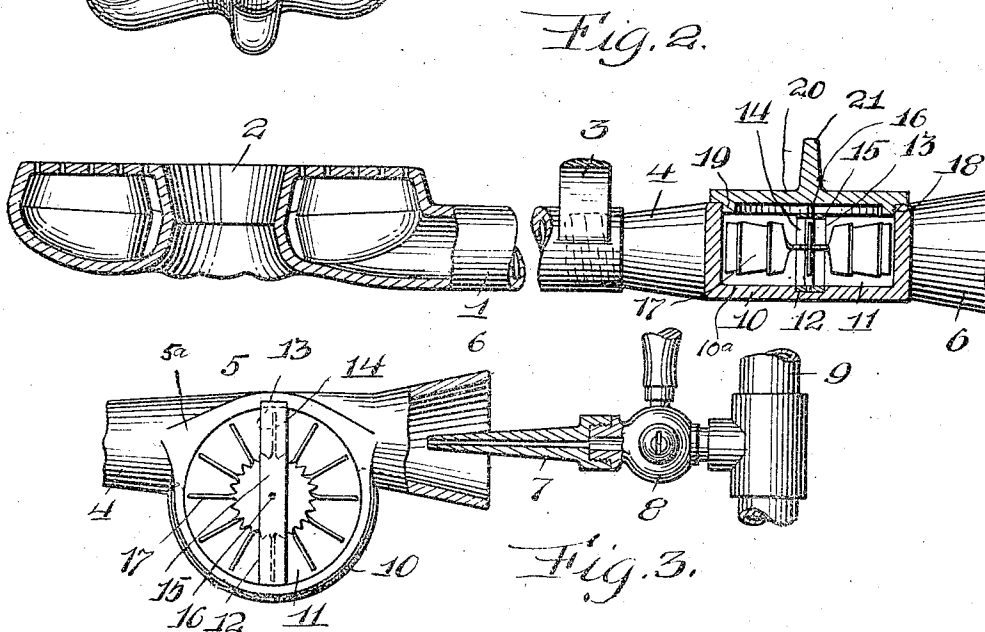
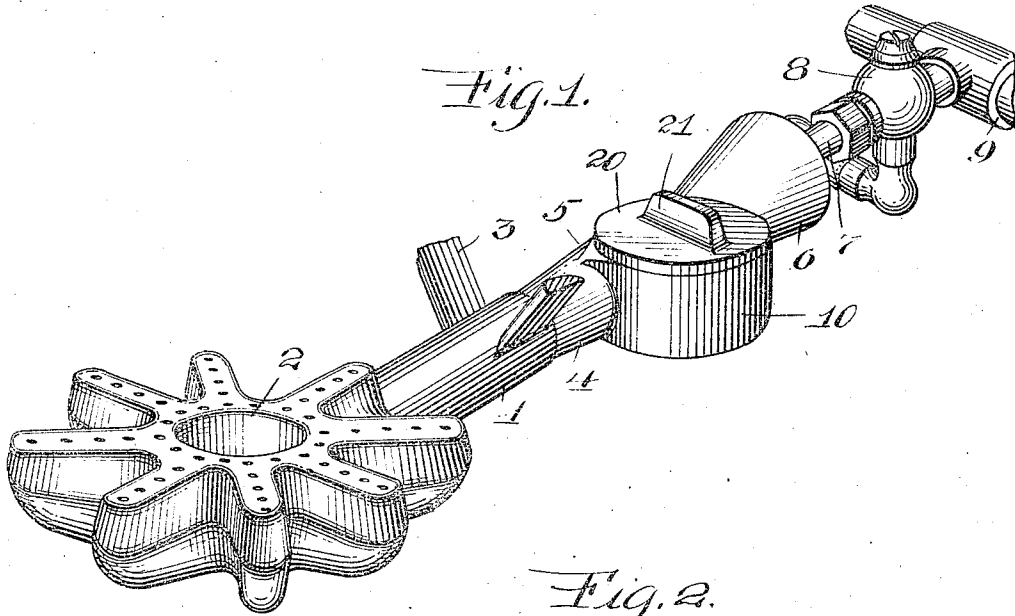


J. L. CRAWFORD.
GAS BURNER.
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1,007,538.

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JOHN L. CRAWFORD, OF MOUNT PLEASANT, PENNSYLVANIA.

