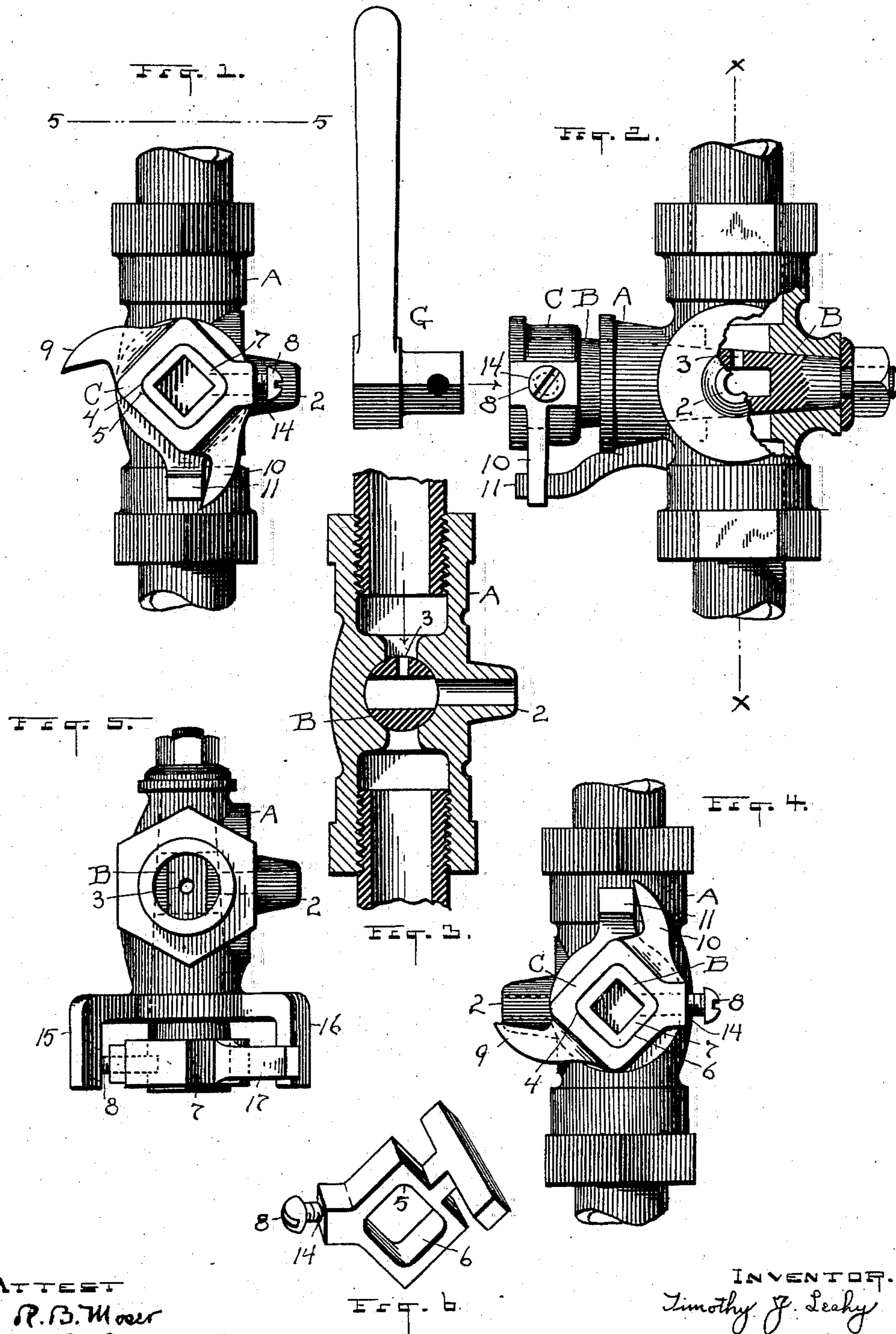


(No Model.)

