(No Model.)

K. MAIER.

SELF CLOSING FAUCET.

No. 401,288. Patented Apr. 9, 1889.

Fig. 1.

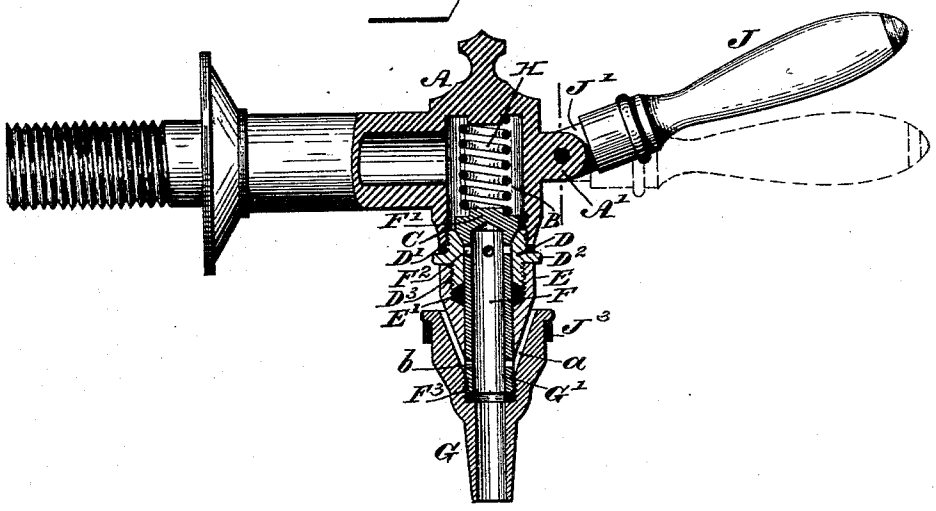
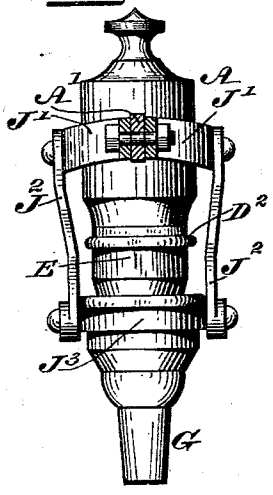


Fig. 2.



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KARL MAIER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO LOUIS FRIK, OF SAME PLACE.

SELF-CLOSING FAUCET.

SPECIFICATION forming part of Letters Patent No. 401,288, dated April 9, 1889.

Application filed September 12, 1888. Serial No. 285,261. (No model.)

To all whom it may concern:

Be it known that I, KARL MAIER, a subject of the Emperor of Germany, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Self-Closing Faucets, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a self-closing faucet constructed substantially as hereinafter set forth and claimed, whereby the same is readily operated to be opened and closed, and should the handle break the faucet remains closed.

Figure 1 represents a partial side elevation and partial vertical section of a faucet embodying my invention. Fig. 2 represents a front end view, partly sectional.

Similar letters of reference indicate corresponding parts in the two figures.

Referring to the drawings, A represents the shell of the faucet, the same having at its discharge end a chamber, B, which is screw-threaded, as at C, for the engagement of a nut or thimble, D, which is screw-threaded, as at D′ D^3, and formed with a flange, D^2, between said screw-threads. To the thimble at D^3 is screwed the collar E, within which is freely fitted the tube or barrel F, which also passes freely through said thimble D. The upper end of said tube is closed by a head, F′, which seats itself upon the top of the thimble, and has below said head a series of openings, F^2, which when the tube is in normal position are surrounded by the inner wall of the thimble D and thereby closed.

G represents the discharge spout or nozzle, which is interiorly threaded, as at G′, for engagement with threads F^3 on the exterior of the lower end of the tube F. Within the chamber B is a spring, H, which bears upon the head of the tube for holding the latter in lowermost or closed position. Packing E′ is interposed between the collar E and tube F, at the base of the thimble D, for preventing leaking at the joint of said parts, and a washer or packing is interposed between the flange D^2 of the thimble and base of the chamber B for preventing leaking at the joint of said parts. The outer wall of the chamber B has a lug, A′, to which are pivoted the bifurcations or arms J′ of a handle, J, said arms being pivoted to links J^2, whose lower ends are pivoted to an annulus, J^3, which encircles the upper end of the nozzle G and bears against a flange thereon. When the faucet is to be opened to permit the discharge of fluid, the handle J is lowered, as shown by the dotted lines, Fig. 1. This raises the nozzle G, and with it the tube F, whereby the openings F^2 of the latter are raised above the thimble D. Fluid may now flow from the chamber B through said openings F^2 into the tube F, and so escape from the latter. As soon as the handle is let go, the spring H, previously compressed or contracted, is now operative, and by its expansion forces the tube downwardly or outwardly, causing the openings F^2 to be covered by the inner wall of the thimble D, whereby the faucet is quickly closed and discharge of the fluid stopped.

It is evident that should the handle break at any time it will not release the tube. Consequently the faucet remains closed, and improper discharge of fluid is thereby prevented.

The upper portion of the nozzle G is recessed or set out from the lower portion of the collar E, forming an air-passage, *a*, which communicates with vents *b* in the tube F, by which provision air may enter said tube to cause the same to drain when closed.

The handle may be placed at the top of the shell, instead of at the side, as shown, and I do not limit myself to the location of the same.

The annulus J^3 freely receives the upper end of the nozzle G. Consequently the latter may be raised by pressing the mouth of the bottle against the same, thus opening the faucet and allowing the fluid to enter the bottle. In each case the handle is not used, and consequently may be omitted.

I am aware that it is not new to construct a self-closing faucet having a shell with chamber, a tube projecting from and movable in said chamber, a spring in said chamber bearing against said tube, and means secured to said shell for operating said tube, the said tube having openings in its side, whereby communication is had between the chamber and the interior of the tube; but I am not aware that the construction herein set forth

and claimed is old, wherein a thimble with a flanged portion is secured to the chamber and a sleeve secured to the lower end of the thimble, thus furnishing a lengthened bearing for said tube that is easily replaced in case of wear, and also permitting the easy separation of the tube from the chamber for cleansing purposes; neither is it believed to be old to provide the tube with a vent or vents coinciding with the lower edge of the sleeve embracing the tube, so that the said vent is open when the cock is closed.

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

1. A self-closing faucet consisting of a shell with a chamber, a thimble and sleeve connected to the shell, a tube within said thimble and sleeve having perforations affording communication between the chamber and the interior of the tube, and side vents opening the interior of the tube to the atmosphere, a spring within the tube bearing against the head of the tube, and a nozzle connected to the tube, the said vents coinciding with the lower edge of the said sleeve when the faucet is closed, substantially as described.

2. A self-closing faucet having a shell with a chamber, a sliding tube projecting from said shell and having side vents and a bore, the latter communicating with the said chamber when the upper closed end of said tube is raised from its seat, a spring in said chamber bearing against said tube, and a nozzle secured to the said tube below the said vents, the said vents being uncovered when the cock is closed, said parts being combined substantially as described.

3. A self-closing faucet consisting of the shell A, with chamber B therein, the thimble D, secured to shell A, the collar E, secured to said thimble, the sliding tube F, having a closed head, F′, with side openings, F^2, below said head, said head having a seat on the top of said thimble D, the spring H in said chamber B bearing against said sliding tube, the nozzle G, secured to said tube F, and the pivoted handle J, with link J^2 and annulus J^3, said parts being combined substantially as described.

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