No. 852,155. PATENTED APR. 30, 1907.

W. M. BASHLIN.

SELF CLOSING FAUCET.

APPLICATION FILED JUNE 1, 1903.

Fig. 1.

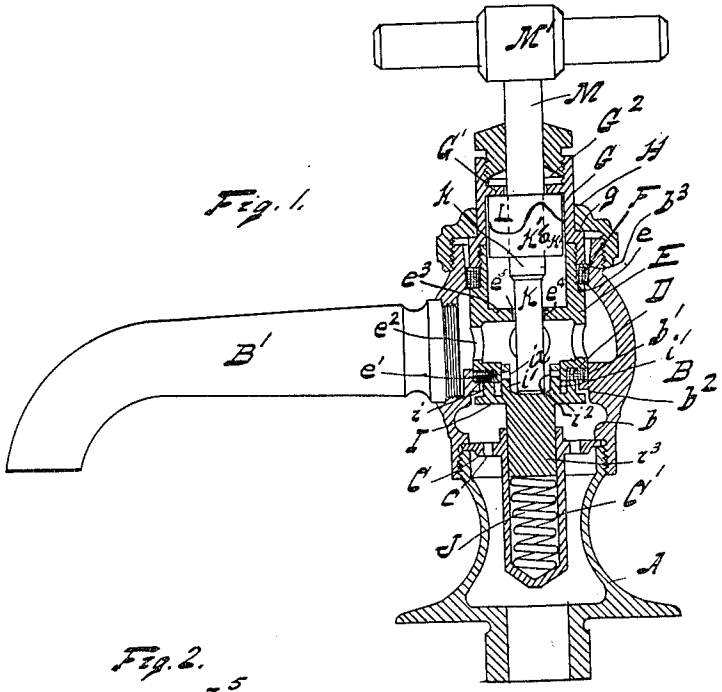
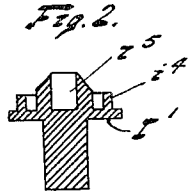


Fig. 2.



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SELF-CLOSING FAUCET.

No. 852,155. Specification of Letters Patent. Patented April 30, 1907.

Application filed June 1, 1903. Serial No. 159,578.

To all whom it may concern:

Be it known that I, WILLIAM M. BASHLIN, a citizen of the United States, residing at Warren, in the county of Warren and State of Pennsylvania, have invented new and useful Improvements in Self-Closing Faucets, of which the following is a specification.

This invention relates to faucets and consists in certain improvements in the construction thereof as will be hereinafter fully described and pointed out in the claims.

The invention is illustrated in the accompanying drawings as follows:—

Figure 1 shows a view of the faucet partly in section. Fig. 2, a view of an alternative construction of a valve.

A marks the faucet base. This ordinarily is arranged on the stand and is connected with the water or fluid supply.

B marks the valve body. This is screwed onto the base, a shoulder b engaging the web C. This web C has the perforation c which permits the passage of water or fluid by it and also carries the guide or socket C'. It will readily be seen that the web forms a strainer and that it may be readily removed by removing the body from the base.

The valve body has the usual diaphragm with the opening b' therein. Around the opening is the annular shoulder b^2, the under part of which forms a seat for the valve when the removable seat is taken out. A removable seat D is arranged on the shoulder b^2. It is carried by a follower E. The lower end of the follower has the cylindrically shaped neck e' on which the seat is arranged. The follower also has the openings e^2 through which the fluid may pass to the outlet B' of the faucet. The upper end of the follower E has the shoulder e on which is arranged a packing ring F. The packing ring is forced onto the shoulder by means of the extension G, which is screwed onto the upper end of the follower and against the packing ring F. The packing ring fits against a wedge shaped opening b^3 at the upper end of the valve body. The extension G has a shoulder g and the cap H is screwed onto the upper end of the valve body and engages the shoulder g, thus forcing the follower downwardly so as to fix the seat D in place.

The valve disk I has the annular closing rib i which operates upon the seat D. It also has the telescoping cylindrical part i' which enters the neck e'. This cylindrical part is provided with openings i^2. The valve is provided with the stem i^3 which enters the socket C', the socket thereby forming a guide for the valve. The spring J is arranged in the socket and tends to seat the valve.

