

No. 641,009.

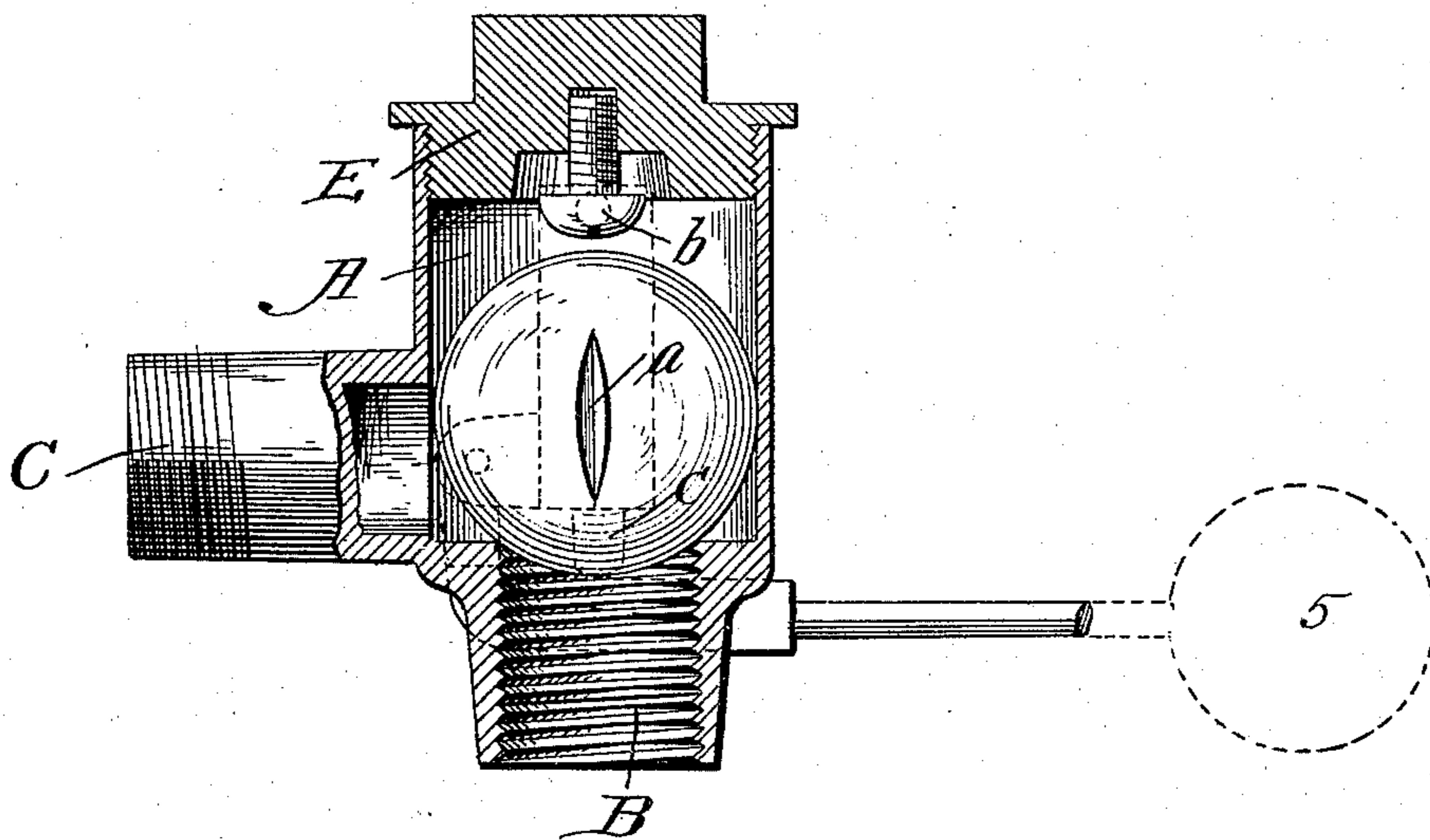
Patented Jan. 9, 1900.

