July 26, 1927. 1,637,014

A. F. THOMPSON

GAS BURNER

Filed Dec. 2, 1926

Fig. 1.

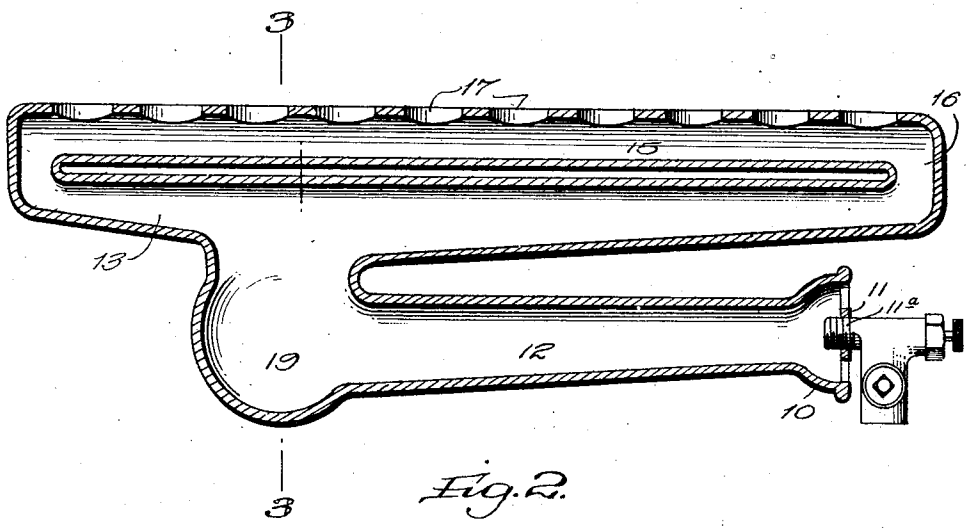
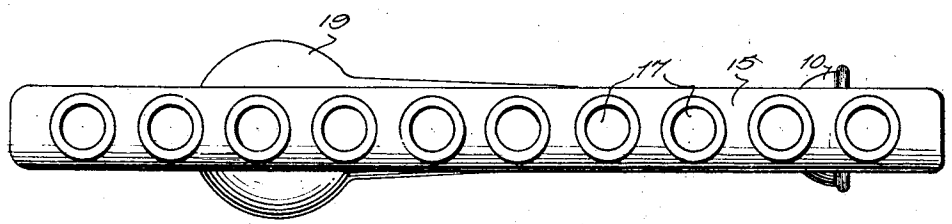


Fig. 2.



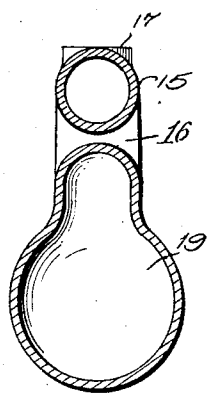


Fig. 3.

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Patented July 26, 1927. 1,637,014

UNITED STATES PATENT OFFICE.

AUGUSTUS F. THOMPSON, OF HUNTINGTON, WEST VIRGINIA.

GAS BURNER.

Application filed December 2, 1926. Serial No. 152,151.

This invention relates to that type of gas-burner in which a jet of gas under pressure is injected into an inlet-tube, preferably of the Venturi type, in such manner as to draw into the inlet-tube a quantity of air, the air and the gas being injected into a mixing-chamber where they are intimately mixed before exit at the burner-tips, and the object of the present invention is to insure a more even distribution of the gas-air mixture to the burners in that specific type of burner shown in my former Patent No. 1,563,050, dated November 24, 1925.

In the drawing—

Fig. 1 is a vertical sectional view of my improved burner;

Fig. 2 is a plan view thereof;

Fig. 3 is an end elevation.

Referring to the drawing annexed by reference-characters, 10 designates an inlet cup or bell having in its center a tubular support 11 for the exit-end of the gas-supply pipe 11^a which is positioned to throw a continuous jet of gas into the inlet-tube 12 connected with the mouth-piece 10. The inner end of this inlet-tube opens upwardly into a tube 13 toward the rear end thereof.

A parallel mixing-tube 15 is provided and the ends of this tube 15 are connected to the respective ends of the tube 13 by end-connections 16, these end-connections being curved, i. e., semi-circular, to insure easy and even delivery of the mixture into the final mixing-tube 15. The top face of the final tube 15 is provided with a series of openings 17 for the reception of the usual burner-tips. The whole structure is desirably cast in one piece, the inlet-tube 12 being integral with the under wall of the preliminary mixing-tube 13. This structure provides a very simple way of thoroughly mixing the gas and air, without lowering its pressure at the burner-tips, and at the same time insuring a uniform pressure at the burner-tips, this latter being obviously a very desirable result.

At the juncture of the tube 12 with the tube 13, the tube 12 is enlarged to form a globular chamber 19, the object of which is to form a sort of reservoir that will prevent all tendency to jet the mixture into one arm or the other of the tube 13 and thus insure an even flow of the mixture into said arm 13 to the end that the pressure in both arms of the tube 13 shall be approximately equal at all times, whereby is insured an even distribution of the mixture to the burners in the tube 15.

In this way, I have been able to do away with the double deflector 14 shown in my aforesaid former patent and at the same time I get a more even distribution of the mixture. The jet coming in through tube 12 enters the globular chamber 19 and causes a whirling action therein, thus tending to prevent any jetting of the mixture when it enters the tube 13.

What I claim as new is:

1. In a burner of the type set forth, an elongated mixing-chamber consisting of two tubes joined at their ends, one of these tubes being provided with a series of burner-holes along its length and the other being provided with a gas-and-air inlet at a point in its length, and a gas-and-air injector-tube connected with said inlet, this tube at the point of juncture with the inlet being laterally enlarged to form a chamber, for the purpose set forth.

2. In a burner of the type set forth, an elongated mixing-chamber consisting of two tubes joined at their ends, one of these tubes being provided with a series of burner-holes along its length and the other being provided with a gas-and-air inlet at a point in its length, and a gas-and-air injector-tube connected with said inlet, this tube at the point of juncture with the inlet being enlarged to form a globular chamber, for the purpose set forth.

In testimony whereof I hereunto affix my signature.

AUGUSTUS F. THOMPSON.