J. WINKLER.

SAFETY COCK.

APPLICATION FILED FEB. 21, 1913.

1,089,098. Patented Mar. 3, 1914.

Fig. 1.

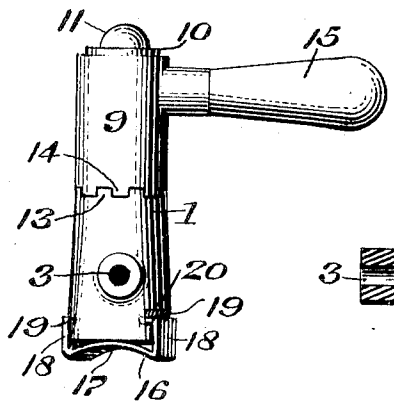


Fig. 2.

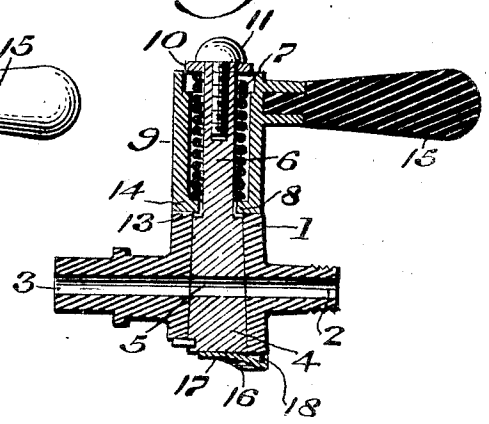


Fig. 3.

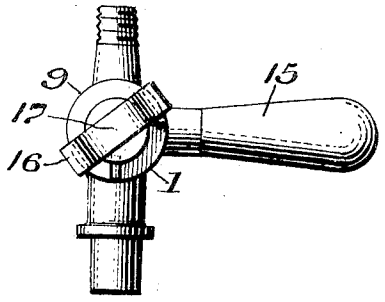
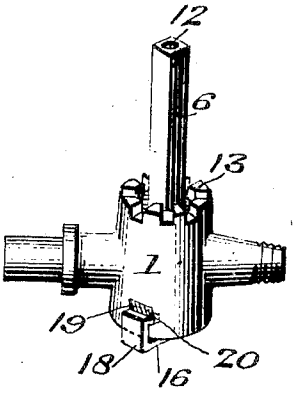


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

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SAFETY-COCK.

1,089,098. Specification of Letters Patent. Patented Mar. 3, 1914.

Application filed February 21, 1913. Serial No. 749,836.

To all whom it may concern:

Be it known that I, JOHN WINKLER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Safety-Cock, of which the following is a specification.

It is well known that from gas fixtures of the ordinary construction, many fatal accidents have occurred from persons carelessly turning on the gas as they remove their fingers from the key, thereby giving the plug a slight reverse movement sufficient to permit the gas to escape.

My present invention relates to a novel construction of a safety gas cock, wherein the liability of accidents of this character is obviated, and wherein I provide a locking device which will automatically and positively lock the plug when the latter is turned to the open, closed or intermediate positions and will prevent the accidental turning of the plug again as the hand is removed from the key, provision being also made for enabling the plug to be at all times tightly engaged with its body in either of its closed, open or intermediate positions, without the possibility of leakage of the gas, the locking of the plug preventing improper or accidental turning of the same.

My invention further consists of a novel construction of spring actuated devices adapted to coact with the operating mechanism of the cock, so as to insure the automatic locking of the same in the desired position, without requiring attention on the part of the operator.

To the above ends my invention consists of a novel construction of a safety cock, adapted for use with all fluids, the important features of which will be hereinafter described and fully pointed out in the claim.

For the purpose of illustrating my invention, I have shown in the accompanying drawings one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Figure 1 represents a side elevation of a safety cock embodying my invention. Fig. 2 represents a vertical sectional view of Fig. 1. Fig. 3 represents a bottom plan view of Fig. 2. Fig. 4 represents a perspective view of the body of the cock, showing the handle or operating mechanism and its adjuncts removed therefrom.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings:—1 designates the body of the cock having the openings 2 and 3 therein, which are controlled by the plug 4, having the port 5 therein. The plug 4 tapers slightly upwardly to conform to the contiguous taper of the cock body and is provided with the stem 6 which is surrounded with the coil or other spring 7, whose lower portion rests upon the inturned flange or shoulder 8 of the casing or sleeve 9, which surrounds said spring, the outer portion of the latter being retained in position by the washer 10 through which passes the threaded screw 11, the latter being seated in the threaded opening 12 of the stem 6.

13 designates a series of ratchet teeth in the upper edge of the cock body 1, the latter coacting with the juxtaposed ratchet teeth 14 in the lower edge of the sleeve or casing 9, which latter has the handle 15 secured thereto in any suitable manner.

16 designates a spring or tension device having its center or intermediate portion 17 bent or deflected upwardly so as to contact with the lower portion of the plug 4, said spring having the upwardly extending arms 18 and the inwardly deflected terminals or tongues 19, which engage contiguous recesses or seats 20 in the cock body, so that when the parts are assembled, as shown in Figs. 1, 2 and 4, the contact of the bent portion 17 of the spring with the bottom of the plug 4 will cause the same to tightly engage the contiguous bore of the body 1, so that any leakage of gas will be prevented under all conditions, either during the turning of the plug or when the latter is locked in any of its open, closed or intermediate positions. The plug 4 can be readily rotated into any of its desired positions, as open, closed or intermediate, by lifting slightly on the handle 15, so as to temporarily disengage the ratchet teeth 13 and 14, and upon the turning of the casing or sleeve 9 and stem 6 and the plug 4 into the desired position and releasing the handle 15, the

tension of the spring 7 will cause the ratchet teeth 13 and 14 to interlock and thus retain or lock the plug 4 in the desired position.

It will be further apparent that since the plug 4 is conical in form and the body 1 has a similar seat therefor, there will always be a tight joint between these parts under all conditions, by reason of the action of the spring 16, and during the rotation of the plug 4 into the desired position, the plug will not be moved from its seat and consequently there will be no leakage of the gas during the rotation of the sleeve 9 or the plug and its adjuncts. The parts can be readily disconnected upon the removal of the screw 11 and the spring 16, whereupon the plug can be readily withdrawn for the purpose of inspection, cleaning or repairs.

It will now be apparent that I have devised a novel and useful construction of a safety cock which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while I have, in the present instance, shown and described a preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that the same is susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

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

In a device of the character stated, a body formed with a tapering seat and with an annular series of teeth at the small end of said seat, and formed with diametrically opposite recesses in its exterior, a tapering plug rotatably seated in said seat and formed with a stem at its small end, a sleeve having a handle and surrounding said stem and formed with an annular series of teeth at one end registering and intermeshing with the teeth of the body, a spring coiled around the stem and bearing against the sleeve with one end to force the teeth of said sleeve into engagement with those of the body, and a flat bulging spring bearing with the bulge at its middle against the large end of said plug and having upwardly and inwardly bent ends engaging the recesses in said body.

JOHN WINKLER.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."