(No Model.)

H. B. LEACH.

SELF CLOSING FAUCET.

No. 322,114. Patented July 14, 1885.

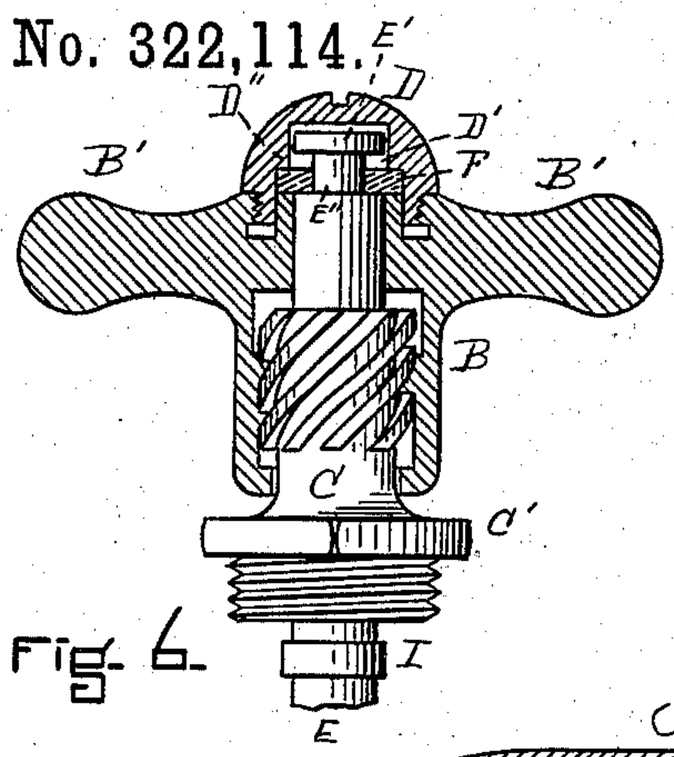


Fig. 6.

Fig. 1.

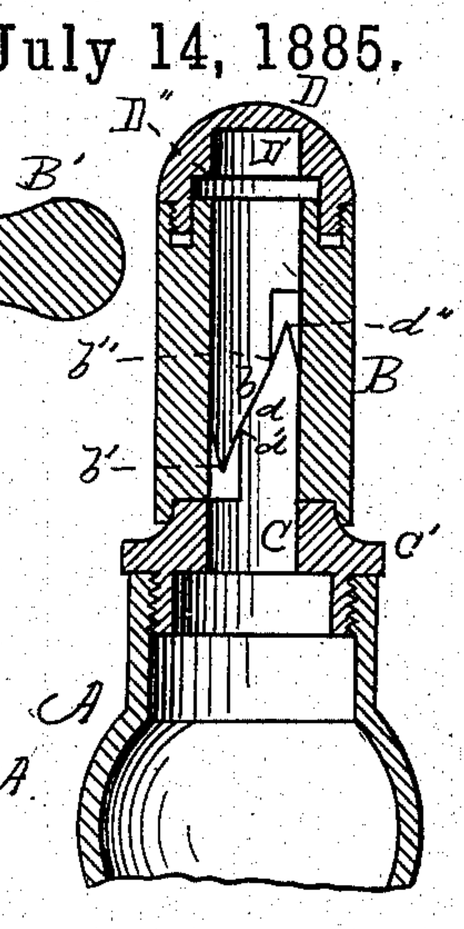


Fig. 2.

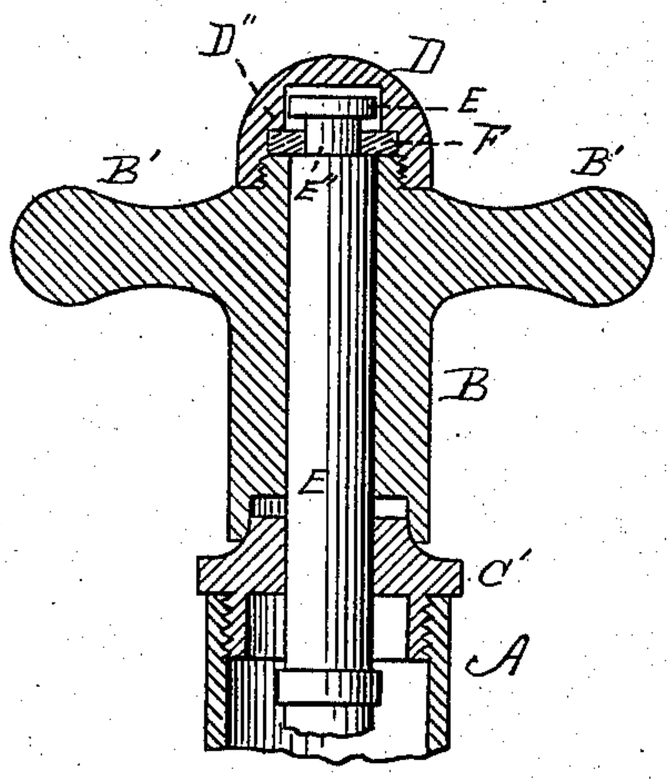
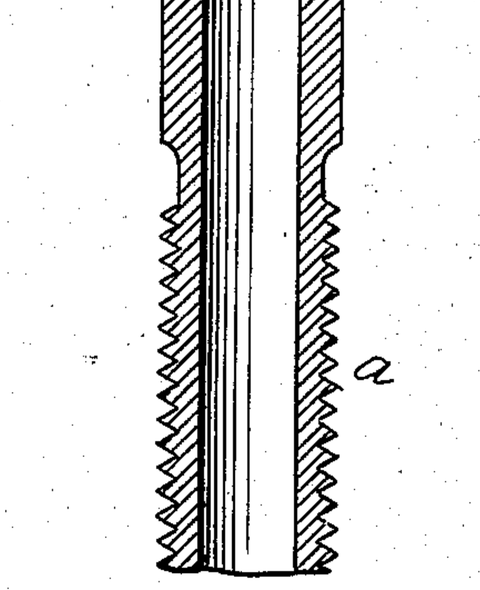


Fig. 5.