C. GULLAND.  
VALVE.

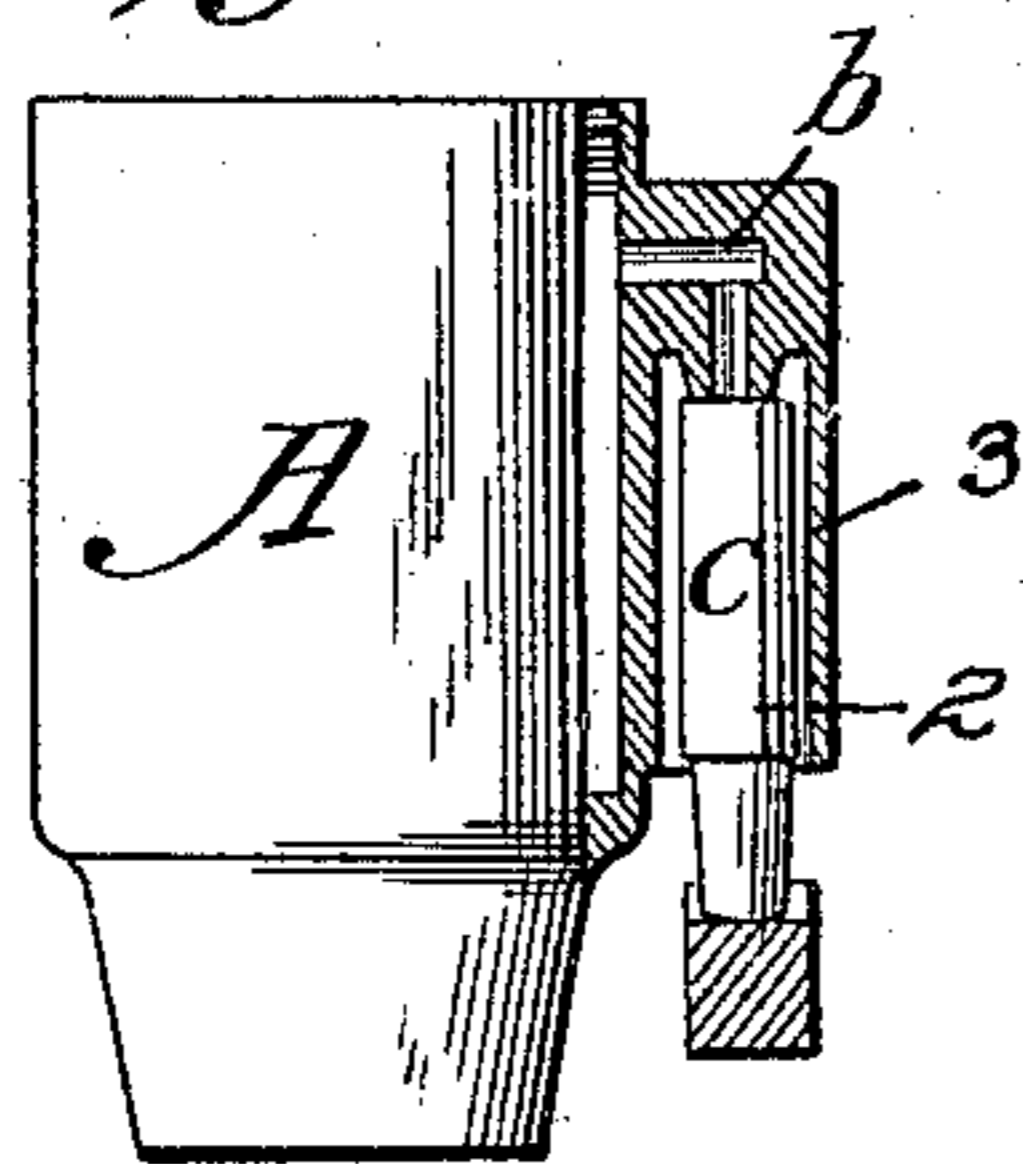
(Application filed Mar. 7, 1899.)

(No Model.)

