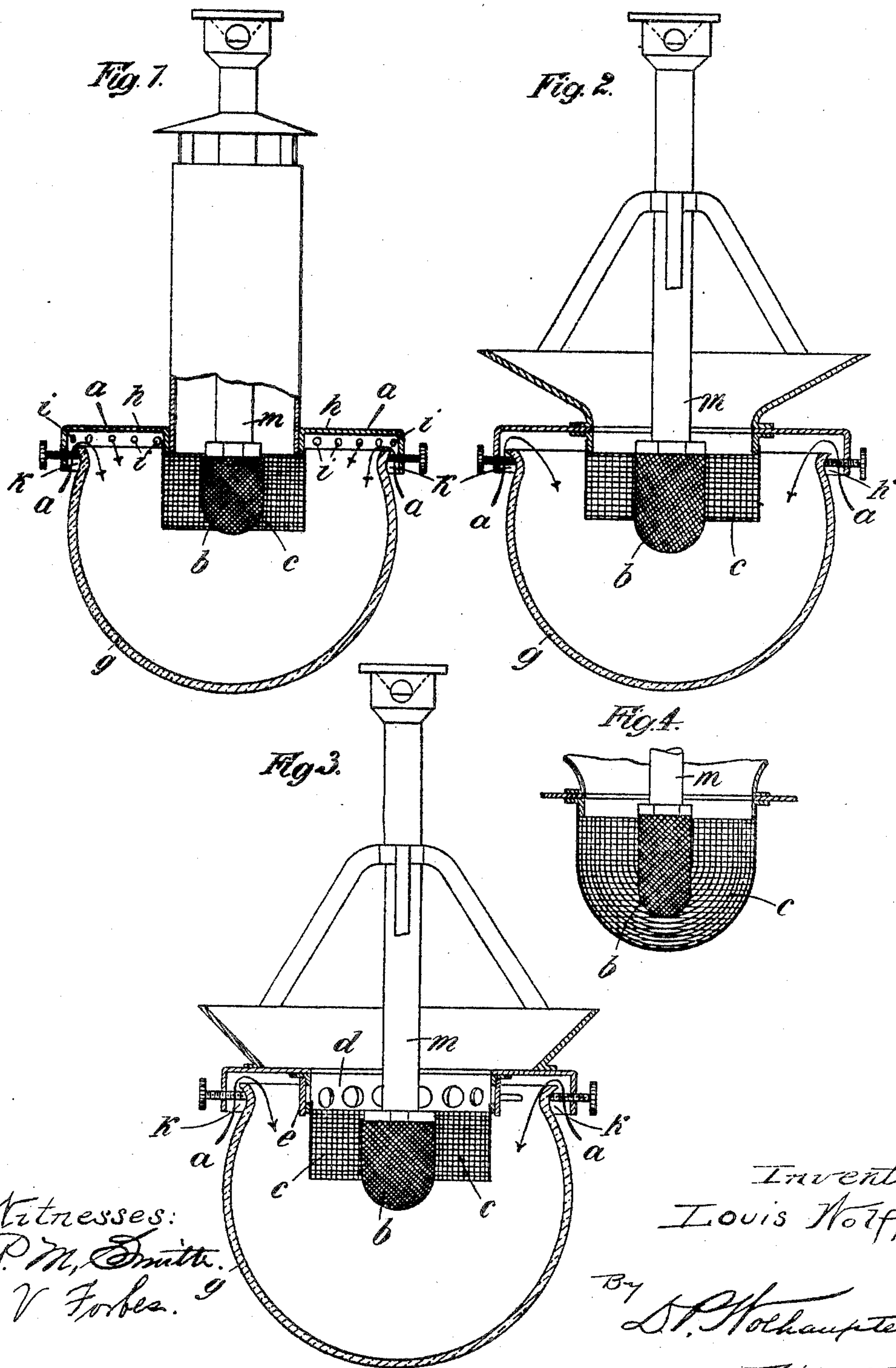


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INVERTED INCANDESCENT LAMP.  
APPLICATION FILED MAR. 3, 1905.





