

No. 755,332.

PATENTED MAR. 22, 1904.

H. P. THIELE.
SAFETY GAS COCK.

APPLICATION FILED SEPT. 14, 1903.

NO MODEL.

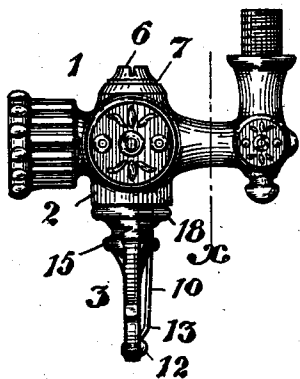


Fig. 1.

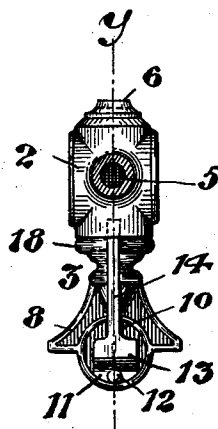


Fig. 2.

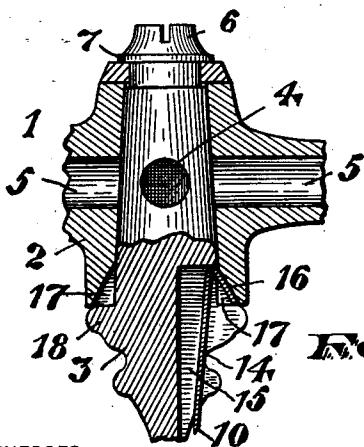


Fig. 3.

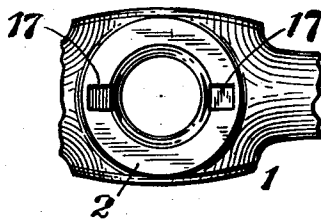


Fig. 4.

WITNESSES:

Ralph Lancaster.
Russell M. Everett.

INVENTOR

Henry P. Thiele,

BY

Charles H. Pell
ATTORNEY

UNITED STATES PATENT OFFICE.

HENRY P. THIELE, OF NEWARK, NEW JERSEY.

SAFETY GAS-COCK.

SPECIFICATION forming part of Letters Patent No. 755,332, dated March 22, 1904.

Application filed September 14, 1903. Serial No. 173,083. (No model.)

To all whom it may concern:

Be it known that I, HENRY P. THIELE, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented and produced a new and useful Safety Gas-Cock; and I 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 appertains to make and use the same, reference being had to the accompanying drawings, and to numerals of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in that class of gas-cocks represented by the one shown in my prior application, Serial No. 160,008, filed June 4, 1903; and the objects of the present invention are to secure greater strength and rigidity in the locking of the valve-plug, to conceal the locking member to a large extent, to avoid defacement of the valve-casing, and to secure other advantages and results some of which may be hereinafter referred to in connection with the description of the working parts.

The invention consists in the improved safety gas-cock and in the arrangements and combinations of parts of the same, all substantially as will be hereinafter set forth, and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like numerals of reference indicate corresponding parts in each of the several figures, Figure 1 is a side view of my invention as applied to a gas-fixture, the cock being shown closed. Fig. 2 is a section on line *x*, Fig. 1. Fig. 3 is a central sectional view on line *y*, Fig. 2; and Fig. 4 is a bottom view of the valve-casing with the plug removed.

In said drawings, 1 indicates a gas connection or fixture of any ordinary form or construction adapted to be coupled at its opposite ends to other gas-fittings, as is usual, said connection furnishing a valve-casing 2 of my improved construction and adapted to receive a valve-plug 3. Said valve-plug is at its inner end tapered to fit the valve-seat, as usual, having a transverse perforation 4, to be turned into or out of alinement with the bore or passage 5 of the gas-fixture 1 and receiving at

