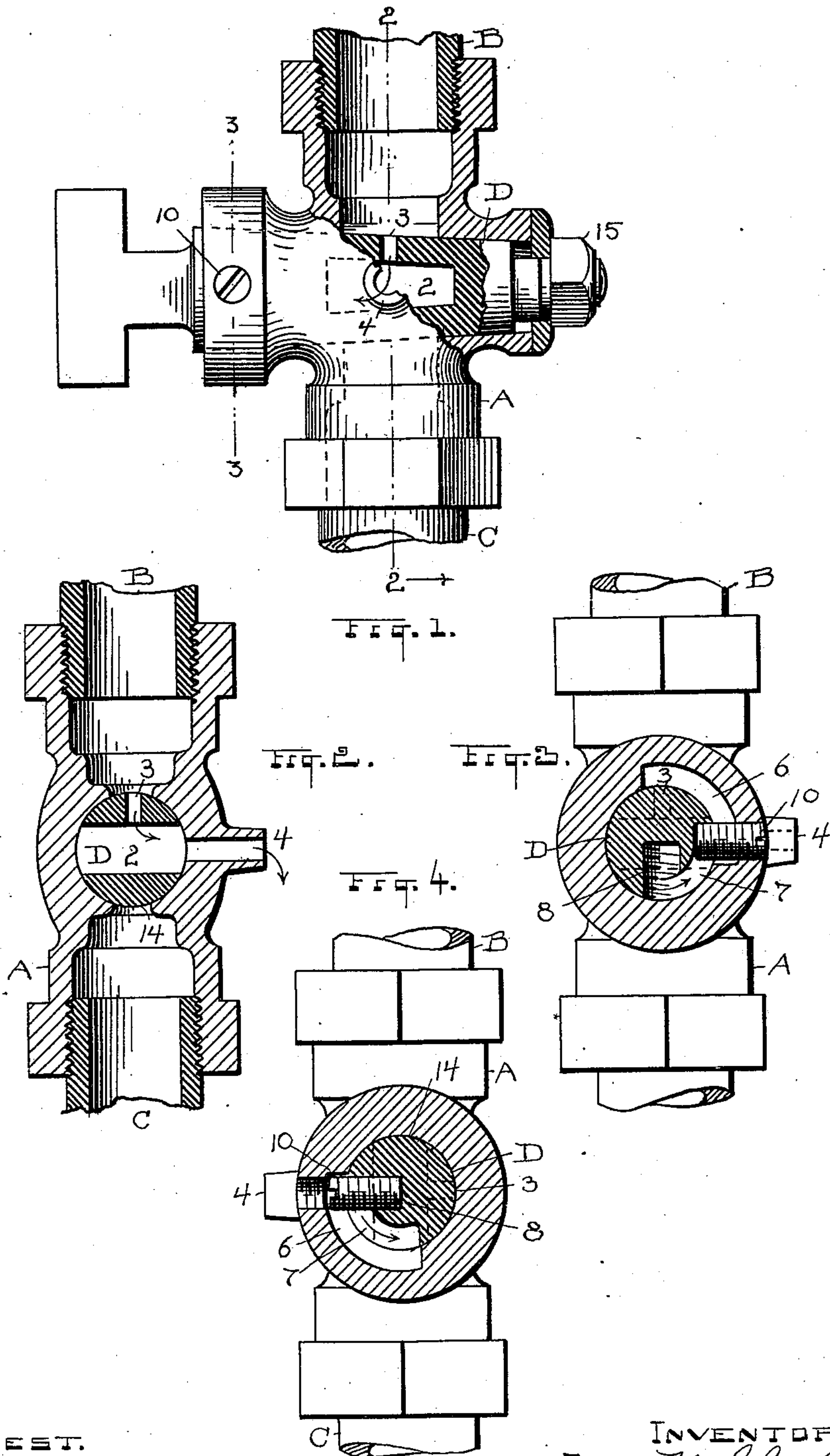


(No Model.)

I. N. GLAUBER.  
WASTE COCK.

No. 564,014.

Patented July 14, 1896.



ATTEST.

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# UNITED STATES PATENT OFFICE.

ISAAC N. GLAUBER, OF CLEVELAND, OHIO.

## WASTE-COCK.

SPECIFICATION forming part of Letters Patent No. 564,014, dated July 14, 1896.

Application filed December 13, 1895. Serial No. 572,012. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC N. GLAUBER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Waste - Cocks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to waste-water cocks; and the object of the invention is to provide a waste-cock which, if it be set by mistake in inverted position, can be easily righted without removal. Heretofore, as waste-cocks have been generally constructed, there was only one way in which they could be set and work, and if by accident or mistake the cock was set in inverted position it had to be bodily detached from the pipes and placed in right position before it could be used for waste purposes.

My invention renders detachment and reversal in case of mistake unnecessary, and enables anyone, however unskilled, to correct the error and make the cock work right, even though it remains in inverted position.

