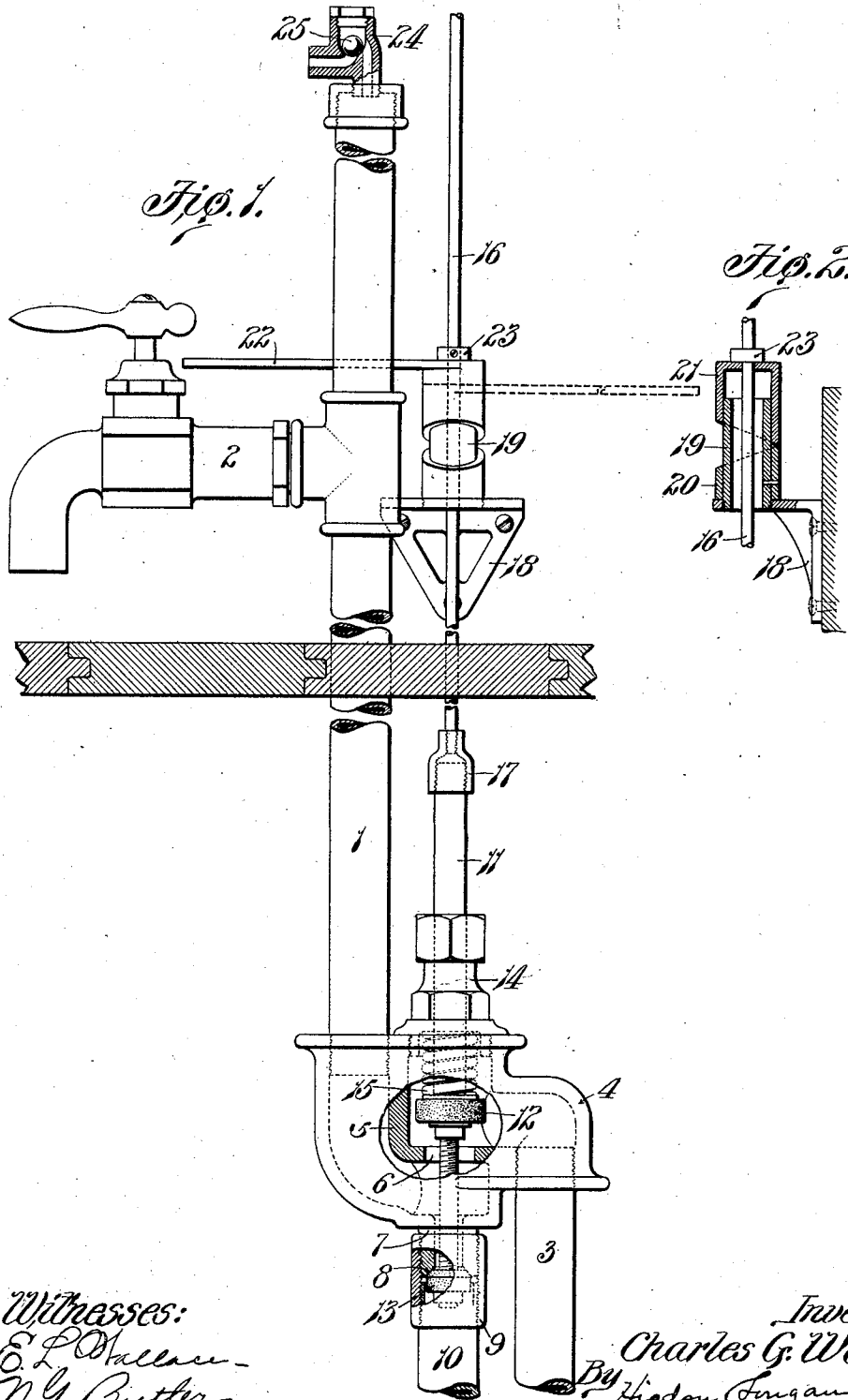


C. G. WOODS.
CUT-OFF AND DRAIN FOR HOUSE PLUMBING.
APPLICATION FILED DEC. 12, 1910.

1,049,792.

Patented Jan. 7, 1913.



Witnesses:
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N. G. Butler

Inventor:
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By Hudson Fungum Atty.

UNITED STATES PATENT OFFICE.

CHARLES G. WOODS, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF ONE-FOURTH TO FRANK GRUTZNER, ONE-FOURTH TO GUY HAYNES, AND ONE-FOURTH TO JOSEPH H. BROGAN, ALL OF ST. LOUIS, MISSOURI.

CUT-OFF AND DRAIN FOR HOUSE-PLUMBING.

1,049,792.

Specification of Letters Patent.

Patented Jan. 7, 1913.

Application filed December 12, 1910. Serial No. 596,819.

