

G. A. GLASS.
GAS COCK LOCK.
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1,039,048.

Patented Sept. 17, 1912.

Fig. 1.

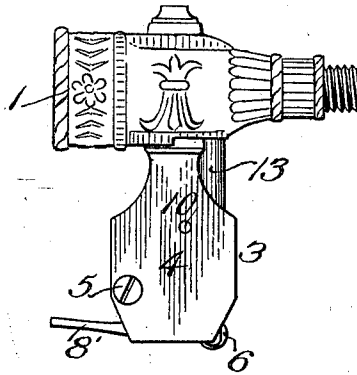


Fig. 2.

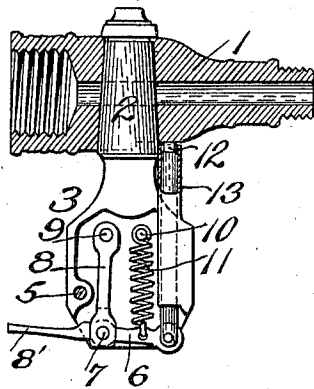


Fig. 3.

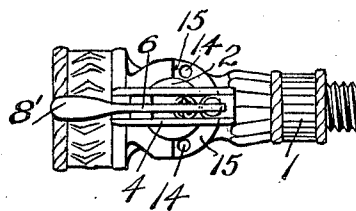
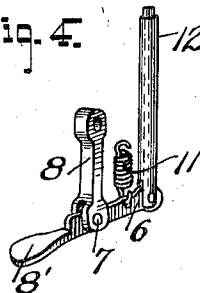


Fig. 4.



Witnesses

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GAS-COCK LOCK.

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To all whom it may concern:

Be it known that I, GEORGE A. GLASS, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Gas-Cock Locks, of which the following is a specification.

At the present period, considerable loss of life is being entailed owing to persons becoming asphyxiated by the accidental escape of gas in sleeping apartments, rooms, and similar places, and very frequently because of the improper operation of gas fixtures in dwellings and other structures. It is well known that ordinary gas cocks, or valves, such as now in common use, are such that in operation, it is often very difficult to turn the gas entirely off thereby; furthermore, these valves when operated in extinguishing a gas burner, may work very easily and are frequently inadvertently turned partially on, unbeknown to the operator, after he has previously properly closed the same. resulting under such conditions in escape of gas after a person has retired, for instance, and consequent asphyxiation of such person, and possibly others with him.

With the foregoing in view therefore, the object of the present invention has been to devise an exceedingly simple, compact and cheap form of valve or cock adapted for use on ordinary gas fixtures and embodying a readily and conveniently operable locking mechanism associated preferably with the handle portion of the valve, and which will effectively lock the valve in closed position, irrespective of whichever direction the valve is turned in order to shut off the flow of gas to a burner. The locking mechanism operates automatically in the closing movement of the valve and prevents any accidental movement, such as might partially open the valve after it has once been closed. The locking mechanism necessitates the release of the valve by positive operation of said mechanism preliminary to opening movement and in the practical embodiment of the invention, said locking mechanism is advantageously housed by a finger piece similar to that provided for gas valves now commonly used.

For a full understanding of the present invention, reference is to be had to the following description and to the accompanying drawings, in which—

Figure 1 is a side elevation showing the invention applied to an ordinary coupling or union, such as used universally for gas fixtures. Fig. 2 is a view showing the union or coupling in section and illustrating the side plate of the handle or finger piece of the valve removed to disclose the locking mechanism. Fig. 3 is a bottom plan view with the valve arranged in open position. Fig. 4 is a perspective view of the locking mechanism alone.

Throughout the following detail description and on the several figures of the drawings, similar parts are referred to by like reference characters.

While the invention as illustrated shows the valve locking means and associated valve in connection with the tubular coupling or union of an ordinary wall gas fixture, it is to be understood that the valve is adapted to be employed on any ordinary unions or coupling members such as may be provided for various other types of fixtures.

