(No Model.)

F. W. MEYER.

STOP AND WASTE COCK.

No. 430,869. Patented June 24, 1890.

Fig 1

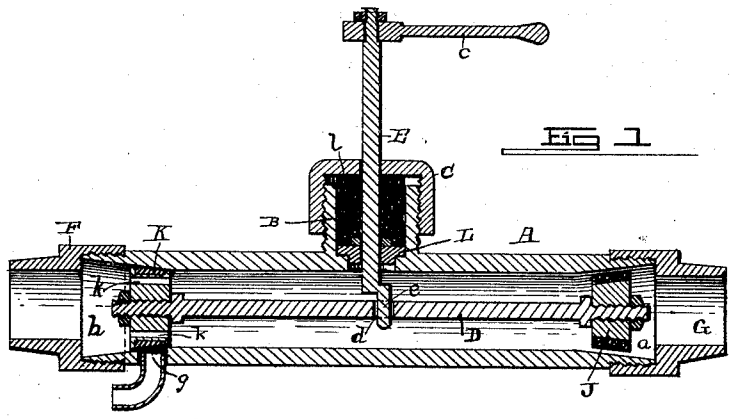


Fig 2

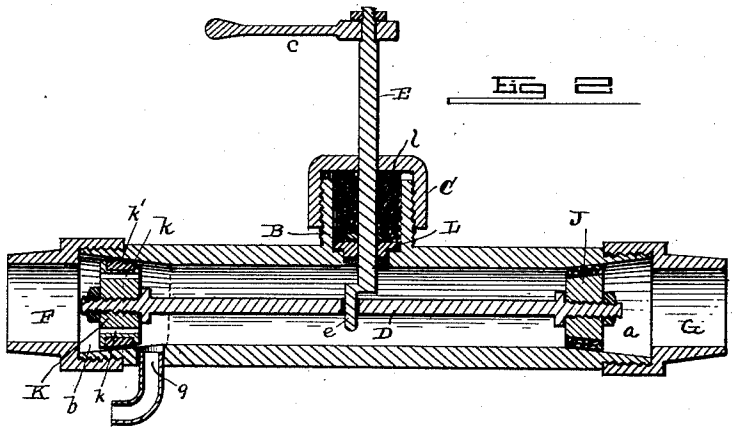
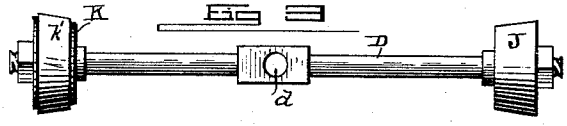


Fig 3



Witnesses

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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STOP AND WASTE COCK.

SPECIFICATION forming part of Letters Patent No. 430,869, dated June 24, 1890.

Application filed April 9, 1890. Serial No. 347,218. (No model.)

To all whom it may concern:

Be it known that I, FRED WILLIAM MEYER, of Louisville, in the county of Jefferson and State of Kentucky, 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 thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a central vertical longitudinal section through my improved waste cock or valve closed. Fig. 2 is a similar view of the same open. Fig. 3 is a detail.

This invention is an improvement in stop and waste cocks or valves, and its object is to provide the valve-casing with a waste-outlet or drip-opening, and means whereby the drip will be closed when the cut-off valve is open, and opened when the cut-off valve is closed; and to this end the invention consists in the novel construction and arrangement of parts hereinafter described and claimed.

Referring by letter to the drawings, the casing of the valve is formed of three parts, the main portion A being T-shaped, having a tubular horizontal body conically bored at its ends, as indicated at *a b*, to form valve-seats, and having a central upstanding tube B, threaded exteriorly to engage a cap C, as indicated.

F G are short joints or connections, screwed or otherwise secured to the opposite ends of body A, and having a large interior bore opposite seats *a b* to accommodate the valves, but having their outer ends contracted or otherwise adapted for connection with the main pipes. Seat *a* is at the inlet side of the valve and seat *b* at the outlet side, and *g* is a drip-opening through seat *b* of body A, to which a tube may be connected to carry off the waste fluid.

D designates the valve-stem lying horizontally in body A and having its ends screw-threaded to engage conical valves J K. Valve J is the main or cut-off valve and is preferably made of a compressible material or metal having an exterior covering of compressible packing material and of such size that it will fit on seat *a* when drawn inward, as indicated in Fig. 2, but when unseated, as shown in Fig. 1, will permit the fluid to pass around it into and through body A. This valve is secured on the end of stem D between a collar on the stem and a nut on the threaded end thereof, as shown, or in other convenient manner. Valve K is similarly secured on the opposite end of the stem and in such relative position to valve J that when the latter is unseated the former is closed against seat *b*, and vice versa.

Valve K is the drip-valve, and consists of a conical body having a series of longitudinal perforations or openings *k* in it through which water can pass readily even when the valve is seated. It also has an annular groove in its periphery, in which is seated a yielding packing *k'* of suitable material, which, when valve K is seated, covers and closes drip-opening *g*, as indicated, preventing leakage from the casing when the cut-off valve is open.

Stem D has a central perforation *d* in it engaged by an eccentric stud or pin *e* on the lower end of a valve-rod E, which extends through tube B, and has a collar L on it within the tube, above and around which is placed a packing *l*, of suitable material, that is compressed around rod E by screw-cap C to make a water-tight joint. The stem may be operated by an arm *c* on its outer end, and when turned it shifts stem D longitudinally, unclosing or closing valve J and simultaneously seating or unseating valve K to close or unclose drip *g*. When valve J is closed, any water in the casing or pipes at the exit side of valve J can escape through opening *g*, which is then unclosed, but when valve J is open valve K simultaneously closes opening G, but being perforated it does not prevent the flow of water through the casing.

The valves J K are both conical and lie in opposite positions on the stem and the pressure against valve J only serves to seat it more tightly. In assembling the parts one valve, say J, is taken off and the stem D is then slipped into body A, the valve J is replaced thereon, rod E slipped through tube B into engagement with stem D and secured as described, and then connections F G are attached to the ends of body A over the valve protecting them from external injury.

Having thus described my invention, what I claim is—

1. The combination of the body, the longi-

tudinally-movable valve-stem therein carrying cut-off and drip valves on its opposite ends, the latter being longitudinally perforated, the connections secured to the ends of body A and protecting the valves, and the rod E, eccentrically connected with the valve-stem to operate the same, substantially as described.

2. The combination of the body having oppositely-bored valve-seats at its ends and a drip-opening through one of said valve-seats, with a longitudinally-movable valve-stem therein, the conical cut-off valve on one end thereof and the conical perforated drip-valve on its other end, and the valve-rod for shifting the stem, whereby one valve is seated when the other is unseated, substantially as specified.

3. The herein-described stop and waste cock, consisting of a tubular body A, having valve-seats *a b* in its ends and a drip-opening *g* through one of said seats, and a central upstanding tube B, a valve-stem D, having a central perforation, and a valve-rod E, having an eccentric stud on one end engaging the opening in the stem and secured in tube B by a collar, packing, and cap, with the cut-off valve J on one end of stem D and the drip-valve K on the other end thereof, having longitudinal openings *k* and an annular packing *k'*, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

FRED WILLIAM MEYER.

Witnesses:
AUGUSTUS H. MARRET, Jr.,
C. A. OLMSTEAD.