

(No Model.)

A. P. GUYER.

GAS BURNER.

No. 314,376.

Patented Mar. 24, 1885.

Fig. 1.

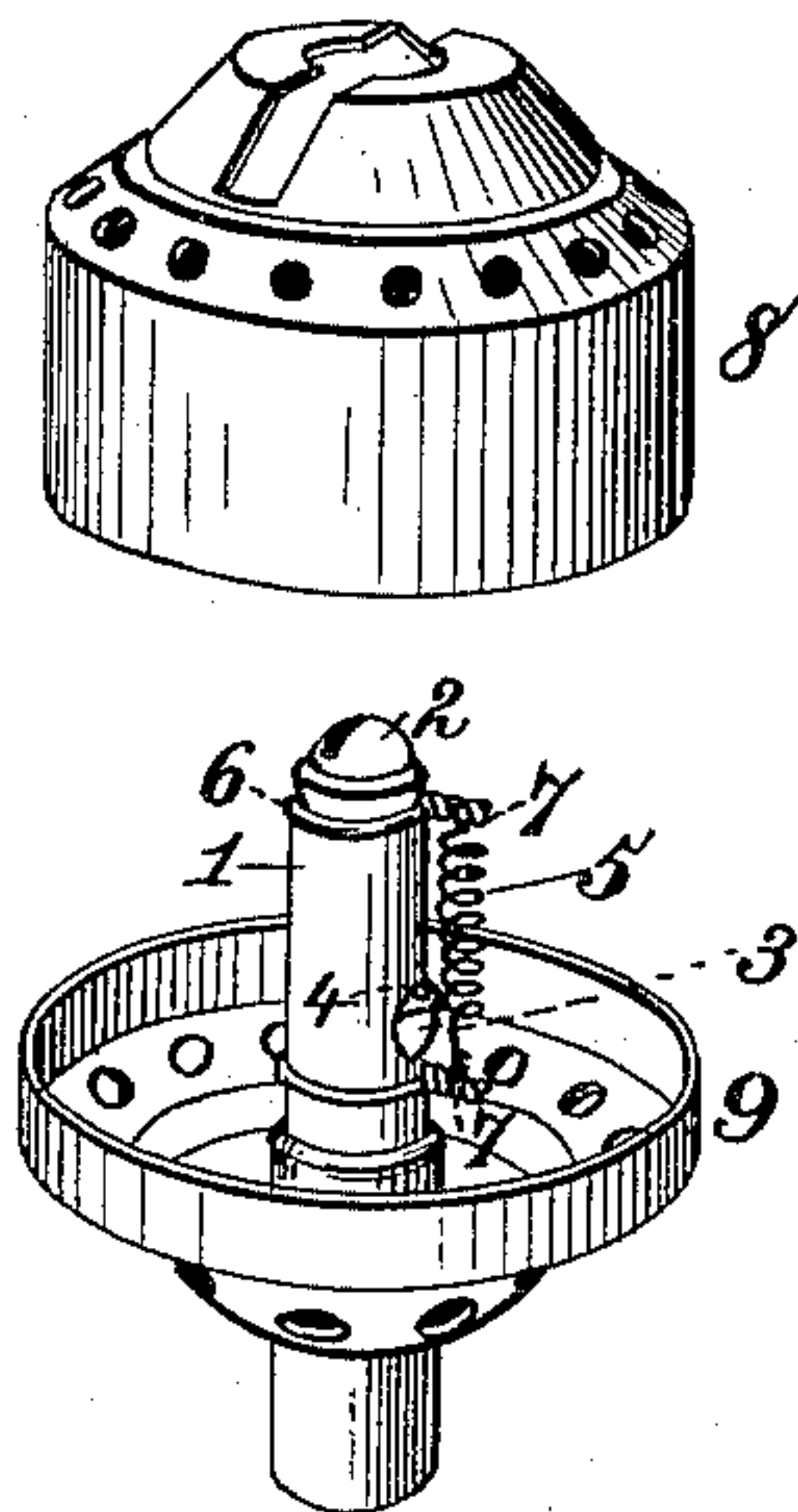


Fig. 2.

