

No. 695,850.

Patented Mar. 18, 1902.

C. WOLFF.
BURNER.

(Application filed June 8, 1901.)

(No Model.)

Fig. 1.

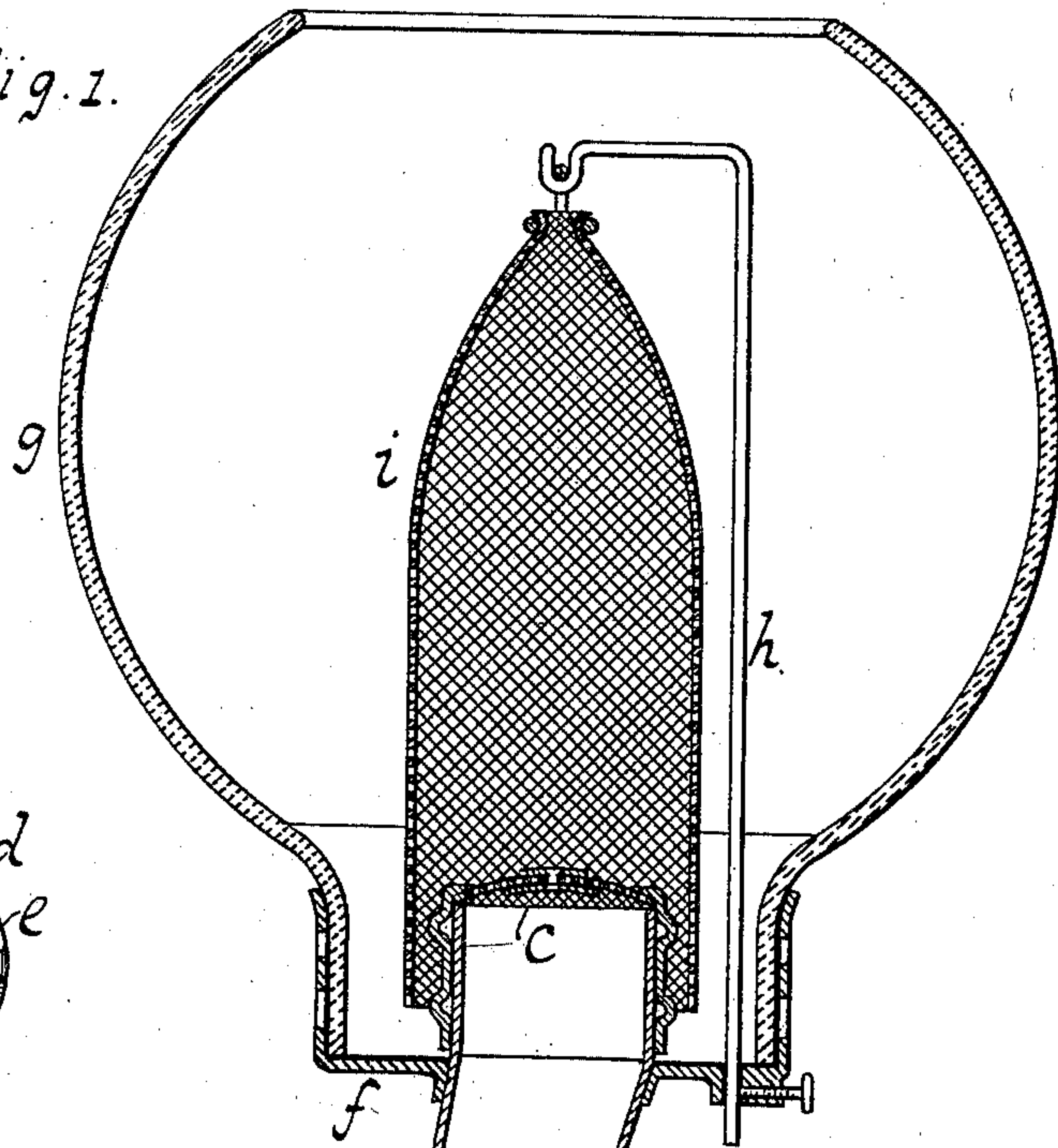
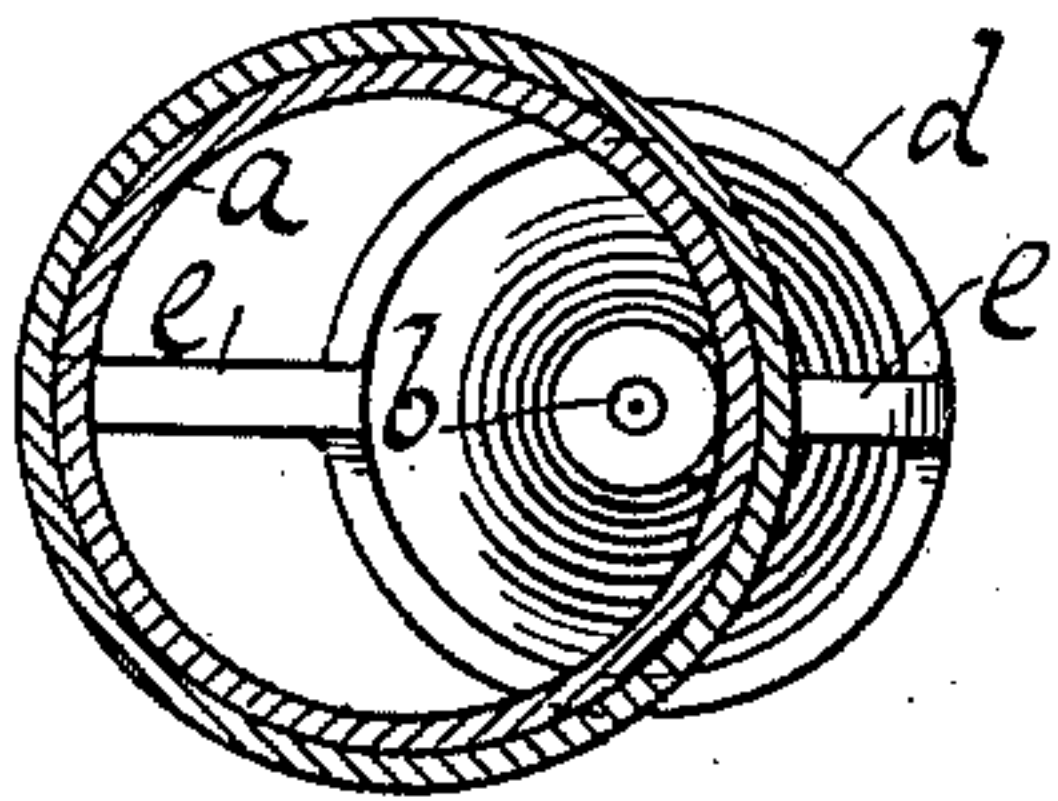


