A. C. MOTT, Jr.

LIGHTING DEVICE FOR GAS BURNERS OF OVENS.

APPLICATION FILED JUNE 28, 1912.

1,072,349. Patented Sept. 2, 1913.

Fig. 1.

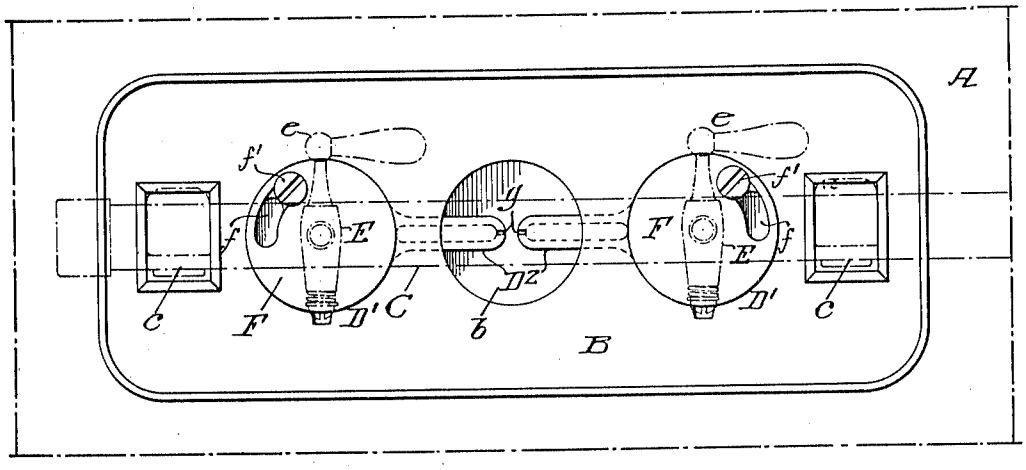


Fig. 3.

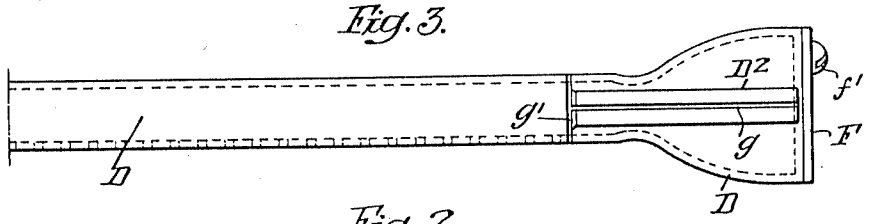
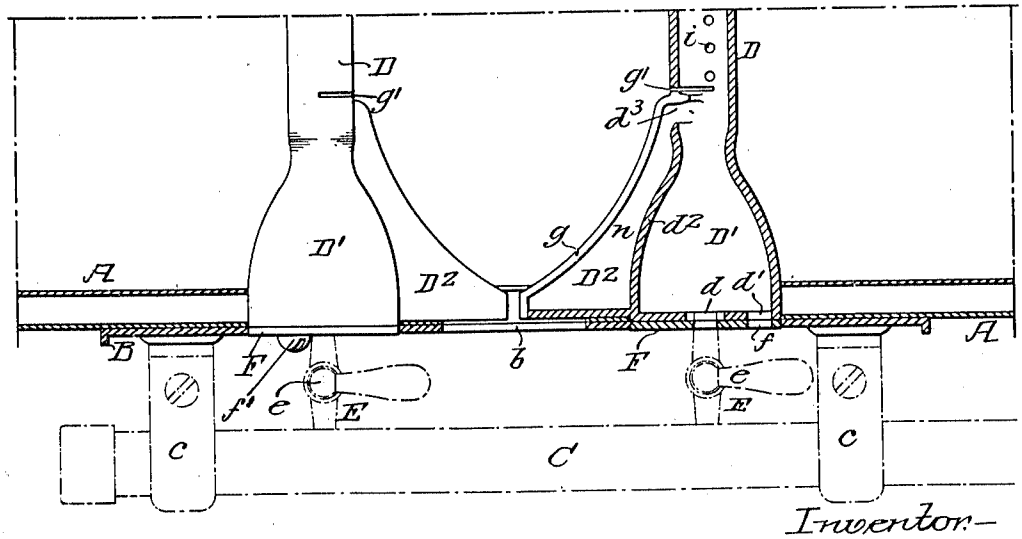


Fig. 2.



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UNITED STATES PATENT OFFICE.

ABRAM C. MOTT, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO ABRAM COX STOVE COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

LIGHTING DEVICE FOR GAS-BURNERS OF OVENS.

1,072,349. Specification of Letters Patent. Patented Sept. 2, 1913.

Application filed June 28, 1912. Serial No. 706,447.

To all whom it may concern:

Be it known that I, ABRAM C. MOTT, Jr., a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Lighting Devices for Gas-Burners of Ovens, of which the following is a specification.

One object of my invention is to construct a gas lighting device for oven burners, which will be so located that it can be readily ignited; the flame being carried to the main burner within the oven structure.

A further object of the invention is to so arrange two burners that the gas of one burner can be ignited by the flame of the other burner.

In the accompanying drawing:—Figure 1, is a front view of sufficient of a gas range to illustrate my invention; Fig. 2, is a sectional plan view illustrating two burners, one of the burners being in section; and Fig. 3, is a side view of a portion of one of the burners illustrating the invention.

