(No Model.)

W. CURLETT.

VALVE.

No. 561,658. Patented June 9, 1896.

Fig. 1.

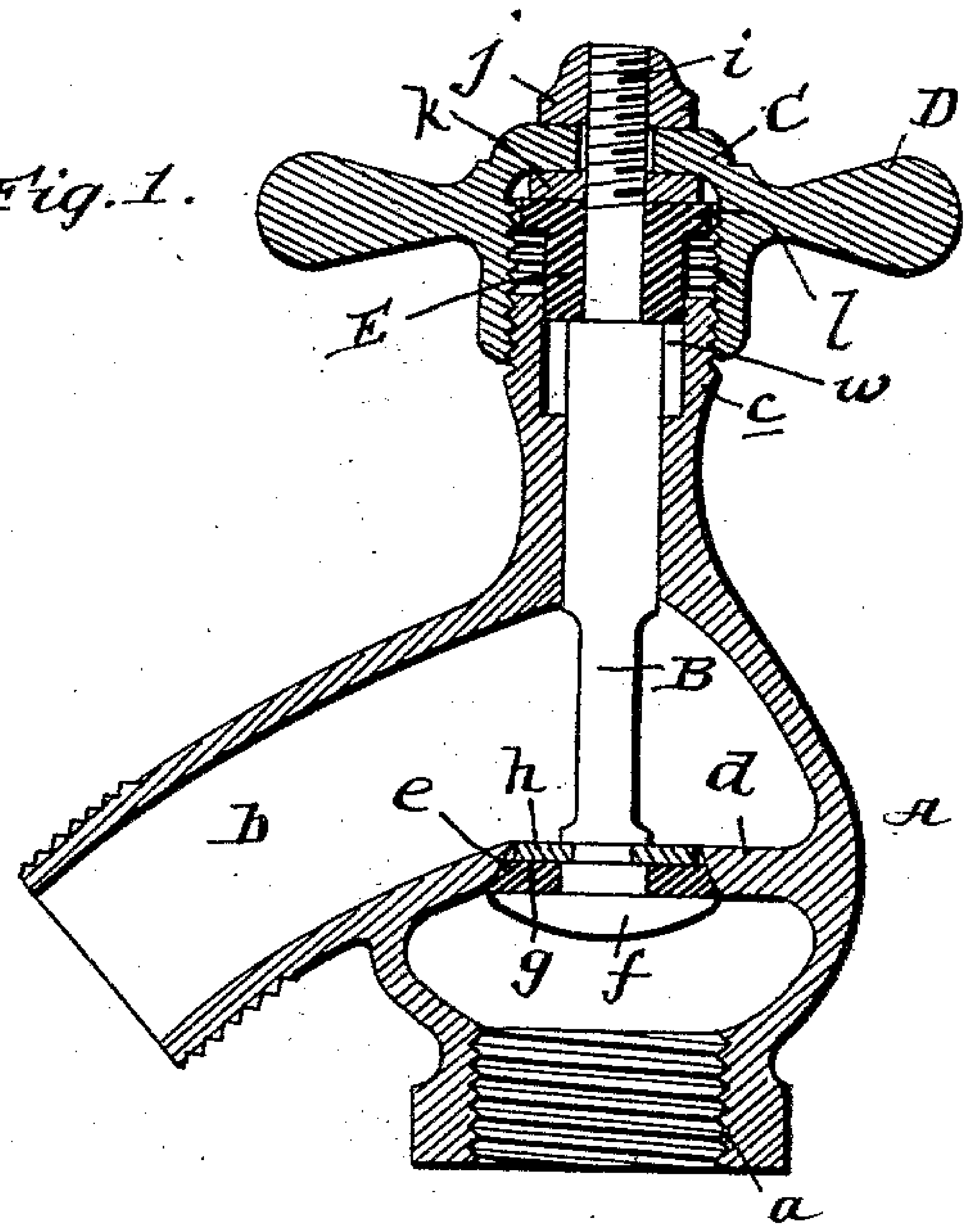
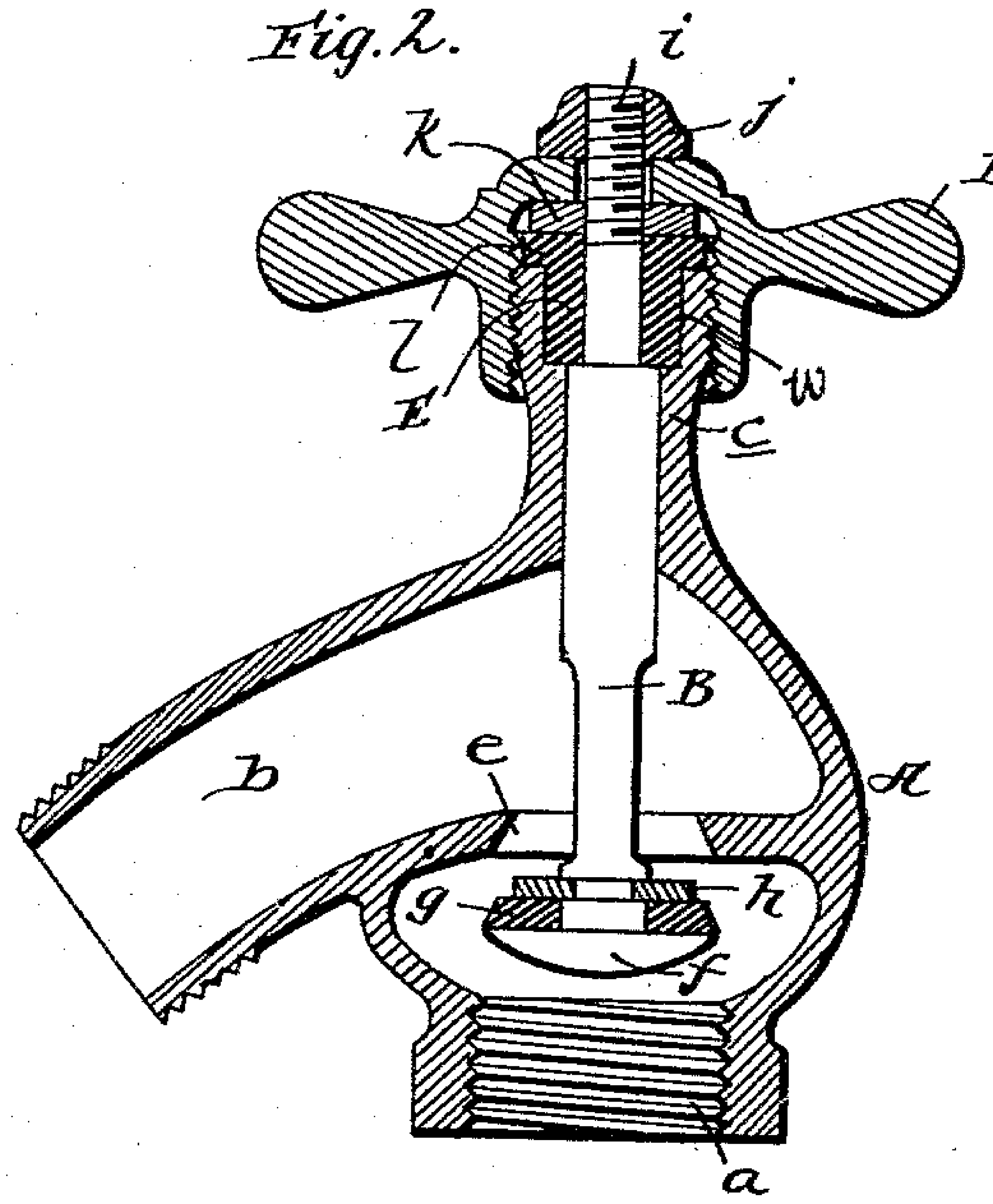