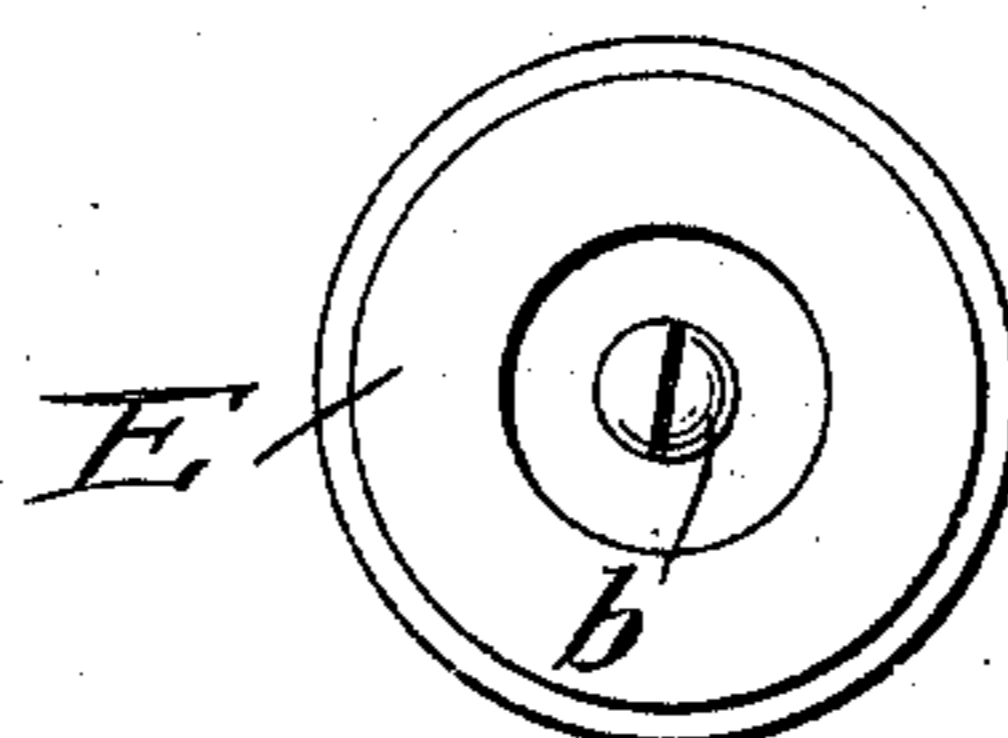
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Attest*  
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# UNITED STATES PATENT OFFICE.

CHARLES GULLAND, OF PITTSBURG, PENNSYLVANIA.

## VALVE.

SPECIFICATION forming part of Letters Patent No. 641,009, dated January 9, 1900.

Application filed March 7, 1899. Serial No. 708,130. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES GULLAND, a citizen of the United States, residing at Pittsburg, Pennsylvania, have invented certain new and useful Improvements in Valves, of which the following is a specification.

My invention relates to valves for faucets, tanks, and the like of that class in which there is a valve-casing containing a valve, the valve being interposed between the inlet and the outlet, said valve being held to its seat by the force of water, and the action of said valve controlled by a supplemental valve adapted to relieve the pressure above the main valve, and thus allow it to act.

The present invention relates to the details of construction by which the parts are simplified and whereby also the valve may be adjusted to allow for different pressures of water, and thus the discharge of water may be readily regulated.

In the accompanying drawings, Figure 1 is a sectional view of the invention, while Figs. 2 and 3 are details, the one of the valve and the other of the cap for the valve-casing.

The valve-casing is shown at A and has an outlet B at its bottom and an inlet C entering the side of the casing below its center. As a valve I prefer to use a rubber ball, which closes the outlet and is directly in line with the inlet. The ball fits the casing loosely, and in operation the pressure of water exerts a force upon the upper side of the ball and keeps it closed. In order that the water may have easy access to the space above the valve, I prefer to cut a notch in the periphery of the ball at *a*, and this allows the water to flow readily to the upper side of the valve.

In order to relieve the pressure from the upper side of the valve, an outlet *b* is provided, and this is controlled by a supplemental valve *c*, which may be controlled by hand or by a float, as may be found desirable. This valve consists of a spindle 2, fitted within a case 3, secured to the wall of the main casing. The spindle serves to prevent

the egress of the water through the outlet *b* when raised by the stem of the float, as shown at 5; but when the float lowers the spindle falls with it, and this allows the water to flow out of the outlet *b* and around the spindle. As soon as the pressure is relieved above the valve by the opening of the supplemental valve the main valve will be lifted from its seat and the water flows out.

As pressure varies in different localities it is important that some provision be made to regulate the outflow according to the pressure, and in order to provide for this in a very simple manner I make the top of the valve-casing imperforate and removable, this being shown at E, and in the center of this cap on the under side I place a screw, which is adjustable so as to bring it in a different relation to the ball-valve. When it extends downwardly to its greatest extent, it will be seen that it will limit the upward movement of the valve, and consequently reduce the discharge in cases where the pressure is very great; but where the pressure is slight the screw *e* may be moved inwardly, so as to allow greater movement of the main valve, and thus increase the flow.

What I claim is—

1. In combination with a valve-casing, an inlet and discharge opening, a space above the valve adapted to be filled with water and a groove in the wall of the valve to permit the water to flow to the upper side thereof, substantially as described.

2. In combination with the valve-casing, a main valve therein, inlet and outlet openings, a solid and imperforate cap for the valve-casing and an adjustable screw carried by said cap for regulating the movement of the main valve

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

CHARLES GULLAND.

Witnesses:

JAMES SMITH,

THOMAS F. COSGROVE.