M. B. SMITH.

GAS BURNER.

APPLICATION FILED JAN. 29, 1913.

1,067,069. Patented July 8, 1913.

Fig. 1.

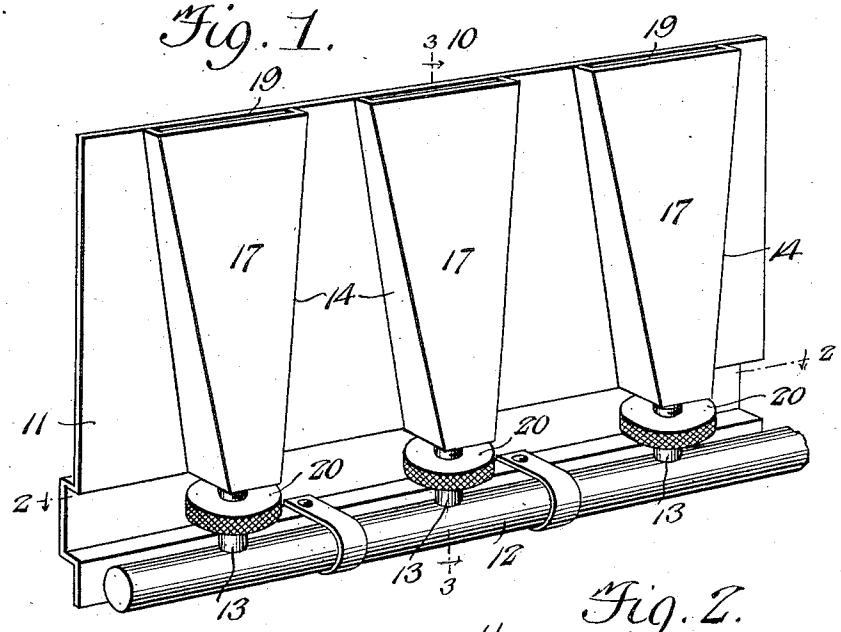


Fig. 2.

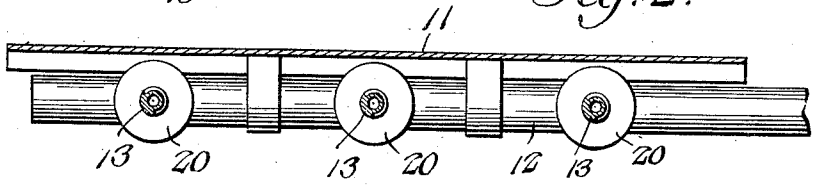
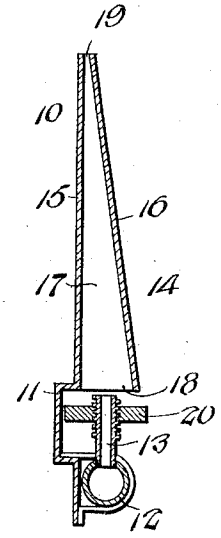


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

MARVIN B. SMITH, OF SPENCER, WEST VIRGINIA.

GAS-BURNER.

1,067,069. Specification of Letters Patent. Patented July 8, 1913.

Application filed January 29, 1913. Serial No. 744,990.

To all whom it may concern:

Be it known that I, MARVIN B. SMITH, a citizen of the United States, residing at Spencer, in the county of Roane and State of West Virginia, have invented new and useful Improvements in Gas-Burners, of which the following is a specification.

The invention relates to gas burners and more particularly to gas burners used in connection with natural gas or other gases for heating purposes and has for an object to provide a gas burner of simple and durable construction and in which the mixture of gas and air can be easily and quickly controlled.

In the further disclosure of the invention reference is to be had to the accompanying drawings, constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which:

Figure 1 is a perspective view of the device; Fig. 2 is a horizontal longitudinal sectional view taken on the line 2—2 in Fig. 1; and Fig. 3 is a vertical transverse sectional view taken through one of the burner tubes on the line 3—3 in Fig. 1.

Referring more particularly to the views, I disclose a burner 10 including a frame 11 on which is supported a horizontally arranged supply pipe 12, the said supply pipe being provided with a series of vertically extending ducts 13 relatively spaced apart, as shown.

Carried by the frame 11 and projecting upwardly therefrom are a series of spaced burner tubes 14, each of the said burner tubes including a vertical wall 15 and an inclined wall 16 to provide a converging chamber 17 having an enlarged inlet 18 and a restricted outlet 19 of an elongated nature, each of said burner tubes 14 being arranged above each of said ducts 13, the said ducts being exteriorly threaded and slightly spaced from the lower ends of the burner tubes.

A regulating member 20, in the shape of a wheel having a knurled periphery, is provided for each duct 13 and has threaded connection therewith so that when the regulating members 20 are rotated they will move vertically on the ducts, as will be readily seen by referring to the views, the said regulating members being of sufficient diameter to substantially close the inlets 18 of the burner tubes 14 when the regulating members are advanced to the highest position on the ducts 13, it being further seen that the lower ends of the burner tubes form stop members for the regulating members 20 to limit the upward movement of the regulating members on the ducts, thus preventing the regulating members from becoming disengaged from the ducts.

It will now be readily apparent that when gas is admitted into the ducts 13 through the supply pipe 12, the gas will pass upwardly into the burner tubes 14 and by advancing or retreating the regulating members 20 on the ducts 13 the supply of air through the inlets 18 of the burner tubes can be increased or decreased until the proper mixture of gas and air is received in each of the chambers 17 of each of the burner tubes 14, thus producing an efficient flame at the upper ends or outlets 19 of the burner tubes.

From the foregoing description it will be further apparent that the device described, although simple and durable in construction and consisting of few parts, provides a structure whereby the amount of air admitted into the burner tubes can be easily regulated with respect to the amount of gas admitted thereto so that an efficient and combustible mixture of gas and air will pass outwardly from the burner tubes through the restricted outlets 19 thereof and at which points the resulting mixture is consumed.

Having thus described my invention, I claim:

1. In a gas burner, the combination with a frame, of a supply pipe carried thereby, a series of spaced ducts projecting vertically from the supply pipe, a series of spaced burner tubes carried on the frame and arranged immediately above and in spaced relation to the said ducts, each of the said burner tubes including a vertical wall formed by a portion of the said frame and an inclined wall, the said walls providing an enlarged inlet at the lower end of the burner tube, and a restricted elongated outlet at the upper end thereof, and regulating members having threaded connection with the said ducts and operable vertically thereon to regulate the supply of air through the enlarged inlets of the said burner tubes.

2. In a gas burner, the combination with a frame having a portion thereof offset from the vertical plane of the frame to provide a horizontal channel, of a supply pipe carried on the frame, a series of spaced ducts

having connection with the supply pipe, burner tubes carried by the frame and arranged immediately above and in spaced relation to the said ducts, and regulating members having connection with the said ducts and operable vertically thereon, the said regulating members lying in the horizontal channel formed by the offset portion of the frame and adapted to engage the frame adjacent the offset portion to limit the upward movement of the said members relatively to the said ducts.

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

MARVIN B. SMITH.

Witnesses:
A. W. SUMMERS,
GEORGE BENZ.

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