T. J. LEAHY.
STOP AND WASTE COCK.

No. 578,885.

Patented Mar. 16, 1897.



ATTEST
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STOP AND WASTE COCK.

SPECIFICATION forming part of Letters Patent No. 578,885, dated March 16, 1897.

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To all whom it may concern:

Be it known that I, TIMOTHY J. LEAHY, 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 Stop and 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 has reference to stop and waste cocks; and the invention consists in the construction, combination, and arrangement of parts whereby the cock is convertible to right or left hand use, substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved stop and waste cock, showing the parts set, say, as "rights" and as they appear when in wasting position. Fig. 2 is a side elevation thereof at right angles to the view in Fig. 1 and showing the same parts in the same relation with a portion of the casing broken away to reveal the outlet-passage. Fig. 3 is a vertical central sectional elevation of the said parts on a line corresponding to $x x$, Fig. 2. Fig. 4 is a view showing the parts set as "lefts" or the reverse from that shown in Figs. 1 and 2. Fig. 5 is a view of my improved mechanism corresponding to view looking down from line 5 5, Fig. 1, but containing a modification of the adjusting-collar and the stop mechanism therefor, as hereinafter described. Fig. 6 is a perspective view of still another modified form of collar, as hereinafter described.

A represents the body or casing of my improved mechanism, threaded at each end, as usual, to make the pipe connections and provided with the usual waste-opening 2 at one side. I do not claim that there is any novelty about this body part, as it is shown most plainly, for example, in Fig. 3, nor in the plug B in so far as it serves the usual purpose of a plug for opening and closing the passage through the body and to provide a waste through its own waste-opening 3. These parts and features of construction broadly are well known in the art.

Now it is desirable that a stop and waste cock should be easily adaptable to a right or

left hand setting, according as the place to which it goes may require one or the other, and it is likewise desirable that this convertible or interchangeable feature should not add materially to the cost or expense of the device, and that it should be simple and at the same time efficient and not liable to get out of order or be difficult to change from one position to the other as occasion may require.

I am of course aware that in a broad sense a mechanism which makes a stop and waste cock thus convertible to a right or a left hand arrangement, as one or the other may be wanted, is not broadly new, because I have seen and known of a good many different constructions having this object in view, and they are well known in the art; but I have never seen one which embodies the peculiarities of construction or which has the advantages in operation which I claim for my invention.

Referring now again to the drawings, it will be seen, for example, in Fig. 4 that the plug B has a hollow shank adapted to insert a key or L-shaped lever to rotate the same, the said lever being removable, so that the collar C may be taken off and reversed to change its position, as herein described. If preferred, however, the said key-lever could be temporarily attached to the said plug, so that it would always be in place for use, and obviously the said shank might be extended somewhat and the key-lever engaged over the same instead of into the socket thereof, as here shown, and obviously, also, there might be other means of any available or suitable kind employed to rotate the plug, no special or particular means being indispensably necessary. The present construction, however, has the advantage of leaving the plug a free and independent member, so that it is easily handled for turning down on a lathe and adapting the collar C on the shank thereof. This shank has rounded corners 4, which are turned to this shape in the lathe, and the collar C has its eye rounded at 5 in the angle of its sides to receive the rounded edges 4 of the shank. The said collar C has an eye 6, adapted to slip over and upon the shank 7 of the barrel B and to be temporarily fastened thereon by means of the set-screw 8. The said collar is shown in Figs. 1 and 4 as having two lateral projections or jaws 9 and 10, adapted to en-

gage an outward projection or arm 11, rigid with the body or shell A. The projections 9 and 10 are at right angles to projection 11 and are spaced apart equal to a quarter-rotation of the plug B, that is, they limit the rotation of the plug to a quarter-turn, and the sleeve C and its projections of course turn with the plug, and the sleeve is non-rotatable on the plug.