Heretofore with self closing valves difficulty has been experienced by reason of the strain put upon it through the momentum of the liquid passing to it as the valve is closed. This makes the closure more violent than is desirable and consequently decreases the life of the valve. With this structure it will be noted that there is a partial closure due to the telescoping of the part i' in the neck e' prior to the complete closure of the valve, so that the liquid or fluid moving to the valve is brought to a gradual stop, thus avoiding the difficulty heretofore experienced. This supplemental opening also is desirable in that it gives a small flow from the valve which is easily regulated, that is to say if a moderate continuous stream is desired the valve may be opened so as to bring the ring away from its seat without fully opening the telescoping part. A small stream will then pass through the openings i^2.

The follower has the diaphragm e^3. This diaphragm is provided with the opening e^4 on which is the seat e^5. The operating stem K passes through this opening and is provided with the valve k which is adapted to close on the seat e^5 when the valve I is fully opened. Thus when there is the greatest pressure in the upper part of the valve body this valve k prevents leakage by the stem.

The extension G is provided with the diaphragm G' and fixedly arranged within said extension and against this diaphragm is the cam L. The stem M passes through this cam and diaphragm to the operating handle M'. The stuffing box G^2 is arranged around this stem. The cam K' is secured to the lower end of the stem M by means of the pin k'. It will readily be observed that if the handle M' is rotated the stem K is forced down through the action of the cam K', thus opening the valve. As soon as the handle is released the valve is closed through the action of the spring J.

What I claim as new is:—

1. In a self closing faucet the combination of a valve body having the diaphragm with the movable seat thereon; the follower arranged on said seat and having the cylindrical neck e' thereon; the valve I having the seating portion i and telescoping portion i' arranged to operate with the neck e', the tele-

scoping portion being provided with the ways i^2; and a spring arranged to close the valve I.

2. In a self closing faucet the combination with the valve body of the removable seat D; the follower E thereon, said follower and seat being adapted to be removed from the valve body; means for forcing the follower onto the seat and for closing the opening in the valve body; and a cam valve actuating mechanism carried by the follower.

3. In a self closing faucet the combination of the base A; the valve body B screwed onto the base; the web C secured between the base and valve body; the guide socket C′ carried by the web; the valve I having the stem i^3 extending into the socket, said valve I having the closing portion i and cylindrical portion i'; the spring J for acting upon the stem i^3 for closing the valve; the movable seat D; the follower E upon said seat having the neck e' arranged to operate with the cylindrical portion i' of the valve to effect a partial closure of the valve before the closure of the valve upon the seat D; the diaphragm e^3 in the follower, said diaphragm having a valve seat thereon; the stem K having the valve k thereon; the valve k and seat e^5 being so placed relatively as to bring the valve to the seat with the opening of the valve I; the cams L and K′; and means for actuating one of said cams.

4. A faucet having a valve chamber provided internally with an annular flange and with inlet and outlet portions opening into the said chamber at opposite sides of said flange, a peripherally grooved and perforated cage normally stationary but removably associated with the faucet and provided in its bottom with a packing arranged to seat against the upper side of said flange, a packing between the cage and faucet, a valve below the cage provided with a perforated boss to extend into the cage from the bottom thereof, a portion to seat against said first mentioned packing when the valve is closed, and a second closing portion to seat against the under side of the flange when the cage is removed, a spring acting against the valve to seat the same, and a spindle extending through the cage and arranged to apply an opening pressure to the valve.

5. A faucet having a chamber provided internally with an annular flange and with inlet and outlet portions opening into the said chamber at opposite sides of said flange, a cage having a packing in its bottom, arranged to seat against the upper side of said flange, the cage being perforated for the passage of water, a removable sleeve fitted into the upper side of the faucet and removably united with the upper portion of the cage, a packing ring between the sleeve and cage and in engagement with the body of the faucet, a cap nut threaded on to the upper side of the faucet and engaging the said sleeve, and a spindle extending through the sleeve and adapted to engage the valve to open the same.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM M. BASHLIN.

Witnesses:

NELLIE S. BESHLIN,

G. H. BESHLIN.