed out or recessed to form a chamber or cavity with the lower part of the portion b^3, from which pipes *d* pass outwardly and downwardly, opening at their lower extremities into the annular chamber D.

In the lamp-body B are provided two sets of chambers or passages E and F. The former of these are radial passages—that is, they extend radially outward between the plate b' and the flange b^2—their inner ends opening into the inner opening in the lamp-body, while their outer ends communicate with the atmosphere. They constitute the air-passages. The passages F are longitudinal passages—that is, they extend through the lamp-body at right angles to the direction of the radial passages and between the latter. They open through the plate b' and the flange b^2 and constitute passages for the products of combustion.

G is an annular-shaped piece or gas-burner body forming the annular chamber D. The bottom of this chamber is provided with one or more openings *g*, through which the gas escapes from the chamber, the gas burning below the gas-burner body G.

J designates an air-distributer, here shown as being of a cylindrical form with a hemispherical end portion; but the shape of this latter portion is not essential. It is rigidly secured to and supported by the annular gas-burner body and is provided with numerous perforations below said body. It is also perforated at its lower extremity.

K designates a shell fitted to the lugs *s* and extending downward around the annular gas-burner body G at such distance therefrom as will leave a passage between the outside of the gas-burner body and the shell for the flow of air to the upper side of the flame. It may have a ring of reflecting material L fitted to its exterior, and when this device is used it may rest upon an outwardly-turned flange formed at the lower extremity of the shell K.

M designates a ring-like piece suitably secured to or formed integral with the flange b^2.

N designates a movable ring hinged to the piece M at N′ and provided with a thumb-catch at N^2. The purpose of the ring N is in part to support a globe P, and therefore it may be aptly termed a "globe-holder." The globe P is intended to be made of glass. It is in the main of hemispherical form, but has its edge turned outwardly to fit within the ring N. A reflector O, secured to the ring N, may also be applied when desired.

Air enters the passages E and passes in part downwardly through the lamp-body B, and thence to the air-distributer J. From the latter it escapes through the perforations to the lower side of the flame. Another portion of the air passes outwardly and then downwardly through the space or spaces between the shell K and the annular gas-burner body

G to the upper side of the flame. The waste products pass upward through passages F, and finally out through the pipe A.

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

In a gas-lamp, the combination with a burner-body provided with passages for the inflow of air and the outflow of waste products and comprised in part of a plate formed with a central enlargement having a passage communicating with a source of gas-supply, a cap provided with a chamber secured upon the enlargement of the plate, a gas-burner body provided with a chamber and in its bottom with an annular series of openings, pipes connecting the chamber of the gas-burner body with that of the cap, a perforated cylindrical air-distributer supported centrally upon the gas-burner body and extending below the same, a shell supported upon the plate to surround the gas-burner body but leave a space between them, said shell having an outwardly-extending flange at its lower edge and a ring of reflecting material supported upon the exterior of the shell by the flange thereof, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALTER J. SMART.

Witnesses:
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