

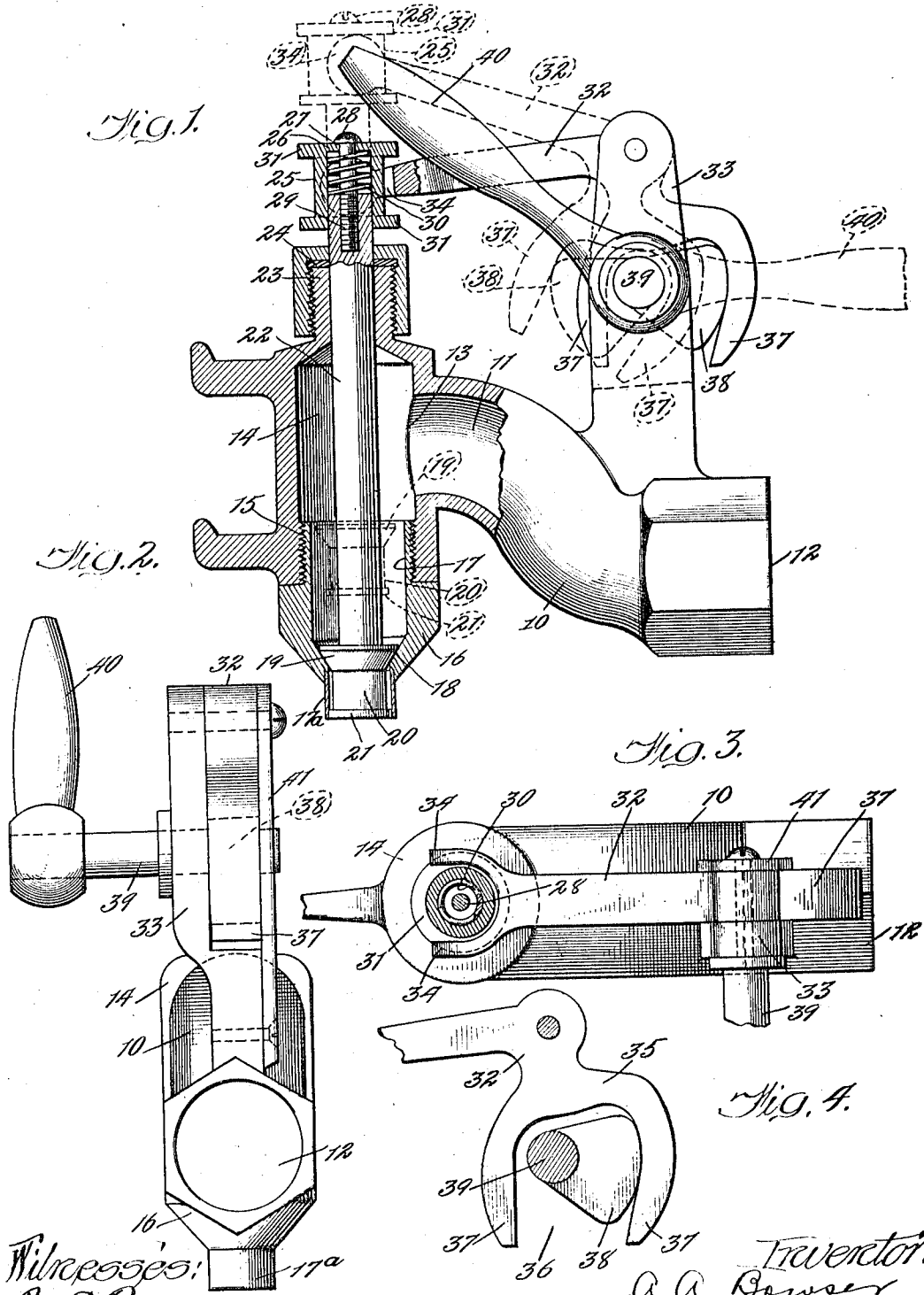
A. A. BOWSER.

FAUCET.

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1,020,076.



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UNITED STATES PATENT OFFICE.

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FAUCET.

1,020,076.

Specification of Letters Patent.

Patented Mar. 12, 1912.

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To all whom it may concern:

Be it known that I, ALLEN A. BOWSER, a citizen of the United States, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Faucets, of which the following is a specification.

