(No Model.)

J. M. GILMOUR.

FAUCET.

No. 480,090. Patented Aug. 2, 1892.

Fig: 1.

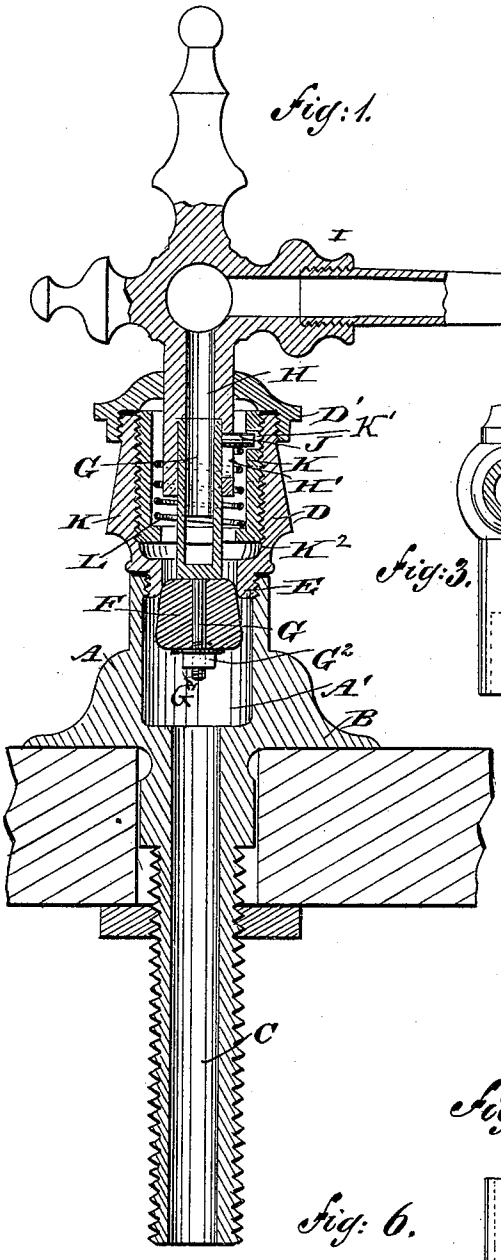

Fig: 2.

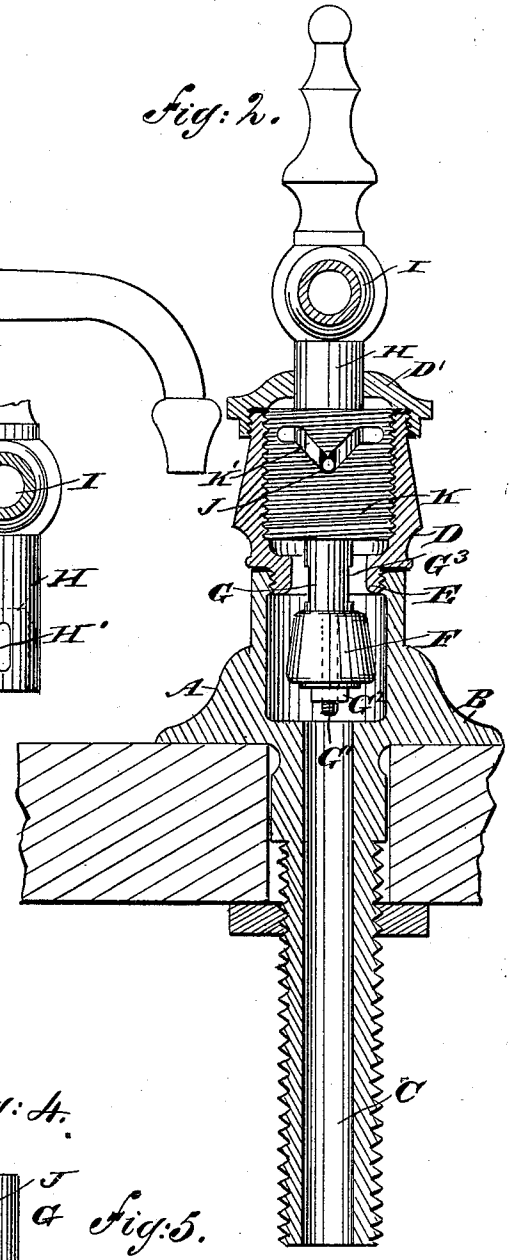

Fig: 3.

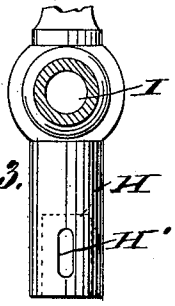

Fig: 4.

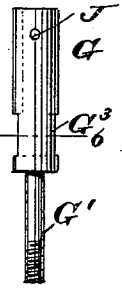

Fig: 6.

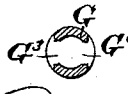

Fig: 5.

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JAMES M. GILMOUR, OF EAST ORANGE, NEW JERSEY.

FAUCET.

SPECIFICATION forming part of Letters Patent No. 480,090, dated August 2, 1892.

Application filed January 7, 1892. Serial No. 417,242. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. GILMOUR, of East Orange, in the county of Essex and State of New Jersey, have invented a new and Improved Faucet, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved faucet which is simple and durable in construction, designed for use with water service, and arranged to readily open or close by turning the discharge-spout, the valve seating itself within the line of pressure of the water service.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the improvement, showing the valve in a closed position. Fig. 2 is a transverse section of the same with the valve open. Fig. 3 is a sectional side elevation of the discharge-spout. Fig. 4 is a side elevation of the valve-stem. Fig. 5 is a plan view of the same, and Fig. 6 is a sectional plan view of the same on the line 6 6 of Fig. 4.