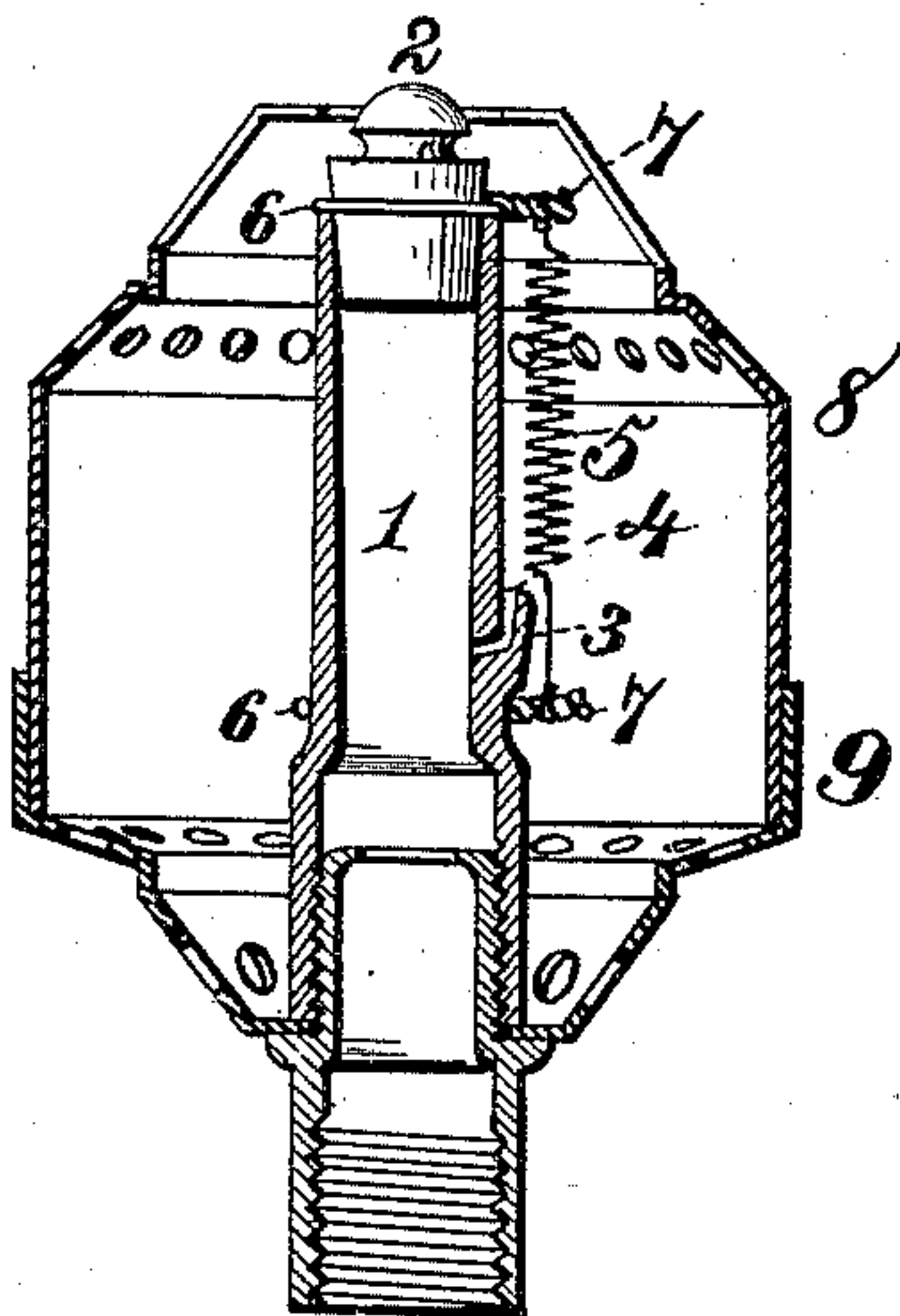
