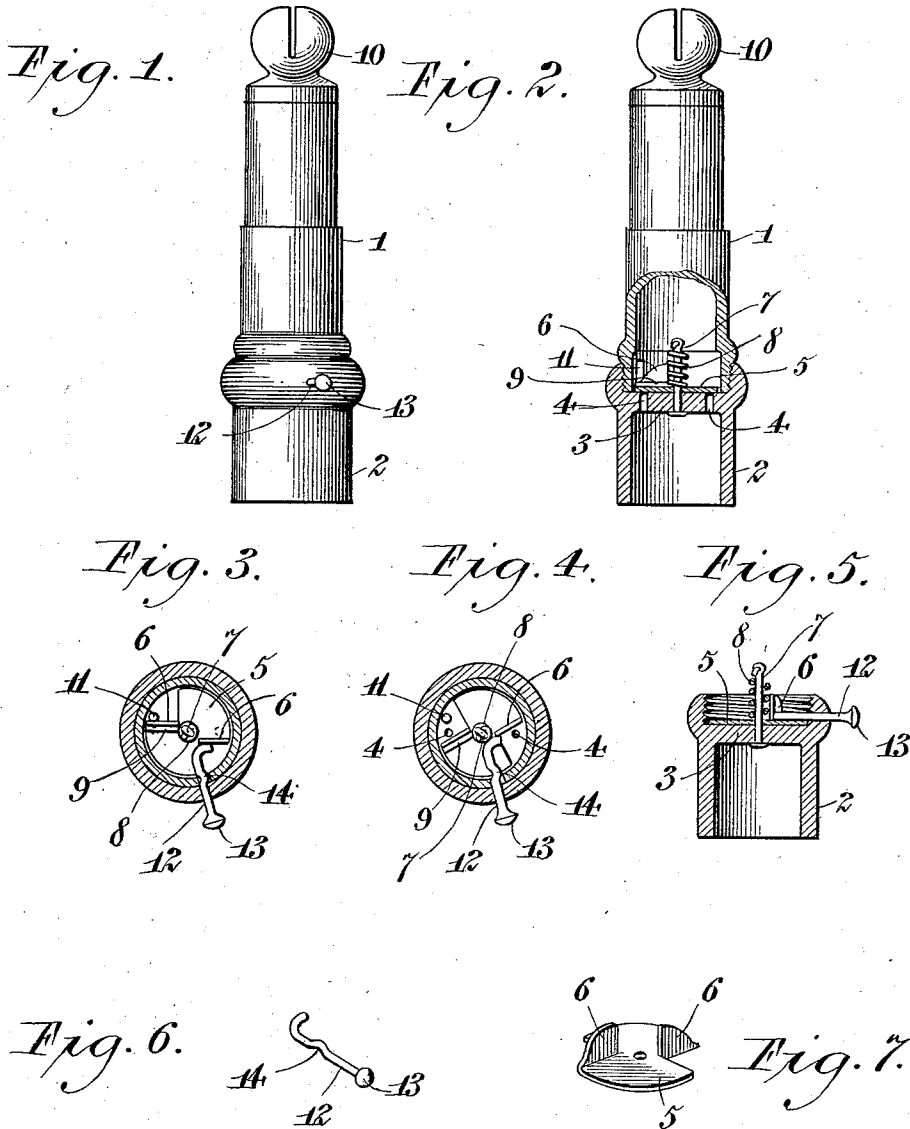


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 AUTOMATIC SAFETY GAS JET.
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1,065,777.

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UNITED STATES PATENT OFFICE.

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AUTOMATIC SAFETY GAS-JET.

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To all whom it may concern:

Be it known that we, HARRY A. CHIPPENDALE and MABEL KIMMELL, citizens of the United States, residing, respectively, at Wethersfield and Providence, in the counties of Hartford and Providence and States of Connecticut and Rhode Island, have invented new and useful Improvements in Automatic Safety Gas-Jets, of which the following is a specification.

This invention relates to improvements in gas burners, and is designed to prevent the accidental escape of gas from the burner, when the cock in the pipe is accidentally opened by a person not familiar with the danger caused by escaping gas, or after the gas ignited at the burner is extinguished by momentary cut off or reduction of the pressure in the gas main.