To these ends the invention consists in the construction and arrangement of parts substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation of a waste-cock constructed according to my invention, and broken out in its upper portion to reveal the parts as they appear in wasting position. Fig. 2 is a vertical sectional elevation on line 2 2, Fig. 1, through the center of my improved structure. Fig. 3 is a cross-section on line 3 3, Fig. 1, showing the stop-screw in normal position as it appears when the cock has been set properly. Fig. 4 is a cross-section on a line corresponding to 3 3, Fig. 1, and showing the parts as when the cock has been set in what may be considered as inverted or wrong position, and showing the stop-screw driven in to overcome the error and enable the cock to work right, as hereinafter more fully described.

A represents the casing or body, and B and C the pipe connections upon which the body is secured when in working position.

D is the plug or valve, which is of the usual cylindrical and tapered form common in this art. Broadly, the plug and the body are old and well known. The plug has the through water-passage 2, and the waste is from above through the inlet or opening 3 in the side of the plug and the outlet or discharge 4 in the side of the body, as seen in Fig. 2, and which also is old and well known. Figs. 1 and 3 show the same relation of parts.

Always heretofore the plug D has had a certain limited quarter turn with a stop to determine its rotation to open the plug for the free passage of water through the pipe or to turn it off and open the waste, as here shown. But this was the limit of the function of the stop, and there was no provision whereby when a plug was wrongly set to make it operate just as well as if it had been set aright. My invention is designed to accomplish this result, as above indicated, and to this end I form the body A within the mouth of the barrel for the plug with a segmental groove or depression 6, having shoulders at its ends and extending about a third or more around within the barrel. A corresponding groove or depression 7, with shoulders at its ends, is formed in the plug D opposite depression 6, but shorter, and having at one end a threaded hole or cavity 8. This threaded cavity is diametrically opposite the waste-passage 2 in the plug, but farther out. A threaded hole is made in the body which taps the groove or depression 6 at the end next to the threaded hole 8 at the end of groove 7, and into this hole in the body I insert a stop-screw 10. This screw has no head and is of such length as in the first instance to reach through into the groove 7 in the plug while its outer end retains its bearing and hold in the body A, thus working between the shoulders in groove 7 and serving as a stop to the rotation of the plug. When the parts are as seen in Figs. 1 to 3, the plug has been rotated into position to open the waste-passage. This is the limit of rotation in one direction. Then by turning the plug back till the screw strikes the opposite shoulder of the groove 7, the waste will be closed and the through passage 2 for the water open. The portion 14 of the plug will then close the waste-passage 4, and the threaded cavity 8 will be opposite the stop-



screw 10. This shows what may be termed the proper relation of the parts and how they should work when they have been set in this way. But suppose when one comes to turn  
5 the water off for the first time he discovers that the cock has been set upside down, as frequently occurs. In that case it will be found that the waste-inlet 3 of the plug will be on the right, as seen in dotted lines, Fig.  
10 4, and the only possible turn of the plug will bring said inlet 3 to the bottom and open the discharge to the water in pipe C, which is open to the main. Hence, it would be impossible to waste the water out of the pipes  
15 if all the parts remained as shown in Fig. 3. However, with the parts as seen in Fig. 4, it will be seen that the screw 10 is in position to thread down into the cavity 8, as has been done in this figure, so that it is now trans-  
20 ferred from the body A to the plug D and will rotate therewith. Now, having transferred the screw 10 from the body to the plug, it moves hereafter with the plug, and its opposite or outer end now operates as a stop against  
25 the shoulder or ends of the groove or depression 6 in the body. This done, the plug can now be turned in the reverse direction far enough to bring the waste-passage 3 above again and in communication with the water  
30 to be wasted, as in Fig. 2. The parts will now work as well as originally, only in turning to waste position the plug will have to be turned in the opposite direction. Obviously, if preferred, this latter position of stop-screw  
35 10 might be made the preferred position, in which case to change or reverse the action

the said screw would be run out so as to be and operate as in Fig. 3.

It will be thus seen that the screw-stop 10 is interchangeable between the parts A and 40 D and that it operates equally well in both the grooves 6 and 7.

The plug is held in working position and can be tightened therein by the nut 15 at its smaller end.

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What I claim is—

1. The body and the plug having opposite threaded holes and shoulders to be engaged by a stop, and a stop constructed to occupy 50 either of said holes and to work between said shoulders, substantially as described.

2. The body and the plug therein and each of said parts constructed to limit the rotation of the plug, and a stop movable bodily from one of said parts to the other, substantially 55 as described.

3. The body and the plug having each a segmental groove and a threaded stop constructed to engage in either of said parts and operate in either of said grooves, substan- 60 tially as described.

4. The body and the plug having opposite grooves and opposite holes for a stop, in combination with a stop occupying one of said holes and one of said grooves, substantially 65 as described.

Witness my hand to the foregoing specification on this 7th day of December, 1895.

ISAAC N. GLAUBER.

Witnesses:

H. T. FISHER,

H. E. MUDRA.