

C. G. FAREZ.
GAS BURNER.

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1,034,224.

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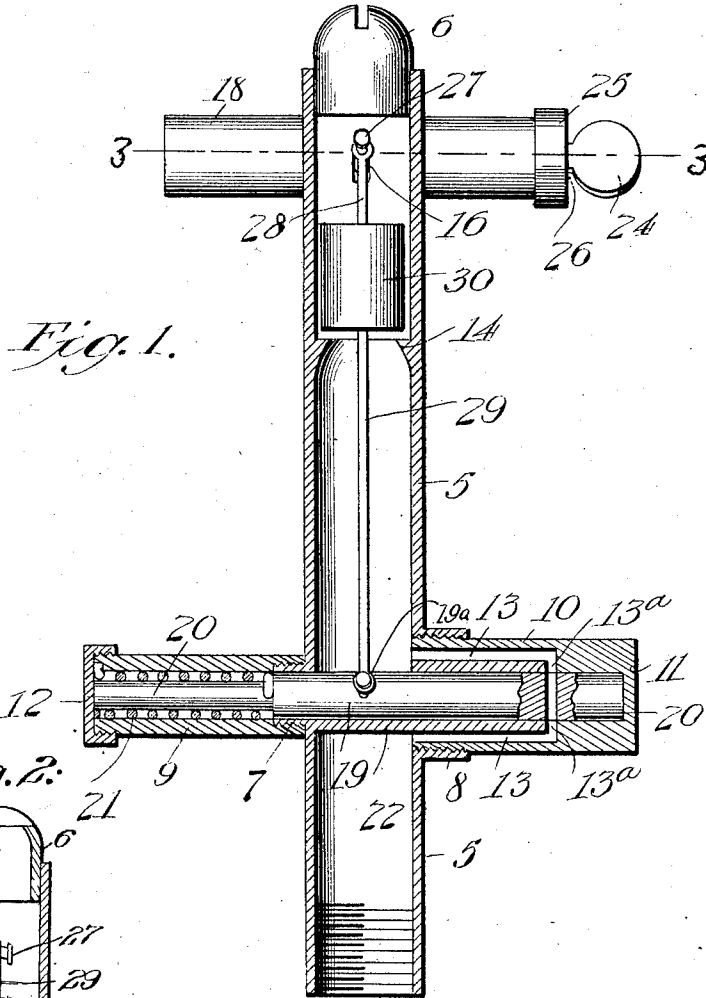


Fig. 1.

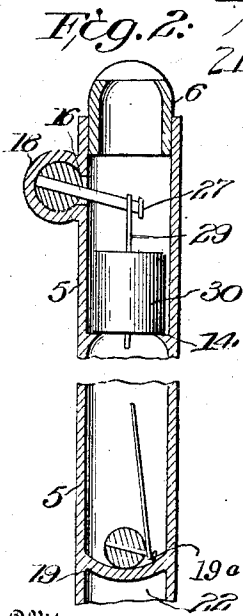


Fig. 2.

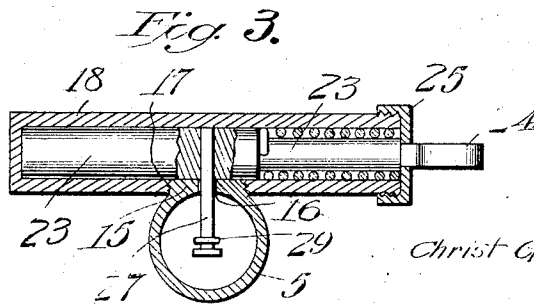


Fig. 3.

Witnesses

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GAS-BURNER.

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To all whom it may concern:

Be it known that I, CHRIST G. FAREZ, a citizen of the United States, residing at Coney Island, in the county of Kings and State of New York, have invented new and useful Improvements in Gas-Burners, of which the following is a specification.

