J. B. SLATTERY.

GAS BURNER.

APPLICATION FILED AUG. 26, 1916.

1,248,565. Patented Dec. 4, 1917.

Fig. 1.

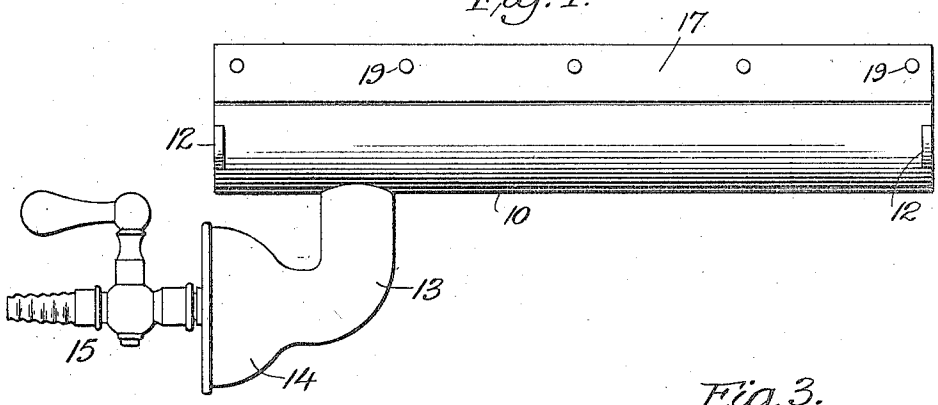


Fig. 2.

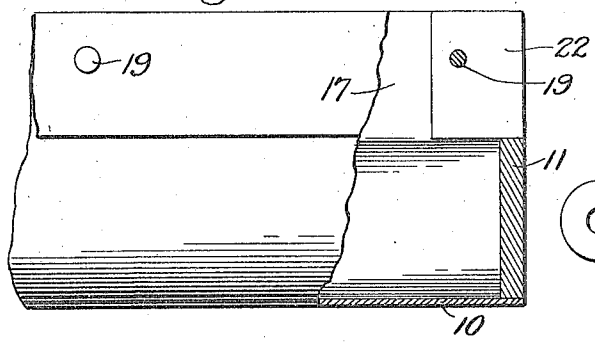


Fig. 3.

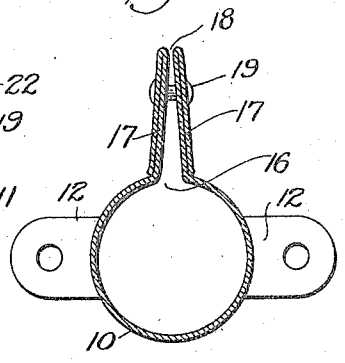


Fig. 4.

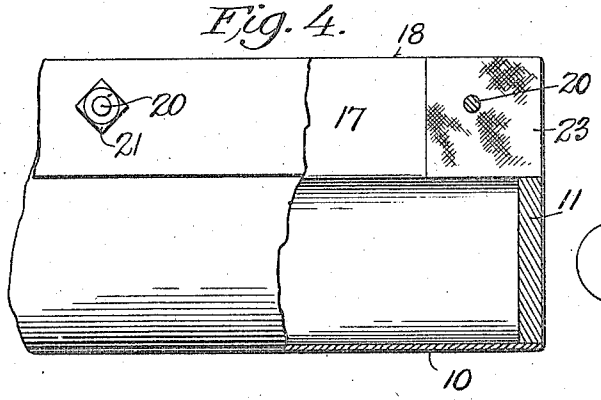
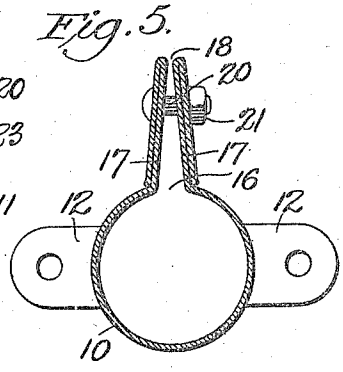


Fig. 5.



