

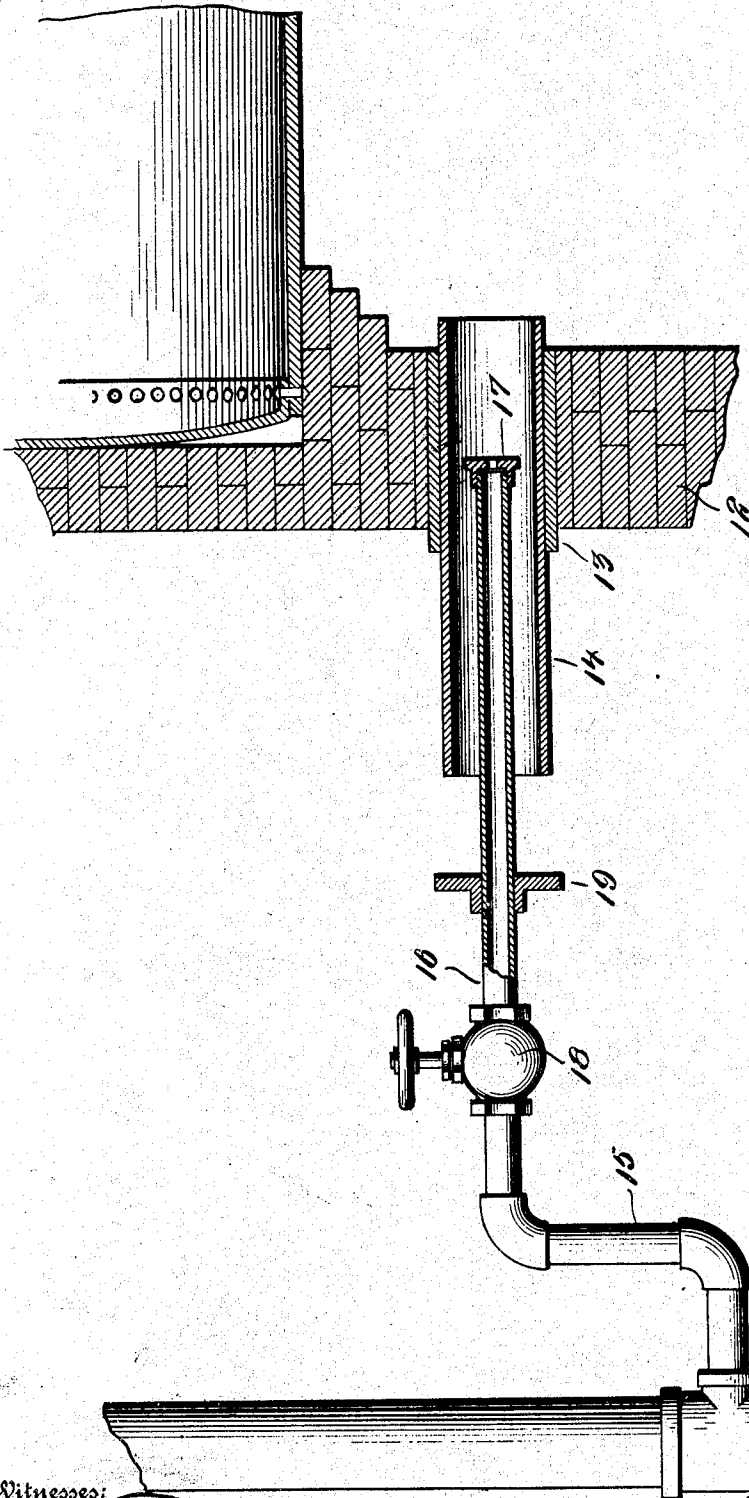
J. J. MOORE.

GAS BURNER.

APPLICATION FILED MAY 28, 1908.

921,139.

Patented May 11, 1909.



Inventor:

Witnesses:

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UNITED STATES PATENT OFFICE.

JERRY J. MOORE, OF MOUND VALLEY, KANSAS.

GAS-BURNER.

