

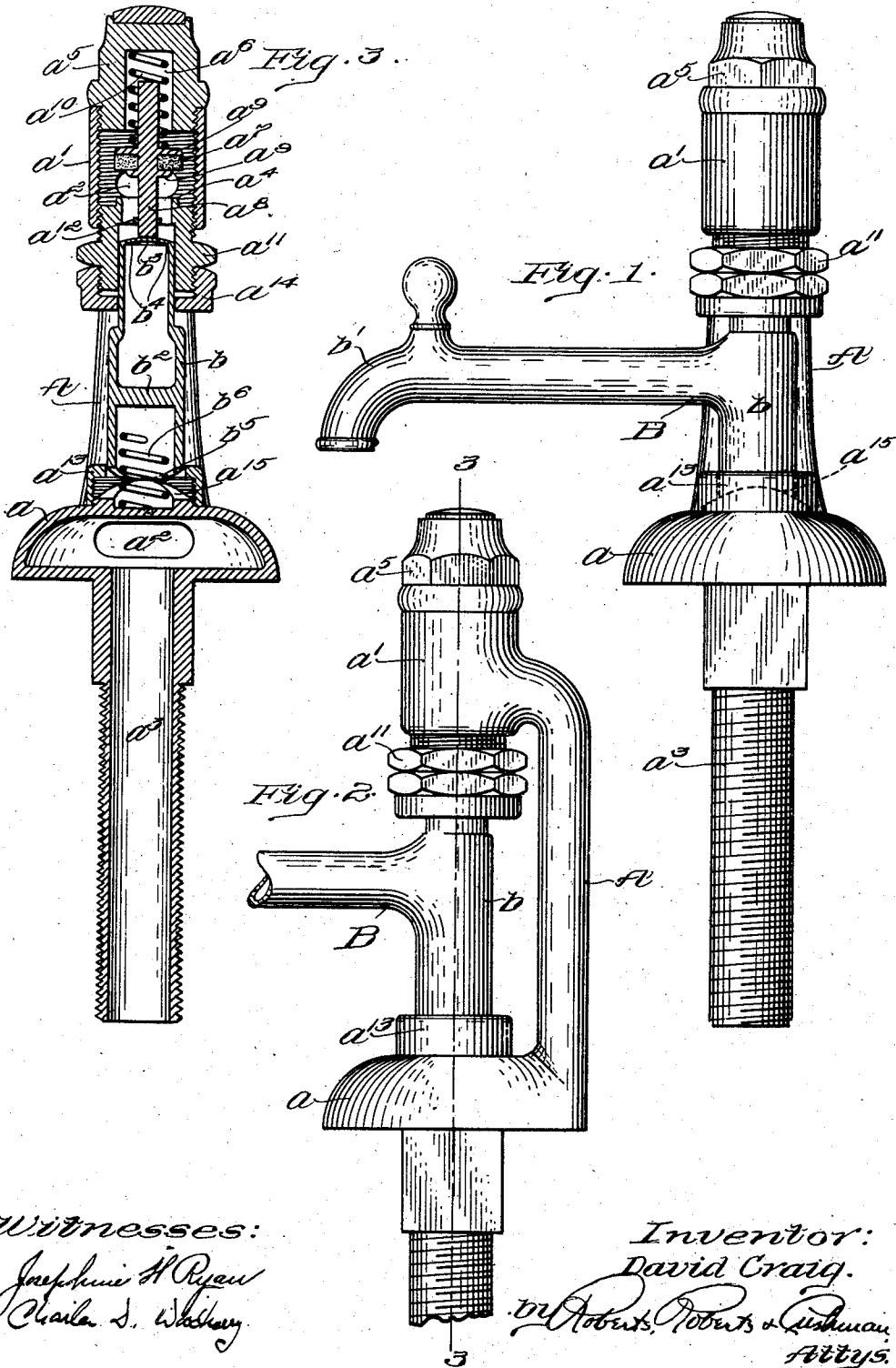
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FAUCET.

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974,028.

Patented Oct. 25, 1910.



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UNITED STATES PATENT OFFICE.

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FAUCET.

974,028.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, DAVID CRAIG, a citizen of the United States, and resident of Melrose, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Faucets, of which the following is a specification.