To all whom it may concern:

Be it known that I, CHARLES G. WOODS, a citizen of the United States, and resident of St. Louis, Missouri, have invented certain new and useful Improvements in Cut-Offs and Drains for House-Plumbing, of which the following is a specification, containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in cut-offs and drains for house plumbing, the object of my invention being to construct a simple means which is connected with the service pipe whereby the water supply may be cut off and at the same time drain the service pipe to prevent freezing.

With the above purposes in view my invention consists in certain novel features of construction and arrangement of parts as will be hereinafter more fully described, pointed out in the claim and illustrated by the accompanying drawing, in which:

Figure 1 is a view illustrating the complete apparatus for cutting off and draining the water service pipe; and Fig. 2 is a vertical, sectional elevation of the valve operating device.

Referring by numerals to the accompanying drawings; 1 designates the water service pipe leading to the service cock 2. 3 designates the water supply pipe which is connected with the service pipe 1 by means of the valve housing 4. Within the housing 4 is a partition 5 dividing the housing into two compartments, one of which is in open communication with the supply pipe 3 and the other in open communication with the service pipe 1. Within the partition is a port 6 normally affording communication between the compartments leading respectively to the supply pipe 3 and service pipe 1. Connected with the housing 4 and preferably formed integrally with the housing in alinement with the port 6 is a tubular extension 7 which acts as a drain opening for the compartment of the housing in communication with the service pipe 1 and the service pipe 1 with all of its connections, and at the lower end of the tubular extension there is formed a valve seat 8. Connected with the tubular extension 7, by means of the coupling 9, is a waste pipe 10 which leads off to a sewer or other drain.

11 designates a valve stem which extends through the entire housing, through the port 6 and beyond the lower end of the tubular extension 7, and carried by the stem is a valve 12 for controlling the port 6 and a valve 13 for controlling the flow of water through the waste pipe 10.

Located between the valve 12 and the sleeve nut 14, which nut forms a water-tight joint between the stem 11 and the interior of the housing 4, is an extensile coil spring 15 which normally acts to seat the valve 12 and hold the valve 13 open.

The parts just described are preferably located in the cellar of the building, at any rate, they are usually placed at a point wherein the valve is not subjected to a freezing temperature.

For the operation of the valve, I have provided a means, which will be hereinafter described in detail, preferably located at a convenient and accessible point in the building on one of the floors above the cellar, which means comprises the actuating rod 16 which is connected with the valve stem 11 by means of the reducing coupling 17 and which rod is of a length to extend to one or more of the floors of the building. In the illustration I have shown only one of the valve operating devices, but have extended the actuating rod beyond said valve operating device and have assumed that the illustration would suffice to make it clear that I intend using, if desired, more than one of the valve operating devices on the actuating rod.

Fixed upon a suitable support is a bracket 18, which bracket carries a sleeve 19, and secured to the sleeve is a cam sleeve 20, the upper margin of which is inclined rearwardly and upwardly. Arranged for movement upon the sleeve 19 is a second cam sleeve 21, the lower margin of which is shaped to conform with the upper margin of the sleeve 20, which sleeve 21 is provided with an actuating lever 22. Arranged for contact with the upper end of the sleeve 21 and secured to the actuating rod 16 is a collar 23.

As shown in the drawings, when the lever 22 occupies the position shown in solid lines the cam sleeves have served to move and hold the valve 12 in an open position and the valve 13 in a closed position, this is the normal position of the valves, affording

communication between the supply pipe 3 and service pipe 1 and cutting off communication between the service pipe 1 and drain pipe 10. If it be desired, at any time, to cut off the water supply the lever 22 is thrown to a position shown in dotted lines in Fig. 1. In moving the lever to the position just described the cam sleeve 21 is lowered and, by reason of the action of the spring 15, the valve 12 is seated and the valve 13 opened. In this position it is obvious that the port 6 will be closed, thereby cutting off communication between the supply and service pipes and that the water in the service pipe will drain through the housing, the tubular extension 7 and drain pipe 10 to the sewer or other outlet. In order to facilitate the movement of the water, to drain, the service cock 2 may be opened thereby admitting atmospheric pressure. However, I have provided an automatic air inlet valve 24 which is connected with the service

pipe and in which there is a weighted ball 25, which, by reason of its peculiar construction, prevents the discharge of water and admits air when the water pressure is reduced.

I claim:

In an apparatus of the class described, a valve, spring actuated in one direction, a rod detachably connected with the stem of the valve for the operation of the valve from a distance, a bracket fixedly located a distance from the valve, a sleeve fixed to the bracket, a cam fixed to the sleeve, a movable cam carried by the sleeve and a collar secured to the rod to be engaged by the movable cam.

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

CHARLES G. WOODS.

Witnesses:

E. L. WALLACE,
N. G. BUTLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."