No. 703,262. Patented June 24, 1902.

E. HOWLAND.

STOP AND WASTE FOR WATER PIPES.

(Application filed Mar. 11, 1902.)

(No Model.)

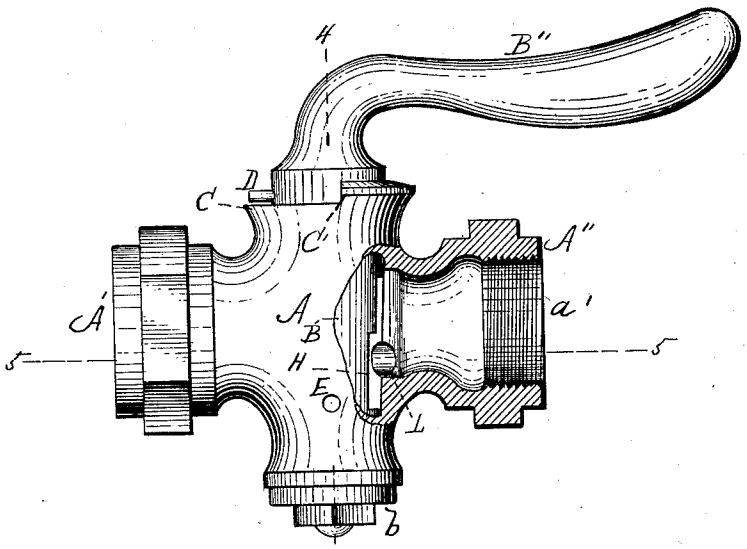


Fig. 1.

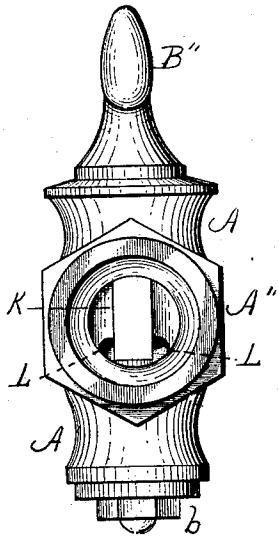


Fig. 2.

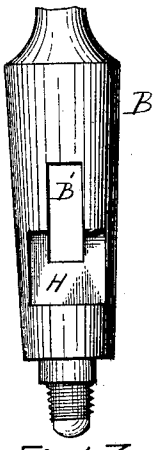


Fig. 3.

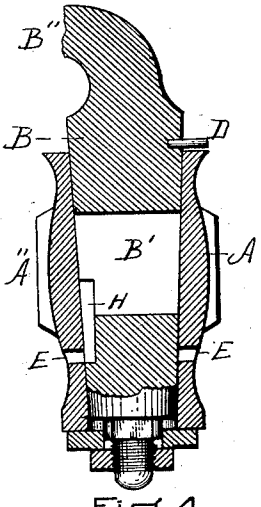


Fig. 4.

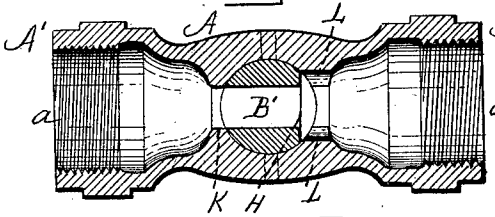


Fig. 5.

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STOP AND WASTE FOR WATER-PIPES.

SPECIFICATION forming part of Letters Patent No. 703,262, dated June 24, 1902.

Application filed March 11, 1902. Serial No. 97,742. (No model.)

To all whom it may concern:

Be it known that I, EDWIN HOWLAND, a citizen of the United States, residing in Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Stop and Waste for Water-Pipes, of which the following is a specification.

This invention relates to what is termed the "stop" and "waste" in water-pipes, more especially in water-pipes which connect the street-main with the fixtures in buildings, the stop and waste being usually located within the building and generally in the basement thereof.

In the ordinary stop and waste there is an aperture on one side through which the water wastes when it is shut off. In other words, when the handle is turned to the side of the pipe in which the aperture is located the water in the pipe between the plug and the fixtures in the building runs out or wastes through the aperture. It is necessary, therefore, to have two kinds of stop and waste, a right and a left, one of which can be applied to the pipe if the water is to enter the stop and waste from the right and the other if the water enters from the left. As water-pipes are usually near the building-wall, wasting should be accomplished by turning the handle outward or from the wall. In this improvement the device wastes when the handle is turned either toward the right or toward the left, so that but one kind of stop and waste is needed, and it is not necessary to remove or adjust the handle in order to waste from whichever way the water enters the house. A removable or an adjustable handle is therefore unnecessary in order to effect this result.