This invention relates to improvements in faucets for dispensing liquids and the like, and the primary object of the invention is to provide an improved construction of valve for closing the faucet and improved means for operating the valve.

A further object is to provide improved means for wiping or cleaning the discharge opening of the faucet to prevent the liquid which may adhere to the wall of the outlet from dripping after the valve is closed.

A further object is to provide an improved device of this character which will be simple and cheap in construction and efficient and effective in operation.

To the attainment of these ends and the accomplishment of other new and useful objects as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawing illustrating an exemplification of the invention, and in which—

Figure 1 is a side elevation, partly in section, of an improved faucet constructed in accordance with the principles of this invention. Fig. 2 is a rear end elevation of Fig. 1. Fig. 3 is a detailed top plan view partly in section of Fig. 1. Fig. 4 is a detailed elevation of a portion of the operating levers and cam.

Referring more particularly to the drawing and in the present exemplification of the invention, the numeral 10 designates generally the body portion of the faucet, which is provided with a discharge passage 11 having an inlet opening 12 and an outlet opening 13. A portion of the discharge passage 11 intermediate the inlet and outlet openings is preferably located at a point higher than the inlet opening so as to direct the fluid remaining in the faucet when the valve is closed back into the supply tank.

The faucet is preferably provided with an enlarged casing or housing 14, adjacent the

outlet opening 13 and with which the latter communicates, and said casing or housing 14 is provided with a discharge opening 15 which is preferably provided with interior screw threads.

A nozzle 16 is preferably provided with a reduced portion 17 which latter is provided with peripheral screw threads, and said reduced portion 17 is adapted to be seated in the discharge opening 15 and secured in position by means of the engagement of the screw threads with the threads in the opening. The nozzle 16 is provided with an outlet opening secured within which is one end of a tubular extension 17^a, and said nozzle is also provided with a valve seat 18 adjacent the tubular portion 17^a. This tubular portion 17^a may be secured to the nozzle in any desired or suitable manner and may be of any desired length and configuration, but preferably cylindrical in shape.

A suitable valve 19 is arranged for movement within the nozzle 16 and is adapted to engage and cooperate with the valve seat 18 for closing the outlet. The valve 19 is provided with a projection 20 which is adapted to extend into the tubular portion 17^a when the valve is seated, and said projection is preferably of a diameter slightly smaller than the diameter of the tubular portion. A circumferential flange or projection 21 is provided on the extremity of the projection 20, and said flange or projection 21 is of a diameter to substantially fill the tubular portion 17^a so that as the projection 20 is moved into and out of the tubular portion, when the valve 19 is seated or unseated, the periphery of the flange or projection 21 will engage the wall of the tubular portion 17^a to wipe the liquid therefrom to prevent accumulation and hardening of oils or liquids therein which would in time wholly or partly obstruct the opening. The projection 20 is of such a length that when the valve 19 is seated upon the valve seat 18, the extremity thereof will stand substantially flush with the extremity of the tubular portion 17^a.

The valve 19 is provided with a stem 22 which extends through the casing or housing 14 and through a suitable bearing 23, within which may be arranged any suitable packing material 24 and the extremity of

the stem 22 preferably projects for a short distance beyond the bearing 23 when the valve 19 is seated. Loosely surrounding the extremity of the stem 24 is a sleeve or collar 25, which latter is provided with a top 26 having a suitable aperture 27 therein, and said sleeve or collar is loosely secured upon the extremity of the stem 22 in any desired or suitable manner, preferably by means of a screw or bolt 28 which passes through the aperture 27 and into a suitable threaded aperture 29 in the extremity of the stem 22, and said screw or bolt 28 may be adjusted to any desired extent to limit the movement of the sleeve or collar 25 with relation to the stem 22. A suitable flexible member 30, such as a spring or the like is arranged within the sleeve or collar 25, and disposed between the top 26 thereof and the end of the stem 22, and said flexible member or spring 30 preferably surrounds the screw or bolt 28 and tends to hold the sleeve or collar 25 in such a position with relation to the end of the stem 22 that the top 26 thereof will engage the head of the bolt 28. With this arrangement the sleeve or collar 25 will be yieldingly held in position with relation to the end of the stem 22 to compensate for the wear of the parts. The sleeve or collar 25 is preferably provided with spaced circumferential flanges 31 which extend beyond the periphery thereof.