its extremity the usual screw 6 and washer 7 to hold the valve-plug seated. The other end of the said valve-plug forms a handle or finger-piece 8, to be grasped in turning the valve and which I have shown as provided by merely flattening the said end, as is common. In carrying out my present invention I mount upon one side of said flattened end or handle 8 a locking-spring 10, preferably stamped out of sheet metal and provided at one end with a broadened portion 11, by which it is riveted, as at 12, to the side of the handle-piece 8, close to its extremity. Adjacent to said point of riveting the spring 10 is offset outwardly, as at 13, so that the main portion 14 of the spring will lie away from the valve-plug sufficiently to insure freedom of action. Preferably said offset is located in the said broadened end of the spring and the straight portion 14 beyond is narrowed to a width considerably less than the width of the valve-plug, as shown. Said narrow portion or tongue 14 of the spring extends, it will be understood, longitudinally along the valve-plug, which has a corresponding longitudinal groove or recess 15 to accommodate it. Preferably said groove is of a depth adapted to bring its bottom on a line with the side of the flattened end portion or finger-piece 8, as shown in Fig. 1, and its walls are abrupt or at right angles to said floor of the groove. The portion 14 of the spring fits in said groove closely enough to prevent lateral movement, even though only one fastening-rivet is employed at the point of fastening 12, and yet not so tight as to impede free resilient action of the spring. Said groove 15 and also the spring 10 extend along the valve-plug 3 to a point within the casing 2, and thereat the end of said spring is bent backwardly to lie at an acute angle to the main portion 14, as at 16, and forms an outwardly and rearwardly inclined extremity. This extremity normally lies out of the groove 15 or outside the surface of the valve-plug under the action of the spring, although at intermediate positions of the valve-plug in turning it will be held repressed by the walls of the casing 2. At proper circumferential points of the casing to correspond to the position of the locking-tongue when the cock is

closed are recesses 17, sunk radially into the walls and adapted to receive the said extremity 16 as it springs outward. When it is desired to turn on the gas, a simple grasping of the finger-piece of the valve-plug in the usual way will pinch the spring 10 back against the bottom of the groove 15 and repress the extremity 16, freeing it from the locking-recess 17 and allowing the cock to be freely turned.

It will be noted that the recess 17 does not cut through the wall of the valve-casing, and thus there is no marring or disfiguring of the valve-casing where it will be visible. Furthermore, a bead or rim 18 is preferably placed upon the valve-plug closely adjacent to the casing, which aids in concealing the recess and secures a very neat appearance. In fact, only the outer portion of the spring is exposed, and this may be given an ornamental effect in any suitable and well-known manner. Preferably the recess 17 inclines at its floor inwardly toward the plug-seat for convenience in manufacture, and the extremity 16 of the locking-spring is of corresponding form, as above described, for a similar reason. Other shapes may be given said parts without departing from the spirit and scope of my invention.

Having thus described the invention, what I claim as new is—

1. In a gas-cock the combination with a casing, and a valve-plug having a lateral longitudinal groove with side walls, of a leaf-spring normally lying in said groove away from the bottom thereof, said spring being fastened at its outer end to the valve-plug and adapted at its inner end to engage the valve-casing.

2. In a gas-cock, the combination with a valve-plug casing having in its walls a radial recess, and a valve-plug having a lateral longitudinal groove with side walls, of a leaf-spring lying in said groove and being fastened at its outer end to the valve-plug and adapted at its inner extremity to enter said recess in the valve-casing.

3. In a gas-cock, the combination of a valve-plug casing having in its walls a recess opening only into the plug-seat and being concealed from the exterior, a valve-plug having a lateral

longitudinal groove, and a leaf-spring lying in said groove and being fastened at its outer end to the valve-plug and adapted at its inner end to enter the said valve-casing recess.

4. In a gas-cock, the combination of a valve-plug casing having in its wall a recess with its floor inclining from an outer point of the edge of said casing inwardly toward the plug-seat, a valve-plug having a lateral longitudinal groove, and a leaf-spring lying in said groove and having its outer end fastened to the valve-plug and its inner extremity bent outwardly backward at an acute angle to the main portion of the spring and adapted to fit said recess in the edge of the valve-casing.

5. In a gas-cock, the combination with a valve-casing having in the valve-seat a recess opening out through the edge of the casing, a valve-plug having an annular bead or flange adapted to lie adjacent to the valve-casing to hide said recess and having a longitudinal groove, and a leaf-spring lying in said groove and being fastened at its outer end to the valve-plug and adapted at its inner end to enter said recess.

6. In a gas-cock, a casing, a valve-plug having a flattened outer end and a lateral longitudinal groove, of a leaf-spring having a broad outer end fastened to the flattened portion of the plug and a narrow inner portion lying in said groove and adapted at its extremity to engage the said casing.

7. In a gas-cock, a casing, a valve-plug having a flattened outer end and a lateral longitudinal groove, of a leaf-spring having an outer end fastened flatwise upon the flattened end of the plug, said spring being adjacent to said fastened offset or bent outward, and having beyond said offset a narrowed inner end lying in said groove and adapted to engage the said casing.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of September, 1903.

HENRY P. THIELE.

Witnesses:

CHARLES H. PELL,
RUSSELL M. EVERETT.