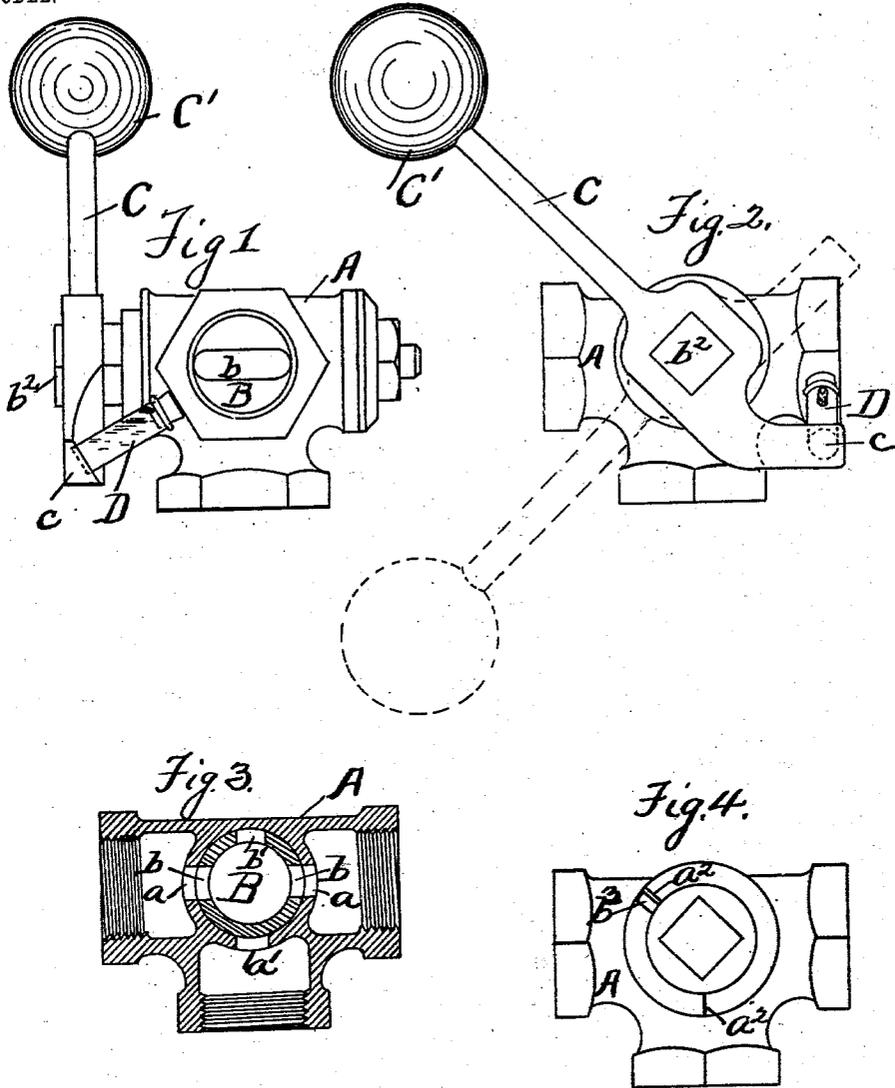


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PATENTED MAR. 1, 1904.

J. T. HUTTON.
AUTOMATIC STOP AND WASTE COCK.
APPLICATION FILED APR. 2, 1902.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

JOY T. HUTTON, OF BRONSON, MICHIGAN.

AUTOMATIC STOP AND WASTE COCK.

SPECIFICATION forming part of Letters Patent No. 753,271, dated March 1, 1904.

Application filed April 2, 1902. Serial No. 101,110. (No model.)

To all whom it may concern:

Be it known that I, JOY T. HUTTON, a citizen of the United States, residing at Bronson, in the county of Branch and State of Michigan, have invented certain new and useful Improvements in Automatic Stop and Waste Cocks; and I do hereby 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.

This invention relates to automatic stop and waste cocks; and it consists in certain improvements in the construction thereof, as will be hereinafter fully described, and pointed out in the claims.

The object of the invention is to provide an attachment for stop and waste cocks which will act when the water in the main reaches the freezing-point, so that the cock is closed and the pipe drained automatically whenever the temperature reaches a point which is unsafe for the main.

The invention is illustrated in the accompanying drawings, as follows:

Figure 1 shows an end elevation. Fig. 2 shows a side elevation. Fig. 3 shows a central section. Fig. 4 shows a side elevation with the automatic attachment removed.

A marks the valve-cock chamber, and B the plug. These are of the ordinary construction, the chamber having the ways *a a* for the passage of water and the way *a'* for waste. The plug has the ways *b b* for the ordinary passage of water, and the way *b'*, which, in connection with one of the ways *b*, forms a connection with the way *a'*. The cock-chamber is provided with the usual shoulder *a² a²*, and the plug with the stop-lug *b²* for limiting the movement of the plug. The plug is provided with the usual square end *b²*, on which the lever C is placed. The lever is preferably provided with the weight C', the mass of which is sufficient to actuate the plug when released. At the opposite end of the lever C there is a socket *c*, which when the lever is raised, so that the valve is brought to the position shown in Fig. 3, the socket *c* is opposite one of the faces of the end of the valve-chamber. A glass tube, preferably an ordinary vial, D is placed in the socket *c* and rests against the opposing surface of the valve-

chamber, as shown in Figs. 1 and 2. This tube is very fragile and is preferably filled with water. As soon as the temperature reaches the freezing-point the water in the vial D is congealed, and this breaks the vial, releasing the lever C, operating the plug B to close the cock, and bringing the ports *b' b* into register with one of the ports *a* and the port *a'*, so that the main may be drained. The vial being smaller and the water in it more exposed than the water in the main will freeze and effect the movement of the valve before the freezing in the main or pipe has reached the dangerous point.

It will be noted that the vial is provided with the ordinary stopper and that the lever C operates against the vial so as to exert pressure on the closing means or stopper. It will also be noted that the end *c* of the lever C is so arranged that the vial may be placed between it and the hexagonally-shaped branch of the cock-body. This permits this mechanism to be attached to the ordinary stop and waste cock now in use.

What I claim as new is—

1. The combination of a stop and waste cock; a device for closing said cock when released; and a vial containing liquid acting with the change of temperature to release said device, said vial having a means of closure subjected to the pressure of said device.

2. The combination of a stop and waste cock; a device for closing said cock when released; and the vial D provided with a stopper and arranged to prevent the operation of said device, said device exerting pressure on the vial in a direction tending to crowd the stopper into the vial.

3. The combination of a stop and waste cock having a hexagonally-shaped branch on its body; the lever having the end *c* arranged opposite one of the faces of the hexagonally-shaped branch; and the vial D between the end *c* and one of the surfaces of the hexagonal branch.

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

JOY T. HUTTON.

Witnesses:

E. R. HURFORD,
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