F. YOCKEY & C. D. McLEOD.

SAFETY GAS VALVE.

APPLICATION FILED MAR. 27, 1909.

942,158.

Patented Dec. 7, 1909.

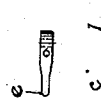

fig. 6.

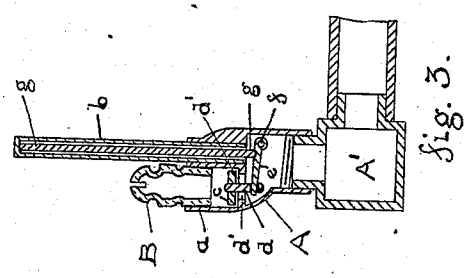

fig. 3.

fig. 4.

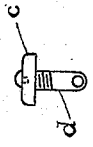

fig. 5.

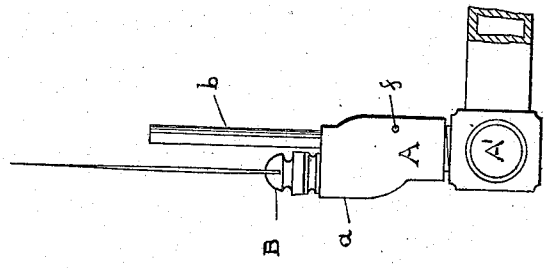

fig. 1.

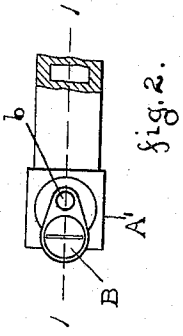

fig. 2.

WITNESSES:

J. M. Brown.

J. Breeson.

INVENTORS

F. YOCKEY

C. D. McLEOD

BY Hebb & Gardiner

ATTORNEY

UNITED STATES PATENT OFFICE.

FORREST YOCKEY AND CHARLES D. McLEOD, OF SIOUX CITY, IOWA.

SAFETY GAS-VALVE.

942,158. Specification of Letters Patent. Patented Dec. 7, 1909.

Application filed March 27, 1909. Serial No. 486,234.

To all whom it may concern:

Be it known that we, FORREST YOCKEY and CHARLES D. McLEOD, citizens of the United States, residing at Sioux City, in the county of Woodbury and State of Iowa, have invented new and useful Improvements in Safety Gas-Valves, of which the following is a specification.

Our invention has relation to gas fixtures and is intended as an improvement upon the safety gas valve, which was patented to us on the 4th day of August, 1908, No. 895,136.

The object of the invention is to still further improve, simplify and perfect the gas valve therein described.

We have illustrated our improvement upon said invention in the accompanying drawing in which—

Figure 1 is a view in side elevation of a pillar secured to a section of the arm of the fixture. Fig. 2 is a plan view of the same. Fig. 3 is a cross-section on line 1—1, Fig. 2. Fig. 4 is an enlarged plan view of valve showing the central opening and side depressions. Fig. 5 is an enlarged detail view of valve and stem in end elevation. Fig. 6 is a detail plan view of lever, showing the depression in the top of the lever for the end of the wire.

In the drawing A is a curved pillar adapted to be secured to the nipple of the fixture A′ in the usual manner. The pillar has an offset or shoulder *a* at one side adjacent to the tip B. In the top of the shoulder *a* is a vertical opening into which is secured the lower end of a tube *b*, made preferably of copper or other expansive material. The tube is closed at the upper end but opens freely at the lower end into the interior of the pillar. Underneath the tip B is a round valve *c* having a central threaded opening adapted to fit a threaded stem *d* projecting downward into the interior of the pillar and provided with a round opening near the lower end. In the top of the valve are two side depressions *c′*, adapted to receive the point of an instrument by which the valve may be adjusted on the stem. The valve rests upon a seat *d′*, forming a rim on the interior of the pillar. Through the opening in the stem of the valve is freely projected the end of a lever *e* pivoted at its opposite end to the pin *f* passed through the pillar. Near the pivoted end and directly underneath the center of the tube *b* a round depression is made in the top of the lever to receive the end of a wire *g* extending freely upward through the tube to the top of the same, the upper end of the wire being adapted to touch the tube when the valve in the pillar is closed and the lever in its normal position.

The valve regulating the supply of gas is controlled by the expansion of the tube. When heat is applied to the tube it spreads and lengthens, freeing itself from the upper end of the wire. At the same time the pressure of the gas upon the valve causes the valve to open, when the gas may be lighted. While the gas jet is burning the heat of the tube is retained by its proximity to the burning jet, and the top of the tube kept free of the wire, the force of the gas holding the valve open. When the light is extinguished and the tube cools it contracts and shortens sufficiently to press upon the upper end of the wire, which in turn pressing upon the lever *e* forces the lever down and restores the valve to its seat where it is held until heat is again applied to the tube. The valve being threaded on the stem permits an adjustment to the seat as may be required.

The valve in this improvement is controlled by the expansiveness of the tube as in our original invention, but the means for exercising and regulating that control are modified as herein shown, and for which we desire protection by Letters Patent.

Having described our invention, what we claim as new and desire to secure by Letters Patent is,—

1. In an automatic cut-off for gas burners, a pillar having an opening in the upper side thereof, a tube of expansive material secured in said opening, a valve in said pillar, a lever pivoted therein and adapted to control said valve, and a wire in said tube adapted to permit the valve to open by the pressure of gas thereon or to hold said valve closed, according as heat is applied to or withdrawn from the tube and the tube expanded or contracted, as and for the purposes specified.

2. In an automatic cut-off for gas burners, a pillar having an opening in the upper side thereof, a tube of expansive material secured in said opening, a vertical valve in said pillar, a lever pivoted therein at one end and attached to said valve, said lever having a depression therein directly underneath said tube, and a wire resting in said depression extending through the tube to

the top thereof and adapted to permit the valve to open by the pressure of gas thereon, or to hold said valve closed according as heat is applied to or withdrawn from the tube, and the tube expanded or contracted, as and for the purposes specified.

3. In an automatic cut-off for gas burners, a pillar, a tube of expansive material communicating with the interior thereof, said tube being closed at the outer end, a valve in said pillar and a stem adjustable to said valve, a lever pivoted therein and adapted to control said valve and stem, and a wire extending through said tube and resting against said lever and adapted to release the valve and permit the valve to open by the pressure of gas thereon or to hold said valve closed, as heat is applied to or withdrawn from the tube and the tube expanded or contracted, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

FORREST YOCKEY.
CHAS. D. McLEOD.

Witnesses:
H. C. GARDINER,
J. E. JACOBS.