

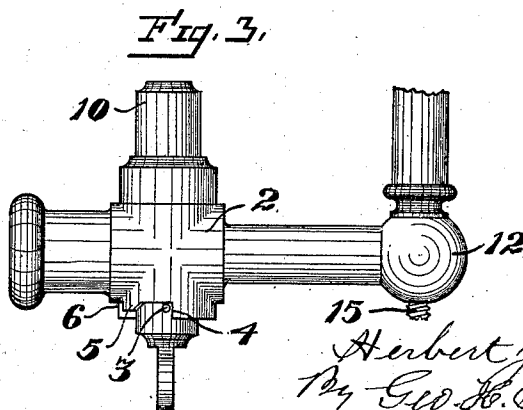
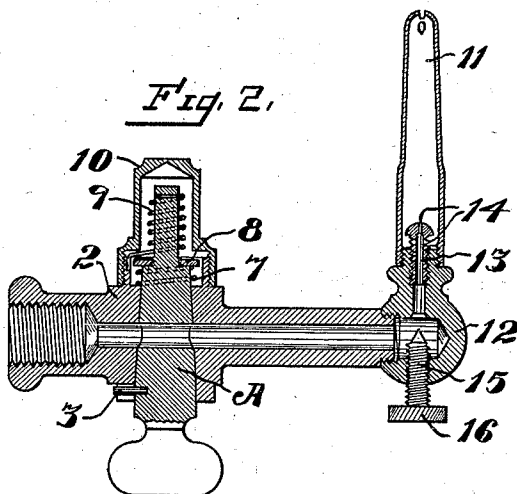
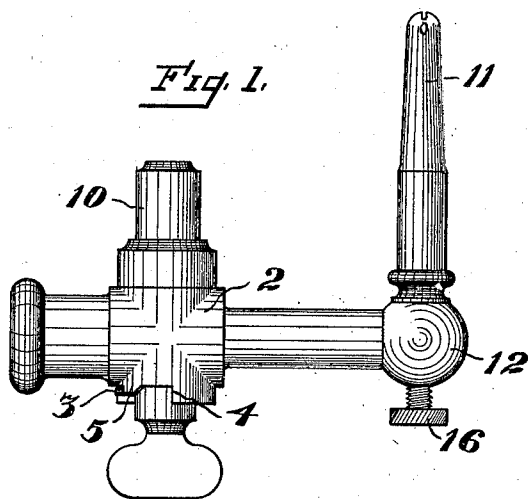
No. 748,487.

PATENTED DEC. 29, 1903.

H. J. DOLL.  
SAFETY GAS COCK.

APPLICATION FILED OCT. 13, 1903.

NO MODEL.



Witnesses,  
*James*  
*Dudley Moss.*

Inventor,  
*Herbert J. Doll*  
*By Geo. H. Strong.*

## UNITED STATES PATENT OFFICE.

HERBERT J. DOLL, OF SAN FRANCISCO, CALIFORNIA.

## SAFETY GAS-COCK.

SPECIFICATION forming part of Letters Patent No. 748,487, dated December 29, 1903.

Application filed October 13, 1903. Serial No. 176,829. (No model.)

*To all whom it may concern:*

Be it known that I, HERBERT J. DOLL, a citizen of United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Safety Gas-Cocks, of which the following is a specification.

My invention relates to improvements in safety gas-cocks.

Its object is to furnish a simple device which will insure the complete shutting off of the gas when the key is turned and which will also provide means for regulating the flow of gas independent of the key.

It consists of the parts and the construction and combination of parts as hereinafter more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of the cock in open position. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a side elevation showing cock closed.

A represents a plug-valve or key seating in the casing 2 and having a projection 3, which normally abuts against the stop 4 on the casing when the cock is in closed position. The key is adapted to have a limited reciprocating movement in the casing to allow the projection 3 to ride over a fixed boss or keeper 5 on the casing and to engage in a notch 6 behind the boss when the cock is in open position. The key is held in position by means of a spring 7, having one end bearing against a fixed support, as the casing 2, and the other against a nut 8 on the key. A second spring 9 has one end secured to a fixed point of support, as the casing, and the other to the key and is adapted to exert a torsional force to turn the key to shut off the gas. The two springs and the end of the key may be inclosed and protected by a cap 10.

Spring 7, it is understood, exerts a tension solely in the direction of the length of the plug to hold it to its seat, while the function of spring 9 is to turn the plug so that projection 3 will normally engage stop 4. Should spring 9 break, the plug will not fall from its seat, but will be held in position by spring 7.

When it is desired to turn on the gas, the key is turned to the left to carry projection 3 over boss 5, spring 7 giving sufficiently for

the purpose. As long as projection 3 rests in notch 6 the cock is opened and gas may flow to the tip 11.

When it is desired to turn off the gas, the plug is pulled out slightly to disengage the projection from the notch, whereupon it flies back to shut off the gas, the continued rotation of the plug being limited by means of stop 4 and projection 3.

The several parts coöperate, so that the complete cutting off of the gas is insured whenever the plug is released from the notch.

Inasmuch as this device is not designed to permit the plug being held at any intermediate point between the complete open position and the closed position of the cock I have provided the following means for controlling the flow of gas to the jet: The elbow 12, which is interposed between the key and tip 11, carries a hollow regulating-screw 13, having the lateral gas-passages 14. This screw is adjusted by the landlord to any desired maximum flow of gas. When tip 11 is screwed on, screw 13 is concealed and protected against any unauthorized tampering with the gas-supply.

The intensity of the light may be regulated by a suitable needle-point valve 15, having a milled head 16 to enable it being engaged by the thumb and finger.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a gas-cock, the combination of a key having a limited reciprocating movement in the direction of its axis, means for holding it in open position, and means tending to close the key on release from said holding means.

2. In a gas-cock, the combination of a key having a limited reciprocating movement parallel with its axis, a projection on said key, a keeper on the casing engageable by said projection, means limiting the turning movement of the key, and means for causing the key to close on release of the projection from the keeper.

3. In a gas-cock, the combination of a key having a limited reciprocating movement in the direction of its length, spring means for holding it in normally closed position, and means for holding it in open position against the tension of the spring.

4. In a gas-cock, the combination of a key having a limited reciprocating movement, spring means by which it is normally made to seat in its casing, independent spring means for holding the key in normally closed position, and detent means for holding the key in opening position against the closing-spring.
5. In a gas-cock the combination with a control-key, of externally-operated valve means independent of and exterior to the key for controlling the intensity of the light when the said key is full open.
6. In a gas-cock, the combination with an automatically-closing key, of an externally-operated light-control valve operating in the main gas-passage and controlling the intensity of the light when the key is full open.
7. In a gas-cock, the combination with an automatically-closing key, of means intermediate of the key and jet and operating in the main gas-passage for varying the intensity of the light.
- In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HERBERT J. DOLL.

Witnesses:

S. H. NOURSE,  
JESSIE C. BRODIE.