A suitable lever 32, preferably in the form of a bell crank is pivotally mounted between its extremities upon a suitable support or fulcrum 33, which latter is secured to the faucet 10 preferably at a point remote from the valve stem 22. The forward extremity of one of the arms of the bell crank is preferably bifurcated to form side arms 34, and said arm is of such a length that the sleeve or collar 25 will stand within the bifurcation and the side arms 34 will stand between the circumferential flanges 31 and adjacent the periphery of the sleeve or collar 25. The other arm of the bell crank is preferably enlarged as at 35 and said enlarged portion is preferably bifurcated as at 36 to form side arms 37, and said arms 37 are located preferably adjacent the support or fulcrum 33.

A suitable cam 38 is pivotally mounted on the support or fulcrum 33 by means of a rod or axle 39, and said cam is located within the bifurcation 36 of the enlarged portion 35 of the lever 32 and adjacent the arms 37. The rod or axle 39 preferably projects beyond the support or fulcrum 33 and secured to the extremity thereof is a suitable operating handle 40. The support or fulcrum 33 is preferably offset, as shown more clearly in Fig. 2 of the drawing, and the enlarged portion 35 of the lever 32, together with the cam 38, is arranged adjacent the offset portion, and a suitable shield or plate 41 is se-

cured to the support or fulcrum 33 in such a manner as to form a guide for the cam 38 and arms 37 between the fulcrum 33 and the shield or plate 41, and the latter also forms a bearing for one extremity of the rod or axle 39.

The handle 40 is so arranged with relation to the cam 38 that when the handle is in the position shown in full line in Fig. 1 of the drawing, the cam will engage one of the arms 37 of the lever 32 to cause the bifurcated extremity which engages the sleeve or collar 25 to seat the valve 19 and in this position the handle will be adjacent the stem 22 and will be protected against being accidentally struck. When the handle is moved to rock the rod or axle 39 and to move the cam 38 about its point of pivotal support to the dotted position as shown in Fig. 1, so that the cam 38 will engage the other arm 37 of the lever 32, the latter will be rocked or moved about its point of pivotal support and will raise the valve 19 to the position as shown in dotted lines in Fig. 1, thereby unseating the valve 19 and withdrawing the projection 20 and the flange 21 out of the tubular portion 17 to permit the ready flow of the fluid out of the discharge nozzle. When the handle is reversed to seat the valve 19 the flange 21 and projection 20 will enter the tubular portion in advance of the valve and will wipe off the fluid which is adhering to the tubular portion so that when the valve 19 is seated the fluid will be prevented from dripping.

The yielding member 30 serves at all times to keep the tension on the valve seat as the different parts wear, and the tension of the member 30 may be varied or adjusted by means of the screw or bolt 28.

In order that the invention might be fully understood by those skilled in the art, the details of the foregoing embodiment thereof have been thus specifically described, but

What I claim as new and desire to secure by Letters Patent is:—

1. In a faucet, the combination of a casing having an outlet and provided with a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve, and a yielding connection outside of the casing between the valve and its operating means, said connection serving to seat and unseat the valve.

2. In a faucet the combination of a casing having an outlet and provided with a valve seat adjacent the outlet, means for operating the valve, a yielding connection outside of the casing between the valve and its operating means and means for varying the tension of said yielding means without operating the valve, said connection serving to seat and unseat the valve.

3. In a faucet, the combination of a casing having an outlet, a discharge nozzle

communicating with the outlet, said nozzle being provided with a valve seat adjacent the outlet, a valve for closing the outlet, said valve being provided with a projection, means for operating the valve, and a yielding connection between the valve and its operating means, said projection being adapted to enter the nozzle as the valve is closed to wipe the liquid from the wall of the nozzle.

4. In a faucet the combination of a casing having a discharge outlet and a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve, said means comprising a stem extending through the casing, a member yieldingly mounted on the stem, a pivotally supported lever, said lever having engagement with the said member, and means separate from the lever for rocking the latter.

5. In a faucet the combination of a casing having a discharge outlet and a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve, said means comprising a stem extending beyond the casing, a member yieldingly secured to the stem, a bell crank lever pivotally supported between the ends, one arm of said lever having engagement with the member and means separate from the lever and adapted to engage the other arm for rocking the lever.

