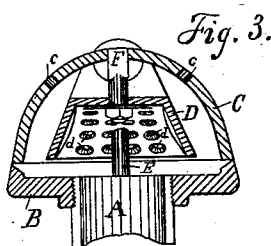
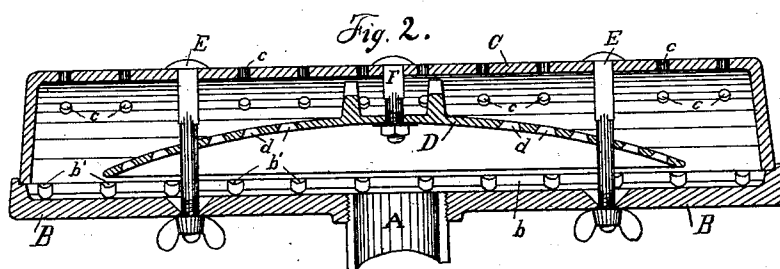
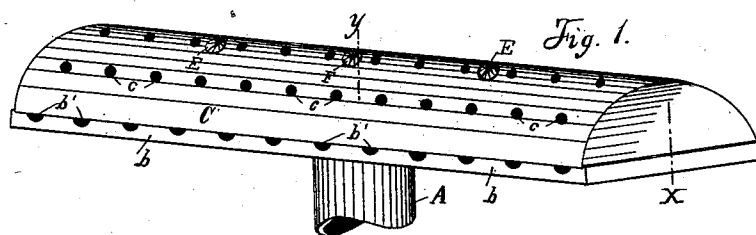


(No Model.)

M. & E. M. LOVE.
FUEL GAS BURNER.

No. 366,780.

Patented July 19, 1887.



Witnesses.

Geo. R. Bejington
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Att'y.

UNITED STATES PATENT OFFICE.

MILTON LOVE AND ELMER M. LOVE, OF CORRY, PENNSYLVANIA.

FUEL-GAS BURNER.

SPECIFICATION forming part of Letters Patent No. 366,780, dated July 19, 1887.

Application filed March 3, 1887. Serial No. 229,665. (No model.)

To all whom it may concern:

Be it known that we, MILTON LOVE and ELMER M. LOVE, citizens of the United States, residing at Corry, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Fuel-Gas Burners; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to burners for fuel-gas; and it consists in certain improvements in the construction thereof, as will be hereinafter fully described, and pointed out in the claims.

Our device is illustrated in the accompanying drawings, as follows: Figure 1 is a perspective view of the burner complete. Fig. 2 is a vertical longitudinal section on the line *xx* in Fig. 1. Fig. 3 is a vertical transverse section on the line *yy* in Fig. 1.

The construction is as follows: The burner consists of three parts—a base, B, an arched cap, C, and an interior gas-distributor, D, together with the necessary bolts for fastening the parts together.

The object of the distributor D is to break the flow of gas as it enters the burner and cause it to flow evenly from all parts of the burner. Where a distributor is not used, the gas will move in a direct line from the supply-pipe and impinge against the opposite wall of the burner, and the jet-openings at that point will have a much greater flow of gas from them than those removed from the point of impingement, and hence the flames on the burner will not be uniform.

The distributor D consists of a perforated plate of metal placed over the mouth of the supply-pipe in such a way that the incoming gas will impinge upon it and its flow be broken up, and it will be distributed to all parts of the interior of the burner.

We do not wish to be limited to any particular form of distributor, as it is shown that various forms of deflectors might be used with the same effect as the one we show.

The cap C is arch form in transverse section, and the perforations or jet-holes *c c c* through it are so drilled that the jets will be radial to the arch, thus giving a perfect distribution of the flame. The base B is made with a flange,

b, around its edges, into which the cap C sets, as shown in Figs. 2 and 3, and the side flanges are provided with notches *b'*, which form jet-openings. These notches are so beveled that the jets of flame from them will stand radially to the arch, as do the other jets. To compel the gas to pass through the notches *b'*, the distribution is so arranged that its edges will be above the said notches.

The parts of the burner are secured together by the bolts E E and F, as clearly shown in the drawings.

Our burner is especially adapted for use in cook-stoves, ranges, open grates, &c., but may be used almost anywhere.

We are aware that fuel-gas burners have been provided with a gas and air mixing chamber having a distributor resting upon the bottom of the chamber and imperforate except at the edges, and that we do not claim. Our device differs from that form, in that the burner is perforated near the base as well as at the arched part, and the distributor is so arranged in the chamber that the gas is forced out of the lower openings as well as the upper ones. The distributor is also perforated, so that while the gas is slightly retarded for the purpose of mixing it with the air it is not retarded sufficiently to prevent the combined gas and air from being evenly distributed to the radial openings.

What we claim as new is—

1. In a burner, the combination of a base and cap forming a chamber having radial openings in the walls thereof and a distributor in said chamber, and having a space between it and the base and the edges thereof above the lower openings, substantially as described.

2. In a burner, the combination of a base and cap forming a chamber having radial openings in the walls thereof, and a perforated distributor in said chamber and having a space between it and the bottom of the chamber, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

MILTON LOVE.
ELMER M. LOVE.

Witnesses:

JOHN SLING,
A. F. BOLE.