The improved faucet is provided with a body A, formed with a base B for convenient attachment to any desired place, and from the base extends an inlet-pipe C, connected with the water service.

On the upper end of the body A screws the head D, formed in its lower end with a valve-seat E, extending into the enlarged opening A′ of the body A, in which opening is held the valve F, adapted to be seated on the seat E of the head D. The valve F is preferably made of rubber or other suitable material and is held on the reduced end G′ of the valve-stem G by means of washers and nuts G^2, screwing on the lower threaded end of the said reduced part G′ against the under side of the valve F. The valve-stem G is fitted loosely into the cylindrical stem H of the outlet-spout I, the said stem H extending through a cap D′, held on the upper end of the head D. The discharge-spout I is of the usual design and construction and is arranged to be readily turned by the operator, so as to open or close the valve F, as hereinafter more fully described. On that part of the valve-stem G extending in the stem H is secured a pin J, passing through a vertical slot H′, arranged in the stem H, the outer end of the said pin J engaging a V-shaped groove K′, formed in a sleeve K, screwed or otherwise secured in the head D. When the pin J engages the apex or lower end of the V-shaped groove K′, then the valve F is unseated from the seat E and water can flow through the inlet-pipe C, the enlarged opening A′, past the valve-seat E, through the openings G^3, onto the valve-stem G, and from the latter into the stem H and discharge-spout I. When the pin J, however, is in either upper end of the V-shaped groove K′, then the valve F is seated on the seat E, and the water-supply to the discharge-spout I is cut off. On the lower end of the sleeve K is formed an inwardly-extending annular flange K^2, on which rests the lower end of a coil-spring L, coiled within the sleeve K and around the stem H to press with its upper end on the pin J, as is plainly shown in Fig. 1.

The operation is as follows: In its normal position the spout I is disconnected from the inlet or supply pipe C, the pin J then standing in either upper end of the V-shaped groove K′. In this position the valve F is securely seated on the seat E, with the pressure of the water of the water service holding the valve to its seat. Now when it is desired to connect the pipe C with the spout I the operator turns the latter so that its stem H carries along the pin J and valve-stem G, the said pin traveling downward in one leg of the V-shaped groove K′, so that the valve-stem G is forced downward and the valve F is unseated from the seat E, the parts then having the position shown in Fig. 2. Water can now flow from the pipe C, opening A′, past the open seat E, into the stem G, and from the latter through the stem H to the spout I. Water will flow through the spout I as long as the valve F is open. The spout is held in the position to hold the pin J in the apex of the V-shaped groove. As soon as the operator releases the spout I or moves the same to the right or left the pin J travels up the respective leg of the V-shaped groove K′, so that the stem G is caused to slide upward,

thereby moving the valve F onto its seat E, the movement of the valve F being in line with the water-pressure, so that the valve is readily seated and held in its seat by the pressure of the water service. It will be understood that while the closing or seating of the valve F is facilitated or rendered automatic by the employment of the spring L, which, as soon as the operator releases the discharge-spout I, presses on the pin J and forces it upward in one or the other leg of the groove K′, said spring may be dispensed with without impairing the efficiency of the faucet, as in such event the valve will be closed or seated by the upward travel of the pin J in the groove K′ when the operator returns the discharge-spout I to its normal position. It will be seen that by this construction the spout I is turned without its stem having a vertical sliding motion, a vertical movement, however, being given to the valve-stem G and the valve F by turning the said spout in the manner above described. The pin J readily travels up and down in the groove H′ of the stem H, so that a vertical movement of the latter does not take place; but a vertical movement of the stem G in the stem H must take place, as the pin J is rigidly connected with the said stem G and is moved up and down in the legs of the groove K′.

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

1. A faucet comprising a body provided with a valve-seat, a valve adapted to be seated on the said valve-seat and arranged to close in line with the pressure of the water service, a discharge-spout loosely engaging the stem of the said valve and formed with a slot, the said spout being mounted to turn in the said valve-body, and a pin projecting from the valve-stem and passing through the slot in the spout to engage a groove on the said body, so that on turning the spout the pin moves in the groove to actuate the valve and at the same time the pin slides in the slot of the spout, substantially as shown and described.

2. A faucet comprising a body having a head and a seat formed thereon, a valve adapted to be seated on the said seat and arranged to close with the pressure of the water service, a valve-stem carrying the said valve and connected with the discharge-spout, and a pin held on the said stem and engaging a V-shaped groove on the said head, substantially as shown and described.

3. A faucet comprising a body having a head and a seat formed thereon, a valve adapted to be seated on the said seat and arranged to close with the pressure of the water service, a valve-stem carrying the said valve and connected with the discharge-spout, a pin held on the said stem and engaging a V-shaped groove on the said head, and a spring pressing on the said pin for automatically closing the valve, substantially as shown and described.

4. A faucet comprising a body, a head held thereon and formed with a valve-seat, a sleeve held on the said head and formed with a V-shaped groove, a valve adapted to be seated on the said valve-seat, a valve-stem carrying the said valve, a discharge-spout formed with a stem engaging the said valve-stem, and a pin projecting from the said valve-stem and passing through a vertical slot in the said spout to engage with its outer end the said V-shaped groove, substantially as shown and described.

5. A faucet comprising a body, a head held thereon and formed with a valve-seat, a sleeve held on the said head and formed with a V-shaped groove, a valve adapted to be seated on the said valve-seat, a valve-stem carrying the said valve, a discharge-spout formed with a stem engaging the said valve-stem, a pin projecting from the said valve-stem and passing through a vertical slot in the said spout to engage with its outer end the said V-shaped groove, and a spring held in the said sleeve and pressing against the said pin, substantially as shown and described.

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Witnesses:
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EDGAR TATE.