No. 921,139.

Specification of Letters Patent.

Patented May 11, 1909.

Application filed May 28, 1908. Serial No. 435,458.

To all whom it may concern:

Be it known that I, JERRY J. MOORE, a citizen of the United States, residing at Mound Valley, in the county of Labette and State of Kansas, have invented or discovered certain new and useful Improvements in Gas-Burners, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to gas burners for heating purposes, and the objects thereof are to provide a burner of simple construction which will be capable of certain novel adjustments designed to increase the efficiency and reliability of operation of the same, as hereinafter more fully described.

In hydrocarbon burners in which the gaseous fuel is mixed with a certain proportion of air prior to its arrival at the point of combustion, experiments have shown me that the distance between the point at which the air and gas are permitted to meet and mix and the point of combustion is a factor in the efficiency of the burner, and that, to produce the most satisfactory results, this distance will vary according to the pressure under which the gas is delivered to the burner. For high pressures the distance above referred to should be greater than for low pressures.

My invention therefore comprises a hydrocarbon burner of the type referred to having provision for the adjustment of the distance from the point of combustion to the point at which the gas and air are mixed, in accordance with the pressure of the gas.

The accompanying drawing illustrates, partly in elevation and partly in vertical section, one construction in which my invention may be embodied, the same being shown as applied to a steam boiler furnace.

In the construction shown, the furnace wall 12 is provided with a suitable thimble or bushing 13 in which is slidably mounted the mixing tube or cylinder 14. The gas supply pipe 15 is continued into a gas inlet pipe 16, extended into and inclosed by the said mixing tube or cylinder 14 to a point within the furnace wall 12, and is preferably provided at its inner or delivery end with a perforated cap 17. The outer end of the cylinder 14 provides, around the inlet pipe 16, an air

inlet, while combustion takes place at the inner end of said cylinder.

The inlet pipe 16 may, if desired, be provided with the usual cock or throttle valve 18, and is also preferably provided, adjacent the outer end of the cylinder 14, with a sliding flanged collar 19 adapted to be moved toward or away from said cylinder to control the admission of air thereto. It will now be seen that, by sliding the cylinder 14, inwardly, or outwardly in the thimble or bushing 13, the distance between the cap 17, the point at which the air and gas meet, and the inner end of the cylinder 14, the point at which combustion occurs, may be varied at will and in accordance with the pressure under which the gas is delivered to the burner.

While I, in order that my invention may be readily understood, have herein shown and described the same as embodied in a particular construction, I wish it to be distinctly understood that I do not limit myself to the precise construction shown and described, it being obvious that many changes might be made therein without departing from the scope and spirit of my invention.

Having thus described my invention I claim and desire to secure by Letters Patent:

1. In a gas burner for boiler furnaces or the like, the combination with a gas inlet pipe having a reduced outlet at its inner or delivery end, of a mixing tube or cylinder having a cylindrical chamber throughout its length and open at both ends, said tube or cylinder inclosing said inlet pipe, and a sleeve or bushing fixed in the furnace wall and in which said cylinder has a sliding fit to permit endwise longitudinal movement thereof for the purpose of varying the relative positions of the inner or delivery end of said gas inlet pipe and the inner end of said mixing tube or cylinder, substantially as described.

2. In a gas burner for boiler furnaces or the like, the combination with a gas inlet pipe having a reduced outlet at its inner or delivery end, of a mixing tube or cylinder longitudinally adjustable in said sleeve or bushing and inclosing said inlet pipe, said tube or cylinder having a cylindrical internal chamber throughout its length and an air

inlet at its outer end, an adjustable disk, carried by said gas inlet pipe, for regulating the admission of air at said air inlet, and a sleeve or bushing fixed in the furnace wall and in which said mixing tube or cylinder has a sliding fit to permit it to be moved longitudinally to vary the distance between the inner or delivery end of said gas inlet pipe and

the inner end of said mixing tube or cylinder, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses.

JERRY J. MOORE.

Witnesses:

GEO. STIDHAM,
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