April 1, 1930. F. WYATT 1,753,141

GAS BURNER

Filed Dec. 26, 1928 2 Sheets-Sheet 1

Fig. 1.

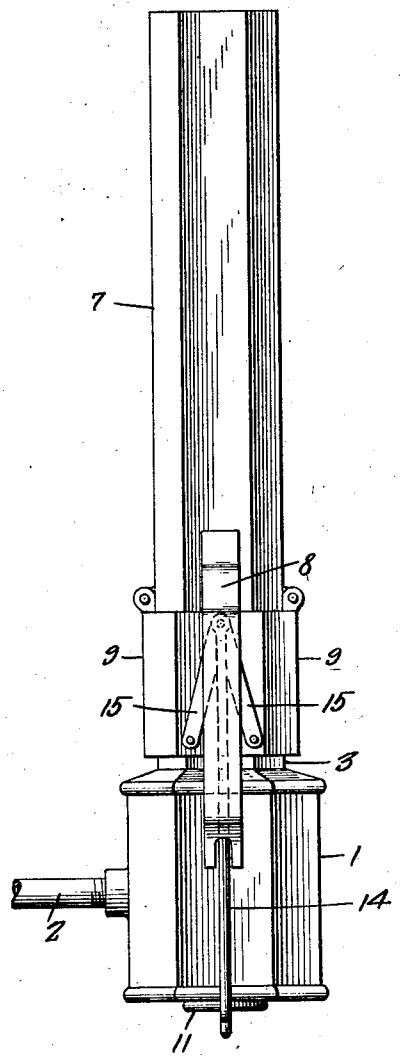


Fig. 2.

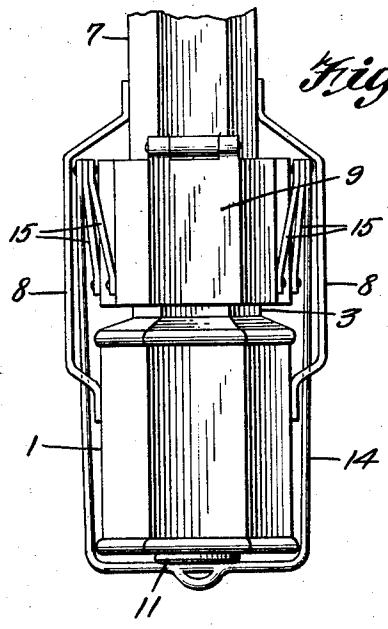
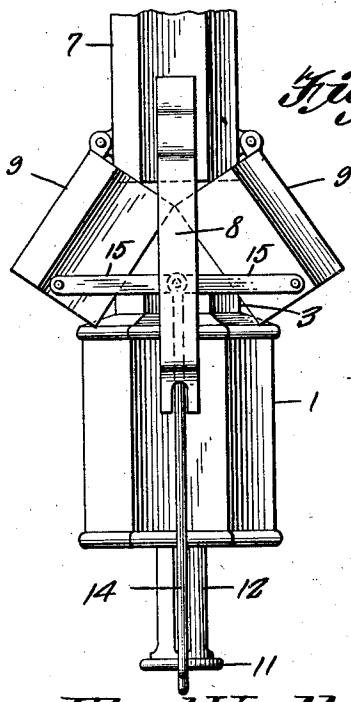


Fig. 3.



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WITNESS

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Filed Dec. 26, 1928 2 Sheets-Sheet 2

Fig. 4.

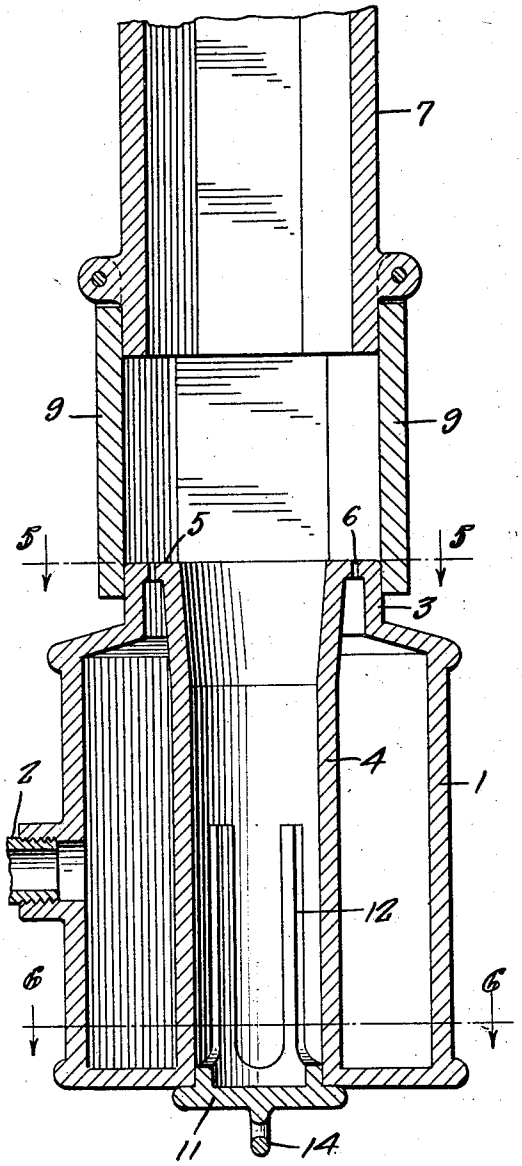


Fig. 5.

