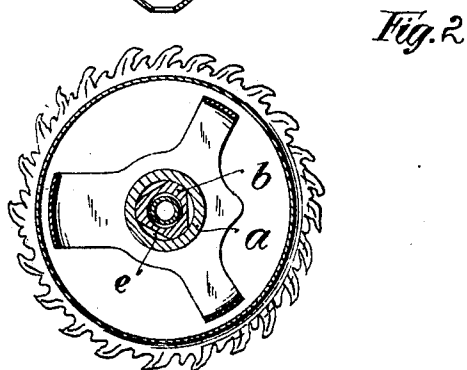
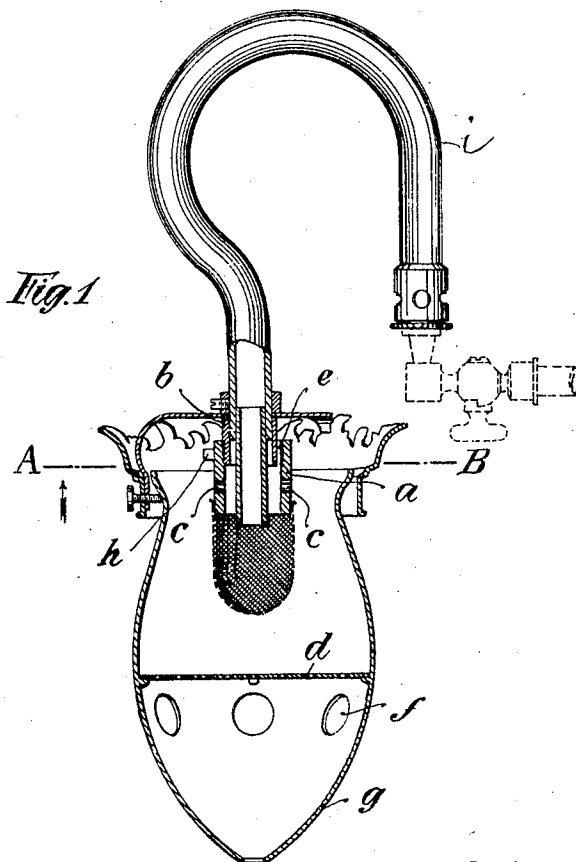


No. 872,367

PATENTED DEC. 3, 1907.

M. PLEDATH.
INVERTED INCANDESCENT GAS BURNER.
APPLICATION FILED DEC. 14, 1905.



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INVERTED INCANDESCENT GAS-BURNER.

No. 872,367.

Specification of Letters Patent.

Patented Dec. 3, 1907.

Application filed December 14, 1905. Serial No. 291,748.

To all whom it may concern:

Be it known that I, MAX PLEDATH, of 14 Planufer, Berlin, Germany, manufacturer, have invented new and useful Improvements in Inverted Incandescent Gas-Burners, of which the following is a specification.

My invention I have illustrated on the accompanying drawings, in which

Figure 1 shows a vertical section and Fig. 2 a cross section on line A—B of Fig. 1.

Till now the mantles of inverted incandescent gas burners have been suspended by means of supports similar to a bayonet. But this mode of attachment has the disadvantage, that the support must be manufactured of metal, which is easily consumed owing to the heat of the flame. Other methods of attaching the mantles involving the use of magnesia or porcelain are objectionable for the reason that their employment entails a constant vibration of the mantle, whereby a flickering of the light is caused. All these methods of attachment are subject to the further disadvantage that the mixing pipe must be made of an incombustible material, as the warm fresh air constantly coming into contact with the metal of the pipe will cause it to be consumed.

Mixing pipes or tubes made of porcelain, steatite, or magnesia require frequent renewal because cracks are easily produced by the heat. Hence metal is preferable for the mixing pipe provided it is not liable to be attacked by the oxygen of the air.

My invention aims at avoiding these disadvantages and accordingly the mantle support *a* preferably made of porcelain, magnesia, or the like is screwed on a socket *b* similar to that of an electric incandescent lamp. The socket *b* cannot be attacked by the oxygen of the air, as it is partly protected from the outer air by the mantle support *a*. Preferably the latter is so constructed, that it extends somewhat over the screwthreaded socket *b*, so that the air or the gases are inclosed in the free part of the mantle support. The mixing pipe *i* is thus at the same time protected from the outer air so that the pipe does not waste away.

Since it is necessary to maintain a slight draft within the mantle as otherwise too great a pressure would occur within the mantle, it is advantageous to arrange flat sur-

faces *e*, grooves or filed out surfaces around the circumference of the mantle support and perforations *c* in the same, so that a slight stream may enter between the socket *b* and the mantle support *a*. Both arrangements may, of course, be simultaneously or not provided. When draft apertures *c* are used there is no danger that the inner metallic mixing pipe will be attacked, since only the products of combustion pass the apertures and the entrance of fresh air is impossible. With a suitable distribution of these air draft apertures *c* the gas within the burner will burn steadily, without flickering, but little flickering may ensue when the gas pressure is reduced. This flickering or fluctuation of the light is caused by the perforations *f* in the lower part of the glass globe *g* of the burner, absolutely necessary for the combustion process. Through these perforations *f* a fluctuating draft goes on, which constantly alters the air pressures within the globe. To overcome this difficulty I have placed a perforated disk *d* above the perforations *f*, so that air entering through the latter will expand over the entire surface of the disk *d* and then rise without any fluctuation. An absolutely steady light is obtained in this way even with a strong draft or low gas pressure, and in addition the disk *d* is found to give additional intensity to the illumination, when the gas pressure is low. The illuminating power is greater than when such a perforated disk is not in use. The disk *d* may be made of wire-gauze or perforated sheetmetal or further a glass or mica disk with many holes may be used.

It is advantageous that the mantle support *a* should be provided with projections *h* to afford greater facility in packing the mantles, and in suspending them during the burning process of the manufacture.

Having now described my invention what I claim is:

1. In an inverted incandescent gas-burner the combination of a mantle in inverted position, a screw-threaded mantle-support (*a*) in connection with the mantle, perforations (*c*) for draft in the cylindrical wall of the support, a flatted socket (*b*) keeping the mantle-support in position leaving passages (*e*) between itself and the support the perforations and passages being channels for the passage of a slight stream of products of combustion and means for the conduction of

gas and air into the mantle, as and for the purpose specified.

2. In an inverted incandescent gas-burner the combination of a mantle in inverted position, means for keeping the same in position, a globe perforated on its lower part inclosing the mantle—a perforated disk made

of wire-gauze and inserted in the globe above the perforations of the globe as and for the purpose specified.

MAX PLEDATH.

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