A. W. GROVE & D. F. ANDERSON.

GAS COCK.

APPLICATION FILED JUNE 5, 1911.

1,039,386. Patented Sept. 24, 1912.

Fig. 4.

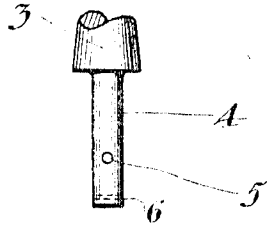


Fig. 1.

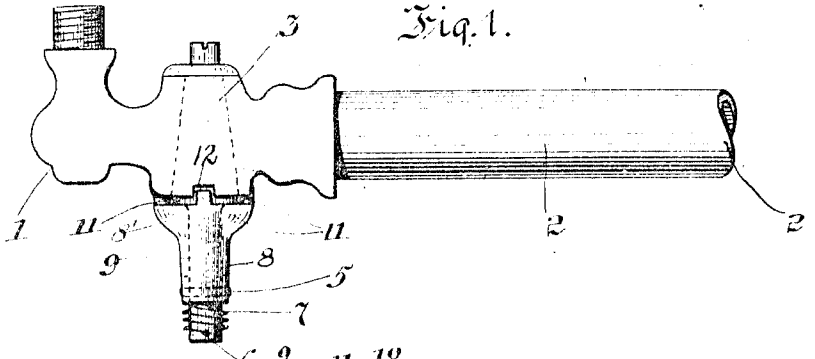


Fig. 2.

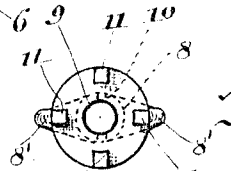
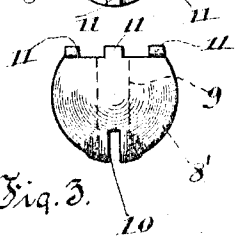


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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GAS-COCK.

1,039,386. Specification of Letters Patent. Patented Sept. 24, 1912.

Application filed June 5, 1911. Serial No. 631,357.

To all whom it may concern:

Be it known that we, AUGUST W. GROVE and DAVID F. ANDERSON, citizens of the United States, and residents of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Gas-Cocks, of which the following is a specification.

Our invention relates to improvements in gas-cocks and more particularly to a lock therefor, the object of the invention being to provide a gas-cock locking device which shall operate automatically for locking the plug of the gas-cock when turned to either the fully open or closed position, thus precluding the possibility of said plug becoming unintentionally or accidentally turned after the gas jet has been turned off.

A further object of our invention is to provide a lock as above stated which shall be simple of construction, efficient in operation, and convenient in use.

Other objects will appear hereinafter.

With these objects in view our invention consists in the novel construction and arrangement of parts hereinafter described and claimed.

Our invention will be best understood by reference to the accompanying drawings forming a part of this specification and in which,

Figure 1 is a side elevation of a gas-cock embodying our invention, Fig. 2 is a detail top plan view, showing the principal member of the gas-cock lock, Fig. 3 is a side elevation of said member at right angles to that shown in Fig. 1, and Fig. 4 is a detail elevation showing a portion of the gas-cock plug.

The preferred form of construction of our invention as illustrated in the accompanying drawings comprises a gas-cock body 1 which is attached to a gas-pipe 2 in the ordinary manner. The plug 3 of the gas-cock is of conventional form and adapted to open or close the cock when turned a certain number of degrees in the body 1, a diametrical aperture, not shown, being provided in said plug.

The construction thus far described coincides with the construction of an ordinary gas-cock, the modification in construction for attaching our improved lock being as follows: The plug 3 is provided with a coaxial stem 4 the diameter of which is somewhat less than the larger diameter of said plug. Extending through said stem diametrically and projecting from either side thereof is a pin 5 which serves as a key for a splined connection to be presently described. Extending through the end of the stem 4 in a plane at right angles to that of the pin 5 is a perforation 6 which is provided for the reception of the outer end of a helical spring 7 surrounding the outer end of the stem 4 as clearly illustrated in Fig. 1. The end of the spring 7 opposite to that which is secured in the perforation 6 abuts one end of a revoluble member 8, said member taking the place of the ordinary rotary finger-piece by means of which the gas is turned on or off. The member 8 is provided with laterally extending wings 8′ by means of which it may be readily turned and with a medial bore 9 in which is inserted the stem 4, the fit being such that said member will slide freely on said stem. In order to prevent rotation of the member 8 on the stem 4 a splined connection is formed with the latter, said connection comprising a pin 5 as hereinbefore described and a longitudinal slot 10 extending inwardly from the outer end of the member 8, and said slot receiving the ends of the pin 5 as indicated by dotted lines in Fig. 1. From this construction it is clear that when the member 8 is turned that the plug 3 must also be turned regardless of the longitudinal position of the member 8 on the stem 4. An enlarged end 8′ is formed on the member 8, and projecting longitudinally from this end is a plurality of teeth 11, there being preferably four of these teeth as illustrated in Fig. 2. Recesses 12 corresponding with the teeth 11 and spaced in accordance therewith are formed in that portion of the body 1 which is in close proximity to the large end of the plug 3, consequently when the teeth 11 register with the recesses 12 said teeth will be forced into said recesses by the action of the spring 7 which is of the compression type. The arrangement of the teeth 11 with reference to the recesses 12 is such that when the same register that the opening, not shown, in the plug 3 is either in fully open or closed position.

The mode of operation is as follows: Assuming that gas under pressure is provided in the gas-pipe 2 and that the plug 3 is closed, then in order to open the cock for lighting the gas it is necessary to withdraw the teeth 11 from their respective recesses

and thereupon to turn the member 8 through any number of degrees not exceeding ninety. The size of the gas flame is regulated as usual by turning the member 8, and when said member is turned ninety degrees the maximum flame is produced and said member is locked into position. In order to turn off the gas the member 8 is moved in such a manner as to effect the withdrawal of the teeth 11 from the recesses in which they are seated, and thereupon said member is turned ninety degrees to again effect the registration of the teeth 11 with their respective recesses 12, it being understood that the spring 7 will automatically force the teeth 11 into their respective recesses when they register therewith.

It is apparent that two teeth 11 if diametrically opposed would perform the same function as the four teeth as shown, but with the provision of the latter number of teeth the device is much more efficient and reliable in operation.

A gas-cock locking device of the construction set forth is neat and compact of appearance, simple of construction, cheap to manufacture, and efficient in operation.

While we have illustrated and described the preferred form of construction for carrying our invention into effect, this is capable of variation and modification without departing from the spirit of the invention. We therefore do not wish to be limited to the precise details of construction set forth but desire to avail ourselves of such variations and modifications as come within the scope of the appended claim.

Having described our invention what we claim as new and desire to secure by Letters Patent is:

A gas cock having a rotary plug; a stem extending from said plug; a member splined on said stem and provided with laterally extending wings and an enlarged inner end; projections on the inner end of said member, there being recesses in the body of said cock adapted to register with and receive said projections; and a spring arranged to hold said member normally in position to effect engagement between said projections and said recesses, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

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DAVID F. ANDERSON.

Witnesses:
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