

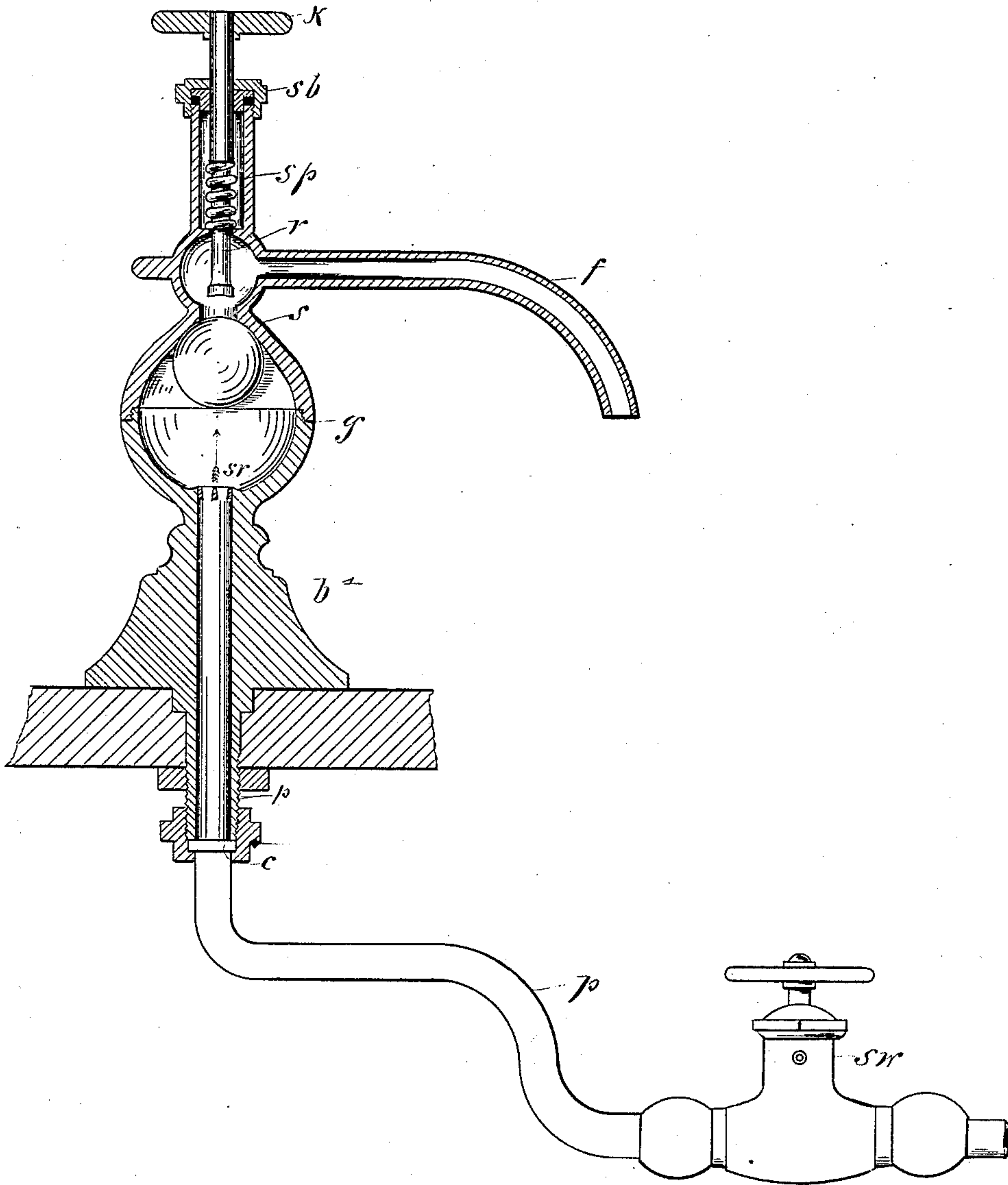
(No Model.)

J. M. BRENNAN.

SELF CLOSING COCK FOR WATER PIPES.

No. 318,083.

Patented May 19, 1885.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

JAMES M. BRENNAN, OF ELKHART, INDIANA.

