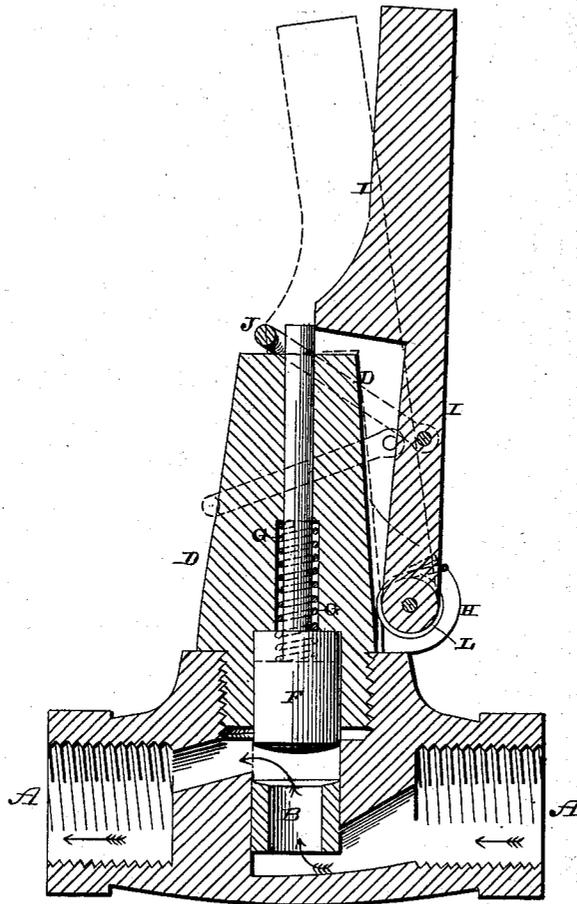


(No Model.)

A. H. McCLURE & H. HOLLAND.
AUTOMATIC SAFETY LOCK FOR GAS.

No. 410,001.

Patented Aug. 27, 1889.



Witnesses:

E. P. Ellis,
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UNITED STATES PATENT OFFICE.

ALBERT H. McCLURE AND HUGH HOLLAND, OF McGOVERN, PENNSYLVANIA.

AUTOMATIC SAFETY-LOCK FOR GAS.

SPECIFICATION forming part of Letters Patent No. 410,001, dated August 27, 1889.

Application filed May 3, 1889. Serial No. 309,443. (No model.)

To all whom it may concern:

Be it known that we, ALBERT H. McCLURE and HUGH HOLLAND, of McGovern, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Safety-Locks for Gas; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawing, which forms part of this specification.

Our invention relates to an improvement in automatic safety-locks for gas; and it consists in the combination of a body or shell provided with a valve-seat, a vertical guide or cylinder which projects from the top of the shell, a spring-actuated valve which is placed in this cylinder, and an automatic lock pivoted upon the side of the cylinder, as will be more fully described hereinafter.

The object of our invention is to provide a safety-lock which is to be placed between the house and the gas-main, so that if at any time the gas should be turned off from the main from any cause the lock will instantly close, and thus prevent the escape of gas from those burners which have been left burning, and thereby prevent all accidents from explosions and similar causes.

The accompanying drawing represents a vertical section of a gas-lock which embodies our invention.

A represents the body or shell of the lock, which is provided with an inlet at one end and an outlet at the other, and which has the recessed valve-seat B formed thereon. This valve-seat is placed below the outlet, so that if there is any sediment from the gas inside of the shell it will settle below the outlet. Screwed into the top of this shell A is the guide or cylinder D, inside of which is placed a spring-actuated valve F, which is held pressed down against the valve-seat by the spring G, which is placed around its stem. The stem is made long enough to project a suitable distance above the top of the cylinder when the valve is raised by the pressure of gas; but when the valve is forced downward by its spring the upper end of the stem sinks inside of the guide or cylinder, so as not to be in the

way of the lock. While the gas is under pressure in the main it passes through the valve-seat, and, bearing against the lower end of the valve, it raises it from its seat and the gas flows freely to the burners. When the pressure of gas is shut off from the main from any cause, the pressure of the spring G instantly forces the valve down upon its seat in the shell A.

Formed upon one side of the guide or cylinder are the ears H, and in between these ears is pivoted the spring-actuated lock I, to which the ring J is pivoted. Placed around the lower end of the lock I is a spring L, and the pressure of this spring always has a tendency to force the lock to close over the top of the guide or cylinder. As long as the pressure of the gas holds the stem of the valve above the upper end of the guide or cylinder the lock cannot close, because the stem will not permit it to move beyond a certain point. The moment, however, the gas is shut off from the main from any cause and the valve sinks, so that the upper end of this stem is no longer in the way of the lock, the lock is instantly forced by the pressure of the spring L between the ears H to close over the top of the guide or cylinder, and thus prevent the valve from being opened again by the pressure of the gas when the gas is again turned on. As soon as the lock closes over the top of the guide the ring J also drops down over around the side of the guide, as shown, so as to prevent the lock from being forced open. The gas having been thus shut off automatically when the pressure in the main is reduced below a certain pressure from any cause, the gas can only again be turned on to the house by some one going and moving back the lock, so as to allow the pressure of the gas to again raise the valve. By thus automatically shutting off the gas from the house after the gas has been shut off from the main, if the gas should be turned on again it will not escape through burners which were left burning, and which is extinguished by the shutting off the gas from the main. Where the burners are extinguished by the shutting off of the gas from the main and no one notices the fact, when the gas is turned on again it will escape into the house or building, and then explosions are liable to occur or deaths by suffocation. Our inven-

tion prevents any possibility of any trouble from this source.

Having thus described our invention, we claim—

5 1. The combination, with the shell provided with a valve-seat, the vertical cylinder, and a spring-actuated valve having a stem project-
10 ing above the cylinder when it is raised, of a spring-actuated lock having its lower end pivoted to the shell or guide and its upper end engaging the upper end of the valve-stem, in the manner shown, and for the purpose described.

2. The combination of the shell provided

with a valve-seat, the guide or cylinder, the 15 spring-actuated valve placed therein and adapted to have its end extend above the guide or cylinder by the pressure of gas against it, the pivoted spring-actuated lock, and a ring connected to the lock, substantially as set 20 forth.

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

ALBERT H. McCLURE.
HUGH HOLLAND.

Witnesses:

JONATHAN ALLISON,
THOS. G. ALLISON.