With the above object in view, and others which will be apparent as the nature of the invention is more fully disclosed, the improvement resides in the construction, combination, and arrangement of parts, as will hereinafter be fully described and claimed.

In the drawings, Figure 1 is a side elevation of a gas burner constructed in accordance with the present invention. Fig. 2 is a vertical sectional view through the same. Fig. 3 is a detail horizontal section showing the position of the parts when the burner passage is closed. Fig. 4 is a similar section showing the position of the parts when the burner passage is open. Fig. 5 is a detail sectional view of the lower member of the burner. Fig. 6 is a detail perspective view of the valve operating rod. Fig. 7 is a perspective view of the valve.

Referring now to the drawings in detail, the numeral 1 designates a tubular burner of the ordinary construction, and which is adapted to be connected with a gas fixture (not shown). The burner, in this instance, is preferably provided with a lower tubular section or member 2, the same having its upper edge enlarged and provided with an annular depression whereby the burner 1 is frictionally secured upon the said section 2. The burner section 2 is formed, adjacent its upper end with a wall 3, the same being provided with diametrically opposite ports or gas passages 4—4, which are controlled by a valve 5. The valve 5 is preferably formed from a round disk of flat material, and is slitted from its edge toward its center

at diametrically opposite points, the material between the said slits and the periphery of the disk is bent upwardly to provide blades 6—6, and to also provide the valve with recessed portions which are adapted to provide passages to permit of the free outflow of the gas through the ports or passages 4—4 when the valve is in the position illustrated in Fig. 4 of the drawings.

The flat body of the valve 5 is centrally provided with an opening through which extends a post 7 which is connected with the floor or wall 3. Surrounding the post 7, as well as having one of its ends attached thereto is a spring 8, and the said spring is provided with an extending arm which contacts with one of the blades 6 to rotate the valve to cause the same to close the passages 4—4, and thus shut off the gas from the burner tip 10.

The numeral 11 designates a stop which is arranged upon the wall 3 and which is adapted to contact with the blade 8 that is influenced by the arm 9 of the spring, and thus limit the movement of the valve upon its pivotal post 7.

The numeral 12 designates the valve operating rod or finger. This finger extends through suitable openings provided in the upper portion of the section, as well as in the lower portion of the section 1 of the burner, and is adapted to co-act or to be secured to the blade 6 of the valve opposite to the blade engaged by the spring. The openings through which the finger passes may, if desired, be provided with suitable packing glands, but from experience it has been found that the employment of packing is not absolutely necessary, as the openings are the size sufficient to accommodate the stem, and to sustain the same snugly therein without danger of gas escaping through the said openings. The finger 12 has its outer end provided with a head 13, and the said finger is bent to provide an offset portion which I will term a locking lug 14.

It is to be understood that the spring 8 is comparatively light, exerting only a sufficient tension to sustain the valve in a closed position, and when the finger 12 is operated to open the valve and uncover the ports 4—4, the blades 6 will be impinged by the pressure of the gas and so retained in an open position against the action of the weak spring 8.

The locking lug 14 is so arranged upon the finger 12 as to contact with the inner face or wall of the burner 1, the said finger and lug being of resilient material which materially assists in retaining the valve in an open position. When the valve is brought to its closed position, as illustrated in Fig. 3, the portion forming the lug 14 for the finger is received within the opening in the burner 1 to cause the parallel portions to contact with the opposite sides or faces of the burner, thus effectively locking the valve against accidental movement in either direction.

15 Having thus described the invention, what we claim is:—

In a gas burner, the combination of a burner tube, a substantially horizontally disposed valve for controlling the gas passage of the tube and arranged within the tube, said valve embodying a flat disk which is

slit from its edges toward its center, and the material between the slits and the periphery of the disk being bent upwardly to provide blades, a resilient finger having an offset stop passing through an opening in the burner and engaging with one of the blades of the valve to rotate the valve to a closed position, and the said finger adapted to rotate the valve to an open position, and the valve adapted to be sustained in the said open position by the gas passing through the tube and impinging the blades of the valve.

In testimony whereof we affix our signatures in presence of two witnesses.

HARRY A. CHIPPENDALE.
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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."