

J. MOREHEAD.
 FAUCET.
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970,082.

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Fig. 1.

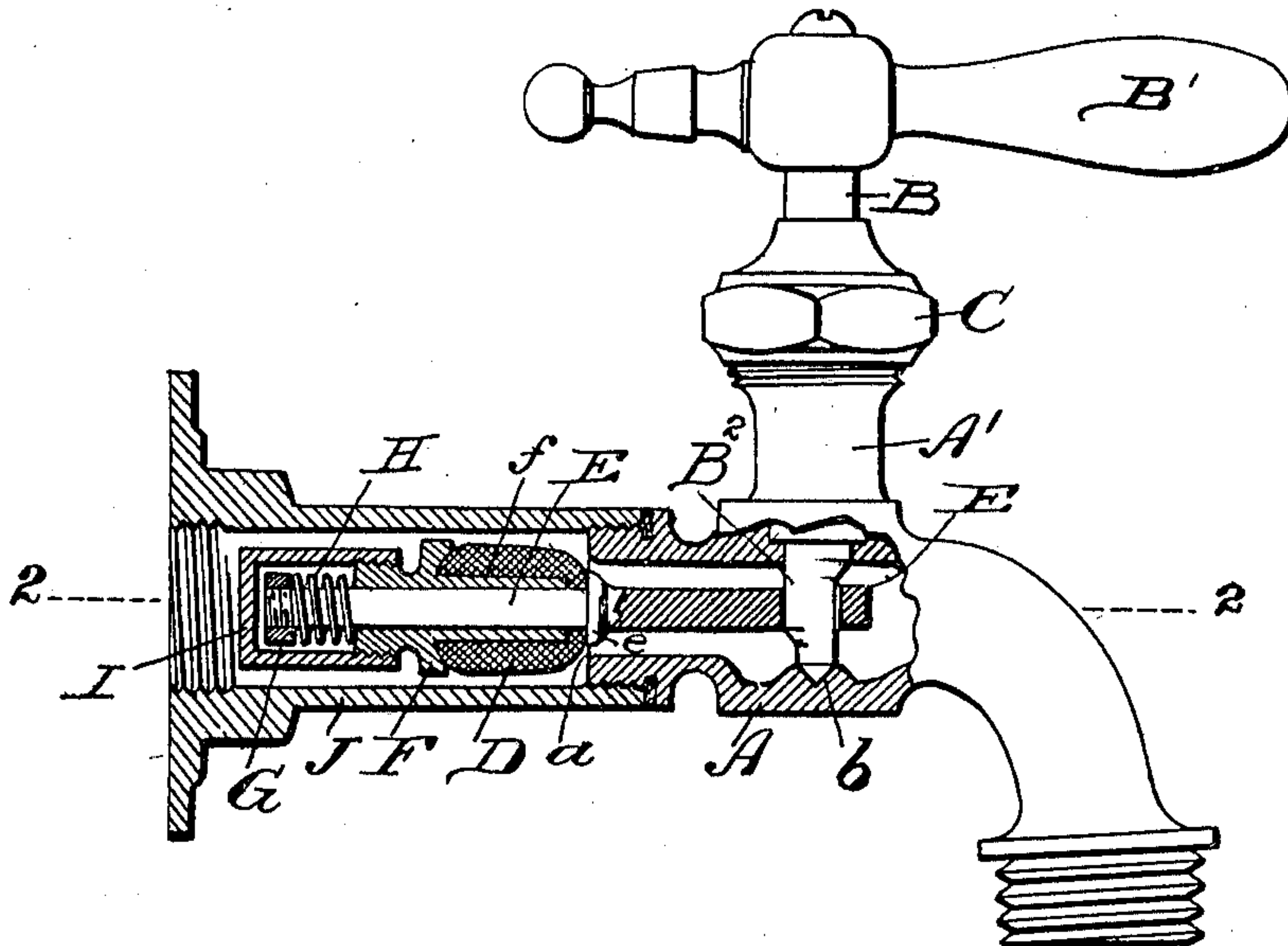
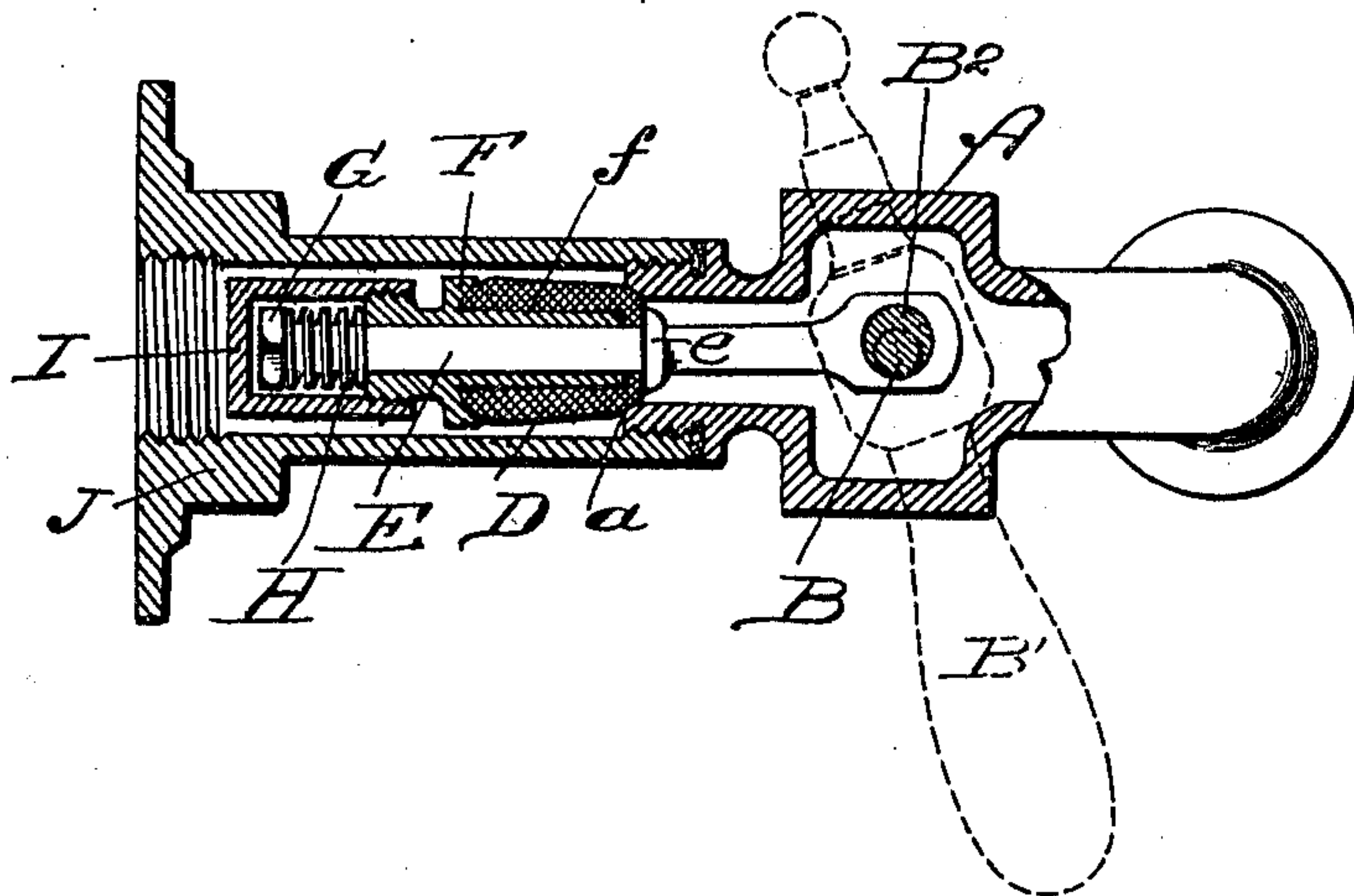


