

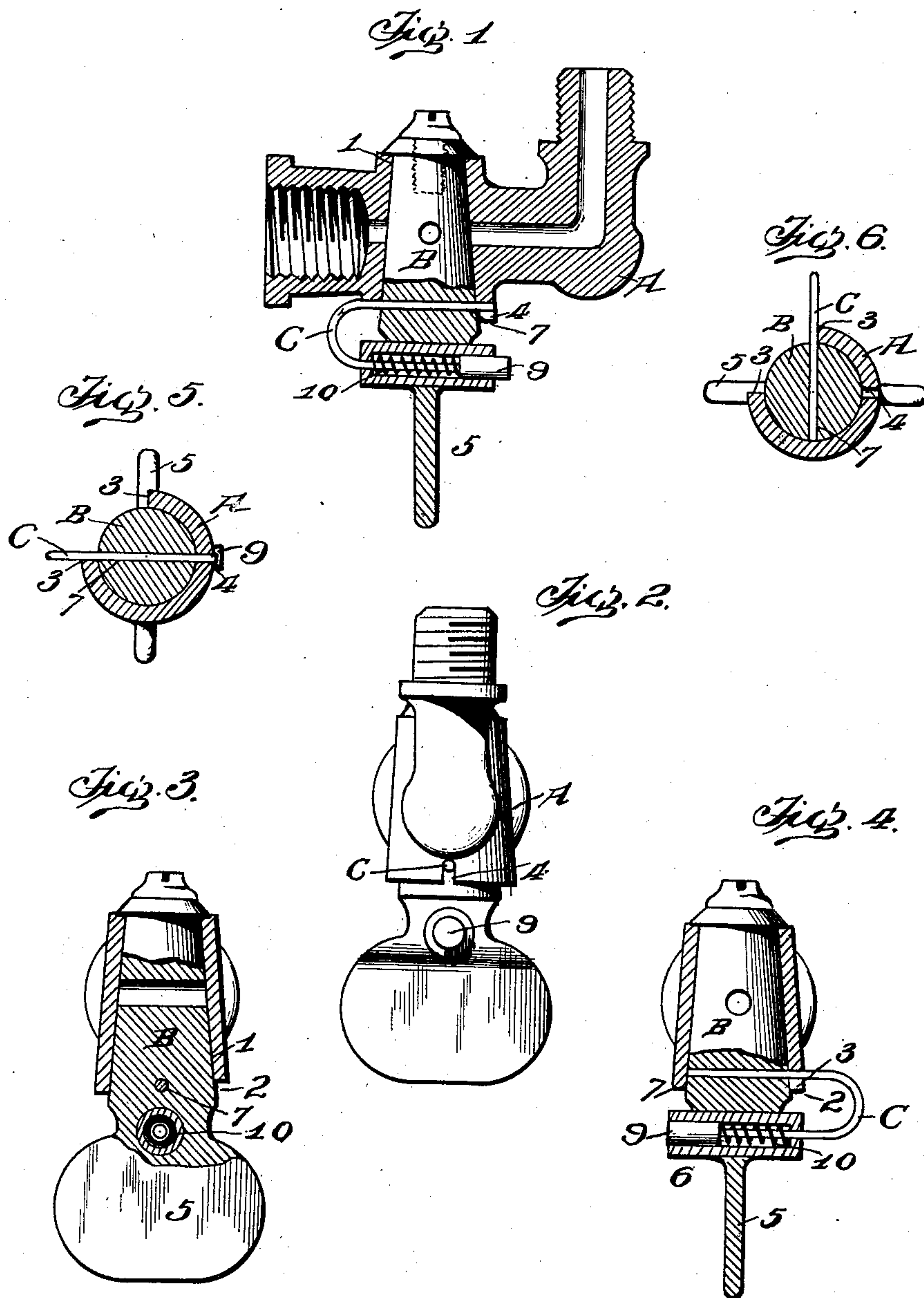
No. 705,419.

Patented July 22, 1902.

A. M. MERRILL.
SAFETY ATTACHMENT FOR GAS COCKS.

(Application filed Nov. 1, 1901.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

ALVA M. MERRILL, OF BROOKLYN, NEW YORK.

SAFETY ATTACHMENT FOR GAS-COCKS.

SPECIFICATION forming part of Letters Patent No. 705,419, dated July 22, 1902.

Application filed November 1, 1901. Serial No. 80,812. (No model.)

To all whom it may concern:

Be it known that I, ALVA M. MERRILL, a citizen of the United States, residing in the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Safety Attachments for Gas-Cocks, of which the following is a specification.

My invention relates to an improvement in safety attachments for gas-cocks, the object being to provide a lock which will secure the cock against accidental movement and which will operate automatically to fasten the cock when the gas is shut off.

The further object is to provide a simple attachment of few parts, compactly arranged, and capable of being applied to the gas-cocks in common use.

