G. B. KILLAM.

GAS BURNER.

APPLICATION FILED JULY 9, 1913.

1,091,663. Patented Mar. 31, 1914.

Fig. 1.

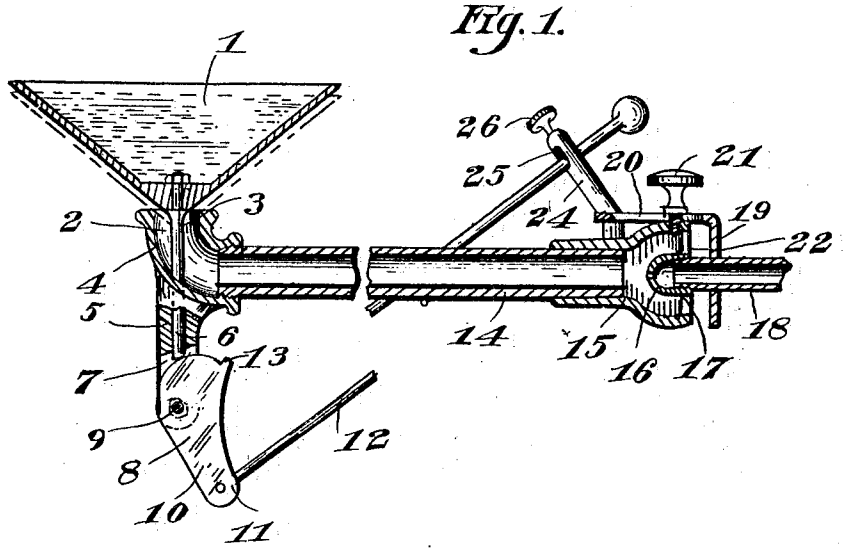
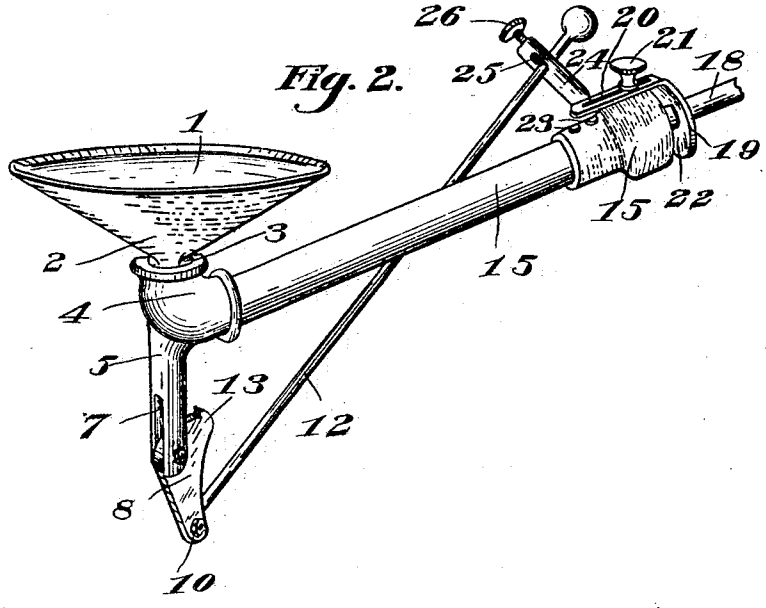


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

GASTON B. KILLAM, OF CALGARY, ALBERTA, CANADA.

GAS-BURNER.

1,091,663. Specification of Letters Patent. **Patented Mar. 31, 1914.**

Application filed July 9, 1913. Serial No. 778,171.

To all whom it may concern:

Be it known that I, GASTON B. KILLAM, a citizen of the United States of America, residing at 517 Fifth avenue west, in the city of Calgary, Province of Alberta, Dominion of Canada, have invented certain new and useful Improvements in Gas-Burners, of which the following is a specification.

This invention relates to improvements in gas burners, as more specifically set forth in the following specification, and the accompanying drawings that form part of the same.

The objects of the invention are to provide a simple, efficient and inexpensive means of adjusting the nature and size of the flame of a gas jet when used in conjunction with a conical flame spreader.

The invention consists essentially in the novel construction and arrangement of parts hereinafter described.

In the drawings: Figure 1 is a sectional elevation of the device, and Fig. 2 is a general perspective view of the device.

In the drawings like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 is a conical flame spreader which is secured to the adjusting spindle 2, and adapted to close the orifice 3 in burner 4, when said flame spreader is in its "closed" position (shown dotted in the drawing).

5 is a lug extending vertically downward from burner 4, and is provided with an orifice 6 adapted to receive spindle 2 and allow a free vertical movement for it, yet allow no perceptible lateral movement or leakage of gas between said spindle and said lug. In the lower extremity of lug 5, is a slot 7, adapted to receive the cam 8 which is pivotally secured therein by the pin 9. The cam 8 is formed with a heel 10, and an orifice 11 therein adapted to provide means for pivotally securing the adjustment-rod 12. If found desirable the cam 8 may be formed with a stop projection 13.

14 is a tube connecting the mixing chamber 15 to the burner 4.

The mixing chamber 15 is of the usual type, having a nozzle 16 supported from the body 15 by a plurality of arms 17, said nozzle being adapted to receive the gas-supply pipe 18.

19 is an air-regulating baffle provided with a clamping arm 20, which may be secured by a knurled nut 21 at any distance found suitable from the back 22 of the mixing chamber. The mixing chamber may be secured to the connecting tube 14, by the screws 23, or any other convenient means may be utilized for this purpose.

24 is a guide pillar for adjustment rod 12; and may be secured at one end to the mixing-chamber; the other end is provided with an orifice 25 and a thumb screw 26 respectively adapted to receive and secure the adjustment rod 12.

In the operation of this device, it will readily be followed that by moving the rod 12 backward and forward the size of the flame will be increased or decreased, on account of the cam 8 to which said rod is attached pressing up or allowing to fall by gravity, the spindle 2 with its spreader cone 1, thus opening or closing the orifice 3 which is the exit of the gas to be burned; it will also be obvious that the arrangement and construction of the baffle 19 is admirably suited for the regulation of air admission to the mixing chamber and that the combination of these features would produce a burner easy of adjustment and efficient in operation.

This burner is especially adapted for use in furnaces and in heating stoves, boilers and the like, but I do not wish to limit its application entirely to use in these apparatuses.

What I claim as my invention is:

In a gas burner, a conical flame spreader, a spindle secured to the flame spreader, a lug provided with an orifice adapted to slidably secure the spindle, and having a slit at one end of said lug, a cam pivotally secured in said slit, and adapted to operate said spindle, a rod operating said cam, and means for securing said rod at various positions.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

GASTON B. KILLAM.

Witnesses:
D. R. CRICHTON,
H. E. ANDERSON.