

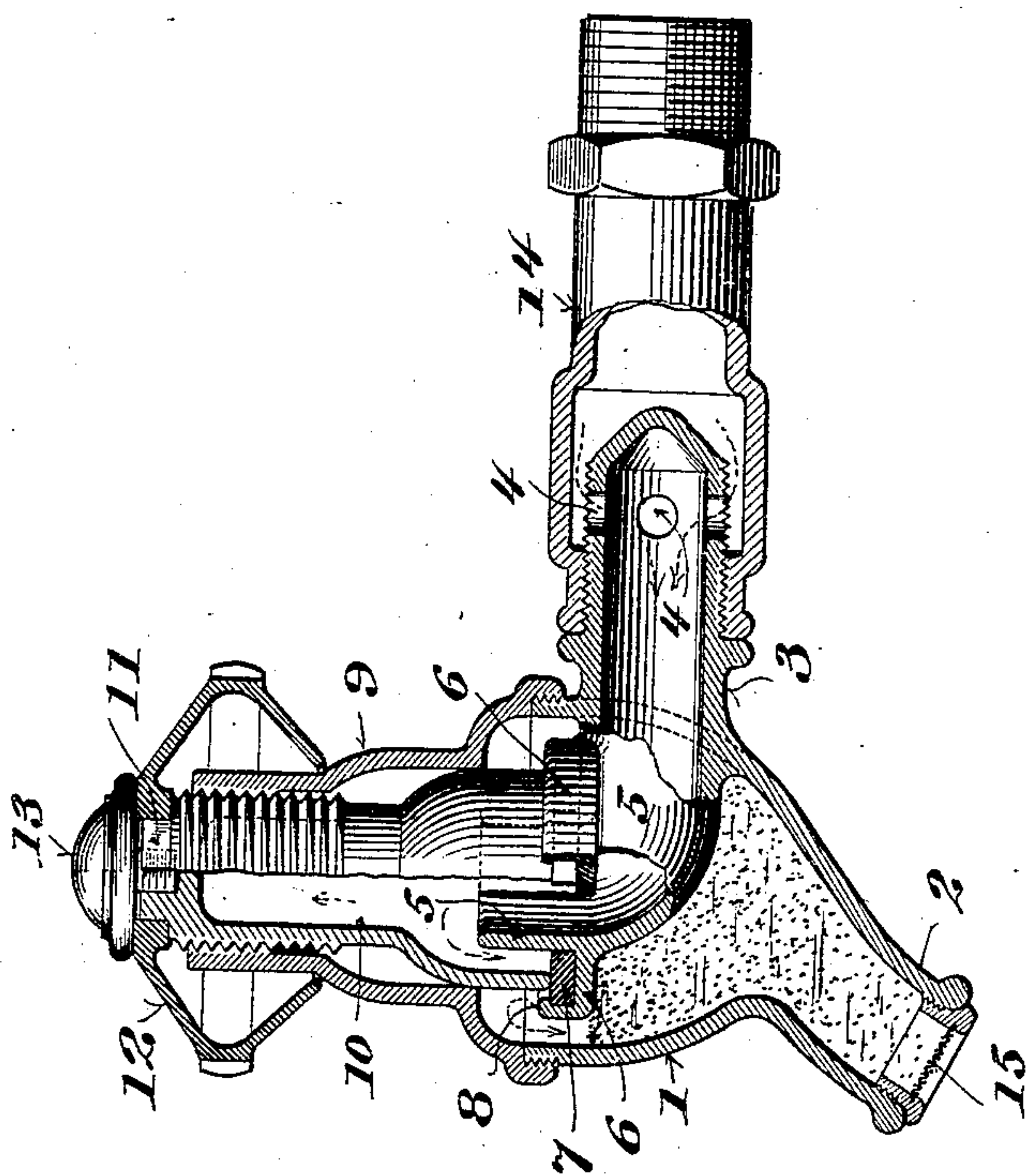
T. M. GLEASON.

COCK.

APPLICATION FILED SEPT. 16, 1907.

912,466.

Patented Feb. 16, 1909.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

THOMAS M. GLEASON, OF RACINE, WISCONSIN.

## COCK.

No. 912,466.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed September 16, 1907. Serial No. 392,955.

*To all whom it may concern:*

Be it known that I, THOMAS M. GLEASON, a citizen of the United States, and resident of Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Cocks; and I do hereby declare that the following is a full, clear, and exact description thereof.