Referring to the drawings, A is the casing of a gas stove inclosing the oven, which is to be heated by gas.

D, D are two burners, in the present instance, spaced apart as shown in Fig. 2. Each of these burners has an enlarged head D′ at the forward end inclosing the mixing chamber, and each head projects through an opening in the casing A and through an opening in the plate B secured to the casing. At a point midway between the two burners, in the present instance, is a circular opening *b* extending through the casing and plate B and through which the burner is ignited. The end of each burner head is closed, with the exception of a central opening *d* into which projects the gas nozzles E coupled to the gas supply pipe C, and a slot *d′* through which air is admitted, which is mixed with the gas to provide the proper combustible mixture. The gas nozzles E are provided with valves *e* and the supply pipe C, in the present instance, as shown by dotted lines in Fig. 2, is mounted in brackets *c* secured to the plate B.

In order to regulate the amount of air admitted to the burner, I provide disk valves F, each having a slot *f*, which may aline with the slot *d′* in the end of the burner. A screw *f′* is provided to secure the valve in the position to which it is adjusted; the parts being so arranged that it is impossible to tamper with this valve without the use of a screw driver, as the valve, after being once set, must not be re-adjusted, as a wrong mixture of gas and air would result.

i is a series of perforations in each gas burner, preferably extending along the bottom of the burner through which the gas escapes. These openings are some distance from the outer wall of the stove or oven and, consequently, in order to ignite the gas escaping through the perforations, I provide a lateral extension D^2 which is preferably formed integral with the burner. This extension is narrow, as shown in the drawing, and one extension projects toward another. Each projection has a narrow slot *g* extending from the end of the head of the burner close to the casing A of the oven to a point near the first perforation in the burner, as clearly shown in Fig. 3. The slot is very narrow and communicates with a slot *g′* which leads to the line of perforations.

The two projecting ends of the extension D^2 are exposed through the opening *b* in the plate B, as illustrated in Fig. 1, so that at this point when the gas is turned into both burners a narrow film of gas is projected from each extension and, by placing a match, or other lighting device, at this point, the gas will be ignited and the flame will travel along the slots *g*, *g′*, igniting the gas escaping through the perforations, or, if one burner is in use and it is wished to use the other burner as well, all that is necessary is to turn the valve to admit gas to the last mentioned burner, which will be ignited by the flame from the other burner.

In the interior of each burner is a partition d^2 which extends from the forward end to a point near the end of the mixing chamber, and projecting into the burner beyond this point is a baffle d^3 which directs a portion of the mixture into the space *n* in the extension D^2 back of the partition. It will, therefore, be seen that in the construction illustrated the gas escaping through the narrow slot *g* does not come directly from the gas nozzle E, but must pass around the partition d^2, as clearly shown in Fig. 2. Thus, the main body of gas escapes through the perforations *i*. This insures the use of but a small quantity of gas for the purpose of

lighting the gas escaping from the main burner.

The head D′, being enlarged as shown, allows for the thorough mixture of gas and air prior to the escape from the burner. The burners are so formed that one is a duplicate of another, one pattern only being necessary, and each burner is preferably made in a single casting, so that it can be cheaply and accurately manufactured and will not become distorted by the heat.

By arranging the burners so that the extensions will be close together, I am enabled to ignite the gas of one burner from the flame of the other burner, without having to apply a match or independent lighting device, as, in some instances, it may be necessary to use only one burner and again it may be necessary to use two burners.

I claim:—

1. A burner for gas ranges having a body portion; a mixing chamber at one end; a lateral extension having an opening for the escape of a small quantity of gas; a partition separating the mixing chamber from the extension; and a baffle projecting into the burner beyond the end of the partition to direct a certain proportion of the gas mixture to the lateral extension.

2. A gas burner for ovens having a perforated tubular body and an enlarged head at one end forming a mixing chamber and a lateral extension having a narrow slot therein, said slot terminating in close proximity to the perforations in the body of the burner; and a partition extending to a point near the narrow slot of the extension where it communicates with the perforations in the burner, so that the gas escaping through the slot must pass around the partition, preventing the ignition of the gas within the mixing chamber.

3. The combination in a gas range, of a casing having a central opening and openings at each side of the central opening, said openings being adapted to receive a burner; a plate secured to the casing, also having a central opening and side openings alining with the openings in the casing; two burners having enlarged heads adapted to the side openings and having lateral projections exposed through the central opening, each projection having a longitudinal slot at the side thereof, said burners being arranged so that the projections will be in close proximity to each other.

4. The combination in a gas range, of a casing; two burners projecting through the casing; said casing having an opening located between the two burners; means for supplying gas and air to each burner; said burners having a series of perforations and each having a lateral extension slotted throughout its length and having a transverse slot forming communication between the slot of the extension and the perforations of the burner; said extensions projecting toward each other and exposed through the central opening in the casing.

5. A burner for a gas range having a body portion; with an enlarged head at one end forming a mixing chamber and having a slotted lateral projection; the body portion of the burner having gas outlets; a partition separating the mixing chamber in the head from the slotted projection; said partition being less in length than the projection; said head having an opening in its end for a gas nozzle and having a slot for the admission of air; a slotted valve mounted on the casing; and means for securing the valve to the casing; the parts being so arranged that the gas will pass to the rear of the burner, a portion traveling back into the slotted extension.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ABRAM C. MOTT, Jr.

Witnesses:
Jos. H. Klein,
W. A. Barr.