This invention relates to faucets, and particularly to faucets of the type in which the spout is swiveled upon a fixture or frame containing the valve and valve casing, and the valve is opened or closed by swinging the spout itself to open or closed position.

In the accompanying drawings, which illustrate one embodiment of my invention—Figure 1 is a front elevation of a faucet embodying my invention, showing the swiveled spout in closed position; Fig. 2 is a side elevation of said faucet showing the spout in open position; and Fig. 3 is a vertical section through line 3—3 of Fig. 2.

The stationary part or frame of the device as shown consists of a yoke-like frame A having a standard or collar a , adapted to rest upon the top of the usual slab adjacent to a basin, and an overhanging top part a' . An inlet passage a^2 which communicates with the supply pipe a^3 , extends through said frame. The upper part a' of the frame forms a valve casing having therein the valve seat a^4 . The top of the valve casing is closed by the nut a^5 provided with a bore or socket a^6 . A valve a^7 of leather, rubber, fiber or other suitable material is mounted on valve stem a^8 between two collars a^9 and a^{10} . The upper part of the valve stem a^8 extends into the socket a^6 and is surrounded by coil spring a^{10} which abuts at one end against the top of nut a^5 and at the other end against the upper collar a^9 , normally urging the valve toward its seat a^4 . The lower end of valve stem a^8 engages an abutment upon the swinging spout for the purpose presently to be described. The valve seat a^4 is carried by the externally threaded nut a^{11} screwed into the internally threaded valve casing as shown. A guide is provided in nut a^{11} for the lower end of valve stem a^8 consisting of a ring a^{12} which is supported by arms or spokes in a usual manner with the wall of the nut a^{11} . The outlet passage for the valve casing a' is through the nut a^{11} .

The swiveled spout B comprises a vertical barrel part b and a laterally-extending noz-

zle b' . The barrel b is pivoted at its upper end in nut a^{11} , which is fast to the upper part of the frame, and at its lower end in collar a^{13} , which is screwed to the frame above collar a . The barrel b is provided with a partition b^2 below the entrance to nozzle b' , and with an abutment b^3 across the top of the barrel engaging the end of valve stem a^8 , and having apertures b^4 connecting the valve chamber with the passage through the barrel and nozzle.

a^{14} is a stuffing or packing nut.

On the top of collar a and within collar a^{13} is a cam a^{15} cooperating with a cam surface b^5 on the lower end of the barrel b . A coil spring b^6 is secured at one end to the interior of barrel b and at the other end to the top of collar a .

Thus it will be seen that spout B may be swung laterally, and is also movable longitudinally of its axis. When the spout is in normal or closed position as shown in Fig. 1, cam b^5 rides down cam a^{15} allowing valve a^7 to engage its seat a^4 under the influence of spring a^{10} . When the spout is swung to open position, as shown in Figs. 2 and 3, the cam surface b^5 rides up cam a^{15} , thus lifting the spout longitudinally of its axis, and lifting the valve a^7 from its seat through the abutment b^3 and valve stem a^8 . The spring b^6 is thereby placed under tension and normally urges the spout toward its closed position, in which it is assisted by the normal tendency of cam surface b^5 to slip down cam surface a^{15} , and if the nozzle is released by the operator it will of itself fly back to closed position, and there normally remain.

The nut or fitting a^{11} carrying the valve seat a^4 is removably or separably secured to the outlet end of the downwardly opening valve chamber a' so that access may readily be had to the interior of the valve chamber for the purpose of cleaning or repairing the valve and valve seat. It will also be noticed that the valve stem a^8 simply abuts against the end of the barrel b but is not attached thereto, so that the valve may be moved independently of the spout. If therefore it should be desired to empty the pipes of water, a vacuum may be created in passage a^3 , a^2 , on the inlet side of the valve, which would tend to lift the valve from its seat overcoming the resistance of spring a^{10} and permit the water to be drawn off.

