May 7, 1929. O. B. KIBELE 1,711,794

GAS BURNER

Filed Dec. 13, 1926

Fig. 1.

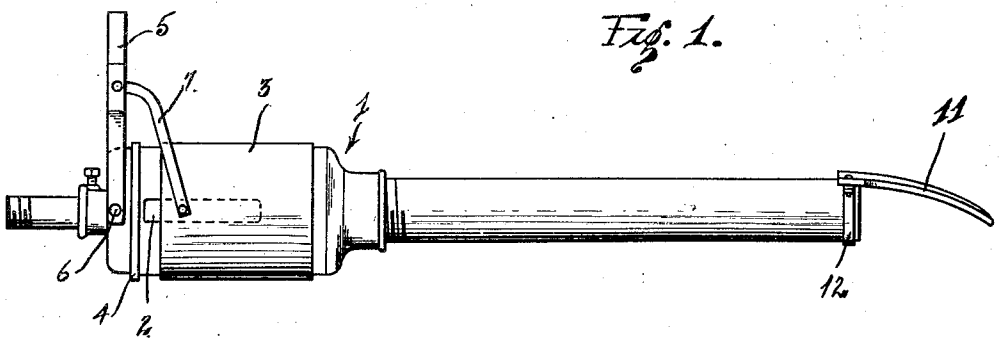


Fig. 2.

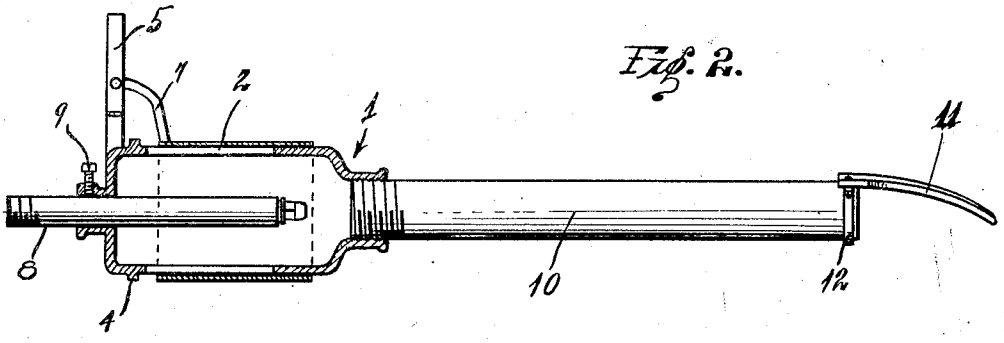


Fig. 3.

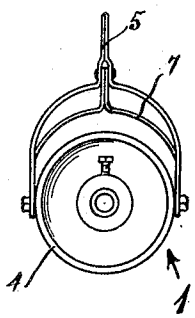
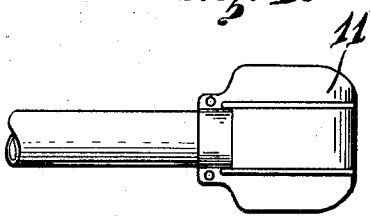


Fig. 4.



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UNITED STATES PATENT OFFICE.

OTTO B. KIBELE, OF WILMINGTON, CALIFORNIA.

GAS BURNER.

Application filed December 13, 1926. Serial No. 154,412.

An object of my invention is to provide a burner in which the air supply may be easily and quickly regulated to suit the varying conditions.

Another object is to provide a burner in which the fuel nozzle is adjustable in the mixing chamber.

A still further object is to provide a burner in which a baffle on the end thereof deflects the flame downwardly thus tending to protect the walls and tubes from the direct blast of the flame.

Other objects, advantages, and features of invention may appear from the accompanying drawing, the subjoined detailed description, and the appended claim.

In the drawings—

Fig. 1 is a side elevation of my burner.

Fig. 2 is a longitudinal sectional view of the same.

Fig. 3 is an end view.

Fig. 4 is a fragmentary plan view of the end of the burner.

Referring more particularly to the drawing:

My burner comprises a casing 1 forming a mixing chamber which is preferably formed as a casting or the like and is provided with a plurality of slots 2 which slots extend lengthwise of the casing and are adapted to admit air thereto. A sleeve 3 surrounds the casing 1 covering the slots 2 and is adapted to be moved lengthwise of the casing to expose the slots as will be further described.

A stop ring 4 is provided on the casing 1 to limit the rearward movement of the sleeve. A lever 5 is pivoted at 6 to the casing 1 and a link 7 is pivoted to the lever 5 and to the sleeve 3. Thus it will be seen that as the lever 5 is swung forwardly or rearwardly that the sleeve 3 will be slid along the casing 1 to expose or cover the slots 2, thus regulating the amount of air passing into said casing. A fuel pipe 8 extends into the casing 1 and is held in adjusted position by a set screw 9 bearing against said pipe. The pipe may be moved inwardly or outwardly so that a proper mixing of the fuel and air may be obtained, that is, the various pressure conditions, both atmospheric and on the fuel, may be provided for by adjusting the said fuel pipe so that the fuel and air will be properly mixed; and provide a combustible mixture which will burn with a properly colored flame.

A pipe 10 extends forwardly from the casing 1 and is preferably screwed into the forward end thereof, said pipe serving to conduct the mixed fuel and air into the boiler, heater, or the like. A downwardly curved baffle plate 11 is secured to the end of the pipe 10 by means of a band 12, or the like. This baffle plate serves to deflect the flame downwardly to protect the walls of the furnace or the like, and also assists in the proper mixing of the fuel and air as well as a better dissemination of the heat in the furnace. The baffle plate 11 is preferably of greater width than the pipe 10 in order that the flame may be confined and deflected downwardly.

Having described my invention, I claim:

A burner comprising a cast casing having longitudinally extending slots formed therein, a sleeve adapted to cover said slots and slidable on the casing, a stop link formed on the casing, a lever pivoted to the sides of the casing, a link pivoted to the lever and the sleeve whereby said sleeve may be moved to open or close said slots, a fuel pipe extending into the casing, a set screw extending through the casing against said fuel pipe, whereby the fuel pipe is adjustably held in position, a second pipe screws into the casing and extends into the boiler or the like, downwardly curved baffle plate, a band secured to the baffle plate and encircles the second pipe, thereby adjustably mounting the baffle plate.

In testimony whereof, I affix my signature.

OTTO B. KIBELE.