## SELF-CLOSING COCK FOR WATER-PIPES.

SPECIFICATION forming part of Letters Patent No. 318,083, dated May 19, 1885.

Application filed March 2, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES M. BRENNAN, a resident of Elkhart, Indiana, have made certain new and useful Improvements in Self-Closing Cocks for Water-Pipes, a description of which is set forth in the following specification, reference being made to the accompanying drawing.

My invention is an improvement in water-pipes, by which the device is made self-closing and self-relieving, and will be understood from the following description.

The drawing represents a vertical section of my device, with the coupling and waste-pipe attached below.

In detail, *b'* is the base, centrally bored to admit the passage of water, whose threaded pipe extends through the top of the stand, and is connected by a coupling, *c*, to a pipe, *p*, leading to the stop and waste cock *sw*, the latter being of the ordinary kind. Above the base *b'* the body of the cock is swelled out into a hollow globe, *g*, made in two parts, which are adapted to be screwed together, the whole forming a water-reservoir, within which a ball, *b*, whose specific gravity is heavier than the water, is placed. Where the base *b'* and the globe *g* join is provided a seat-rest, *sr*, for this ball, upon which it drops when the water-pressure is removed, the small projections of this seat-rest allowing the water in the globe to readily drain away through the pipe *p* and the opening in the waste-cock *sw*. At the top of this globe is formed a seat, *s*, above which is an opening connected with the faucet *f*, in the rear of which is shown a finger-rest, *fr*. In the stem of the cock, above the globe *g*, a rod, *r*, works through a stuffing-box, *sb*, having a knob, *k*, on its top, and a spring, *sp*, coiled round the lower part of the rod, and which is prevented from slipping up by a shoulder formed about midway of the rod. The faucet *f* constitutes the nozzle of the cock.

The operation of my device is as follows: The water, being let on at the stop-cock *sw*, passes upward through the pipe *p* and the opening of the base *b'*, and forces the ball *b* upward to the seat *s*, making it water-tight at that point, and as long as the pressure of the water is on, the ball *b* will be held firmly in the position shown in the drawing. When it is desired to use the water, by pressing on the knob *k*, the rod *r* is forced down against the

ball, pushing it away from its seat, and the water will then flow in the opening above the seat and out at the faucet *f*. When the pressure on the knob *k* is removed, the spring *sp*, exerting its force, will lift the rod *r* from contact with the ball *b*, and the pressure of the water will then force the ball *b* to the seat *s*, stopping the flow of the water. By properly adjusting the valve of the waste-cock *sw* the water may then be all drained off from the cock and the pipes *p*, and air entering in at the nozzle *f* will pass down through the globe *g* and openings in the seat-rest *sr* through the pipe *p*, preventing any air-binding, so common in pipes having the ordinary water-cock attached.

The advantages of my device are these: First, it is self-closing; second, it is self-relieving; third, the heavier the pressure the tighter the ball *b* fits its seat; fourth, by closing off the water at the stop and waste cock the pipe is entirely emptied; fifth, it will not permit of air-binding; sixth, it dispenses with the labor of opening and closing the cocks throughout the house when water is turned off and on.

What I claim as my invention, and desire to secure by Letters Patent, is the following:

1. The self-closing and self-draining water-cock herein described, wherein the globe *g* incloses a ball, *b*, of greater specific gravity than water, this ball adapted to be forced upward to the seat *s* by means of the water-pressure from below, the spring-rod *r*, with knob *k*, for forcing the ball *b* away from the seat, and the seat-rest *sr*, provided with openings for allowing the water to drain off, all combined substantially as described.

2. In a water-cock, the base *b'*, having central opening through the same, the hollow portion *g*, provided with seat-rest *sr* below, the seat *s* above, the ball *b*, having greater specific gravity than the water, the spring-rod *r*, stuffing-box *sb*, faucet *f*, connecting-pipe *p*, and the stop and waste cock *sw*, all combined substantially as described.

In witness whereof I have hereunto set my hand this 17th day of February, 1885.

JAMES M. BRENNAN.

Witnesses:

FRANK TIMMIS,  
C. H. WATSON.