

966,281.

FIG. 1.

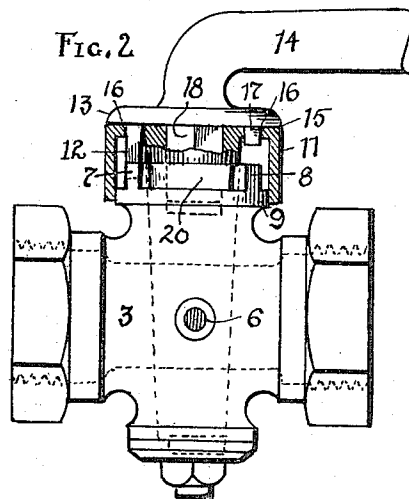


FIG. 2

FIG. 3.

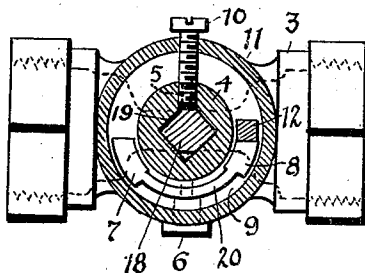


FIG. 4.

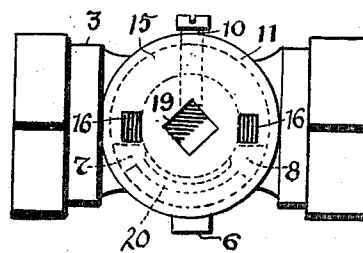


FIG 5

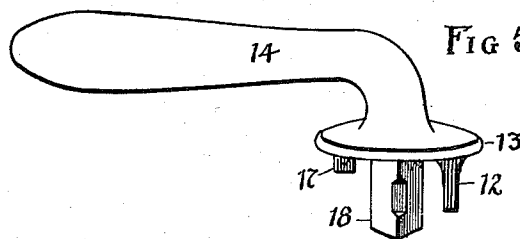
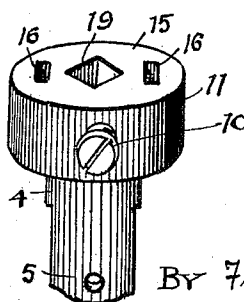


FIG. 6.



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FRANK WEISS, OF CLEVELAND, OHIO.

REVERSIBLE STOP AND WASTE COCK.

966,281.

Specification of Letters Patent.

Patented Aug. 2, 1910.

Application filed November 9, 1909. Serial No. 527,024.

To all whom it may concern:

Be it known that I, FRANK WEISS, 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 Reversible Stop and Waste Cocks, of which the following is a specification.

My invention consists in a reversible stop and waste cock constructed and arranged substantially as hereinafter shown and described and more particularly pointed out in the claims.

My object is embodied in a stop and waste cock having a plug provided with a sealing cap which is primarily of advantage in keeping all dirt and grit from working into the plug seat. Such caps or covers have been used heretofore, but I also employ a removable handle having a pair of stop projections adapted to pass through openings in said cap to engage stop lugs upon the body of the cock. This arrangement provides for reversibility of the plug and also serves to effectively seal all openings leading to the plug at its top. Again, the matter of reversibility is simplified to a mere shift of the handle from either one of the two positions in which it is adapted to rest, and there are no complicated or hidden parts to be changed or to confuse a person in setting the parts.

In the accompanying drawings, Figure 1 is a sectional view of my improved stop and waste cock, showing the handle in elevation and set to permit the plug to rotate to the left from the top as shown in Fig. 3 and which will then permit the cock to waste from the left. Fig. 2 is a side elevation of the cock with the cap and top of the plug sectioned away and showing the handle in reversed position from that seen in Fig. 1 to permit a reverse rotation of the plug so as to waste from the right. Fig. 3 is a cross section and plan view on line 3—3, Fig. 1, and Fig. 4 is a plan view of the cock with the handle removed. Fig. 5 is a perspective view of the handle, and Fig. 6 is a similar view of the cap portion of the plug.