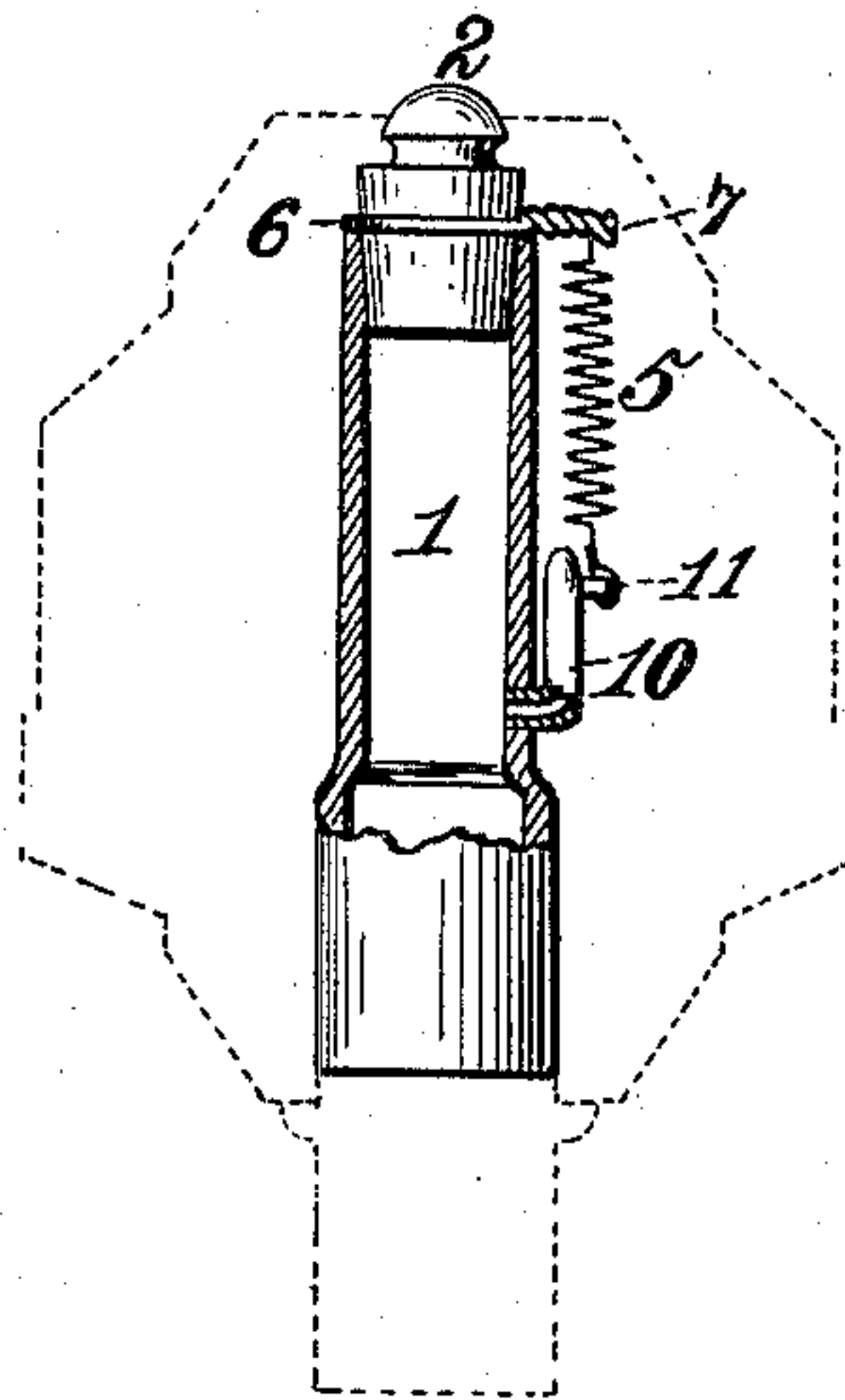


