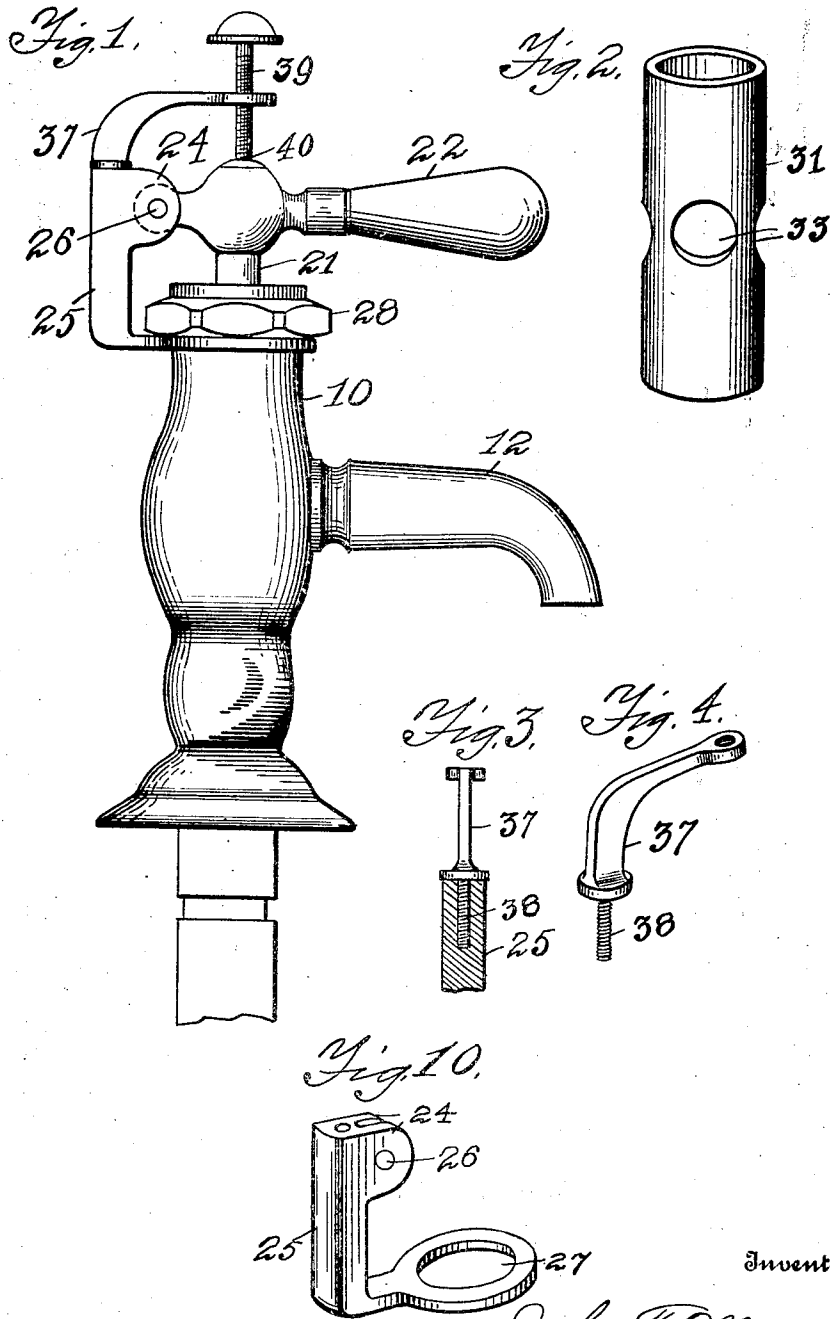


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SELF CLOSING FAUCET.  
APPLICATION FILED AUG. 24, 1916.

1,235,221.

Patented July 31, 1917.  
2 SHEETS—SHEET 1.