In the assembled figures, main water passage 2 is shown open through both body 3 and plug 4, and waste opening 5 in the plug and waste outlet 6 in the body are closed. As usual, waste opening 5 is located at the closed side of body 3 so as to register with

main passage 2 if the plug be rotated a quarter turn in either direction, thus throwing main water passage 2 in the plug in open communication with waste outlet 6. This rotation of the plug is limited to a quarter turn by integral lugs 7 and 8 projecting upwardly a short distance from the annular top portion 9 of body 3 in which tapered plug 4 is centrally seated. That is to say, said lugs form stops for screw 10 which passes through cap 11 of plug 4 and for long projection 12 extending downwardly from apron 13 of handle 14. In one instance and as shown in Figs. 1 and 3, screw 10 is adapted to engage stop lug 7 to limit the rotation of plug 4 to the left to permit wasting from the left side of the cock, and in this case handle 14 is set as shown to present its projection 12 in the path of stop lug 8 so as to limit the return movement of plug 4 to a quarter turn. In Fig. 3 this last position is shown with projection 12 engaging stop lug 8. Now assuming that it is desired to set the plug to rotate reversely from the foregoing, handle 14 is bodily removed from cap 11 and set in reverse position with its projection 12 on the opposite side of the axis of plug 4 and as shown in Fig. 2. This brings projection 12 opposite lug 7 but screw 10 sustains the same position as in Fig. 3. Only now it must move to the right and strike lug 8 to limit the plug to a quarter turn and which will place the plug in position to waste from the right hand side of the cock. It is obvious that such reversal of the handle can only be effected by providing the top face 15 of cap 11 with a pair of openings 16, so that projection 12 may be entered through said cap in the two radically different positions shown and described. And, it is also apparent that without apron 13, one of said openings 16 would remain open, but as it is, said apron 13 covers both openings and prevents the entrance of dirt to the interior of cap 11. To further safeguard closing of both openings 16, a second but shorter projection 17 is used at the bottom of apron 13 to co-act with longer projection 12 in closing said openings. Projection 17 must necessarily be short otherwise it would contact with lugs 7 or 8. Greater turning strength is also given to the handle by reason of two projections thereon instead of one alone, and the double engagement with plug 4 through

openings 16 supplements the main one at the center obtained by square stem 18 socketed in square opening 19 in the top of the plug.

To prevent confusion or error in placing the valve plug 3 in its proper position in body 3 and in placing handle 14 in either of its two positions on the plug, I provide a connecting web or upstanding rib 20 between lugs 7 and 8 at the waste-outlet side of the cock. Because of said obstructing web or rib, screw 10 cannot be seated to play between lugs 7 and 8 at this side of the cock, and projection 12 cannot be entered its full depth at this side nor can handle 14 be seated improperly for the same reason. Screw 10 not only serves as a stop member but also serves to lock the handle upon the cap. Its position is fixed however and is not shifted to make any change in reversing the plug or the handle, except to unlock the latter.

What I claim is:

1. A reversible stop and waste cock comprising a body having a main water passage and a waste outlet, a valve plug having a waste opening, a sealing cap for said plug having a pair of openings in its top, stops on said body and plug covered by said cap, and a removable handle having means to close both said openings and being provided with a projection adapted to enter either one of said openings to engage the respective body stops.

2. In a reversible stop and waste cock, a valve plug having a sealing cap at its upper end provided with a set of openings in its top face, in combination with a detachable operating handle for said plug having a stop projection adapted to occupy either of said openings and having a separate portion adapted to close the other opening.

3. In a reversible stop and waste cock, a valve plug having a sealing cap with a pair of through openings in its top, in combination with a detachable and reversible handle for said plug having an apron to cover said cap and its openings and provided with a projection adapted to pass through either of said openings into the inside of said cap, whereby the body of the cock may be engaged by said projection and the cap be closed at both openings by said apron.

4. In a reversible stop and waste cock, a valve plug having a sealing cap with a pair of through openings in its top, in combination with a detachable and reversible handle having a pair of projections adapted to occupy said openings in either of two reversed positions, one of said projections being longer than the other to form a stop for said plug when the parts are assembled.

5. A reversible stop and waste cock comprising a body having a main water passage and a waste outlet, a valve plug having a waste opening and provided with a sealing cap having a central recess in its top for a handle and a pair of openings at the side of said recess adapted to receive a projection on said handle, and stops and a connecting portion between said stops to limit and obstruct the said handle projection, in combination with a handle having an apron to cover said cap and provided with a projection adapted to pass through either of said cap openings to engage said stops, and a separate stop member for said plug within said cap located intermediate its top openings.

6. A reversible stop and waste cock consisting in a hollow body having a main water passage and a waste outlet, a valve plug having a through water passage and a waste opening, stop lugs and a connecting web between them on said body, an integral cap on said plug covering said lugs and having a pair of through openings in its top and a central recess for a handle, a screw through the side of said cap adapted to engage said stop lugs to limit the rotation of said plug either to the right or the left, and a removable and reversible handle having an apron to cover the top of said cap and its openings and being provided with a projection adapted to pass through either of said cap openings to engage said stop lugs to cooperate with said screw.

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

FRANK WEISS.

Witnesses:

R. B. MOSER,
F. C. MUSSUN.