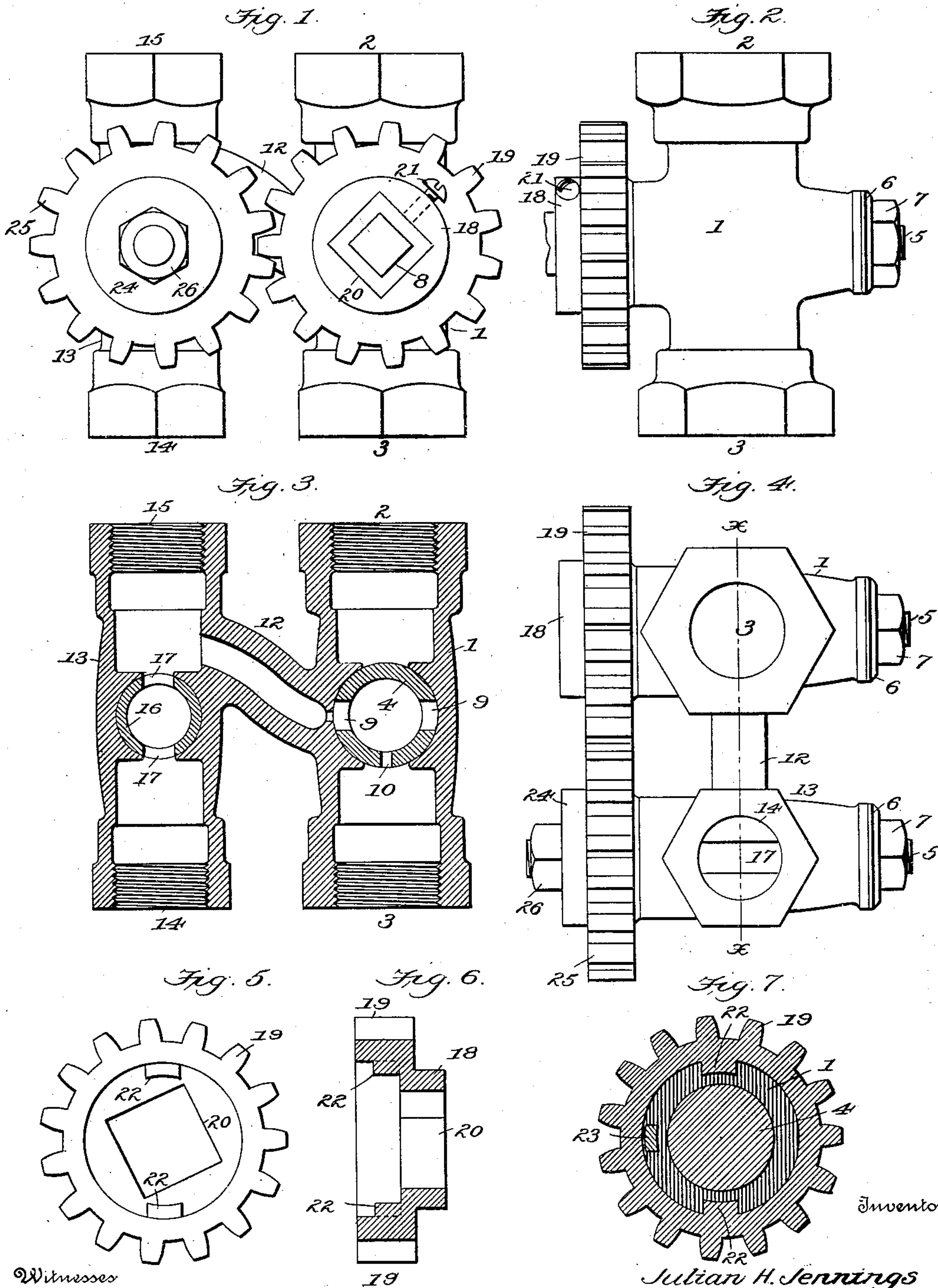


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J. H. JENNINGS.
COMBINED CUT-OFF AND DRAIN COCK.
APPLICATION FILED APR. 3, 1903.

NO MODEL.



Witnesses

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JULIAN H. JENNINGS, OF ATLANTA, GEORGIA.

COMBINED CUT-OFF AND DRAIN COCK.

