J. G. WEBB.

Vapor Burner.

No. 6,625. Patented Aug. 7, 1849.

Fig. 1

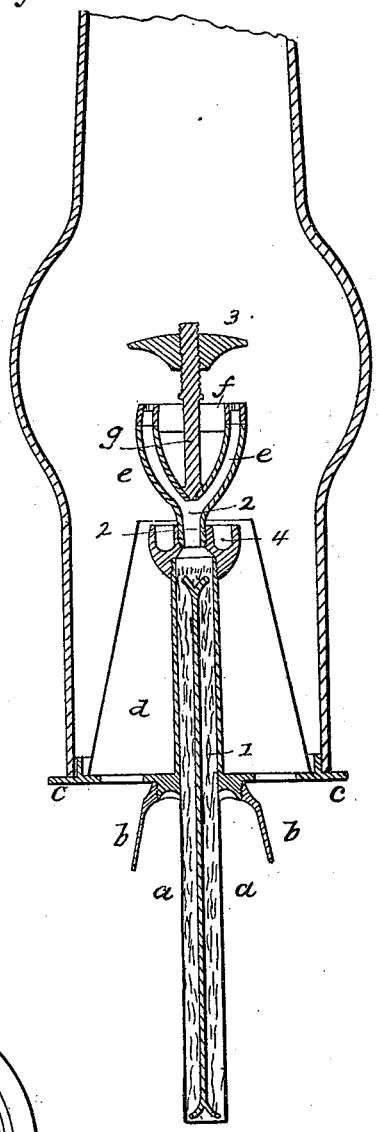


Fig. 3

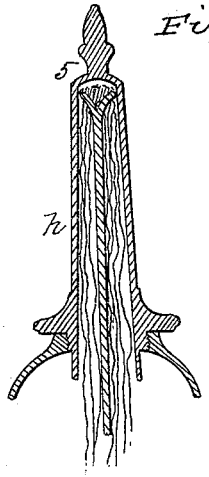
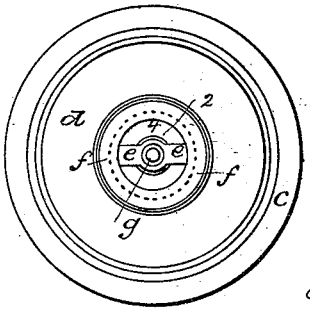


Fig. 2



WITNESSES

W. Serrell

Samuel W. Serrell

INVENTOR

John G. Webb

UNITED STATES PATENT OFFICE.

JNO. G. WEBB, OF WILLIAMSBURG, NEW YORK.

ARGAND BURNER FOR GAS-LAMPS.

Specification of Letters Patent No. 6,625, dated August 7, 1849.

To all whom it may concern:

Be it known that I, JOHN G. WEBB, of Williamsburg, Kings county, State of New York, manufacturer, have invented and made and applied to use a certain new and useful Improvement in the construction of lamps and through which the Argand burner is made capable of generating the gas that it burns from any fluid sufficiently combustible for the purpose, for which improvement, I seek Letters Patent of the United States, and that the said improvement is fully and substantially set forth and shown in the following description and in the drawing annexed to and making part of the specification, wherein—

The Figure 1, is a sectional elevation of a lamp, fitted with this improvement, and Fig. 2, is a plan of the burner. The Fig. 3 is hereafter separately referred to, for the purpose of showing the difference, between my invention, and the most successful self generating gas lamp, within my knowledge.

In the Fig. 1, the wick tube *a*, contains a wick 1, made of any fibrous or other material, that will act by capillary attraction, to raise the combustible liquid from the cistern beneath. *b*, is an inverted cap cover to close the top of the oil cistern; *c*, is the glass bearer, taking the glass outside a rib, and the cone *d*, on the inside of the rib, to concentrate the air draught, from beneath, to the center of the burner. At 2 is a hollow joint, to which the top of the wick 1, only just reaches. Above this the point 2, divides in a tubular yoke or fork *e*, on the top points of which is the Argand burner *f*, made either round or square, with a hollow inside educting the gas from the tubes of the fork or yoke *e*, and passing it out by small holes in the top surface as usual. Between the yokes, and rising through the burner, is a metal conductor *g*, carrying on its top a reverberating metal button 3, adjustable to increase or decrease the contact with the flame around, and below, by a screw on the conductor *g*, and around the joint 2, a cup 4, is placed, to receive a small quantity of any fit combustible liquid or other substance.

The operation of this lamp, thus fitted, is that with the wick 1, and other parts properly in place, with the cistern below supplied, on lighting the combustible matter in the cup, 4, or applying the common wire gauze torch and lighted spirits, heat is freely communicated to all the metal parts in contact, this heat, operating on the upper end of the wick 1, converts the combustible liquid, in the wick, to inflammable gas, which issues, and inflames at the holes in the burner; and as soon as this flame communicates heat to the button 3, and the metal conductor *g*, the heat is transmitted to the fork joint tube and wick below, and maintained, in a sufficient degree, to sustain the conversion of the fluid, drawn up by the wick, into gas, to inflame at the holes of the burners, so that this action and reaction insures a steady, beautiful, and safe light, so long as there is a sufficient supply in the cistern below. The difference between this, and the next best self generating gas lamp, is as follows.

The detached Fig. 3, shows a tube *h*, with the wick next to the burner holes, and the conductor 5, formed as a termination of the wick tube, surrounded by the jets of flame, in such close contact, that not any passage exists, for air to reach the inside of the flame, except by descending from above the top of the conductor 5, which causes an escape of smoke by incomplete deflagration. In the Figs. 1, and 2, it will be seen, that the cone *d*, acts to conduct air from below, to the center of the Argand burner, and that the conductor *g* and button 3, act to transmit the heat for vaporization of the fluid in the wick, so that the addition of this conductor and button to an Argand burner, thus fitted, at once makes it a self generator of the gas that it burns, and secures all the advantage of a central supply of fresh air, to the inside of the cylinder of illuminating flame, above the burners, thereby increasing the intensity of the light, by consuming the smoke that otherwise escapes from all incomplete deflagration of combustible matter, and saving the waste of the combustible liquid, in the like proportion to the more complete use of its products.

I claim—

The application of the conductor *g*, and button 3, acting in the center of an Argand burner, to conduct heat to the liquid matter in the wick below, for the purpose of making the Argand burner a self generator of the gas it consumes; substantially in the manner, and with the effects described and shown.

In witness whereof I have hereunto subscribed my name in the city of New York this second day of January in the year 1849.

JOHN G. WEBB.

Witnesses:

W. SERRELL,

LEMUEL W. SERRELL.