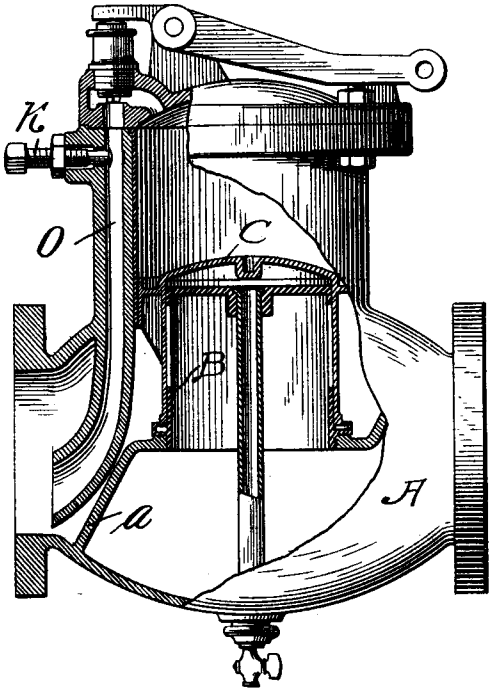
No. 675,946. Patented June 11, 1901.

C. GULLAND.

VALVE.

(Application filed Nov. 13, 1900.)

(No Model.)



Attest
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UNITED STATES PATENT OFFICE.

CHARLES GULLAND, OF PITTSBURG, PENNSYLVANIA.

VALVE.

SPECIFICATION forming part of Letters Patent No. 675,946, dated June 11, 1901.

Application filed November 13, 1900. Serial No. 36,401. (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 of the balanced type where it is necessary to direct a portion of the water from the pressure side to a chamber above the valve to effect its closing.

My invention consists in providing a port with an enlarged mouth or opening and in extending the end of the passage down to the bottom or near the bottom of the inlet-pipe, so as to get the full pressure of the water, and thus cause the quick closing of the valve. Heretofore in valves of this character the inlet to the passage leading above the valve has been near the top of the pressure-pipe and accordingly has not received the full force of the water as it rushed past through the valve, and consequently the closing action has been slower than is possible with my improvement.

In the drawing I have shown a Gulland type of valve and casing with my improvement adapted thereto.

The figure shows a sectional view of a Gulland valve with my present improvement.

In the drawing the case A is divided by a diaphragm *a*, and extending therefrom is a stationary part B, provided with suitable openings, preferably of a tapering form, and this stationary part or projection B is covered by a cap or valve C, which is vertically movable under the pressure of the water to uncover the openings through the part B. The valve C is kept closed by the pressure of water above it. When this water is permitted to drain out, the pressure from the main immediately opens the valve or cap and the water flows through the openings in the part B to the outlet of the casing.

My present improvement is directed wholly to supplying the water quickly to the chamber above the valved cap. The port or passage is shown at O and is preferably made in the wall of the casing. The entrance to this passage is flaring and extends down to or near the bottom of the inlet-pipe, so as to receive the full volume and force of the water, which is thus directed with great rapidity to the chamber above the valve or cap to close the same as soon as the drain-opening from said chamber is closed. The size of the pipe O may be adjusted by the screw K whenever it is desired to reduce the flow of the water to the chamber above the valve.

What I claim is—

1. In combination, a casing, a valve, a port or passage leading above or in rear of said valve, the inlet to said passage being located near the bottom of the pressure-pipe, substantially as described.

2. In combination with a casing, a valve, a port or passage adapted to direct the water above or to the rear of the valve to close the same, said port or passage forming an independent pipe depending into the pressure-pipe centrally thereof, substantially as described.

3. In combination with a casing, a valve therein having a space or chamber above or in rear thereof and a supply-port for said chamber having its lower end flaring and depending into the pressure-pipe centrally thereof, substantially as described.

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

CHARLES GULLAND.

Witnesses:
JOHN A. WILSON,
JOHN D. SPRANKLE.