Now, referring to Fig. 1, it will be seen what the relation of B and C is to the body A when the plug is in wasting position. In this case projection or jaw 10 is against projection 11 of the body. Obviously when the plug is in reversed position to turn the water on it will have a quarter-turn to the left and the jaw 9 will be down against projection 11. But suppose the parts are set as lefts, as in Fig. 4. In this case the body A is simply inverted or turned upside down, as compared with Fig. 1, but the same front is maintained. Now it is necessary to make a quarter-turn of the collar C to meet the change of body A or the waste-orifice 3 will come to the bottom instead of the top when a rotation of the plug to open the waste occurs. To effect this change of the collar C and make the change right, as well as to simplify the construction, I place the set-screw 8 in the angle between two of the sides of the eye 6 of the collar and form a threaded hole 14 for the screw in the shank. Then all I have to do to change the device from right to left or left to right is to reverse the collar C and bring the set-screw 8 to its hole 14 in the shank. This always will bring the projections 9 and 10 to the proper place in respect to arm 11 and keep the device in operative position. The adjustment of the collar is made when the plug is in full-open position.

Suppose the parts to be as in Fig. 1. First turn quarter-way round to the right, so as to bring jaw 9 down to arm 11. Then having inverted the body A, as in Fig. 4, to place the collar C on in the right way reverse it and bring set-screw 8 to hole 14, as already described. Then turn the plug so as to bring the parts to the position seen in Fig. 4, and they are in waste position, the same as in Figs. 1, 2, and 3. Both the body A and the collar C are reversed in this change, but while the angle having set-screw 8 does not have the hole 14 in the angle of the shank of the plug the sides of the eye 6 do change sides to opposite places by said angle. Hence to utilize a single hole for the screw 8 the screw and hole must be in the angles of the parts, as shown.

In Fig. 5 I show a modification of the body A in which are two projections 15 and 16 on the said body, which extend out laterally into the path of the single projection 17 on the collar C. This collar and these projections are operated like and serve all the purposes of the foregoing construction. So of the modification in Fig. 6, where a T-shaped extension

or projection on the collar C is shown. This projection has lateral arms adapted to operate between two properly-placed projections on the barrel. (Not shown.) Still other modifications might be given, but this is sufficient, and the same principle runs through all of them.

In each and all cases the screw 8 is necessarily at either an acute or an obtuse angle in respect to the stop projection or projections on the collar, and the set-screw 8 always comes to the same identical point on the shank whether one or another of the collars is used. Obviously if the said shank were round and the eye round also the operation would be the same.

The set-screw 8 further serves to retain the handle or lever G, which is socketed in the shank of the plug and retained in place by the said screw. This handle is always adjusted with the collar, so as to be in the same working relation at all times, and thus a single screw and hole answer to fasten two parts.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a stop and waste cock mechanism, the body, the plug having a single hole for effecting locking engagement therewith, and the reversible collar having a screw to engage said hole, and stops on said parts to limit the rotation of the plug, substantially as described.

2. The body of the device having a fixed projection to limit the rotation of the plug, and the plug having a single hole in its shank for the locking-screw of the collar, in combination with a reversible collar having a screw to engage in said hole, and a projection on said collar to engage the fixed projection on the body, substantially as described.

3. The body part, the plug having a four-sided shank and a single point between the sides of the shank for the engaging screw, a collar having a four-sided eye to engage said shank and a set-screw in the angle between said sides to lock the collar on the shank, and projections on the said parts to limit the rotation of the plug, substantially as described.

4. In a stop and waste cock mechanism, the body having a projection to limit the rotation of the plug and the plug in said body having a single point to lock the collar thereon, in combination with a collar removably secured on the shank of the plug and provided with two opposite checks to engage said stop and constructed to be set with the checks in different relations to the stop, substantially as described.

Witness my hand to the foregoing specification this 20th day of February, 1896.

TIMOTHY J. LEAHY.

Witnesses:

H. F. FISHER,
H. E. MUDRA.