I claim:

1. A faucet comprising a yoke-like frame having an inlet passage therethrough, a valve chamber in said frame into which said inlet passage opens, an outlet passage leading from said valve chamber, a valve in said valve chamber controlling said outlet passage, and a spout swiveled between the ends of said yoke-like frame, communicating with said outlet passage and controlling said valve.
2. A faucet comprising a yoke-like frame, having an inlet passage therethrough, a valve chamber in said frame into which said inlet passage opens, an outlet passage leading from said valve chamber, a valve in said valve chamber controlling said outlet passage, a spout swiveled between the ends of said yoke-like frame, communicating with said outlet passage and controlling said valve, and means normally and yieldingly to urge said spout toward, and hold it in position to close said valve.
3. A faucet comprising a yoke-like frame having an inlet passage therethrough, a valve chamber in the upper end of said frame into which said inlet passage opens, an outlet passage leading from said valve chamber, a valve in said valve chamber controlling said outlet passage, and a spout swiveled between the ends of said yoke-like frame, communicating with said outlet passage and controlling the operation of said valve.
4. A faucet comprising a yoke-like frame having an inlet passage therethrough, a valve chamber in the upper end of said frame into which said inlet passage opens, an outlet passage leading from said valve chamber, a valve in said valve chamber controlling said outlet passage, and a spout communicating with said outlet passage, swiveled between the ends of said yoke-like frame, means to move said spout longitudinally of its axis when it is swung laterally, and connection between said spout and valve whereby such movement of the spout longitudinally of its axis will control the opening and closing of said valve.
5. A faucet comprising a yoke-like frame having an inlet passage therethrough, a valve chamber in the upper end of said frame into which said inlet passage opens, an outlet passage leading from said valve chamber, a valve in said valve chamber controlling said outlet passage, a spout communicating with said inlet passage, swiveled between the ends of said yoke-like frame, cam surfaces upon said spout and frame respectively adapted to move said spout longitudinally of its axis when it is swung laterally, and connections between said spout and valve whereby such movement of the spout longitudinally of its axis will control the opening and closing of said valve.
6. A faucet comprising a yoke-like frame having an inlet passage therethrough, a valve chamber in the upper end of said frame into which said inlet passage opens, an outlet passage leading from said valve chamber, a valve in said valve chamber controlling said outlet passage, and a spout swiveled between the ends of said yoke-like frame, cam surfaces upon said spout and frame respectively adapted to move said spout longitudinally of its axis when it is swung laterally, and connections between said spout and valve whereby such movement of the spout longitudinally of its axis will control the opening and closing of said valve.
7. A faucet comprising a valve casing having an inlet passage and an outlet passage, a normally closed valve in said casing controlling said outlet passage, a swiveled spout communicating with said outlet passage, said valve having a valve stem engaging an abutment upon said swiveled spout, and means to move said spout longitudinally of its axis when it is swung laterally and thereby to operate said valve through said valve stem.
8. A faucet comprising a yoke-like frame having an inlet passage therethrough, a valve chamber in the upper part of said frame into which said inlet passage opens, an outlet passage leading from said valve chamber, a valve in said valve chamber, having a downwardly extending valve stem, a spout communicating with said outlet passage swiveled between the ends of said yoke-like frame, an abutment carried by said spout and engaging said valve stem, and means to move said spout longitudinally of its axis when it is swung laterally, and thereby to operate said valve through said abutment and valve stem.
9. A faucet comprising a yoke-like frame having an inlet passage therethrough, a valve chamber in the upper part of said frame into which said inlet passage opens, an outlet passage leading from said valve chamber, a valve in said valve chamber, having a downwardly extending valve stem, a spout communicating with said outlet passage swiveled between the ends of said yoke-like frame, an abutment carried by said spout and engaging said valve stem, means to move said spout longitudinally of its axis when it is swung laterally, and thereby to operate said valve through said abutment and valve stem, and means normally and yieldingly to urge said spout toward, and hold it in position to close said valve.
10. A faucet comprising a yoke-like frame having an inlet passage therethrough, a valve chamber in the upper part of said frame into which said inlet passage opens, a valve in said valve chamber, a removable

fitting secured to the outlet side of said valve casing having thereon a valve seat provided with an outlet passage there-
through controlled by said valve, a spout
5 comprising a hub part and a nozzle part, the hub part communicating with said outlet passage and swiveled between said removable fitting below said valve seat, and the lower end of the yoke-like frame, and means controlled by the movement of said 10 swiveled spout to operate said valve.

Signed by me at Boston, Massachusetts,
this fifth day of February, 1909.

DAVID CRAIG.

Witnesses:

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