In the drawings, 1 denotes the tubular union which is internally threaded at one end for coupling the same with a pipe leading to a gas supply, the opposite end of the union being externally threaded for the attachment of a burner fixture. The union is provided with a transverse tapering opening forming a valve seat for the rotative valve 2, the latter being of ordinary form in so far as its valve portion is concerned, but having a handle or finger piece 3 of special form. The handle 3 virtually comprises a casing and has a removable side plate 4 that is attached to the body of the handle by a screw 5, or equivalent fastening.

Between the side plate 4 and the other or opposite side of the handle 3 is pivoted between its ends a small hand lever 6, the pivot being shown at 7 and being carried by the free or swinging outer end of a short supporting lever 8. The lever 8 is pivoted to a stud 9 preferably integrally formed with the handle 3 and located adjacent to a second stud 10 with which one end of a coiled spring 11 is connected. The other end of the spring 11 is attached to the end portion of the hand lever 8 opposite that having the pressure piece 8', and the extremity of the lever nearer the spring 11 is pivotally connected with a locking plunger or member 12 which slides longitudinally of the handle 3, or parallel with the axis of the said handle in a tubular guide 13 integrally formed with

the body of said handle. The end of the locking member 12 opposite the lever 6 is adapted to engage in locking recesses 14 which are formed at opposite portions of the union 1 and located on opposite sides of the valve opening therein. Said recesses 14 are situated adjacent to stops 15 which will limit the closing movement of the valve 2 when turned in either direction to effect closing.

The stud 9 which forms the axis of the lever 8 lies between the opposite side portions of the handle, whereas the stud 10 extends through an opening in the side plate 4, thereby cooperating with the screw 5 to hold the plate 4 from displacement or movement with respect to the body of the handle. The handle 3 will be observed to be of practically the same outline or shape, generally speaking, as the customary handle of gas valves of this type, and the pressure piece 8', projecting as it does in a lateral manner from the handle 3, forms a very convenient means for operating the lever 6 in order to withdraw the plunger 12 from engagement with either one of the recesses 14. When the plunger 12 is disengaged from a recess 14, it is obvious that the valve is released and the operator may then open the same to a greater or less extent as desired. In the movement of the plunger it slides freely in the casing or guide 13 and the supporting lever 8 has a slight pivotal or swinging movement as the plunger is moved to release the valve. When the valve is released, the locking end of the plunger is adapted to slide freely on the arcuate surface 15 at the ends of which the recesses 14 are located, and as soon as the valve reaches a closed position, the spring 11 automatically engages the plunger with the recess 14 at the adjacent end of the surface 15.

While the invention is preferably used in connection with gas burners for lighting purposes, it is as readily adapted for use for burners or stoves, or heaters of any type where the locking mechanism above described may be employed with resultant advantages.

It will be apparent that by the use of the invention, the liability of a gas valve embodying the improvements being opened or partially opened by accident is entirely avoided so that danger of explosion from

accidental escape of gas, or similar cause is eliminated.

The advantages of the present invention as applied to liquid valves, such as control drawing off of explosive liquids, are obvious.

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

1. In combination with a gas fixture, a valve controlling the passage of gas there-through and having a hollow handle, a locking plunger slidably mounted in the hollow portion of the handle, the fixture being provided with a recess to receive the end of said plunger, a supporting lever mounted in the hollow portion of the handle, an operating lever also mounted in the hollow portion of the handle and having a pressure piece projecting from said handle, and spring means connected with the operating lever for projecting the plunger into engagement with said recess.

2. In combination, a tubular member, a valve mounted therein and having a projecting handle, said tubular member being provided on a side thereof with an arcuate surface provided with recesses at its opposite ends, stops adjacent to said recesses, a removable side plate for said handle in spaced relation to the body of the handle, a supporting lever pivoted at its inner end to the handle in the space between the handle body and side plate, a tubular guide carried by said handle, a plunger slidable therein and adapted to engage at its inner end with the recesses aforesaid and to slide at said end on the surface above referred to, a transverse operating lever pivoted between its ends to the outer end of the supporting lever and having a projecting pressure piece at one end, the other end of said lever being pivoted to the outer end of the plunger, a spring located between the guide and supporting lever and connecting the handle with the operating lever, and means removably securing the side plate to the handle so as to house the spring, the supporting lever and the body of the operating lever.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE A. GLASS.

Witnesses:

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