The nature of my invention in detail is fully described below and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved stop and waste, a portion being broken out in order to show the internal construction. Fig. 2 is an elevation looking from the waste side—that is, the side toward the house or fixtures therein. Fig. 3 is an elevation of the plug removed. Fig. 4 is a sectional view taken on line 4, Fig. 1, with the plug turned at right angles to the position indicated in Figs. 1 and 2, a portion of the handle broken off and the lower end of the plug shown in elevation. Fig. 5 is a horizontal section taken on line 5, Fig. 1. In Figs. 1, 2, and 5 the device is in its normal position—that is, with the water passing through it.

Similar letters of reference indicate corresponding parts.

A represents the case, A′ being the portion containing the inlet-passage *a*, and A″ being the portion containing the outlet-passage *a*′. The inlet-passage *a* is of course at the end which points toward the supply or toward the street, and the outlet-passage *a*′ is at the end which points toward the waste or toward the house and fixtures therein. The opposite portions A′ and A″ are provided with the usual screw-threads and nuts, whereby the device is connected with the pipe.

B represents the plug, provided with the passage or port B′, said plug being formed with a handle B″. The upper portion of the case A has about one-half of its periphery cut away at C, whereby shoulders C′ are produced, the cut-away portion facing the inlet or supply passage, and the handle is provided with a stop-pin D, which extends into the recess formed at C. The normal position of the plug is shown in Figs. 1 and 2—that is, with the handle in line with the water-passage and pointing toward the waste or toward the house, and it is secured rotatively in such position by a suitable nut *b*.

In the ordinary stop and waste the aperture through which the water wastes is set on one side only and high enough to register or coincide with the port or passage B′ when the handle and plug are turned toward that side. In my invention there is an aperture E on each side of the plug below the passage or port B′ and not coinciding directly with it. On the side of the plug which faces the waste when the handle is parallel with the water-pipe, as in Fig. 1, said plug is flattened or cut away, as indicated at H, across and connecting with the lower portion of the port or passage B′, and thus constitutes or produces a by-pass extending on each side of the plug, the said by-pass being deep enough to register with either of the apertures E, as indicated in Fig. 4, when the plug is rotated so that the handle B″ is at right angles with the pipe. The case A is provided with the ordinary port K, similar in shape to the port B′;

but at the lower portion of this port K and on opposite sides thereof the case is recessed at L on the side next the waste to form opposite passages, which register with the flattened portion constituting the by-pass H.

In practical operation the parts are assembled as indicated in Figs. 1, 2, and 5, in which they are shown in their normal position—that is, with the handle B″ pointing toward the waste or house, the ports K and B′ coinciding, and the flattened portion or by-pass H facing in the same direction in which the handle points and coinciding with the passages formed at L. In this position the by-pass formed at H does not register with either of the apertures E and the water flows freely through to the house-fixtures. When the water is shut off, it is done by turning the handle B″ in either direction until it is at right angles with the pipe, the pin D being against one of the shoulders C′. In this position the ports K and B′ are at right angles with each other and do not coincide; but the by-pass H, which connects with the lower portion of the port B′, registers with the aperture E on the side to which the handle B″ is swung, and, moreover, the by-pass registers also with that portion of the passage L in the case which is on that side. Hence the water from the house side wastes freely through the passage L, by-pass H, and aperture E on that side. When the handle is swung to the other side, it wastes through the portion of the passage L on the opposite side of the port K, the by-pass H, and the aperture E on that side. It is evident that when the waste is open on one side the waste or aperture of the other side is closed by the plug B.

The common method now in use of producing a stop and waste which will work either right or left is to apply a detachable handle, which by various devices more or less complicated can be reversed in order to accomplish this result. It will be seen that in my contrivance all such complicated mechanism is avoided, as my handle need not be removable, inasmuch as it cannot possibly be turned the wrong way, as it works in either direction. Moreover, there are no pegs or other small parts to be broken, as is commonly the case when the result is produced by means of a detachable handle.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a stop and waste for water-pipes, the plug B provided with a suitable handle and formed with a central horizontal port or passage; and a case, as A, provided with apertures on opposite sides extending through said case to the plug below the port in said plug, and with a port or passage adapted to register with the said port in the plug, said plug being formed with a passage or by-pass extending downward from the port therein to the level of the apertures in the case, whereby the rotation of the plug produced by swinging the handle in either direction from one in line with the pipe enables the by-pass to register with the aperture on that side below the port in the plug, substantially as described.

2. In a stop and waste for water-pipes, the plug B provided with the central port B′ and with a suitable handle; and the case A provided with a central port K adapted to register with the port B′, and further provided with apertures E on opposite sides of the plug below the port B′, said plug being provided with the by-pass H extending downward from and on opposite sides of the port B′, and adapted to register with either of said apertures E as the handle of the plug is swung to the right or to the left, and said case being formed on its inner surface with the passage L extending from the lower portion of and on opposite sides of the port K, and adapted to coincide or register with the by-pass when the plug is suitably rotated, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWIN HOWLAND.

Witnesses:
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