(No Model.)

S. BERNHEIM.

GAS BURNER.

No. 578,071. Patented Mar. 2, 1897.

FIG. 1.

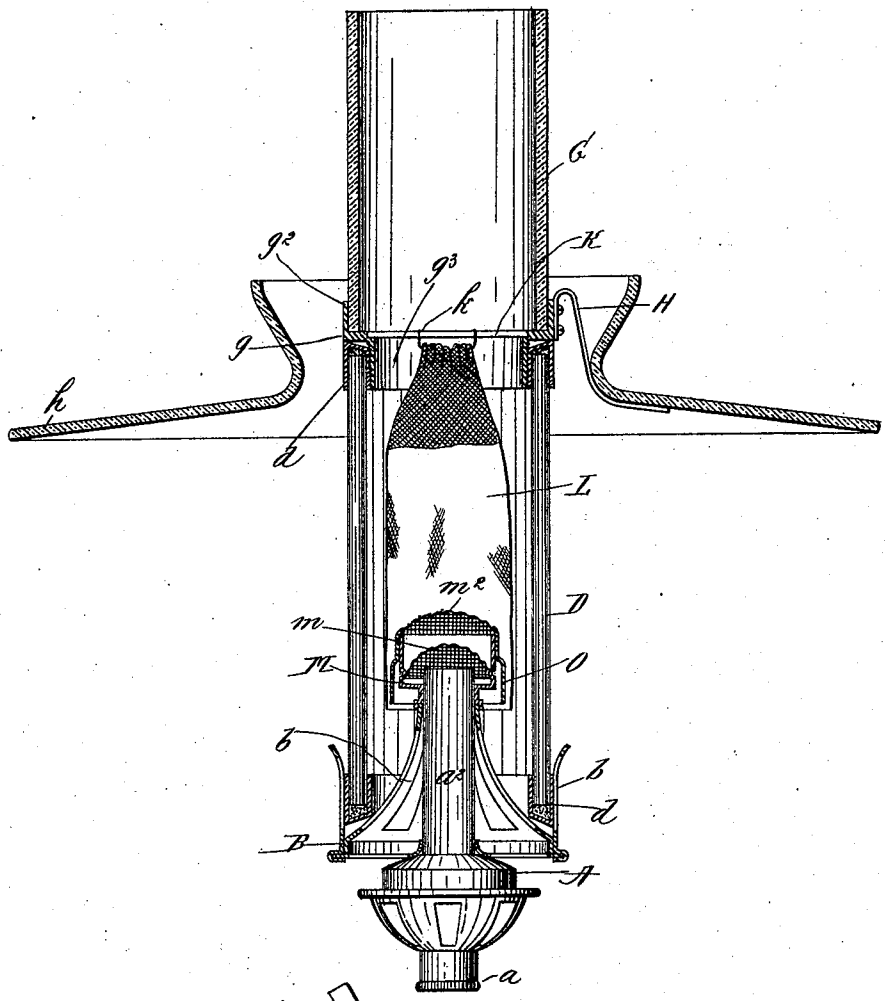
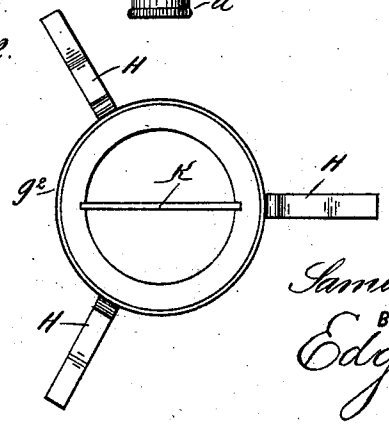


FIG. 2.



WITNESSES:

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SAMUEL BERNHEIM, OF NEW YORK, N. Y.

GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 578,071, dated March 2, 1897.

Application filed January 2, 1896. Serial No. 574,176. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL BERNHEIM, a subject of the Czar of Russia, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Gas-Burners, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to what are known as "incandescent" gas-burners, and particularly what are known as the "Welsbach lights" and others of this class; and the object of the invention is to provide improved means for supporting the mantle or incandescing cone; and with this and other objects in view the invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a sectional side elevation of a burner with my improvement applied thereto, and Fig. 2 a plan view of the chimney and the shade-support.

In the drawings forming part of this specification, A represents the ordinary burner-head, such as is usually employed in the class of gas-burners hereinbefore referred to, and is provided with a tubular extension a, by means of which it may be connected with a gas-fixture in the usual manner, and said burner-head is also provided with an upwardly-directed burner-tube a^2, on which is mounted a chimney-gallery B, provided with springs b, within which in practice is mounted a chimney D, which is preferably composed of vertical glass rods, either tubular or solid, which are held in place by annular heads d, which are U-shaped in cross-section, though this element, in connection with the invention which forms the basis of this application, is immaterial, as a chimney similar in form of any desired construction may be employed.