6. In a faucet the combination of a casing having a discharge outlet and a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve, said means comprising a stem extending beyond the casing, a member yieldingly secured to the stem, a pivotally supported bell crank lever, one arm of said lever having engagement with the said member, a cam adapted to engage the other arm to rock the lever, and means for moving the cam.

7. In a faucet, the combination of a casing having a discharge outlet and a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve comprising a stem extending beyond the casing, a sleeve surrounding the end of the stem, a yielding member disposed between the sleeve and stem, means for holding the sleeve movably in position, a pivotally supported lever one end of which engages the sleeve and means for rocking the lever to move the valve.

8. In a faucet the combination of a casing having a discharge outlet and a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve, said means comprising a stem, a sleeve loosely surrounding the stem, adjustable means for preventing displacement of the sleeve, yielding means disposed between the stem and the sleeve, a pivoted bell crank lever, the extremity of one arm having connection with

the sleeve, the other arm being bifurcated, a cam standing within the bifurcation and means for moving the cam to rock the lever.

9. In a faucet the combination of a casing having a discharge outlet and a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve, said means comprising a stem, a sleeve loosely surmounting the stem, adjustable means for preventing displacement of the sleeve, yielding means disposed between the stem and the sleeve, a pivoted bell crank lever, the extremity of one arm having connection with the sleeve, the other arm being bifurcated, a cam standing within the bifurcation and a handle for moving the cam to rock the lever, said handle being so disposed with relation to the cam that when the valve is closed, the extremity of the handle will assume a position in proximity to the valve stem.

10. In a faucet, the combination of a casing provided with a discharge outlet and a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve, said means comprising a stem having a yielding section, a pivotally supported lever, a connection between one end of the lever and the yielding section, and means for rocking the lever for exerting a tension upon the yielding member to seat the valve.

11. In a faucet, the combination of a casing provided with a discharge outlet, and a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve, said means comprising a stem having a yielding section, said section being provided with spaced laterally projecting flanges, a pivoted lever, one extremity of the lever having engagement with the yielding section between the flanges, and means for rocking the lever to operate the valve.

12. In a faucet the combination of a casing provided with a discharge outlet and a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve, said means comprising a stem having a yielding section, said section being provided with spaced laterally projecting flanges, a pivoted bell crank lever, one end of the lever engaging the yielding section between flanges, the other end being bifurcated, a pivoted cam standing between the bifurcation and means for moving the cam for rocking the lever to control the valve.

13. In a faucet the combination of a casing provided with a discharge outlet and a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve, said means comprising a stem having a yielding section, said section being provided with spaced laterally projecting flanges, a pivoted bell crank lever, one end of the lever being bifurcated, the arms of said bifurcation being adapted to stand on

each side of the yielding section and between the flanges, the other end being bifurcated, a pivoted cam standing between the bifurcation and means for moving the cam for rocking the lever to control the valve.

14. In a faucet, the combination of a casing provided with a discharge opening and a valve seat adjacent the opening, a valve for closing the opening, a stem for the valve, said stem extending beyond the casing, a sleeve surrounding the end of the stem, a yielding member disposed between the stem and the sleeve for supporting the latter, an adjustable stop engaging the stem and the sleeve for holding the latter against displacement and for limiting the movement thereof, said sleeve being provided with spaced circumferential flanges, a pivotally supported bell crank lever, one extremity of the lever being provided with spaced arms, said arms being adapted to engage the sides of the sleeve and stand between the flanges thereon, the other end of the lever being provided with a slot, a pivoted cam within the slot and means for moving the cam to cause the same to engage the wall of the slot and rock the lever to move the valve.

15. In a faucet, the combination of a casing having an outlet provided with a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve, a yielding connection outside of the casing between the valve and its operating means for seating and unseating the valve, and means other than the said operating means for the valve for varying the tension of the yielding connection.

16. In a faucet, the combination of a casing having an outlet provided with a valve seated adjacent the outlet, a valve for closing the outlet, means for operating the valve, and an adjustable connection outside of the casing between the valve and its operating means for seating and unseating the valve.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 5th day of April A. D. 1907.

ALLEN A. BOWSER.

Witnesses:

S. B. BECHTEL,

C. A. DUNKELBERG.