(No Model.)

C. L. HOLDEN.

GAS FUEL BURNER.

No. 419,444. Patented Jan. 14, 1890.

Fig. 1.

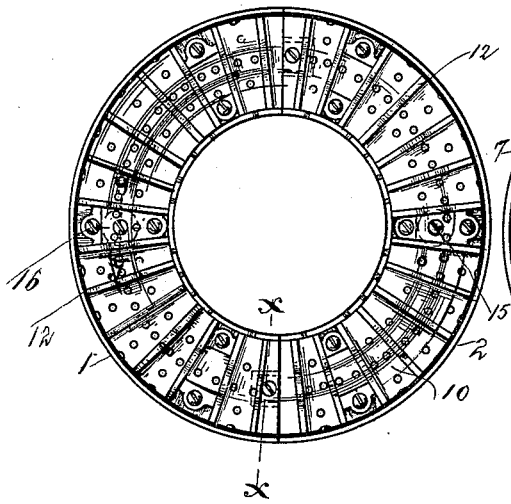


Fig. 2.

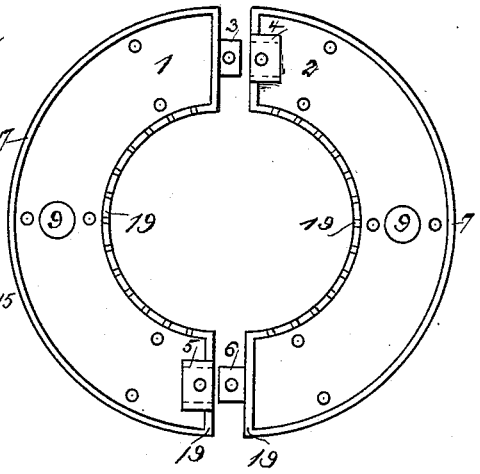


Fig. 3.

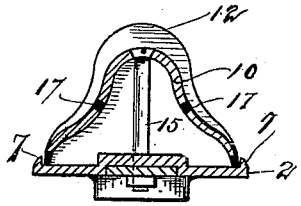


Fig. 4

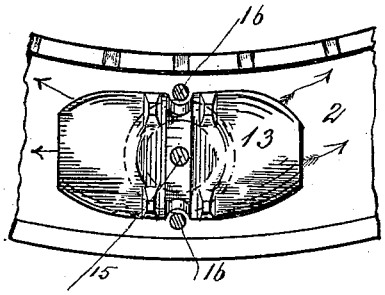


Fig. 5.

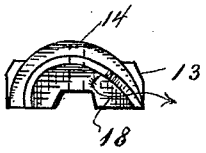
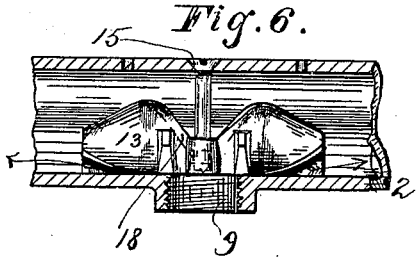


Fig. 6.



Witnesses.
Louis Worner.
B. Loeper.

Inventor.
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by
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atty.

UNITED STATES PATENT OFFICE.

CHARLES L. HOLDEN, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO KNIGHT & JILLSON, OF SAME PLACE.

GAS-FUEL BURNER.

SPECIFICATION forming part of Letters Patent No. 419,444, dated January 14, 1890.

Application filed August 17, 1889. Serial No. 321,127. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. HOLDEN, of Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Gas-Fuel Burners; and I 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.

My invention relates to improvements in gas-fuel burners, more particularly to a type in which natural gas and the atmospheric air are mixed previous to entering into the gas-burner and the mixed gases are burned as fuel for heating purposes, and to effect a more even distribution of gas around the burner. I attain these objects in the herein-described device, which is illustrated in the accompanying drawings, which are made a part of this specification, and in which similar letters of reference relate to similar parts of my invention.

In the accompanying drawings, Figure 1 represents a top view of my circular-ring burner. Fig. 2 is a detail view of Fig. 1. Fig. 3 represents a sectional view of Fig. 1 on the dotted line *x x;* Fig. 4, a detail view of Fig. 1, in which the cap-plate 10 is removed. Fig. 5 is a detail end view of the hood 13 as shown in the top view of Fig. 4 and side view of Fig. 6. Fig. 6 is a view taken on the line *y y* of Fig. 1, the hood being shown in side elevation.

In Fig. 2, 1 2 represent the two semicircular base-plates, in which 3 and 4 and 5 and 6 are locks provided to hold the two halves together by means of bolts. Said plates are provided with the vertical flanges 7 7 on their inner and outer peripheries. 9 9 are inlet-openings properly threaded, adapting them to be screwed upon the corresponding screw-threaded ends of the supply-pipe in which the gas is admitted into the chamber of the burner formed of the base-plate 7 7 and the convexo-concave cap-plate 10.

13 in Fig. 6 represents a hood made and constructed in the particular shape as shown in Figs. 4, 6, and 5. Said hood is held in position by means of bolts 15 on the upper cap-plate of the burner.

12 are ribs cast on the top, which serve to absorb heat from the burning gas and to divide and equally distribute the escaping gas on the burner.

The cap-plate 10 has a series of outlet openings or passages 17, to which the gas escapes at the periphery of the burner, where it is ignited.

The center opening in the burner is left for the purpose of inducing a current of air to pass through the burner, affording an increased supply of oxygen, and thereby effecting a more perfect combustion.

The hood 13, resting over the supply-opening 9, is depressed in the center and forms a V-shaped rib 18, which divides the current of the gas into two halves, which therefore fills the chambers, as indicated by arrows in Figs. 6 and 4. The hood thereby makes and produces a more equal distribution of gas in the burner, supplying the escape-openings with an equal amount of gas, thus saving gas and creating a perfect combustion. The cap-plate and bottom plate of my burner are held together by means of through-bolts 16 and 16.

I am aware that circular burners and square burners have been used heretofore for fuel-burners, and I do not therefore claim this part as new; but I am not aware that a burner has been constructed in the same circular ring form in which each semicircle is provided with a partition and is supplied separately with one or more supply-pipes, and where such supply is again divided and distributed by means of a hood, as shown and adapted in my device and also in a square burner.

What I therefore claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a gas-fuel burner having a plurality of gas-distributing chambers, of hoods located over the supply-opening of the burner and having a central depressed portion forming a V-shaped rib, and also having curved sides, and bolts for securing said hoods in place, all substantially as shown, and for the purposes specified.

2. A segmental-ring burner of the character set forth, each of the segments of which is formed with flanges which divide the burner into separate gas-distributing chambers, in

combination with hoods located above the supply-opening of the burner and formed with depressed central portions and curved sides, a cap, as 10, having perforated sides, and ribs, as 12, all substantially as shown, and for the purposes set forth.

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

CHAS. L. HOLDEN.

Witnesses:
JACOB W. LOEPER,
JOHN KNIGHT.