Fig. 3.



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UNITED STATES PATENT OFFICE.

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GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 314,376, dated March 24, 1885.

Application filed October 24, 1884. (No model.)

To all whom it may concern:

Be it known that I, ALLAN P. GUYER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Gas-Burners, of which the following is a specification.

The present invention relates to that class of gas-burners which are provided with a platinum coil or other body that is maintained in a heated or incandescent state to relight the gas issuing from the burner when the flame is blown out or extinguished from any cause whatever.

In burners of the type specified it has been found objectionable to locate the platinum coil directly above the tip of the main burner, because, being within the flame, it is liable to impair the size or brilliancy thereof, and is also subject to rapid destruction by reason of the constant and extreme heat of the flame.

The object of the present invention is to remedy the defects of the so-called "self-lighting" gas-burners by providing the same with a platinum or other coil that extends vertically along the burner-tube, between the tip thereof and an orifice or small tube provided for the issuance of a jet of gas that, when lighted, will serve to maintain the platinum-coil in a heated or incandescent state. The burner-tube is encircled near its tip and immediately below the gas-orifice for the secondary flame by two bands or rings of wire, the twisted ends of which project beyond the burner-tube and have the vertically-extending platinum coil attached thereto. Instead of such wire rings, outwardly-projecting lugs may be formed on the burner-tube to serve as points of attachment for the platinum coil, and instead of having a small gas-jet opening in the main burner-tube a supplementary tube may serve to receive gas from the main gas-tube and extend vertically along the main burner-tube. In such construction the platinum coil is attached to a sleeve or lug on said auxiliary burner-tube and to a lug or a sleeve beneath the burner-tip.

In the drawings, Figure 1 is a perspective view of a burner embodying my invention, the cap encircling the burner being shown removed. Fig. 2 is a vertical section of the

burner and cap or hood in position. Fig. 3 is a modification representing the adaptation of my invention to a secondary burner-tube arranged alongside the main burner.

The reference-numeral 1 designates the burner proper, the tip 2 of which is preferably made of lava or analogous non-corrosive substance, and may have the customary "fish-tail" or other suitable openings.

At a suitable point between the tip 2 and the base of the burner is formed a boss or enlargement, 3, which is pierced with a vertical hole, 4, that leads into an aperture communicating with the bore of the burner. In this manner a small amount of gas is caused to issue through the hole 4 whenever the communication between the burner and gas-supply pipe is established by a cock or other device. The small gas-jet, when ignited, produces a flamelet that serves to heat or render incandescent a platinum or other metallic coil or wire, 5, which extends in a vertical line from a point immediately below the boss 4.

As shown in Figs. 1 and 2, two metal wires, 6, encircle the burner-tube at the points above specified, or where the platinum coil terminates, and these wires have their ends twisted together to form outwardly-projecting points 7, to which the ends of the platinum coils are attached. It will thus be seen that the platinum coil is located within a vertical flamelet caused by the combustion of gas issuing from the orifice 4. In this manner it is evident that the coil is heated or made incandescent by the small flame, so that when the main flame is extinguished by any cause whatever the incandescent wire will immediately relight the gas issuing from the burner-tube. A detachable cap or hood, 8, surrounding the burner, is slotted at the top for the passage of the flat flame, and rests upon a base-rim, 9, that is firmly fitted on the burner-tube, near the base thereof. This rim is provided with perforations for the admission of air to support combustion.

The object of the hood is to induce a forced current of heated air and concentrate it in contact with the gas issuing from the tip, so as to cause a more perfect combustion of the latter and augment the brilliancy of the light.

It is evident that the vertical platinum coil

may be attached to outwardly-projecting lugs formed on the burner, said lugs taking the place of the wire rings heretofore described.

Referring to Fig. 3, it is apparent that instead of making a vertical hole in a boss of the burner-tube for the issuance of a small jet of gas there is arranged alongside said burner a vertical jet-tube, 10, that is bent at the bottom and leads into the burner-tube, so as to take a sufficient amount of gas therefrom to be burned at the tip of said tube 10. This tube may also be conducted into the gas-supply pipe when a constant flame is to be employed for lighting the gas, as in the so-called "self-lighting" gas-burners. The jet-tube 10 is shown provided with a lug, 11, to which the lower end of the platinum coil is attached, the upper end thereof being connected with a lug or ring on the burner, as above indicated.

Having thus described my invention, what I claim is—

1. A gas-burner having an auxiliary burn-

er arranged beneath the main burner-tip and provided with outwardly-projecting supports, and a vertically-arranged platinum-wire coil or incandescent body attached to said supports on the burner, substantially as described. 25

2. A gas-burner having a boss or enlargement provided with a vertical aperture leading into the gas-chamber of the burner, outwardly-projecting supports located on the burner beneath the tip portion and the apertured boss thereof, and a platinum coil or wire connected with said supports, so as to be within or in line with the flamelet issuing from the aperture in the boss of the burner, substantially as described. 30 35

In testimony whereof I have affixed my signature in presence of two witnesses.

ALLAN P. GUYER.

Witnesses:

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J. A. RUTHERFORD.