This invention is in the nature of a gas burner and the object of the invention is to provide improved means on a gas burner in the nature of a supplementary valve and controller, and automatic, operating means, whereby when the ordinary cut off valve is turned off, even if it is accidentally turned too far, or turned back to open position, the supplementary valve will be instantly closed and all flow of gas through the burner prevented, thus preventing the accidental asphyxiation of the occupants of the room or house, in which the burner is located.

In carrying out my invention for the purpose set forth my improved construction will also instantly cut off the flow of gas through the burner in the event of a temporary cutting off of the pressure in the mains, or back pressure therein, whereby the flame is extinguished, thus preventing the accidental flow of gas which sometimes occurs under such circumstances, especially where a gas jet has been left lighted all night, and the consequent accidental death of the occupants of the room or house.

With these, and such other objects as may hereinafter appear, in view, the invention consists in the improved construction, arrangement and combination of the parts of my apparatus which will be hereinafter fully described and afterwards specifically claimed.

In order that a clear understanding may be had of the construction and operation of my invention, I will now proceed to describe the same in connection with the accompanying drawing which illustrates a preferred embodiment and in which—

Figure 1 represents a longitudinal, sectional view on a plane cutting centrally through the burner pipe and the casing of the supplementary valve, the float being in elevation. Fig. 2 represents a longitudinal, sectional view on a plane cutting centrally through the burner pipe, controller and

casing, and supplementary-valve casing at a right angle to the plane of Fig. 1. Fig. 3 represents a sectional view on a plane cutting transversely through the burner pipe and controller and casing, as indicated by the broken line 3—3 of Fig. 1.

Like reference characters mark the same parts wherever they occur in any of the figures of the drawing.

Referring specifically to the drawing, 5 indicates a burner pipe of any ordinary construction with the exceptions hereinafter noted; having one end threaded for attachment to the ordinary gas-supply pipe, the latter being provided with the usual cock, or cut-off valve. At the opposite end of the burner pipe 5 is attached in any usual manner, at 6, any approved or usual form of tip.

Near its inlet end the burner tube 5 is provided with oppositely disposed branches or nozzles 7 and 8 upon the former of which is threaded a sleeve or casing 9 closed at its outer end by any suitable means, in this instance a cap 12 being shown.

In the nozzle 8 is threaded a plug 10 which is provided with a central bore closed at the outer end 11 of the plug, said hollow plug serving as a casing for a rotary valve plug 19 of a supplementary valve which plug extends transversely through the pipe 5 and into the sleeve 9, being reduced in diameter at 20^a within said sleeve.

The plug 19 is provided with two oppositely located ports, as at 13, 13, extending longitudinally in the plug from the pipe 5 and at their opposite ends turned inwardly, at right angles, as at 13^a, 13^a, and leading into the central bore.

There is provided in the pipe 5 a partition 22 which closes the pipe at this point and leaves no other opening than the lower port 13 for the flow of gas from the supply pipe.

The rotary valve plug 19 is provided with a diametrically located port 20 extending entirely through it in the same transverse plane as the branches 13^a of the ports 13, and a spring 21, coiled around the reduced portion 20^a of the rotary valve plug 19 in the sleeve 9, is secured at one end to the sleeve 9 and at the other end to the valve plug 19 and is so arranged that it will hold the plug 19 normally in a position in which

the ports 13^a, 13^a, are out of register with the transverse port 20 of the plug and the flow of gas through said ports is cut off.

The pipe 5 is provided with an annular, inwardly extending ledge or flange 14 upon which normally rests a float valve 30 connected by a cord, chain, or other flexible connection 29, with an arm 19^a projecting radially from the rotary valve plug 19 within the pipe 5, said flexible connection being of a suitable length to be stretched when the plug 19 is in its normal position, in which position the ports in the valve casing and valve plug are out of register and the valve closed, as before stated, the float valve 30 being held down on the ledge 14, which thus forms a seat for said float valve, upon which it is drawn by means of the connection 29, and spring 21 which turns the plug 19 and its arm 19^a.

