May 26, 1931. S. A. WILDE 1,806,775

SAFETY LOCK FOR GAS VALVES

Filed May 7, 1930

Fig. 1.

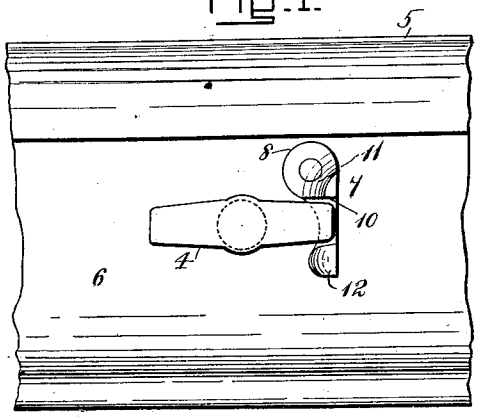


Fig. 2.

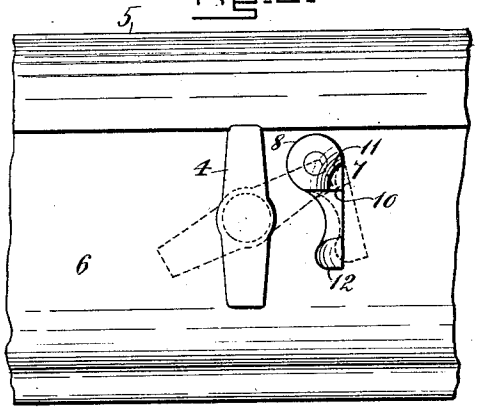


Fig. 3.

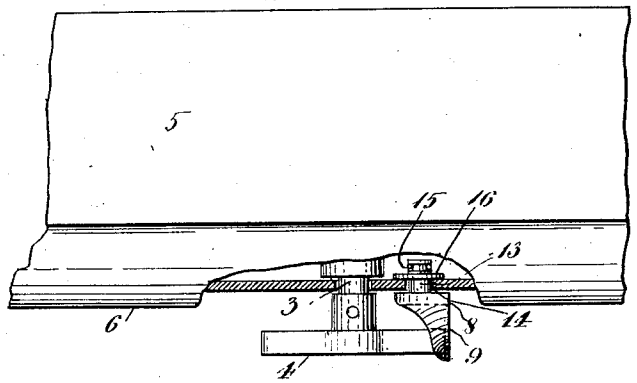
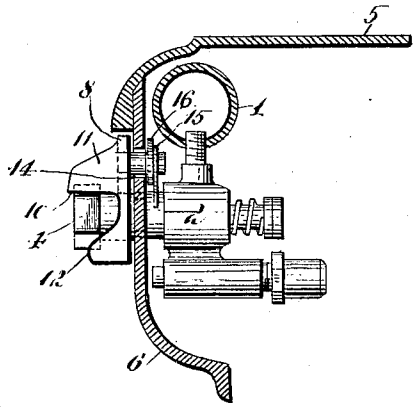


Fig. 4.



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UNITED STATES PATENT OFFICE

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SAFETY LOCK FOR GAS VALVES

Application filed May 7, 1930. Serial No. 450,421.

The object of the invention is to provide an effective arrangement for locking the valves which control the supply of gas to the burners of a gas stove for preventing the accidental opening of the valves when closed.

The invention contemplates the housing of the valves and gas manifold with which the valves connect. This housing includes a face plate arranged in front of the manifold and valves with the stems of the valves extending through this plate. The valve stems carry upon their ends outside the plate handles or buttons which turn over the face of the plate and by the turning of which handles the valves are opened or closed. Mounted upon the face plate adjacent the valves are locking devices controlling the movement of the handles.

The invention can best be seen and understood by reference to the drawings in which an embodiment thereof is shown applied to a single valve, and in which

Fig. 1 is a front elevation of the housing with the handle on the end of the valve stem occupying a position corresponding with the closed position of the valve, and cooperating with the handle is the locking device in engaging position.

Fig. 2 is an elevation the same as Fig. 1 excepting that the handle has been turned to a position corresponding with the open position of the valve, while in dotted lines is shown the relative positions of the handle and locking device as the handle is being turned down to a position corresponding with the closed position of the valve as shown in Fig. 1.