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UNITED STATES PATENT OFFICE.

JAMES B. SLATTERY, OF BROOKLYN, NEW YORK.

GAS-BURNER.

1,248,565. Specification of Letters Patent. Patented Dec. 4, 1917.

Application filed August 26, 1916. Serial No. 117,019.

To all whom it may concern:

Be it known that I, JAMES B. SLATTERY, a citizen of the United States, and resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Gas-Burners, of which the following is a specification.

This invention relates to gas burners and especially to that class where a row of jets or a continuous flame of some length is burned and the device consists of a mixing chamber having in one side a slot for the exit of the gas to be burned and at an elevation from the mixing chamber to prevent "back flash" and at the same time to provide means for so adjusting the slot as to provide for the thickness of the flame, as will be more fully described in the following specification, set forth in the claims and illustrated in the accompanying drawings, wherein:

Figure 1 is a side view of the improved burner.

Fig. 2 is an enlarged view of the outer end of the burner partly in section.

Fig. 3 is a cross sectional view of the same.

Fig. 4 is a view similar to Fig. 2 but of a modified form of burner.

Fig. 5 is a cross sectional view of the latter.

In gas burners for the various types of heaters it is essential that the flame be one of maximum area and minimum volume, and heretofore a series of jets have been used and which are formed by minute perforations in one side of a pipe. The serious objection to this class of burners has been the liability of the flame to "back flash" and light the flame at the inclosed end of the blast pipe. This danger may be reduced in many cases by the use of wire gauze between the blast pipe and the outlet perforations, but the gas pressure is consequently reduced and the flame is lessened.

The present invention consists of the usual mixing chamber 10 preferably made of sheet steel and having heads 11 with ears 12 to secure the burner to any desired support. The burner may be carried, however, by the elbow 13 of the air chamber 14 at the end of the gas pipe 15.

The chamber 10 is cylindrical and is open along its upper side. It is preferably made of sheet steel for resiliency and lightness and the opening 16 is formed by two substantially vertical walls 17 turned backward on themselves to form a double thickness and make them rigid and they are of such distance apart at their upper ends to permit of the escape of the mixed gas through an opening 18 which is a slot along practically the whole length of the burner.

In order to maintain the proper width for this slot or opening 18 rivets 19 are passed through both walls 17 and the proper width thus retained.

When it may be necessary to burn two or more gases or vapors at different times in this device it will be desirable to adjust the outlet 18 and this is done by dispensing with the rivets and using bolts 20 whose nuts 21 may be adjusted and the opening reduced or enlarged as may be desired.

While the permanent burner has its end provided with a metallic filling piece 22 held in place by one of the rivets 19, the adjustable burner may have at its ends and above the heads 11 flexible filling pieces 23 such as asbestos, which will yield or compress as the opening is affected.

To permit of the proper adjustment of the slot or opening 18 the cylinder 10 and the upright walls are made of the thin resilient material to spring apart when the bolts are loosened or yield when the opening is reduced. The heads 11 may be secured within the cylinder by any well known means.

It is obvious that the device may be otherwise arranged or modified without departing from the essential features above described or from the scope of the appended claims.

What I claim as new is:

1. In a gas burner, the combination of a pipe slotted through its length and having an opening at one end and closed at the other end, a supply pipe at the open end of the same, lips at each side of the slot and

inclined toward each other at their upper edges, and means for adjusting the inclination of the lips.

2. In a gas burner, the combination of a pipe slotted throughout its length and having an inlet at one end and closed at the other, flexible lips at each side of the slot, and adjusting screws connecting the lips to cause them to approach or retract at their upper edges.

Signed at New York, in the county of New York, and State of New York, this 21st day of August, A. D. 1916.

JAMES B. SLATTERY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."