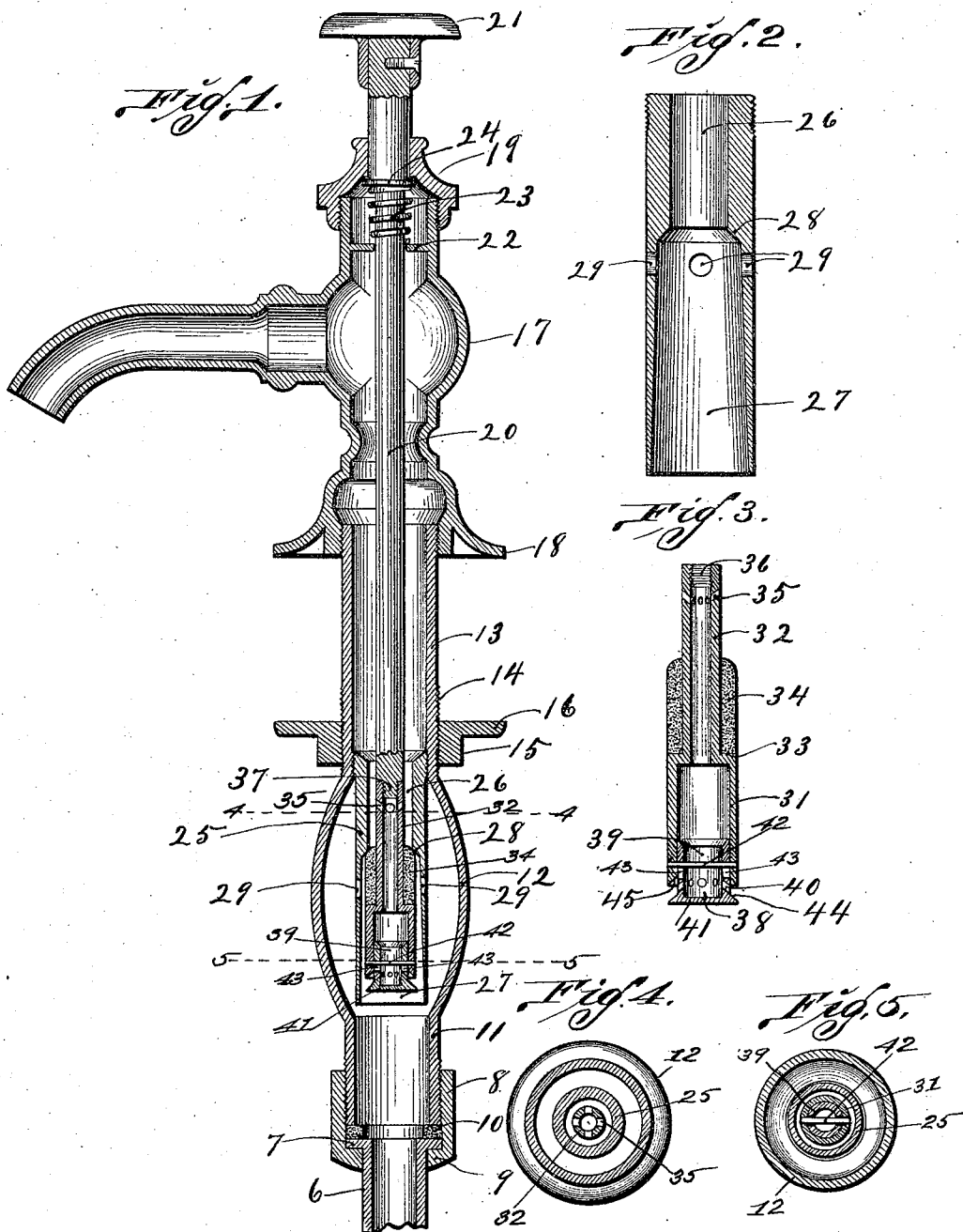


(No Model.)

G. S. MURPHY.
FAUCET.

No. 575,552.

Patented Jan. 19, 1897.



Attest
M. P. Smith
S. G. Wells.

Inventor:—
George S. Murphy.
By Higdon, Longan & Higdon
Attys.

UNITED STATES PATENT OFFICE.

GEORGE S. MURPHY, OF SULPHUR SPRINGS, TEXAS.

FAUCET.

SPECIFICATION forming part of Letters Patent No. 575,552, dated January 19, 1897.

Application filed July 20, 1896. Serial No. 599,962. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. MURPHY, of the city of Sulphur Springs, Hopkins county, State of Texas, have invented certain new and useful Improvements in Faucets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to faucets, and is an improvement upon my prior invention shown in United States Letters Patent No. 539,633, dated May 21, 1895; and it consists in the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

Figure 1 is a vertical sectional view through the center of a faucet constructed in accordance with my present invention. Fig. 2 is an enlarged detail vertical sectional view of a valve-seat of which I make use. Fig. 3 is an enlarged detail vertical sectional view of the valves of which I make use. Fig. 4 is a horizontal sectional view on the line 4 4 of Fig. 1. Fig. 5 is a horizontal sectional view on the line 5 5 of Fig. 1.

Referring to Fig. 1, 6 indicates the supply-pipe to which my improved faucet is attached. Upon the upper end of the pipe 6 is formed an annular outwardly-projecting lug 7. The pipe-coupling 8 is interiorly screw-threaded at its upper end, and the opening in said coupling is large enough to admit the lug 7. The inwardly-projecting annular flange 9 upon the lower end of the coupling 8 engages against the under side of the lug 7. A packing-ring 10 is inserted against the upper face of the lug 7.