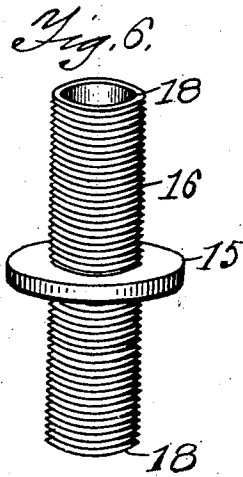
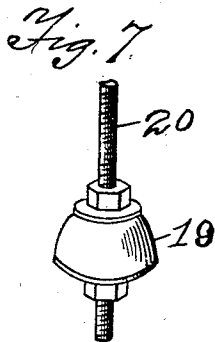
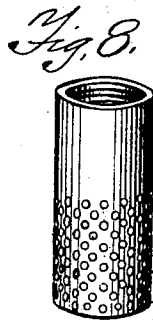
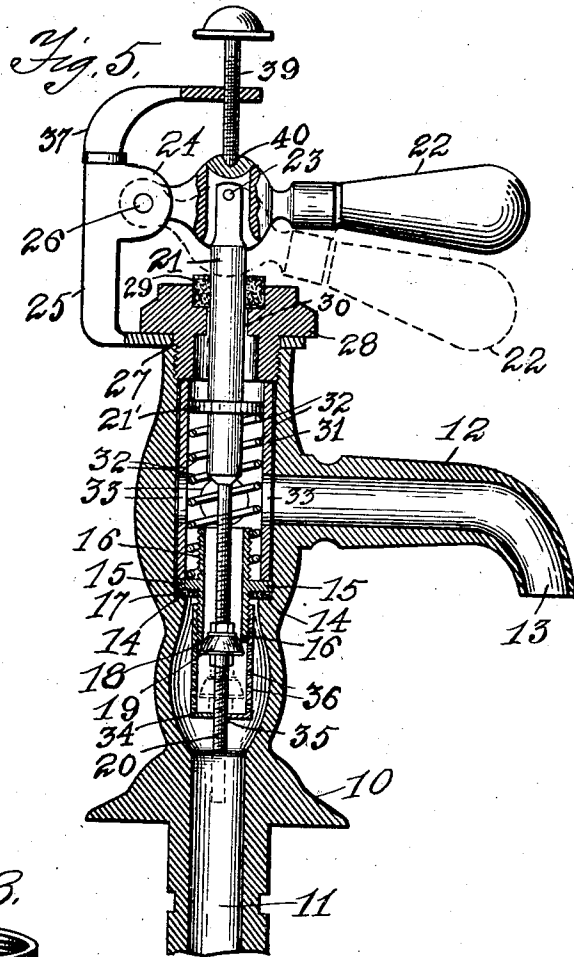
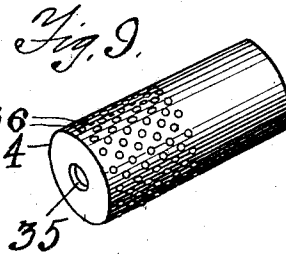
Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN T. MARSH, OF JAMESTOWN, NEW YORK.

## SELF-CLOSING FAUCET.

1,235,221.

Specification of Letters Patent.

Patented July 31, 1917.

Application filed August 24, 1916. Serial No. 116,671

*To all whom it may concern:*

Be it known that I, JOHN T. MARSH, a citizen of the United States, residing at #306 West Eighth street, Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Self-Closing Faucets, of which the following, taken in connection with the accompanying drawings, is a specification.

The invention relates to faucets and particularly to self-closing faucets and the object of the improvement is to provide a simply and strongly constructed faucet having more complete control of and better adaptation in handling liquids; and the invention consists in the combination and arrangement of the parts as shown in this specification and accompanying drawings and pointed out in the claims.

In the drawings, Figure 1. is a side elevation of the improved faucet showing the spring lever for opening the same and the bib for the water to pass through. Fig. 2. is a perspective view of the barrel for the operating spring having holes through which the liquid flows to the bib or spout. Fig. 3. is an elevation of the arm for controlling, in connection with other parts, the extent of opening of the spring pressed valve of the faucet; and Fig. 4. is a perspective view of the same. Fig. 5. is a vertical sectional view of the faucet showing the construction and arrangement of the parts within the faucet, the movement of the handle in opening the faucet being shown in dotted outline. Fig. 6. is a perspective view of the valve seat tube for the spring pressed valve. Fig. 7. is a perspective view of the valve on the lower end of the plunger or valve stem. Fig. 8. is a perspective view of the strainer barrel in a vertical position; and Fig. 9. is a similar view of said strainer barrel in the horizontal position. Fig. 10. is a perspective view of the supporting bracket for the operating lever or handle and to which said lever is pivotally attached.

Like characters of reference apply to corresponding parts in the several views.

The numeral 10 designates the metallic barrel or casing of the faucet, which is cast with a lengthwise opening 11 extending down through the same and the bib or spout 12 extending out therefrom with the tubular

opening 13 communicating with the central opening 11.