The object of my invention is to provide economical, sanitary and effective cocks especially designed for application to enterservice pipes, the construction and arrangement being such as to facilitate speedy opening and closing thereof, reduce the liability to leakage and render access thereto for repairs readily, as well as to avoid water hammer.

The invention with the above objects in view consists in various novel details of construction and combination of parts as hereinafter fully set forth with reference to the accompanying drawing and subsequently claimed.

The drawing represents an elevation of the cock embodying the features of my invention with parts broken away and parts in section to better illustrate the details.

Referring by numerals to the drawing, 1 indicates a valve-casing provided with a discharge nozzle 2 and a hollow inlet shank 3, the end of which shank is threaded and terminates with a series of apertures 4 therein for the egress of water. The hollow shank has a discharge extension 5 within the casing, which extension is curved upward to form a mouth that is centrally disposed with relation to said casing, there being a radial flanged valve-seat 6 projecting from the mouth and slightly below the upper edge thereof. The flanged valve-seat has fitted therein a washer 7 of any desired material, such as fiber, rubber or leather, the said washer being held in position by a lip 8 of an upturned rim forming part of the flanged seat.

In screw-threaded connection with the valve-casing is a bonnet 9, the neck of which is internally threaded for the reception of a similarly threaded end of a hollow valve-stem 10 which stem constitutes an air-dome. The said valve-stem at its lower end being open and slightly flared to form a cup, the edges of which serve as a valve-closure adapted to telescope over the mouth of the discharge-extension 5 and seat upon the washer 7. This hollow valve-stem is closed at its upper end and preferably terminates with a square head 11 to which is fitted a knob 12,

which knob is held in place by a set-screw 13 in threaded-connection with a recess of the head. Below its internal threaded portion the bonnet is swelled outward to the same diameter as the cupped lower end of the valve-stem and thus forms a water-tight joint between the contacting walls of said bonnet and cup whereby leakage is prevented through the neck of the aforesaid bonnet. A coupling-pipe section 14 having an internally threaded end is fitted over the threaded end of the valve casing shank. By this construction when it is desired to cut-off the water for the purpose of access to the valve parts, the shank 3 may be revolved until the apertures therein are within the threaded end of the coupling-pipe section.

The discharge-nozzle 2 of the valve-casing is provided with internal threads for the reception of a screen-cap 15, which as shown can be readily adjusted thereto should it be desired to utilize the lower portion of said valve-casing for a filter-chamber, in which case said chamber would be fitted with suitable filter material.

As shown in the drawing, the valve is closed, to open the same it is only necessary to revolve the knob, causing the hollow valve-stem to lift, water will then rush into the cup and thus cause a compression of air in the hollow stem portion thereof, the water being then deflected downward and out between the valve-casing walls and the edge of the flanged seat 6. When closing the valve, owing to the downward course of the water, the said valve does not seat entirely against the water pressure and is consequently easily operated, and at the same time water-hammer is avoided by the dome-extension, which dome serves to cushion the pressure of water as the valve is seated.

The lower edges of the cupped portion of the valve-stem may be ground indefinitely to form a renewed perfect seating-face in conjunction with the washer, which washer can readily be replaced at small cost by other than skilled workmen.

While I have shown and described the hollow valve-stem as being provided with a knob by which it is raised and lowered, due to its screw-thread connection with the bonnet, it is obvious that a weight or spring may be substituted for the threaded-connection whereby said valve-stem may be operated, in which case a lever would be substituted for the knob.



I claim:

A cock comprising a valve-casing having a discharge-nozzle and a hollow inlet shank, the inlet-shank terminating in an upturned mouth centrally disposed with relation to the valve-casing, and a bonnet in connection with the valve-casing, an annular flanged valve-seat extending from the upturned mouth of the shank below its upper edge, the valve-seat being provided with an upturned exterior annular lip, a washer fitted into said valve-seat between the lip and the mouth of said shank, a closure for the aforesaid valve-seat adapted to seat upon the washer, the closure comprising a dome-like stem fitted into the bonnet and provided with a flared lower cup-portion having a seating-edge, the

diameter of which cup is of such proportions as to provide a space between its inner surface and the exterior wall of the upturned mouth of the aforesaid shank, whereby fluid may pass therebetween when the edge of the cup-portion is lifted from its seat and be deflected upward by the said washer; and means for raising and lowering said closure.

In testimony that I claim the foregoing I have hereunto set my hand at Racine in the county of Racine and State of Wisconsin in the presence of two witnesses.

THOMAS M. GLEASON.

Witnesses:

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