On one side of the pipe 5 near the tip end thereof and parallel with the casings of the valve plug 19 is secured by a threaded projection 15 and thread 17, a transverse casing 18 closed by a cap 25, in which casing is rotarily mounted a controller 23 from one side of which projects a radial arm 27 projecting through a vertical slot 16 into the pipe 5 and terminating substantially at the center of said pipe, said arm being connected by a cord, chain, or other flexible connection 28 with the top of the float valve 30. A handle or button 24 is mounted on a stem 26 of the controller 23, by means of which the controller may be turned, and the length of the connection 28 is such that when the controller is turned in a direction to stretch said connection, the float valve 30 is raised off its seat 14 and the valve plug 19 turned to bring the ports 13^a, 13^a into register with the port 20 thus opening a passage for the gas through said ports and around the sides of the float valve.

The controller plug is reduced in diameter, as at 23 and about this reduced portion is coiled a spring 31 secured at one end to the plug and at the other end to the casing, said spring being only strong enough to maintain the plug normally in position to permit the float valve 30 to rest on its seat 14, leaving the flexible connection 28 barely stretched and free to slacken up when the float valve raises by floating, off its seat at 14.

The spring 21 on the valve plug 19 is strong enough to normally hold said plug turned to keep the port 20 out of register with the ports 13^a, 13^a, but is not so strong as to draw the float valve 30 down upon its seat 14 when the ordinary flow of gas is passing through the pipe, so that, as soon as the valve plug 19 is turned to open position, and the valve 30 raised off its seat 14, by turning the controller, and the ordinary pressure of gas is passing through the pipe

5 to the tip, the float valve is held raised off its seat by the gas, holding the plug 19 in the position in which the port 20 is aligned with branch ports 13^a, 13^a. In this position the proper amount of gas will pass out to be fully consumed.

Should the ordinary cut-off valve be turned to closed position, the cutting off of the gas from pipe 5 will permit the float valve 30 to drop upon its seat 14 and the slacking of its flexible connection with the valve plug 19 will permit the spring 21 to turn that plug to its closed position, thus further preventing the passage of gas. Should the ordinary cut-off valve be turned beyond the closed position, or accidentally be turned back to open position, the result with the float valve 30 and valve plug 19 will be the same. The gas will be cut off the instant the closed position of the cut-off valve is reached, no matter what is done with the cut-off valve afterwards. While the plug 19 remains in its closed position, the restored gas pressure has no effect upon it and no gas can possibly pass to the tip and escape, until the controller is turned, the float valve raised off its seat, and the valve plug 19 turned to open position.

Having thus fully described my invention what I claim as new is:

1. A gas burner comprising a burner pipe, a valve casing communicating therewith, a rotary valve plug in the casing, a spring holding the plug normally in position to close the valve, a controller casing, a rotary controller therein, a float valve in the pipe, and flexible connections between the float valve and the controller, and the float valve and the valve plug.

2. A gas burner comprising a burner pipe, a valve casing communicating therewith, a rotary valve plug in the casing, a spring holding the plug normally in position to close the valve, a controller casing, a rotary controller therein, a spring normally holding the controller in inactive position, a float valve in the pipe, and flexible connections between the float valve and the controller, and the float valve and the valve plug.

3. A gas burner comprising a pipe provided with intermediate laterally projecting external oppositely disposed valve casings having oppositely disposed gas ports, the pipe being provided with a partition for deflecting gas to one of said ports, a rotary valve in the valve casing provided with a transverse port adapted to be placed into communication with the casing ports, a spring on said valve spindle for normally holding the valve in a closed position, said valve being provided with a radial arm, a controller casing carried by the upper portion of the pipe and having a slot communicating with the pipes, a manually operable controller rotatable in said casing, an arm

carried by the controller and projecting
through said slot, a flexible connection in the
pipe and having one of its ends attached to
said arm, a spring carried by the controller
5 and opposing rotation thereof in one direc-
tion, and a float carried by the connection
and acted on by the flow of gas.

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

CHRIST G. FAREZ.

Witnesses:

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