G. H. HARRIS.

GAS COCK.

APPLICATION FILED DEC. 31, 1917.

1,339,882. **Patented May 11, 1920.**

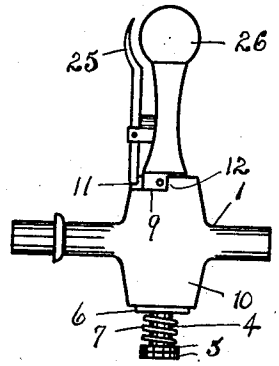


Fig 1

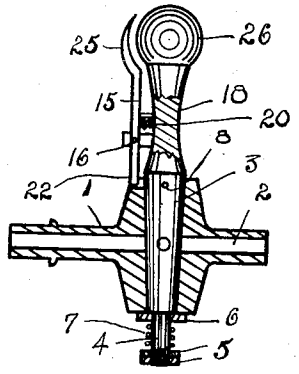


Fig 2

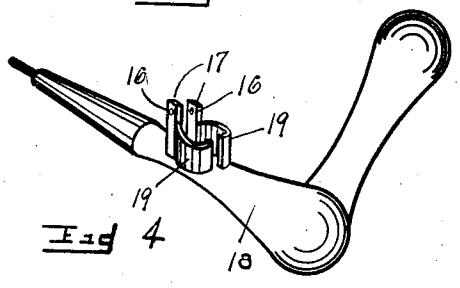


Fig 4

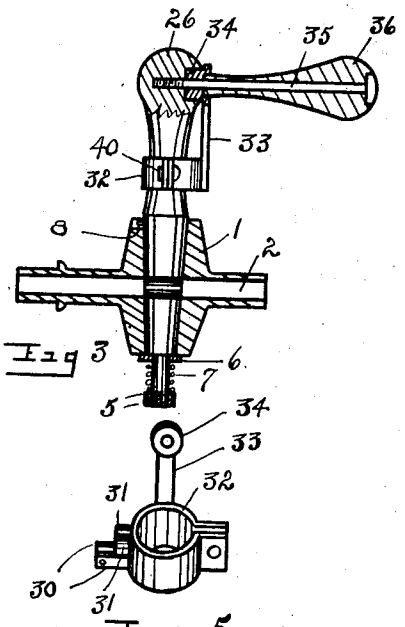


Fig 3

Fig 5

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GAS-COCK.

1,339,882. Specification of Letters Patent. Patented May 11, 1920.

Application filed December 31, 1917. Serial No. 209,774.

To all whom it may concern:

Be it known that I, GEORGE H. HARRIS, a citizen of the United States, residing at Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Gas-Cocks, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to a gas cock and I declare the following to be a full, clear, concise and exact description thereof sufficient to enable anyone skilled in the art to which it appertains to make and use the same reference being had to the accompanying drawings in which like reference characters refer to like parts throughout the specification.

The object of the invention is to provide a gas cock that will automatically lock when the key thereof is turned in closed position. The attainment of this object is accomplished by employing a spring actuated pawl having an end that engages a shoulder, whereby to lock the key in the position aforesaid.

The object will be understood by referring to the drawings in which;

Figure 1 is a side elevation of the gas cock;

Fig. 2 is a central vertical section of the gas cock;

Fig. 3 is a central vertical section, showing a modification;

Fig. 4 is a detail enlarged perspective view of a key employed;

Fig. 5 is a detail enlarged view showing a perspective of a detachable ring employed in a modified construction.

Referring more particularly to the drawings, the gas cock embodies a casing —1— having a conduit 2 for the passage of the gas. A tapered turn key or plug 3 is disposed in a socket or orifice formed in the casing —1—. The key 3 is reduced at 4 and threaded for the mounting of the lock nuts 5—5. A washer 6 is disposed upon the reduced portion 4 and lies adjacent the casing —1—. A coiled spring 7 is mounted upon the reduced portion 4 and bears at one end against the washer 6 and at the other against the adjacent lock nut 5, whereby to hold the key 3 within its socket or orifice in the casing —1—.

The key 3 carries a pin 8. The casing —1— is recessed at 9 on an arc of a circle extending a little more than a quarter way around the cylindrical part 10 of the casing —1—, whereby to form shoulders at 11 and 12. The pin 8 abuts against the shoulders 11 and 12, whereby to limit the turning of the key 3 in either full open or full closed position.

The key 3 is locked in closed position by a pawl 15 that is fulcrumed upon a pin or shaft having bearings at 16—16 to the standards or brackets 17—17 formed integral with the upper portion 18 of the key 3. The walls 19—19 are formed also integral with the upper portion 18 of the key 3 and provide a chamber for the disposition of a spring 20 that bears against the under surface of the pawl 15, whereby to hold said pawl normally with the end 22 inward and in front of the shoulder 11.

In order to turn the key 3 from full closed to open position, the end 22 of the pawl 15 is disengaged from in front of the shoulder 11 by manipulating the finger piece 25 of said pawl 15 inward toward the upper ball part 26 of the key 3. The finger piece 25 is concaved to conform to the surface of the ball part 26 of the key 3.

A modification of the locking mechanism is illustrated in Fig. 3 which modification shows the brackets 30 for supporting the pawl 15 and the walls 31 for housing the spring 20 to be formed integral with a detachable ring 32. The ring 32 has an integral upright arm 33 provided on its upper end with a cup 34 that rests, when the parts are assembled, in a socket in the upper ball part 26 of the key 3. The cup 34 has an aperture for the projection of the rod 35 that is threaded to the ball part 26 of the key 3, whereby to hold the handle 36 in position. The ring 32 is clamped to the upper portion 18 of the key and is secured, by a headed bolt 40. Furthermore, the arm 33 and cup 32 aid in holding the ring 32 in place.

In order to turn the key 3 from full closed to open position, the finger piece 25 of the pawl 15 is forced inward toward the ball part 26 of the key 3, whereby to rock the pawl 15 upon its fulcrum and release the end 22 from engagement with the shoulder 11 of the casing 1. When the key 3 is turned in the reverse direction to close the passage of the conduit 2, the end 22 of the

pawl 15 will snap back in front of the shoulder 11 under the pressure of the spring 20.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a gas cock, a casing having an orifice for the disposition of a key, a detachable ring having brackets, a pawl pivotally supported by said brackets, an arm having a cup shaped member attached to said ring, a handle disposed at right angles to said key, and a rod for holding said handle and cup shaped member in assembled position.

2. In a gas cock, a casing having an orifice for the disposition of a turn key, a detachable ring having brackets, a pawl pivotally supported by said brackets, an arm having a cup shaped member attached to said ring, a handle disposed at right angles to said key, a rod for holding said handle and cup shaped member in assembled position to said key and means for clamping said ring to said key.

3. In a gas cock, a casing having an orifice for the disposition of a key, spring means for holding said key within its orifice, a detachable ring having brackets, a pawl having a concaved finger piece adapted to be pivotally supported by said brackets, an arm having a cup shaped member attached to said ring, a handle disposed at right angles to said key, a rod for holding said handle and cup shaped member in assembled position to said key, and means for clamping said ring to said key.

In testimony whereof I have affixed my signature.

GEORGE H. HARRIS.