No. 629,648 Patented July 25, 1899.

B. W. BOATENREITER.

STOP AND WASTE COCK.

(Application filed May 1, 1899.)

(No Model.)

Fig. 1.

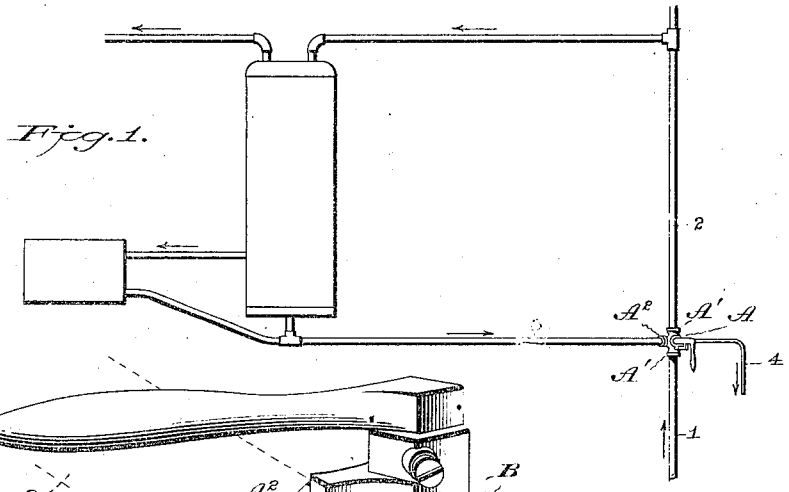


Fig. 2.

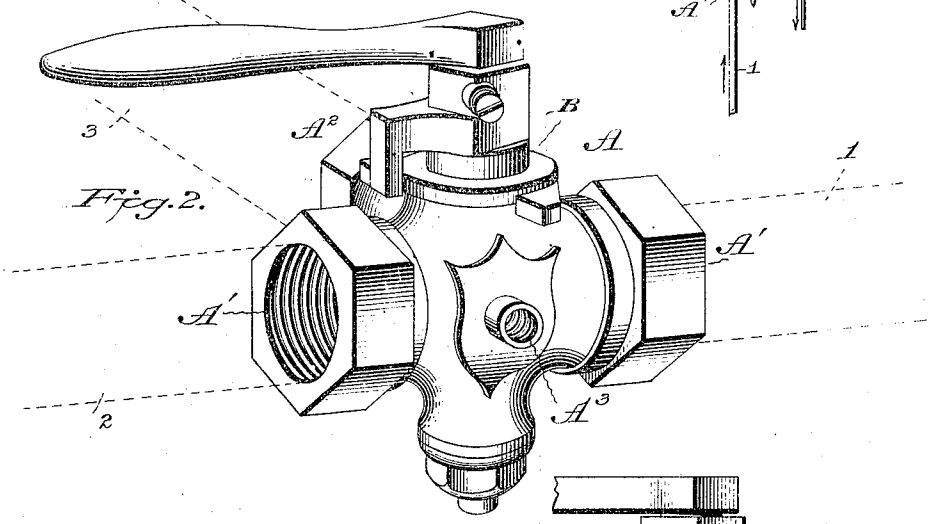


Fig. 3.

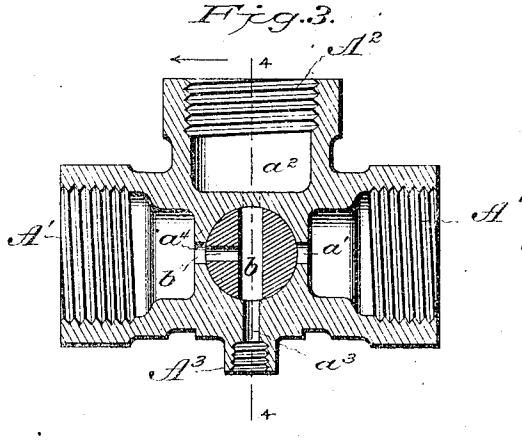
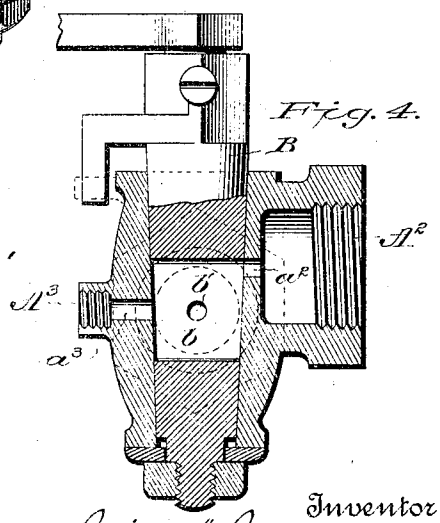


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

BENJAMIN W. BOATENREITER, OF ATLANTA, GEORGIA, ASSIGNOR OF ONE-HALF TO WALTER J. WOOD, OF SAME PLACE.

STOP AND WASTE COCK.

SPECIFICATION forming part of Letters Patent No. 629,648, dated July 25, 1899.

Application filed May 1, 1899. Serial No. 715,201. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN W. BOATENREITER, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented new and useful Improvements in Stop and Waste Cocks, of which the following is a specification.

This invention relates to certain new and useful improvements in stop and waste cocks; and it consists in the construction and combination of the parts whereby I provide a stop and waste cock which may be used as a supply and draw-off cock, said cock having four ports or ways in the casing and two ports or ways in the plug. Said plug when turned in one direction opens the main ports or ways and cuts off the waste-pipes.