Fig. 2.



Witnesses

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FAUCET.

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To all whom it may concern:

Be it known that I, JOHN MOREHEAD, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Faucets, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in faucets, shown in the accompanying drawings and more particularly pointed out in the following specification and claims.

One of the objects of my invention is to provide means to relieve the valve of the wear due to forcing it to its seat in the operation of the valve.

Another object is to provide means that will insure against any lateral movement or play of the operating stem in faucets of the type shown.

Other advantages and improvements will be hereafter described.

In the drawings: Figure 1 is a central vertical section of the faucet showing parts in elevation. Fig. 2 is a horizontal section on line 2—2 of Fig. 1, with parts in elevation.

Referring to the letters of reference denoting the several parts:—A indicates the body of the valve carrying the usual up-standing portion A' within which is housed the operating stem B under the control of the lever B'.

C is a stuffing box having the usual screw-threaded engagement with the part A'.

D is the valve formed of rubber or other suitable composition, carried by the rod E and designed to seat itself against the projecting end *a* of the valve body.

e is a shoulder formed on the rod E against which the valve bears, being designed to limit its movement along the rod in one direction.

F is a cup-shaped casting slidably mounted on the rod E and provided with a projecting tubular portion *f* on which is sleeved the valve D.

G is an adjustable nut having a screw-threaded engagement with the rod E. H is a helical spring mounted on said rod, one end of which bears against the casting F and the other against the nut G,—the action of

the spring serving to force the valve to the limit of its movement.

I is an inclosing cap having a screw-threaded engagement with the casting F,—the purpose of which is to protect the nut G and spring H against accidental displacement and to insure against the passage of water between the rod E and the valve.

J is a sleeve having a screw-threaded engagement with the valve body and inclosing the valve and movable parts,—the sleeve J being also tapped to receive the end of the connecting water pipe.

Referring now to the operating stem B it will be seen that within the valve body it is formed with a cam-shaped portion B², projecting through a suitable aperture provided in the end of the valve rod E whereby upon actuating the lever or handle B', the valve may be brought to or forced away from its seat. The lower end *b* of the stem B is preferably cone-shaped, being seated in a corresponding depression formed in the wall of the valve body which serves as a bearing for the stem, insuring against its lateral movement.

Having indicated the several parts by reference letters, it will be seen that upon operating the handle B' to the position shown in Fig. 1, that the valve D will be forced from its seat to permit the discharge of water. Upon operating it to the position indicated in dotted lines in Fig. 2, the valve will be returned to its seat. Should the operating handle be given a rotation of 180°, more or less, the valve upon contacting with its seat will not be put under undue strain for the spring H will be gradually compressed due to the rod sliding through the valve thus relieving the valve of any excessive strain while at the same time being fully seated. Upon the valve handle being reversed or upon turning it more than 180°, the valve will be forced back along the stem due to the action of the spring still maintaining it in a seated position, or until it reaches the shoulder *e*; having reached the shoulder *e* a further movement of the operating handle will force the valve from its seat.

It will be noted that the valve has the water pressure continuously back of it, the tendency being to force the valve to its seat, thus insuring a properly closed valve when it is permitted to seat itself.

While I have shown the rod E provided

with a perforation at one end for the passage of the cam B², it may have a yoke-shaped formation at this point, the tines straddling the stem, and such a construction may be found easier to assemble.

Having thus described my invention, what I claim is:—

1. In a faucet, a valve, a plunger rod for actuating the valve and upon which it is slidably mounted, a rotatable stem operable at right angles to the plunger rod adapted to actuate said rod to open or close the valve, and means carried by the rod and bearing against the valve said means being sufficiently yieldable to allow the stem to be rotated in one direction to alternately seat and unseat the valve without placing the valve under increasing or variable tension.
2. In a faucet, a body portion, a valve, a plunger rod for actuating the valve upon which said valve is slidably mounted, means for limiting the movement of the valve upon the plunger rod, a rotatable stem one end of which is journaled in a bearing formed in the body portion, means carried by said stem for actuating the plunger rod, an adjustable nut mounted upon the opposite end of the plunger rod, and a spring carried by said plunger rod between the valve and adjustable nut whereby said rod may be actuated independently of the valve, substantially as described.

3. In a faucet, a body portion, a valve, a plunger rod for actuating the valve, a suitable casting sleeved upon the plunger rod upon which the valve is mounted, means for limiting the movement of the valve upon the plunger rod, a rotatable stem adapted to actuate the plunger rod having one end journaled in the body portion, an adjustable nut engaging the end of the plunger rod, and a spring carried by the plunger rod one end of which bears against the adjustable nut and the other against the casting carrying the valve whereby said plunger rod may be further actuated when the valve is upon its seat.

4. In a faucet, a valve, a plunger rod for actuating said valve, a suitable casting sleeved upon said rod and upon which the valve is mounted, an adjustable nut secured to the end of the plunger rod, a spring carried by said plunger rod adapted to bear against the casting carrying the valve and the adjustable nut, a cap engaging said casting designed to inclose the spring and the end of the plunger rod, and means for actuating the plunger rod, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses.

JOHN MOREHEAD.

Witnesses:

GRACE E. WYNKOOP,
SAMUEL E. THOMAS.