Fig. 3 is a plan of the structure shown in Fig. 1, the housing being cut away in part, and

Fig. 4 is a cross section of the housing and manifold, with the valve and associated parts together with the locking device shown in side elevation.

In the drawings 1 represents the gas manifold and 2 the valve connecting therewith. 3 is the stem of the valve. 4 is the handle or button on the end of the stem by which the stem is turned for operating the valve. In the preferred normal arrangement of the parts the handle will assume a substantially horizontal position when the valve is closed and a substantially vertical position when the valve is open. Enclosing the manifold and valve is a housing. This comprises a top plate 5 beneath the down turned edge of which the manifold is arranged, and a front plate 6 through which the stem of the valve extends and over the face of which plate the handle on the end of the stem turns. Pivotally mounted upon the plate in a position adjacent to the handle is a gravity actuated lock 7. This comprises a pivoted pendant body 8 bearing a protuberance 9 which presents a bottom edge 10 and, on the side facing the arm or button, a drawing surface 11 leading to the edge 10. Below the edge 10 the body is extended to form a finger piece 12. The pivotal mounting of the lock is obtained by a stud 13 on the back of the lock body which extends through an opening 14 in the plate 6 and is retained on the inside by a pin 15 with interposed washer 16.

Thus pivotally mounted the body of the lock will normally assume by gravity a pendant position. The arrangement of the lock body with relation to the handle 4 is such that when the body is occupying its normal pendant position and the handle its horizontal position, corresponding with the closed position of the valve, the edge 10 on the lock body will be disposed to lie above the end of the handle thereby preventing its turning, while the thumb piece extension 12 of the lock body will extend downwardly beneath the end of the handle between it and the plate, and with extension below the handle so as to be easily grasped by the fingers. The release of the lock body from the handle to permit of its turning is obtained by moving the lock body outwardly so that the edge 10 will swing away from the end of the arm, and this effect may be obtained manually by means of the finger piece 12 on the end of the body. After the handle has been turned to a substantially upright or closed position, corresponding with the open position of the valve, the body of the lock will then have resumed its normal

pendant position. When occupying such pendant position the lock body will not interfere with the turning down of the handle to a horizontal position, for closing the valve, for as the handle is turned down it will engage the drawing surface 11 on the lock body thereby turning the body outwardly away from the end of the handle until the handle has reached its downward position corresponding with the full closure of the valve, after which the lock will assume by gravity its locking position first referred to.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States:—

1. The combination with a gas manifold, a valve connecting therewith having a stem, and a handle borne by the stem for turning it and operating the valve, said handle having an open and closed position determinate with the open and closed position of the valve, of a plate through which the valve stem extends and over the face of which plate the handle turns, a gravity actuated manually releasable lock pivotally mounted upon said plate adjacent said handle and normally maintained by gravity in locking position with relation to the handle for preventing the turning thereof when the handle is in a closed position, or be manually released into a disengaging position permitting the turning of the handle for opening said valve, and means whereby the lock may be moved automatically into a disengaging position on the turning of the handle from an open to a closed position.

2. The combination with a gas manifold, a valve connecting therewith having a stem, and a handle borne by the stem for turning it and operating the valve, said handle having an open and closed position determinate with the open and closed position of the valve, of a plate through which the valve stem extends and over the face of which the handle turns, a gravity actuated manually releasable lock pivotally mounted upon said plate adjacent said handle and normally maintained by gravity in locking position with relation to the handle for preventing the turning thereof when the handle is in a closed position, or be manually released into a disengaging position permitting the turning of the handle for opening said valve, said lock including means adapted and arranged to be engaged by a moving part of the handle for automatically moving the lock into a disengaging position on the turning of the handle from an open to a closed position.

3. The combination with a gas manifold, a valve connecting therewith having a stem, and a handle borne by the stem for turning it and operating the valve, said handle having a substantially horizontal position when the valve is closed and a substantially vertical position when the valve is open, of a plate through which the stem extends and over the face of which plate the handle turns, a gravity actuated manually releasable lock pivotally mounted upon said plate adjacent the handle and normally maintained by gravity in locking position with relation to the handle for preventing the turning thereof when the handle is in a substantially horizontal position, or be manually released into a disengaging position permitting the turning of the handle for opening said valve, said lock including means adapted and arranged to be engaged by a moving part of the handle for automatically moving the lock into a disengaging position on the turning of the handle from a substantially vertical to a substantially horizontal position.

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