The tubular portion 11, projecting downwardly from the elongated chamber 12, is exteriorly screw-threaded and screw-seated in the pipe-coupling 8 with its lower end against the upper side of the packing-ring 10. The tube 13 extends upwardly from the upper end of the chamber 12, and the lower end of said tube 13 has the screw-threads 14, and the nut 15, carrying the washer 16, is mounted upon said screw-threads 14 and is designed to engage the under face of the marble slab or other device to which the faucet is attached.

The head 17 of the faucet is screw-seated upon the upper end of the tube 13, and a flange 18 projects downwardly and outwardly

from the lower end of said head and is designed to engage the upper side of the marble slab or other device to which the faucet is attached. Upon the upper end of the head 17 a cap 19 is screw-seated.

The piston-rod 20 operates within the faucet and through the bearing formed in the cap 19. Upon the upper end of the piston-rod 20 is a push-button 21 for operating the same. An annular lug 22 projects inwardly near the upper end of the head 17 and forms a bearing through which the piston-rod 20 operates, and a coil-spring 23 is mounted upon said piston-rod and above said lug 22, while the lug 24 projects outwardly from the piston-rod 20 and engages upon the upper end of the coil-spring 23, and thus the tension of the coil-spring 23 is exerted to hold the piston-rod 20 in its elevated position.

The valve-seat 25 has its upper end screw-seated within the lower end of the tube 13, and said valve-seat projects downwardly into the chamber 12. In the upper end of the valve-seat 25 is formed a vertical bore 26, and from the lower end of said valve-seat is formed a vertical bore 27, which extends upwardly and intersects the lower end of said vertical bore 26. The bore 27 is larger than the bore 26, and at the meeting ends of said bores 26 and 27 is formed a beveled shoulder 28. Horizontal apertures 29 penetrate the valve-seat at a point just below the shoulder 28. The bore 26 is substantially straight, but I prefer to make the lower end of the bore 27 somewhat larger than its upper end.

A valve 30 operates within the valve-seat 25, and consists of the tubular portion 31, which is somewhat smaller in external diameter than the diameter of the bore 27, and a tube 32 extends upwardly from the upper end of said tubular portion 31. The tube 32 is somewhat smaller than the tube 31, and at the junction between said tubes a shoulder 33 is formed, and a packing-ring 34, formed of rubber or other suitable material, is mounted upon the tube 32 and rests upon the shoulder 33, as shown in Fig. 3. Near the upper end of the tube 32 is a series of apertures penetrating the wall of said tube, and the extreme upper end of said tube is interiorly screw-threaded, as indicated by 36.

The extreme lower end 37 of the piston-rod

20 is screw-seated in the upper end of said tube 32. The tube 32 is considerably smaller than the bore 26, while the packing-ring 34 is larger than said bore 26, and the valve 30 is placed within the valve-seat 25 with the upper end of the tube 32 in the bore 26 and the packing-ring 34 below the shoulder 28 in the bore 27. The piston-rod 20 is of such a length that when it is connected to the valve 30 said valve will be held with the packing-ring 34 pressing tightly against the shoulder 28 when said piston-rod is in its elevated position.

Mounted within the lower end of the tube 31 is the drop-valve 38, consisting of the tubular portion 39, which fits closely within said tube 31 and has near its lower end a series of apertures 40, and the bottom of which is closed by the disk 41. A pin 42 passes through the tube 31 and is rigidly and securely fixed therein, and in opposite sides of the tube 39 are slots 43, through which said pin 42 operates. The periphery of the disk 41 is larger than the tube 39, and the upper edge 44 of said disk is beveled to fit closely within the lower flared end 45 of the tube 31.

In the practical operation of my improved faucet the water-pressure going through the pipe 6 will force the drop-valve 38 upwardly until the beveled edge 44 fits closely within the flared opening 45 and thus securely closes the lower end of the tube 31. When it is desired to draw water from the faucet, the operator presses the push-button 21, pressing the piston-rod 20 downwardly, thus pressing the packing-ring 34 away from the shoulder 28 and allowing the water to pass through the chamber 12, through the openings 29, up-

wardly around the packing-ring 34, and thence upwardly through the bore 26, around the tube 32, and thence upwardly to the discharge-opening of the faucet. The water may also pass in at the lower end of the bore 27 and upwardly around the valve 30, thence upwardly around the packing-ring 34, and thence upwardly, as before described. The packing-ring 34 forms a very efficient joint between the valve and the valve-seat and at the same time is easily constructed. When it is desired to drain the faucet to prevent the same from freezing, the water is shut off below in the usual way, allowing the water to run out of the pipe 6, thus removing the pressure from below the drop-valve 38 and allowing said valve to drop down. The water that is in the head 17 will now pass downwardly through the openings 35, thence downwardly inside of the tube 32, and outwardly through the openings 40 in the drop-valve.

I claim—

In a faucet, a valve-seat consisting of a cylinder having an internal shoulder, a tubular valve operating within said cylinder and below said shoulder, a packing-ring carried by said valve and engaging said shoulder, a piston-rod attached to said valve for operating the same, and a drop-valve in the lower end of said tubular valve, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE S. MURPHY.

Witnesses:

W. G. MURRAY,
B. H. PHORR.