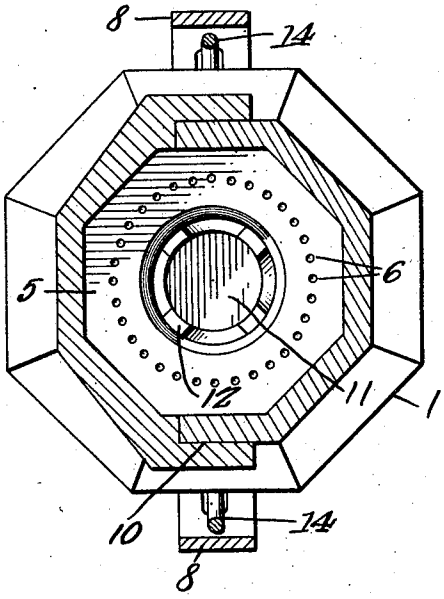
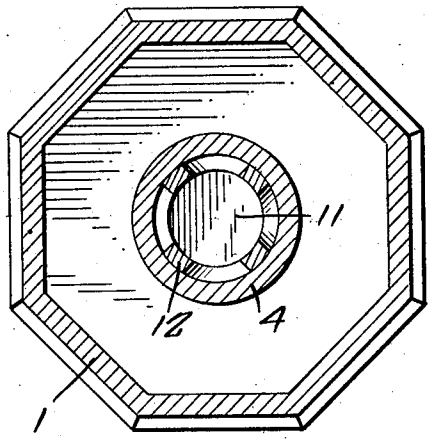


Fig. 6.



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Patented Apr. 1, 1930 1,753,141

UNITED STATES PATENT OFFICE

FLOYD WYATT, OF WHITTENBERG, TEXAS

GAS BURNER

Application filed December 26, 1928. Serial No. 328,561.

This invention relates to a gas burner, the general object of the invention being to provide means whereby the gas is introduced into the barrel part of the burner between two streams of air so that the gas is thoroughly mixed with the air and there is no danger of backfiring or improper combustion and damage through burning of the parts of the burner.

Another object of the invention is to provide valves for controlling the entrance of air to the burner, with means for adjusting the valves simultaneously.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a top plan view of the burner.

Figure 2 is an enlarged side view of the front end thereof.

Figure 3 is a top plan view of the front end thereof, showing the valves open.

Figure 4 is a longitudinal sectional view, with the valves closed.

Figure 5 is a section on line 5—5 of Figure 4.

Figure 6 is a section on line 6—6 of Figure 4.

In these drawings, the numeral 1 indicates the drum into which gas is introduced from any suitable source by the pipe 2, this drum having a reduced inner end 3 and a tubular member 4 has its flaring mouth formed with or connected to the annular closure part 5 of said end. This tubular member is formed with or connected to the other end of the drum and forms a passage through the drum. An annular row of holes 6 is formed in the part 5 for the escape of gas. The barrel or mixing chamber of the burner is shown at 7, and this barrel is of the same dimensions as the reduced part 3 of the drum. The barrel is spaced from the drum and the two parts are connected together at opposite sides by the brackets 8 which are each formed with offset parts. The air space formed between the drum and the barrel is adapted to be closed by a pair of doors or valves 9, each of which is hinged to the barrel, with their free ends overlapping the reduced part 3 of the drum. The side edges of the doors also overlap, as shown at 10, so that when the doors are closed, no air can enter between the drum and barrel. The outer end of the passage formed by the tubular member 4 is closed by a cap or valve 11 which is formed with the spaced fingers 12 so that when the cap is partly pulled from the passage, the spaces between the fingers will permit air to enter the passage.

A yoke 14 has its bight connected with the outer end of the cap 11 and its limbs pass through openings formed in the brackets 8 and the extremities of its limbs are pivoted to the inner ends of the two pairs of links 15 which have their outer ends pivoted to the doors, so that when the yoke is pulled outwardly, the links will swing the doors to open position and the bight of the yoke will move the cap 11 to open position so that air can enter through the tubular member 4 and through the openings left by the doors, thus providing two streams of air between which the gas is projected through the perforations 6. This air and gas will pass through the barrel 7.

By arranging the air supply as shown, the gas and air are thoroughly mixed together and there is no danger of the gas being forced into certain parts of the burner, as there is if but one stream of air is used. This invention will insure perfect combustion without danger of damage to the barrel through burning.

As shown, the barrel and drum are of octagon shape and this shape of barrel reduces the speed of the gas therethrough and it also prevents a whirling movement of the gas.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be

made in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

What I claim is:—

1. A gas burner comprising a drum having perforations in its outlet end and a tubular part passing through the drum and forming an air passage at the center thereof, means for introducing gas into the drum, a barrel connected with the drum but spaced therefrom, a pair of doors hinged to the drum and movable adjacent the barrel for controlling the passage of air into the space between the drum and barrel, a valve for controlling the flow of air through the tubular member and means for operating the doors and valve simultaneously.

2. A gas burner comprising a drum having perforations in its outlet end and a tubular part passing through the drum and forming an air passage at the center thereof, means for introducing gas into the drum, a barrel connected with the drum but spaced therefrom, valves for controlling the passage of air into the space between the drum and barrel, a valve for controlling the flow of air through the tubular member, means for operating the valves simultaneously, said barrel and drum being of octagon shape in cross section.

3. A gas burner comprising a drum having a centrally arranged tubular part passing longitudinally therethrough to form an air passage, the inner end of the drum being perforated, means for introducing gas into the drum, a barrel, means for connecting the barrel to the drum with a space between the adjacent ends of the barrel and drum, doors hinged to the barrel for closing the space, a cap for closing the outer end of the tubular member and having inwardly extending fingers thereon spaced apart whereby air will be admitted to the tubular member when the cap is partly withdrawn, a yoke-shaped member having its bight connected with the cap and its limbs extending over the doors and links connecting the ends of the limbs with the doors whereby the doors and cap will be moved to open position when the yoke-shaped member is pulled outwardly.

In testimony whereof I affix my signature.

FLOYD WYATT.