A shoulder 14 is provided in the inner wall of the opening 11 just below the entrance of the bib opening 13 as a seat for the double ended tubular valve seat 16, said tube 16 having a flange 15 which fits upon the shoulder 14 with a soft packing 17. The valve seat tube 16 extends out each way from a central flange 15 about an equal distance so that either end of said tube can be used as a valve seat 18, thus when one end becomes impaired the tube can be turned end for end thereby presenting a new and perfect valve seat 18 for the valve 19 on the valve stem 20. The valve stem 20 is threaded on its outer surface to receive the locking nuts for the valve 19 so as to hold said valve at any desired point on said valve stem 20 in adjusting the position of said valve 19 to the valve seat 18 so as to insure the closing of the valve.

The valve stem 20 is a continuation of the plunger rod 21 which is pivotally attached to the handle 22 at 23 to raise and lower said plunger 21 by means of the handle 22 and has the flange 21' thereon within the barrel. The handle 22 is pivotally attached to a bracket 25 at 26 by means of a suitable pin through the lugs 24 thereby holding said handle 22 in line and providing a strong attachment therefor. The bracket 25 extends out in the horizontal lower portion with an opening 27 to receive the nut 28 therein, the downwardly projecting portion of the nut 28 being threaded to engage a similar threaded portion in the upper end of the barrel 10 thereby holding the bracket 25 firmly upon the top of the barrel 10 and closing said top. The nut 28 has packing 29 to prevent leakage and an opening 30 therethrough for the plunger 21.

The nut 28 also bears against the upper end of a tube 31 within the faucet barrel 10 above and against the flange 15 thereby holding said tube 31 firmly in position within the barrel opening 11. The tube 31 has a series of openings 33 in line with the bib opening 13 to permit the water to pass up through the tube 16 into the tube 31 and out through the opening 33 into the bib or spout opening 13. A plurality of openings 33, are preferably provided in the barrel 31 in order to insure an opening 33 in line with the mouth of the bib opening 13 without

special adjustment of the tube 31 so that said opening 33 will register with the opening 12. The tube 31 contains a coil spring 32 which bears against the plunger flange 21' at its upper end and against the flange 15 at its lower end to hold the valve 19 firmly against the valve seat 18 thereby also holding the handle 22 in its normal position for manual depression in order to open the valve 19 and permit the water to flow through said valve.

A strainer barrel 34 is attached to the valve seat tube 16, the outer periphery of both ends of the valve tube 16 being threaded to receive the inner threaded barrel 34 and firmly attach said barrel to the lower end of the valve seat tube 16. The barrel 34 which houses the valve 19, has an opening 35 at the lower end for the lower end of the valve stem 20 to hold said valve stem in line so that the valve stem 20 may work upward and downward with the plunger 21 and valve 19. The lower end of the barrel 34 is preferably without perforations so as to force the water to flow up around the barrel to the perforations 36 in the sides. By this arrangement the water will be strained as it passes into the barrel 34 and then up through the valve seat tube 16 into the barrel 31 and out through the bib 12 whenever the handle 22 is depressed. The depression of the handle 22 it will be noticed moves the valve 19 away from the valve seat 18 thereby permitting the flow of the water through the valve. The spring 32 forces the valve 19 back to its seat and holds it upon its valve seat 18 as soon as the pressure is removed from the handle 22.

In order to control the flow of the water through the bib 12 and particularly to provide for a continuous flow at certain seasons of the year an arm 37 is provided on the bracket 25, preferably by means of a screw connection 38 which permits the removal of the arm 37 when its use is not desired. A screw 39 is threaded in the upper end of the arm 37 and bears in an opening 40 in the upper side of the handle 22 directly above the plunger connection 23. This arrangement permits the adjustment of the screw 39 so that the handle 22 is depressed and a continuous flow of water is provided from the bib 12, the screw 39 not permitting the complete closing of the valve 19 upon the valve seat 18.

It is obvious that the inner tubular barrel 31 might be a continuation of the nut 28 without departing from my invention. It is preferable, however, to make them separate from one another since this reduces the cost and also permits the quick and easy placing of the tube 31 so that an opening 33 registers with the opening 12.

It is also apparent that when the top nut 28 is unscrewed from the main barrel 10 all

the working parts, including the plunger 30 and handle 22 with bracket 25, and barrel 31 with spring 32, and valve seat tube 16 with strainer 34 and valve 19, may be withdrawn from the barrel 10 for repair, adjustment or cleaning. Also that these parts may be assembled before insertion in the barrel 10 and that when inserted and the top nut 28 is screwed to place so that it holds the tube 31 firmly against the flange 15 and washer 17 on the shoulder 14, all of said parts will be operatively placed ready for action. While removed from the faucet barrel 10, the handle 22 may be placed in any desired position or direction in relation to said barrel 10 after which the nut 28 is screwed to place on the barrel 10 thereby tightening the parts and holding the handle 22 in the adjusted position, thereby permitting the use of the faucet in close proximity to walls or other objects with the handle 22 in the most convenient position, thus rendering each faucet universal in its action.