# UNITED STATES PATENT OFFICE.

LOUIS WOLFF, OF BERLIN, GERMANY.

## INVERTED INCANDESCENT LAMP.

No. 797,655.

Specification of Letters Patent.

Patented Aug. 22, 1905.

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*To all whom it may concern:*

Be it known that I, LOUIS WOLFF, a subject of the King of Prussia, German Emperor, and a resident of Berlin, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Inverted Incandescent Gas-Lamps, of which the following is a full, clear, and exact description.

This invention relates to an improvement in the so-called "inverted incandescent gas-lamps" having a downwardly-directed gas-outlet aperture, which improvement consists in a metal mantle or casing heated by the flame arranged between the inlet for the external air into the lamp and the incandescent body in order to preliminarily heat, by means of this metal mantle or casing, the air of combustion and allow it to reach the incandescent body in a preliminarily-warmed condition, whereby the illuminating power of the lamp is increased.

Vertical sections of some forms of construction of inverted incandescent gas-lamps provided with this improvement are shown in the accompanying drawings.

In Figures 1 and 2 a sleeve or otherwise shaped wire-mesh screen, mantle, or the like *c* is arranged on the lamp between the lamp-globe *g* and the incandescent body *b* and attached to the lamp in any suitable manner. The fresh external air passes at *a* into the lamp and may enter either through holes *i*, Fig. 1, arranged in the so-called "lamp-plate" or "lamp-dish" *h*, or through an aperture *k*, Figs. 1 and 2, left free between the globe *g* and the dish or plate *h*, or through both simultaneously. Apertures for the admission of the air may also be provided in the glass globe *g*. The entering air, in consequence of the draft existing in the lamp, will be drawn upward through the meshes of the screen or mantle *c*, which meshes are heated by reason of the proximity of the flame, and is effectively warmed, which has for a consequence an increase in the illuminating power of the lamp.

In the form of construction shown in Fig. 3 the screen or mantle *c* is attached to a sheet-metal casing *d*, provided with holes, round which casing a second regulating-ring *e*, also provided with holes, is revolvably placed. The holes in the casing *d* and in the ring *e* serve for the admission of cold air from the inlet *a* to the mixing-tube *m* for the purpose of cooling the latter. By turning the ring *e* the holes in the rings *d* and *e* are closed or opened, more or less, and thereby the admission of cold air

to the mixing-tube *m* may be suitably regulated.

In the form of construction shown in Fig. 4 the incandescent body *b* is entirely inclosed by a perforated mantle or sieve *c*. The screen or mantle *c* may be of any suitable construction—that is to say, they may be wire screens or sheet-metal casings having larger or smaller perforations. When the air for combustion is drawn through this sieve, it is also finely subdivided, and in consequence of this fine subdivision its heating by the heated sieve is brought about in a peculiarly uniform and intense manner.

In the form of construction of the screen or mantle *c* shown in Figs. 1, 2, and 3 it may also be unperforated—that is to say, an imperforate sheet-metal casing only open beneath, round which the inflowing air for the combustion flows in from beneath, and thereby also is warmed by means of the screen *c*, heated from the flame.

The screen or mantle *c* replaces a cylinder.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. An inverted incandescent gas-lamp comprising a pendent gas-supply pipe, an incandescent burner fitted to the lower end of the pipe, a globe-support, a cylindrical foraminous metallic screen pendent from the central portion of said support and arranged about the burner, a globe also suspended from the said support, and means for admitting air into the globe.

2. An inverted incandescent gas-lamp comprising a gas-supply pipe, an incandescent burner fitted to the lower end of the pipe, the globe-support having a central ring portion, a cylindrical metallic screen pendent from the central ring portion of the globe-support and open at the top and bottom, said screen being arranged about the burner, a globe suspended from the said support, means for admitting air into the globe, and an air-supply regulator carried by said central ring portion of the globe-support above the plane of the said screen.

In witness whereof I have hereunto set my hand in presence of two witnesses.

LOUIS WOLFF.

Witnesses:

WOLDEMAR HAUPT,  
HENRY HASPER.