Fig. 2.



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WILLIAM CURLETT, OF SAN FRANCISCO, CALIFORNIA.

VALVE.

SPECIFICATION forming part of Letters Patent No. 561,658, dated June 9, 1896.

Application filed August 17, 1895. Serial No. 559,653. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CURLETT, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Valves; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in that class of reciprocating valves which comprise a shell or casing having an exteriorly-threaded neck, a shouldered valve-stem carrying a valve adapted to seat against a seat in the shell or casing, a packing-ring surrounding the valve-stem and bearing against the shoulder thereof and adapted to be compressed by said shoulder when the valve is opened, and an interiorly-threaded cap engaging the threaded neck of the casing and loosely secured to the valve-stem and having a handle connected thereto.

The said invention consists in the cheap, simple, and advantageous construction hereinafter described, and specifically pointed out in the claim appended.

In the annexed drawings, Figure 1 is a vertical section of my improved valve, the same being shown as closed; and Fig. 2 is a similar view with the valve open.

Referring by letter to said drawings, A indicates the body or casing of my improved valve. This body or casing is cast or otherwise formed in one piece, as shown, and it has the interiorly-threaded end *a* for the connection of a supply-pipe, the nozzle or spout *b*, and the exteriorly-threaded neck *c*, and also has the inner partition-wall *d*, which is provided with a central opening and has the wall of said opening beveled, as shown, to form a seat *e* for the valve-disk, presently to be described.

B indicates the valve-stem. This stem B is provided at its lower end with an enlargement or head *f*, upon which the valve-disk *g*, of rubber or other suitable material, is secured by a split metallic ring *h*, let into a groove in the stem, as shown, and at its upper end the said stem is provided with a reduced and partially-threaded portion *i*, which is designed for the connection of the cap C, which is secured upon the stem by the nut *j*, as illustrated. The said cap C turns loosely on the reduced end of the stem and is interiorly threaded, as shown, to engage the threaded neck *c* of the casing, and it has a handle D, formed integral with or fixedly connected to it, whereby it will be seen that it may be readily turned on the threaded neck *c*. When the cap C is so turned in one direction, it will move upwardly on the threaded neck *c*, and through the medium of the stem B will draw the disk *g* against its seat *e* and tightly close the valve, while when it is turned in the opposite direction it will move downwardly, and through the medium of the stem will move the disk *g* away from the seat *e* and open the valve.

Arranged upon the reduced portion *i* of the stem B, below the cap C, is a metallic washer *k*, and surrounding the reduced portion *i*, below said washer *k*, is a collar or sleeve E, of rubber or other suitable material, which has a flange *l* at its upper end, as illustrated, and is designed to occupy the interior annular recess *w* of the neck *c* when the valve is fully opened, as will be presently described.

When the valve is fully opened, as shown in Fig. 2, the upper end of the cap C will rest adjacent to the upper end of the casing-neck *c* and will press and hold the sleeve or collar E in the space *w* of the neck and flange *l* of said sleeve or collar against the upper end of the neck *c*, so as to effectually prevent the escape of water between said neck and the cap C, and when the valve is closed and there is no danger of water escaping from the upper end of the valve-casing the sleeve E is raised out of the annular recess *w* of the casing and allowed to expand. This, as will be observed, increases the efficiency of the sleeve or collar E when it is pressed down into the recess *w* and enables it to effectually prevent water from escaping from the upper end of the valve-casing.

The valve-disk *g* rests beneath the valve-seat *e* or between said seat and the water-induction opening, and it will therefore be perceived that when the said disk *g* is in its closed position the pressure of water will hold it securely against its seat and will thereby prevent leakage past the same.

In assembling the parts of my improved valve the disk *g* is first secured upon the stem,

and the said stem is then introduced into the body or casing A through the opening *a* and passed up through the neck *c*. The packing-sleeve E and washer *k*, together with the cap C, are then placed and secured upon the stem B in the manner before described, when the valve will be ready for use. When the disk *g* is worn or otherwise rendered inefficient and it is desired to remove it, it is simply necessary to first remove the cap C, packing-sleeve *e*, and washer *k* and then draw the stem, with the disk *g* thereon, down through the opening *a* of the body or casing, when the disk *g* may be readily removed and a new disk secured in position upon the stem, after which the stem may be readily replaced in the casing and secured therein in the manner described.

It will be appreciated from the foregoing that my improved valve is very cheap and simple and that it is not liable to leak unless the disk *g* becomes worn, and that when said disk is worn it may be readily removed and a new disk placed on the stem without the employment of skilled labor.

Having described my invention, what I claim is—

The reciprocating valve described consisting essentially of the following elements in combination, viz: the body or casing formed in one piece and having the apertured partition provided with a valve-seat, and also having the induction-opening arranged below the partition and the eduction-passage arranged above the partition and further having the exteriorly-threaded neck *c*, at its upper end provided in its inner side at its upper end with the annular recess *w*, the valve-stem arranged in the casing and extending through the partition and neck *c*, and having its upper portion reduced to form a shoulder, the valve-disk arranged at the lower end of the stem below the valve-seat and adapted to bear upwardly against said valve-seat, the interiorly-threaded cap loosely secured upon the reduced portion of the stem and engaging the exteriorly-threaded neck *c*, of the casing, and the packing sleeve or collar E, of rubber or similar material surrounding the reduced portion of the stem below the cap and bearing on the shoulder of said stem and having the flange at its upper end, adapted, when the valve is opened, to occupy the annular recess *w*, in the casing, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM CURLETT.

Witnesses:
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