Fig. 2.



WITNESSES:

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CARL WOLFF, OF NEW YORK, N. Y.

BURNER.

SPECIFICATION forming part of Letters Patent No. 695,850, dated March 18, 1902.

Application filed June 8, 1901. Serial No. 63,766. (No model.)

To all whom it may concern:

Be it known that I, CARL WOLFF, a subject of the King of Württemberg, residing at Manhattan borough, New York city, in the county and State of New York, have invented new and useful Improvements in Burners, of which the following is a specification.

This invention relates to a burner suitable, for example, in connection with incandescent mantles and otherwise, the device being of simple construction and insuring thorough consumption of combustible and intense heat.

The invention resides in the novel features of construction set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 is a sectional elevation of a burner. Fig. 2 is a section along $x x$, Fig. 1.

In the drawings is shown a conduit a , the opposite portions or mouths of which can for convenience of description be distinguished as "inlet" and "outlet." At the inlet is a tip or supply b for feeding combustible or gas into the conduit. At the outlet is a gauze or burner c , and a combustible mixture, such as gas and air, passing out at the burner and ignited will burn outside or above the same. The conduit or conducting-tube a is shown placed at an angle to the tip b or to the direction of inflow of combustible from the tip. The tip b is shown arranged eccentrically to the inlet-mouth or lower circumference of the conduit. The arrangement of the example shown in the drawings is such that the line of outflow or a line extended vertically up from tip b will strike a point of the wall of conduit a intermediate the ends or at or in proximity to the narrowest portion of the conduit when constricted or tapering from each end. The conduit, as shown, might be compared to two cone frustums, or wider at the ends than at a point intermediate the ends.

The tube or conduit a is shown provided with means for attaching the tip. A tapped or screw ring d , held by suitable fastening or attachments—as, for example, wires e —can be arranged for eccentrically supporting the tip. Thin wires or braces e form no obstruction to the inlet of air at the lower end or mouth of the conduit, and by locating the tip eccentrically it has been found by practical

test that a more thorough mixture, combustion, and heating are obtained than when the conduit is vertical.

A tip and conduit having been placed out of alinement, as shown, and a burner or gauze applied, a thorough mixture or combustion was found to result without the use of any bafflers or other appliances in the conduit, such as have been used heretofore to secure commingling. Such bafflers, it has been found, tend to cause a certain back pressure, while by omitting the same an easy flow or outlet of gas and air is attained, no obstruction existing between the conduit and the screen or gauze c .

A gallery or support f for a shade or bulb g can be applied, as also a carrier or wire h for a mantle i .

The flares or constriction of the conduit can vary more or less; but the conduit should not be absolutely cylindrical, as this form of construction has not been found to answer so well in practice. It may also be noted that for securing most favorable results the distance or length of the conduit portion from the inlet or bottom end to the constriction or narrowest portion is made somewhat longer or shorter as the pressure or outflow from tip b is more or less powerful or intense.

In stating that the tube and tip are at an angle to one another it is of course manifest that neither part need absolutely be placed in vertical position. For example, the tube might tilt and the tip point vertically or straight up, or the tip could be tilted and the tube point vertical, or both these parts could be off the vertical and at an angle to one another.

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

1. A burner-conduit and a combustible-supply tip therefor arranged at an obtuse angle thereto the tip being so arranged that it causes the combustible initially to touch a point upon the wall of the conduit intermediate its receiving and discharging ends.

2. A burner-conduit having a constricted portion and a tip for said conduit arranged eccentrically relatively to the lower end of said conduit.

3. A burner-conduit and a combustible-sup-

ply tip arranged at an angle to each other and a coupling device uniting said parts having openings to admit air to the conduit.

4. A burner-conduit having a constriction or narrow part and a tip arranged to point to or against the conduit-wall at or in proximity to the constriction substantially as described.

5. A burner-conduit the inner surface of which tapers inwardly from opposite ends and a combustible-supply tip arranged at an angle to said conduit and eccentrically relatively to the lower end of said conduit.

6. A burner-conduit having an open lower end or inlet, a tip attachment, and braces made to eccentrically secure the tip attachment to the conduit without obstructing the inlet substantially as described.

7. A burner-conduit and a tip, said conduit

being placed at an angle to the tip and having a constriction intermediate its ends and nearer one end than the other substantially as described.

8. A burner-conduit having a screen at its outlet and a combustible-supply tip said conduit and tip being arranged at angles to each other, and the inner surface of said conduit being tapered inwardly from the opposite ends thereof and being unobstructed from the tip to said screen.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CARL WOLFF.

Witnesses:

W. C. HAUFF,

E. F. KASTENHUBER.