SPECIFICATION forming part of Letters Patent No. 734,179, dated July 21, 1903.

Application filed April 9, 1903. Serial No. 151,770. (No model.)

To all whom it may concern:

Be it known that I, JULIAN H. JENNINGS, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented new and useful Improvements in a Combined Cut-Off and Drain Cock, of which the following is a specification.

My present invention relates to an improved combined cut-off and drain cock for water-service systems leading to buildings; and it has for its object to provide a device of this character wherein provision is made for closing and draining independent systems supplied from a common main, and especially for draining the hot and the cold water systems, the draining of both of which is effected by a single operation.

It is the general custom at present to employ two separate and independently-operable cocks on the water-service leading to a building, one for cutting off the supply of water and the other for draining. These two separate cocks are not altogether satisfactory and sometimes lead to complications, for the reason that the tenants do not always know how to distinguish between them and often operate one when they should have operated the other.

My improved combined cut-off and drain comprises a stop and a waste cock arranged side by side and interconnected by suitable gearing or other means, so as to be operated simultaneously, the said cocks acting as the cut-off for the water-service and for the hot and cold water drainage.

The invention further comprises the features of construction and combination and arrangement of parts hereinafter referred to and then more definitely pointed out in the appended claims.

In order to enable others to understand, make, and use my said invention, I will now proceed to describe the same in detail, reference being made for this purpose to the accompanying drawings, in which—

Figure 1 is an elevation of my improved combined cut-off and drain cock, showing the interconnected gearing. Fig. 2 is an end elevation of the same. Fig. 3 is a longitudinal sectional view taken on the line *xx* of Fig. 4, the cocks being in position for drainage.

Fig. 4 is a top plan view. Figs. 5, 6, and 7 are detail views of the operating-gears.

In the said drawings the reference-numeral 1 designates the shell or barrel of the cut-off cock, one end, 2, of which is connected with the service-pipe from the street or other supply and the other end, 3, connecting the house supply-pipe. (Not shown.) In the said shell is rotatably arranged a hollow plug 4, preferably tapering in form and having at one end a reduced threaded portion 5, adapted to receive a washer 6 and a nut 7, by which the plug is secured in place within the shell or barrel. At the other end the plug 4 is made square or polygonal and has formed therein a square or polygonal socket 8 to receive a suitable operating-tool. The plug 4 has formed therein a straightway passage 9 and a drain-passage 10, the said straightway passage being arranged to be brought into and out of line with the inlet and outlet ends 2 and 3 and the drain 10 being arranged to be brought into and out of line with the end 3 only and when out of line with the passage to be brought opposite a closed portion of the barrel or casing 1.

Arranged adjacent to the barrel or casing 1 and connected or communicating therewith through a pipe connection 12 is a second barrel or casing 13, preferably of smaller diameter and constituting the drain-outlet and serving to receive at 14 the "dead" end of the hot-water line, as the same is connected thereto at its lowest point, so as to empty all water that may be in the hot-water pipe when the supply is cut off. The other end 15 of the drain is the discharge for the hot waste water and the waste water from the cold-water pipe on the house side when the plug is turned to the position shown in Fig. 3. When in this position, the waste cold water passes through the drain-passage 10 in the plug 4, from thence through one of the passages 9, then through the pipe connection 12 into the casing or shell 13, and out at 15.

The casing or shell 13 is provided with a turn-plug 16, similar to the plug 4 in all respects except that it has only a single straightway passage 17, that is adapted to be brought into alinement with the openings 14 and 15.

In order that both plugs or valves may be

caused to turn simultaneously for the purpose of admitting water to the building or for shutting off the water-supply and draining both the hot and cold water pipes, I have provided the following means: Mounted on the stem of the plug 4 is a ring or collar 18, having gear-teeth 19, said ring or collar being provided with an angular opening 20, adapted to fit over the angular stem of said plug and secured thereto by a set-screw 21. This ring or collar is also provided with lugs 22, adapted to engage corresponding stops or lugs 23, carried by the shell or barrel 1 in order to limit the turning movement of the plugs and to cause their passages to always register as designed. Likewise a ring or collar 24 is fitted to the stem of the plug 16, said ring or collar having teeth 25, which mesh with the teeth 19 on the other collar in such manner that when the plug 4, with its gear, is rotated a corresponding rotary movement in the opposite direction will be imparted to the gear 25 and plug 16. The collar 24 is secured to its stem by a nut 26, as shown in Figs. 1 and 4.