GAS-BURNER.

1,007,538.

Specification of Letters Patent.

Patented Oct. 31, 1911.

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To all whom it may concern:

Be it known that I, JOHN L. CRAWFORD, a citizen of the United States of America, residing at Mount Pleasant, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Gas-Burners, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to gas burners for gas stoves and hot plates wherein artificial or natural gas is utilized as a fuel.

The object of the invention is to provide a gas burner with positive and reliable means, in a manner as will be hereinafter set forth for agitating the gas and air admitted to the burner, to insure a thorough commingling and a proper combustion of the gas when ignited, thereby preventing escape of air through the burner and the burning of raw gas.

I attain the above objects by a mechanical construction that will be hereinafter specifically described and then particularly claimed.

Reference will now be had to the drawing.

Figure 1 is a perspective view of the burner in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same, and Fig. 3 is a plan of a portion of the burner partly broken away and partly in section.

The reference numeral 1 denotes a pipe having one end thereof provided with a burner head 2 of the ordinary and well known type and the opposite end of the pipe is provided with angularly disposed arms 3 employed for connecting the burner to a suitable support. The end of the pipe 1 has the inner walls thereof screw threaded to receive the tapering end 4 of a mixer pipe 5. The mixer pipe has the opposite end thereof flared, as at 6 and protruding into the flared end of the pipe is a nozzle or nipple 7 of a valve 8, carried by a gas supply pipe 9.

The upper portion of the mixer pipe 5 is cut-away in an arcuate-shaped manner and one side of the mixer pipe 5 is also cut-away. Formed integral with the top of the mixer pipe 5 and surrounding the arcuate-shaped cut-away portion is an offset 5^a and formed integral with said offset and also with the side of the mixer pipe 5 is a hollow semi-cylindrical extension 10 provided with a bottom 10^a. The extension 10 is open at its top and said extension 10 opens into the

mixer pipe 5 and forms a compartment 11. The lower portion of the mixer pipe is flat and which forms a continuation of the bottom 10^a to the enlargement 10. The bottom 10^a as well as the flattened portion of the mixer pipe 5 is provided with a transversely-extending groove 12 which terminates at one end in a vertically-disposed groove 13 formed in the inner face of the wall of the mixer pipe 5. The groove 12 is positioned centrally with respect to the bottom 10^a of the extension 10. Mounted in the grooves 12 and 13 is a C-shaped frame 14 and journaled centrally of the upper and lower arms 15 of said frame 14 is a vertically-disposed shaft 16 carrying a fan wheel 17. The upper arm 15 of the frame 14 is positioned below the top edge of the extension 10 and offset 5^a. The inner face of the offset and inner face of the extension at the upper portion thereof are provided with threads as at 18 and engaging with the said threads 18 is the peripherally-threaded annular flange 19 which depends from a cap 20, the latter being adapted to seat upon the offset in the top edge of the extension 10 for closing the chamber 11. The upper face of the cap is provided with a transversely extending handle 21 to facilitate the mounting and removing of said cap when occasion so requires.

The pressure of gas entering the flared end 6 of the pipe 5 causes a suction of air in the flared end of said pipe and as the air and gas impinge the wheel 17 said wheel is caused to rapidly revolve and it is the rotation of this wheel that thoroughly commingles the air and gas before it passes into the burner head 2.

My invention resides solely in the mixer pipe 5 and this pipe can be easily installed in connection with the type of burner shown or other types. Its simplicity of construction permits of its manufacture at a comparatively small cost and any suitable metal can be used.

What I claim is:—

In combination, an air mixer pipe having its upper portion in one side cut-away intermediate its ends, an offset surrounding the cut-away portion at the top of said pipe, a semi-cylindrical extension integral with said offset and with the side of said pipe and opening into the pipe, said pipe having its inner face and a portion of its bottom provided with a groove, said extension having the upper face of its bottom provided with

a groove which terminates in the groove in the bottom of the pipe, a C-shaped frame mounted in said grooves and extending transversely with respect to the pipe and said extension, a shaft journaled centrally of the upper and lower arms of said frame, a fan wheel connected to said shaft and projecting into said pipe, and means engaging

with the offset and the extension for closing the pipe and the extension.

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

JOHN L. CRAWFORD.

Witnesses:

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