With these objects in view my invention consists in an ordinary gas-fitting having the usual valve-seat formed therein with shoulders adjacent thereto in connection with a plug fitted to the valve-seat and adapted to turn therein in the accustomed manner, a thumb-piece on the plug, and a spring-actuated slide-bolt having sliding connection with the plug at a point between the shoulders on the fitting, whereby it serves as a stop by striking one shoulder or the other to limit the turning movement of the plug, and the fitting provided with a notch or a recess in position to receive the bolt when the gas is cut off.

My invention further consists in certain novel features of construction and combinations of parts, which will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a longitudinal vertical section through the fitting and connected parts with the cock in its closed and locked position. Fig. 2 is a view in front elevation with the parts in the same position. Figs. 3 and 4 are views in transverse vertical section through the fitting, showing the plug in its two extreme positions, parts being broken away in each instance to show the interior construction; and Figs. 5 and 6 are horizontal sections showing the plug in its two extreme positions.

A represents the gas-fitting, adapted to be screwed on the fixture in the usual manner and constructed to receive a gas-burner. The fitting is bored out, as at 1, to receive the

plug-barrel. At the lower end of the bore a quadrant of the metal is cut away, as at 2, leaving the two shoulders 3 3, one at a side and another at the rear. Also a notch or opening 4 is formed at the front or opposite the rear shoulder.

B indicates the plug-valve, which is fitted to the bore of the part A in the usual manner, it being adapted to have a quarter-turn therein. A thumb-piece 5 is provided on the lower end of the plug-valve. At right angles to the thumb-piece barrel 6 extends, and parallel with the barrel and in the same plane with shoulders 3 3 a hole 7 is made through the plug-valve. A U-shaped bolt C is constructed and adapted to extend through said hole 7 and the barrel. The length of the U-shaped bolt is sufficiently greater than the length of the barrel and the diameter of the plug-valve, which preferably are about the same, so that normally both ends protrude beyond said parts, and by "normally" is meant when the valve is closed or the gas is cut off, and when in this normal position the free end of the upper member of the U-shaped bolt extends through the notch or opening 4 and the opposite end against the rear shoulder 3, whereby the plug-valve is locked securely in its closed position. The lower member of the U-shaped bolt terminates at its outer end in a push-button 9 in position to be forced inwardly by the operator's thumb as the thumb-piece is grasped to turn the cock. A spiral spring 10, surrounding the lower member of the U-shaped bolt and housed within the barrel, bears outwardly against the push-button, thus automatically throwing the bolt outward when its free end turns to a position behind the notch or opening 4. Therefore to operate the device let us suppose the gas to be shut off and it is desired to light it. The operator in placing his thumb and forefinger upon the thumb-piece to turn the latter first presses his thumb against the push-button, thereby forcing the bolt against the action of the spring and out of the notch or opening 4, whereupon the cock is turned until the rear end of the bolt strikes the stop-shoulder 3 at the side, the bolt being held inward the while by the wall of the bore. The stop-shoulder is so placed, of course, that it stops the plug-valve at the wide-open position. When it is

desired to turn out the light, the thumb-piece is caught between the thumb and finger and turned the usual way, the shoulder 3 at the rear acting to stop the turning movement of the plug and the tension of the spring simultaneously to throw the bolt into the notch or opening 4 opposite said shoulder. Thus it will be seen that the device insures absolute safety, as it always locks automatically the moment the gas is shut off and in such a manner that it will not accidentally unlock itself, and as the bolt usually springs with a click its operation is indicated to the operator. Also, as the locking takes place 15 the moment the gas is turned off an effort on the part of the operator to turn the cock in the opposite direction would at once be met with resistance, thereby indicating in that way that the cock was locked.

20 It is evident that slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth; but,

25 Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

30 1. The combination with a gas-fitting, provided with the usual valve-seat and having stop-shoulders at the lower end thereof, and a notch or opening opposite one of said should-

ders, of a plug-cock fitted to turn in the seat and provided with a hole and a spring-actuated bolt having sliding connection in the 35 hole in the plug-cock in position to simultaneously engage one stop-shoulder and enter the notch or opening.

2. The combination with a gas-fitting, having the valve-seat therein, and provided with 40 stop-shoulders, and a notch or opening adjacent to the valve-seat and in alinement with one shoulder, of a plug-cock fitted to the seat, said cock having a barrel therein and a hole extending therethrough parallel with the barrel 45 and in a plane with the stop-shoulders, a U-shaped bolt extending through the barrel and hole, one end of the bolt having a push-button thereon, a spring in the barrel arranged to force the bolt outwardly when not 50 hindered by the wall of the valve-seat, the opposite end of the bolt being adapted to enter the notch or opening in the fitting in alinement with one of the shoulders and the U-shaped end to engage one of the stop- 55 shoulders when the cock is closed whereby to lock it against accidental turning.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ALVA M. MERRILL.

Witnesses:

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