I do not wish to be understood as limiting myself to the specific means herein shown and described for operating the two plugs simultaneously, as other means may be provided within the scope of the appended claims without departing from the spirit of the invention.

Briefly stated, the operation of the device is as follows: Assuming the valve-plugs to be in the position shown in Fig. 3, it will be seen that the water-supply from the main to the building is cut off, that the drainage-port 10 in plug 4 and passages 17 in plug 16 are open, and that one of the passages 9 in plug 4 is in register with the intercommunicating passage 12. It will thus be seen the pipes communicating with 3 and 14 will be drained, the drainage-water from both of said pipes passing out through the single outlet 15 in the shell or casing 13. Now by giving the plug 4 a quarter-turn to the left in the manner heretofore described both valves will be simultaneously rotated to open the passage-way 9 in valve 4 and close the passage-way 17 in valve 16 and at the same time close the drainage-port 10. When in this position, water from the supply-main may pass into the building through the opening 2 in the casing 1.

Having thus described my invention, what I claim is—

1. In a combined cut-off and drain, a pair of valve-casings having an intercommunicating passage and each provided with an inlet and an outlet, and separate plugs in said casings for controlling the said inlets and outlets, one of said plugs having a drainage-port adapted to open the intercommunicating passage with the house supply-pipe when the said plug is closed to the entrance of water from the main.

2. In a combined cut-off and drain, a pair of valve-casings having an intercommunicat-

ing passage and each provided with an inlet and an outlet, separate plugs in said casings for controlling the said inlets and outlets, one of said plugs having a drainage-port adapted to open the said intercommunicating passage with the house supply-pipe when the said plug is closed to the entrance of water from the main, and means for operating said plugs simultaneously.

3. In a combined cut-off and drain, a pair of valve-casings having an intercommunicating passage and each provided with an inlet and an outlet, separate plugs in said casings for controlling said inlets and outlets, one of said plugs having a drainage-port adapted to open a port leading from the house supply-pipe to the said intercommunicating passage when the said plug is closed to the entrance of water from the main, and intermeshing gears carried by said plugs.

4. In a combined cut-off and drain, a pair of valve-casings having an intercommunicating passage and each casing provided with an inlet and an outlet, separate plugs in said casings for controlling said inlets and outlets, one of said plugs having a drainage-port adapted to open communication with said intercommunicating passage when the said plug is closed to the entrance of water from the main, and a toothed ring or collar secured to each plug, the teeth on one collar intermeshing with the teeth on the other collar.

5. In a combined cut-off and drain, a pair of valve-casings each having an inlet and an outlet, turn-plugs in said casings for controlling the said inlets and outlets, a drainage-port in one of said plugs, and means for simultaneously operating said plugs to open one and close the water-supply to the other.

6. In a combined cut-off and drain, a valve-casing having separate pipe connections, a pair of valves mounted to turn therein and each having a straightway passage and one having in addition a drainage-port, a drainage-passage leading from the valve in one of said pipe connections and opening into the other pipe connection, and means for operating said valves to simultaneously open one pipe connection and close the water-supply to the other and to open the drainage-port.

7. In a combined cut-off and drain, a valve-casing having inlets and outlets and an intercommunicating drain-opening, a pair of valves for controlling said inlets and outlets and said drain-opening, and means for simultaneously operating said valves.

8. In a combined cut-off and drain, a valve-casing having inlets and outlets and an intercommunicating drain-opening, separate turn-plugs in said casing for controlling the inlets and outlets and said drain-opening, and means for simultaneously rotating said plugs to open the one and close the water-supply to the other and open the drainage-port.

9. In a combined cut-off and drain, a valve-casing having separate pipe connections con-

stituting inlets and outlets, valves for controlling said inlets and outlets, one of said valves having a drainage-port arranged to be brought into and out of coincidence with one
5 of the pipe connections, a drain-passage leading from the last-named valve and discharging into the pipe connection of the other valve, and means for operating said valves to

open one and close the water-supply to the other and to open the said drainage-port. 10

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

JULIAN H. JENNINGS.

Witnesses:

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