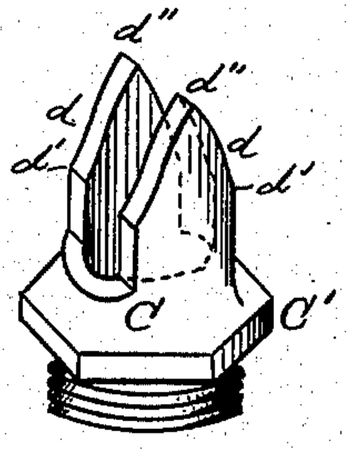


Fig. 3.

Fig. 4.

WITNESSES.

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SELF-CLOSING FAUCET.

SPECIFICATION forming part of Letters Patent No. 322,114, dated July 14, 1885.

Application filed May 14 1885. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. LEACH, of Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Self-Closing Faucets, of which the following is a specification.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a longitudinal vertical section of a self-closing faucet embodying my invention. Fig. 2 is a section taken nearly at right angles to that shown in Fig. 1. Fig. 3 is a view in perspective of the tubular neck removed. Fig. 4 is a perspective view of the washer F removed. Fig. 5 is a vertical section showing a modification. Fig. 6 is a sectional view of another modification.

This invention relates to that class of self-closing faucets in which inclines of quick or steep pitch are used for lifting or moving a valve from its seat in connection with a spring for returning the same to said seat after the handle has been released.

A represents the casing, A′ the nozzle, and *a* the inlet-tube.

B is the cap, provided with the handle B′, adapted to turn in both directions. Made integral with or rigidly secured to this cap are the inclines *b*.

C is the tubular neck, screwed into the casing A, and provided with a base, C′, resting on said casing and sustaining the cap B. This tubular neck is provided with inclines *d*, corresponding in pitch with the inclines *b*, above referred to.

D is the top screw, screwed into the handle or cap B B′, and provided with the chamber D′.

E is the valve-stem, K the valve-seat, G the packing, H the valve, and J the spring. The valve-stem extends from the valve up through the tubular neck C and cap B, the head E of the same extending above the top of said cap. The valve-stem is provided with an annular groove, E″, partially around which extends the washer F, of the shape shown in Fig. 4, said washer resting on the top of the cap B, and it is held in place by the top screw, D, which is provided with an annular shoulder, D″, for the purpose. Said top screw is further provided with a chamber, D′, sufficiently high, and the groove E″, in the valve-stem, being sufficiently broad to give enough space for lost motion between the washer F and the head of the valve-stem to allow the valve H to be seated by the spring without said head coming in contact with the top of said washer. This arrangement also provides a perfect swivel, so that the handles B′ and cap B can be turned and the valve moved from its seat without turning the valve-stem. When the handles B′ are turned, the inclines are moved one set upon another in such a manner that the inclines *b*, or those which are turned by the handle, are in such a position when the valve is on its seat that their lower ends, *b′*, lap or extend below or beyond the bases or lower ends, *d′*, of the inclines *d*, so that upon turning the handle and causing the inclines *b* to move upward upon the inclines *d*, the points *b′* cannot cut or grind into the inclines *d*, while being returned to their former position by the action of the spring. The points *b′* of the inclines *b* are prevented from reaching the bases *d′* of the inclines *d* by a suitable stop, the annular ring I upon the valve-stem being, perhaps, preferable for that purpose. The upper ends, *b″*, of the inclines *b* are below the tops *d″* of the inclines *d*, and are prevented by said stop from being moved up or past said tops. Consequently these tops *d″* cannot cut or stick into the inclines *b* when said inclines are being returned by the action of the spring to their former position or resting place.

My invention applies to all self-closing faucets having threads or inclines in which the valve is moved from its seat by the motion of one set of inclines upon a corresponding set in the direction from bottom to top of the inclines upon which those that are turned by the handle are moved.

In Fig. 6 an example of screw-threads in place of and operating in the same manner as the inclines above described is seen. The inclines or threads are of a sufficiently steep pitch to give way to the pressure necessary to close the valve. The top screw in the handle prevents dirt and grit from working in upon the inclines.

Fig. 5 is a modification of the top screw, D, with the screw on the outside of the cap B.

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

1. In a faucet in which the valve is moved or lifted from its seat by means of an incline or set of inclines mounting another incline or set of inclines in the direction from bottom to top of the latter, the relative construction of said inclines, the same consisting of arranging the point or outer extremity of each incline to extend beyond the base or inner end of the opposite incline during the entire relative motion of the same, substantially as and for the purpose set forth.

2. In a self-closing faucet the valve of which is moved from its seat by the motion of an incline or set of inclines upon a corresponding incline or set of inclines and returned to its seat by the pressure of a spring, the inclines *b d*, arranged as described, whereby when the valve is closed the points *b'* of the turning inclines *b* shall extend below or beyond the points *d'* on the inclines *d*, and the points *d''* of the inclines *d* extend above or beyond the points *b''* on the inclines *b*, in combination with a suitable stop, spring, handle, and valve-stem, substantially as and for the purpose described.

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Witnesses:
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