Mounted upon the upper head b of the chimney D is a supplemental chimney G, which is held in place on the chimney D by means of an annular cap g, having an upwardly-directed flange or rim g^2, within which the supplemental chimney G is placed, and said annular cap g is provided with a depending flange or rim g^3, which is connected with the inner walls of the upper head d of the chimney D in any suitable manner.

It will be observed that the depending flange or rim d^3 of the annular head g is of such size as to closely fit within the upper annular head of the chimney D, and I propose to make the connection between these parts in order that they may be securely held together, and I also employ spring shade-holders H, which are connected with the annular head g and are curved downwardly and outwardly, as shown in Fig. 1, in such manner as to form a safe and secure support for the shade h^4.

Extending transversely across the annular head g, which supports the supplemental chimney, is a rod K, which is intended to support the incandescing mantle or cone L, said mantle or cone being, as is well known, usually composed of a network of earthy substances, which is capable of being rendered incandescent in the frame of the Bunsen burner.

The chimney-gallery B, which is connected with the burner-head A or the tube a^2 thereof, is conical in form, as shown at b^2, and provided with slots or openings, and mounted thereon below the top of the burner-tube is an annular band M, which supports a screen m, of wire mesh or similar material, and above which is arranged a similar screen m^2, of wire mesh or similar material, which is also supported by the annular band M, which is continued upwardly for this purpose, and connected with said annular band M or the upper end thereof is a depending hood O, which extends below said annular band and below the top of the burner-tube a^2 and which is designed to collect and direct within said annular band and around the upper end of the burner-tube the air-currents which enter at the lower end of the chimney.

The incandescing cone or mantle L is suspended from the rod K by means of a wire or similar device k, which is passed around the upper end thereof and by which the upper end of said mantle or cone is gathered or drawn together, and in this position of said mantle or cone the lower end thereof incloses

the ring or band M and the screens m and m^2 and the upper end of the burner-tube a^2.

The upper or supplemental chimney G may be composed of any desired material, and by means of my invention I provide a safe and perfect support for the cone or mantle L and also one which is concealed from view when the burner is in operation, the rod k and the upper end of the cone or mantle L being within the annular upper head d of the chimney D and the annular head g, which supports the supplemental chimney G, and the annular head g, being removable from the upper head d of the chimney D, it will be apparent that these parts may be disconnected whenever desired and new chimneys substituted for the old ones, and it will also be observed that my improved shade-holder is supported on the upper or supplemental chimney and has no connection with the main or lower chimney D or with the support thereof.

My invention is not limited to the exact form, construction, and arrangement of parts herein shown and described, and I therefore reserve the right to make all such alterations therein and modifications thereof as fairly come within the scope of the invention.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a burner-head, substantially as herein shown and described, of a lower chimney composed of a number of glass rods connected by annular metallic end pieces, the bottoms of which end pieces are outwardly beveled or inclined to fit the incline portion of the burner, an annular head or cap provided with a depending annular flange, and adapted to engage the upper end or head pieces of the lower chimney, said head or cap being provided with an upwardly-directed flange, and an upper or supplemental chimney secured within said flange, and the cross-bar adapted to rest upon the horizontal portion of said head or cap, and a canopy supported by said rod, as and for the purpose set forth.

2. The combination with a burner-head, substantially as herein shown and described, of a lower chimney composed of a number of glass rods connected by annular metallic end pieces, the bottoms of which end pieces are outwardly beveled or inclined to fit the incline portion of the burner, an annular head provided with a depending annular flange, and adapted to engage the upper end pieces of the lower chimney, said head being provided with an upwardly-directed flange, and an upper or supplemental chimney secured within said flange, and the cross-bar adapted to rest upon the horizontal portion of said head, curved spring shade-holders attached to the upwardly-directed annular flange of the head, and a shade adapted to be supported by the outer or free ends of said holders, as and for the purpose set forth.

3. The combination with a burner-head, substantially as herein shown and described, of a lower chimney composed of a number of glass rods connected by annular metallic end pieces, the bottoms of which end pieces are outwardly beveled or inclined to fit the incline portion of the burner, and an annular head provided with a depending annular flange, and adapted to engage the upper end pieces of the lower chimney, said head being provided with an upwardly-directed flange, and an upper or supplemental chimney secured within said flange, and the cross-bar adapted to rest upon the horizontal portion of said head, curved spring shade-holders attached to the upwardly-directed annular flange of the head, and a shade adapted to be supported by the outer or free ends of said holders, said burner being provided with a gallery having slits or perforations for the admission of air, and an annular band mounted thereon below the top of the burner, and a screen of wire mesh or similar material supported by said band, and a superimposed screen above the first-mentioned screen also supported by said annular band, and a depending annular head connected with said band and extending below the top of the burner-tube to direct the air upwardly thereto, as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 24th day of December, 1895.

SAMUEL BERNHEIM.

Witnesses:
C. GERST,
L. M. MULLER.