The stop and waste cock is designed to be applied to a water-supply pipe and its connections, so that when the plug is turned in one direction water will pass through the valve-casing in the usual way, and when the plug is turned in an opposite direction the water-supply will be cut off and the pipe which leads to the house-supply will be placed in communication with the waste-port of the plug, the hot-water supply or the fireback and boiler being also connected with the waste-pipe, so that the entire system of piping, including the stand-boiler and fireback, will be drained when the water-supply to the house is cut off.

In the accompanying drawings, which illustrate my invention, Figure 1 is a diagram view showing one manner of applying my improved stop and waste cock to the water-supply pipe. Fig. 2 is a perspective view; Fig. 3, a horizontal sectional view, and Fig. 4 a vertical section.

Referring to the drawings, A represents the casing of my improved stop and waste cock, the same having passage-ways A′ directly through the cock and means for coupling thereto the water-supply pipes. At right angles to the passage-ways A′ the valve-casing has a passage-way A^2, and opposite thereto is an outlet A^3. These several passage-ways are constructed so that there may be coupled thereto pipes, and as an illustration of one form of application of my improvement I have shown in Fig. 1 of the drawings a diagram view in which pipe 1 is coupled to one of the passage-ways A′, and on the opposite passage-way a pipe 2 is coupled, said pipe leading to the house-supply and having a branch which extends to the stand-boiler. From the stand-boiler there extends the usual hot-water-supply pipe and pipes which lead to the water-back and from said water-back to the boiler, said pipe 3 being connected to the passage-way A^2 of the valve-casing, while the other passage-way A^3 is connected to a waste-pipe 4. The plug B, which is used with the valve-casing having the four ways, hereinbefore referred to, is of the usual type as to construction, inasmuch as it is provided with an opening *b*, which extends transversely through the plug, and with a waste opening or port *b*′, which is positioned on a line with the opening *a* of the way A. The opening *b* or transverse slot of the plug is of such a length that it will register when turned with the opening a^2 and with the openings or direct ways a' a^4. In the construction of this valve-casing it will be observed that the openings are on a line with the opening *b* in the valve or plug and that the opening a^2 is out of plane of the opening *b*′ of the plug. The valve or plug B is provided with the usual handle and has stops which limit the movement of the valve to a quarter-turn.

When the valve or plug is turned so as to bring the main port *b* in register with the apertures or ports a' a^4, the cold water will flow through the pipes 1 and 2 to the house-supply and there will be no communication with the pipe 3 from the stand-boiler and water-back and the waste-pipe. When it is desired to cut off the water-supply, the valve-stem is given a quarter-turn, which brings the port *b* through the valve in line with the openings a^2 a^3 and the port *b*′ in line with the port a', to which the house-supply pipe 2 is coupled. When the valve is arranged in such position as is shown in Fig. 3 of the drawings, the water in the house-supply pipe above the valve-casing A will be drawn off through the openings *b*′ *b* in the valve, passing to the waste-pipe 4 through the opening a^3. In addition to draining the house-supply pipes the water from the stand-boiler and water-back is drawn off through the pipe 3, which connects with

the way A^2 and aperture a^2, port b, and way a^3, flowing into the waste-pipe. When the valve is turned to let on the supply from the main to the house connection, the opening b' in the plug will be below the opening a^2, so that the way a^2 will be closed and the other two ways a' and a^4 open, so that the water may pass through the valve and its ways a' and a^4.

I am aware that prior to my invention it has been proposed to provide a three-way cock having two opposite ports, an intermediate port, and means opposite said intermediate port for supplying lubricant to the valve, which valve or plug is so constructed as to bring either of the two opposite ports and the intermediate port in communication, such a cock being adapted for use in connection with brakes. I am also aware that the ordinary stop and waste cock has a plug or valve which is similar in construction to what I have shown; but I am not aware that a valve-casing such as I have shown has been combined with a plug to give the result which I have accomplished by the construction shown.

I claim—

1. A valve-casing having an inlet and a supply port arranged opposite each other and a pair of ports at right angles thereto, one of the ports being out of line or in a different plane from the other ones through the casing, in combination with a valve or plug having a way therethrough and a way at right angles therewith which communicates with the first-mentioned way.

2. In combination with a stop and waste cock, a casing having two ports or ways which are on a line one with the other and another pair of ports or ways at right angles thereto, one of the latter ways being on a different plane from the others, of a valve or plug having an elongated opening therethrough of sufficient length to be placed in communication with three of the ways in the casing and a way at right angles therewith which may be placed in communication with one of the ways in the casing, for the purpose set forth.

3. In combination with a casing for a stop and waste cock having four ports or ways, one of said ports being out of line or on a different plane from the others, of a plug or valve which when turned in one direction places two of the ports or ways in communication and closes the other two and when turned at right angles to such a position closes one of the ports or ways and places the other three in communication, and means attached to the plug or valve and its casing for limiting the movement of the plug or valve to a quarter-turn.

4. The combination with a casing for a stop and waste cock, said casing having four ways, two of the ways being of larger area than the others, two wasteways one on each side of the casing said ways being on different planes, of a turning plug having therethrough an elongated opening or slot and a smaller opening at right angles therewith, the elongated slot establishing communication between ways on opposite sides of the valve-casing and the smaller opening with only one of the ways, and means for giving a quarter-turn to the plug, substantially as shown.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

BENJAMIN W. BOATENREITER.

Witnesses:
I. D. MITCHELL, Jr.,
ELMER HOLLAND.