The valve 19 seats in exactly the same position upon the valve seat 18 whenever returned thereto, not turning or wobbling, in consequence any slight imperfection in said valve seat 18 becomes impressed upon the valve 19 at the one point and there is less likelihood of leakage or impaired action of the valve 19 than where said valve is changed or turned or allowed to deviate from an exact seating on said valve seat. The strainer opening 35 insures this perfect alignment of the lower end of the valve stem 20 as it slidably moves upward and downward through said opening 35.

It is also found that the strainer 34 prevents foreign matter, such as pipe chipings, grit, etc., entering the valve seat 18 or lodging against the valve 19 thereby impairing the surface of said valve 19 and causing leakage. The perforations 36 are preferably quite minute thereby doing away with the necessity of attaching a strainer or filter on the end of the spout or bib 12, and for high water pressure the strainer 34 acts as a reducing valve, giving a more even and uniform flow through the bib or spout opening 13, thereby tending to overcome water hammering in the pipes.

It will be seen that the water pressure works with the spring 32 and aids in the closing of the valve 19 since the pressure of the water in the barrel 10 is against the lower side of the valve 19 thereby pressing it against the valve seat 18.

I claim as new:

1. A self closing faucet comprising a faucet barrel having a spout thereon, a plunger removably mounted in said barrel, said barrel having a shoulder in the inner wall thereof beneath said spout, a valve seat tube having a flange bearing on said shoulder, means for holding said valve seat tube in

place on said shoulder and surrounding said plunger, a valve on said plunger seating on the lower end of said valve seat tube, and a spring to hold said valve against said valve seat tube encircling the latter and seating on the tube flange.

2. A self closing faucet comprising a faucet barrel having a spout thereon, said faucet barrel having a shoulder in the inner wall thereof beneath said spout, a plunger mounted in said barrel, a handle pivotally attached to the upper end of said plunger to reciprocally move the same, a double ended reversible valve seat tube having a flange thereon to bear on said shoulder around said plunger, an inner barrel around said plunger within said faucet barrel having an opening to said spout, a top nut to hold said inner barrel and valve seat tube flange against said shoulder, a valve on said plunger seating on the lower end of said valve seat tube, a flange on said plunger, and a coil spring in said inner barrel engaged by said flange on said plunger at its upper end and engaged by said valve seat flange at its lower end to resiliently hold said valve against said valve seat tube.

3. A self closing faucet comprising a barrel having a vertical opening therein and a spout extending out therefrom, a shoulder in the inner wall of said vertical opening beneath said spout, a reversible valve seat tube having a flange to bear on said shoulder, a top nut to close the top of said faucet barrel having an opening therethrough, an inner barrel extending from said top nut to said valve seat tube flange to hold said valve seat tube in position on said shoulder, a combined plunger and valve stem extending down through the opening in said top nut and said inner barrel and said valve seat tube, a flange on said plunger, a coil spring in said inner barrel bearing against said plunger flange at one end and against said

valve seat tube flange at the other to normally hold said plunger in its valve closing position, a valve on said valve stem to seat on said valve seat tube, and a handle on said plunger to operate the same.

4. A faucet comprising a faucet barrel having a shoulder in the inner wall thereof between its ends, a reversible valve seat tube having a flange seating on the barrel shoulder, a valve engaging with the seat on one end of the tube, and a guide for the valve removably secured on said end of the tube the latter being reversible to present the seat on the opposite end thereof for engagement by the valve.

5. A faucet comprising a faucet barrel, a movable valve therein, a valve seat tube arranged in the barrel for reversal of position whereby the valve may seat on either end and having the end portions threaded, and a removable valve guide arranged in the barrel for threadedly engaging an end of the tube.

6. A faucet comprising a faucet barrel, a movable valve therein, a reversible valve seat tube arranged in the barrel for having the valve seat on its lower end, and a member removably secured to the lower end of the tube and constituting a housing and guide for the valve.

7. In combination with a faucet having a vertically movable valve and a pivoted handle connected thereto, of a removable bracket connected to the faucet and having a part overlying the handle, and a setting screw supported by the overlying part of the bracket and bearing on the handle for adjusting the normal position of the valve.

In testimony whereof I have affixed my signature in the presence of two witnesses.

JOHN T. MARSH.

Witnesses:

H. A. SANDBERG,  
IVAR E. NORDSTROM.