J. W. SHARP, JR.

WATER FLUSHING CONTROL.

APPLICATION FILED MAY 16, 1914.

1,241,037. Patented Sept. 25, 1917.

Fig. 1.

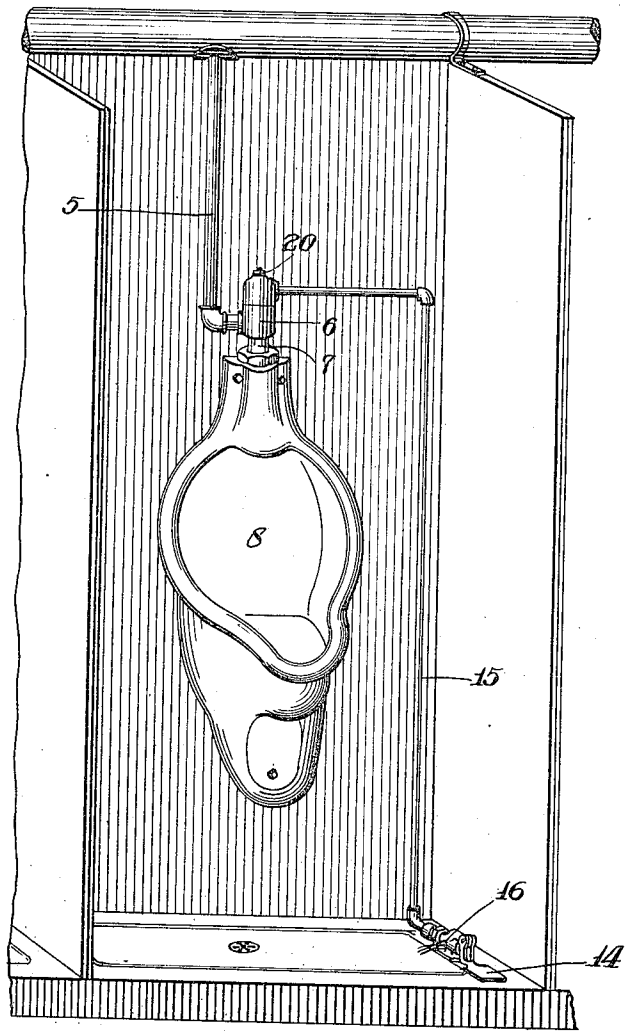
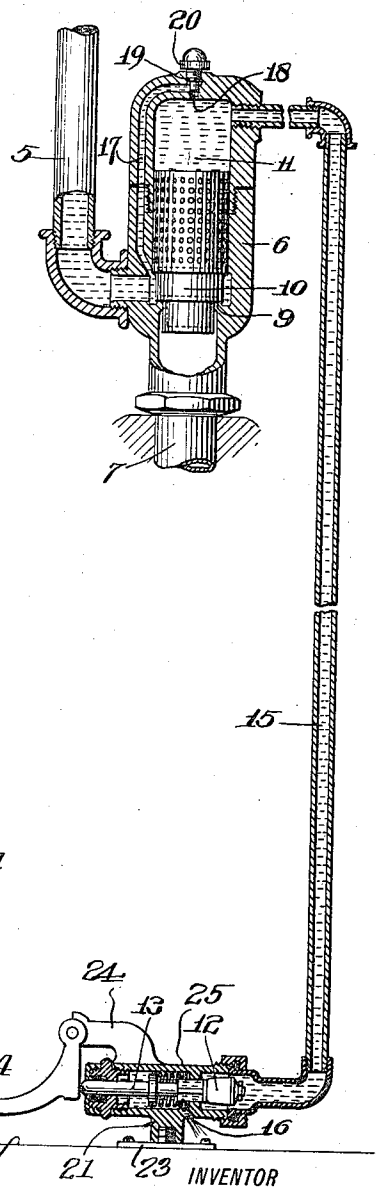


Fig. 2.



WITNESSES:

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WATER-FLUSHING CONTROL.

1,241,037. Specification of Letters Patent. Patented Sept. 25, 1917.

Application filed May 16, 1914. Serial No. 838,918.

To all whom it may concern:

Be it known that I, JOSEPH W. SHARP, Jr., a citizen of the United States, residing at Berwyn, in the county of Chester, State of Pennsylvania, have invented a new and useful Water-Flushing Control, of which the following is a specification.

My invention relates to improvements in water flushing control, the object being to provide improved means for controlling the discharge of flushing water to a closet, urinal or other device; said controlling means being capable of location at any required point distant from the flushing discharge. The invention comprises improvements in escape valves in connection with the utilization of a column of fluid, the length of which may be practically unlimited, between a pressure chamber and an escape valve. The escape valve is provided with means for its arbitrary actuation in the form of a foot lever or pedal.

One of the advantages secured by my invention is to provide an extremely convenient and efficient control at any desired point, irrespective of the location of the flushing water controlling valve, and means that may be conveniently operated without touching of the apparatus with the hand. The mere pressure of the foot by the person using the apparatus is all that is required; or, where preferred several of such relief valves with actuating pedals or levers each controlling a different apparatus, may be assembled at a single point or location, to be operated as required by an attendant. The device is of especial importance for public places of convenience.

Referring to the drawings, which illustrate merely by way of example, a suitable embodiment of my invention—

Figure 1 is a view in perspective, showing the general arrangement of a device embodying my invention.

Fig. 2 is a vertical section on an enlarged scale.

Similar numerals refer to similar parts throughout the several views.

In the example illustrated, the pipe 5 represents the water supply pipe under pressure, connected with the chambered body or cylinder 6, which in turn is connected with the flushing discharge pipe 7 discharging into the bowl 8. In cylinder 6, between its connections with pipes 5 and 7 is the valve seat 9 with which coöperates the piston valve 10. When the piston valve 10 is seated there is a pressure space or chamber 11 above the piston in cylinder 6, the pressure in which prevents the pressure of the water supply in pipe 5 from lifting the piston valve 10 from its seat 9. When the pressure in chamber 11 is relieved, the piston 10 is lifted from its seat by the pressure of the water supply in 5 and water flows from 5 to and through flushing pipe 7. When pressure is again restored to chamber 11 the piston valve is again forced down upon its seat. The adjustment of the control of the pressure supply to chamber 11 fixes the volume of each flushing discharge.

In the present example, the relief of the pressure in chamber 11 is secured by relieving the pressure in the pipe 15 by operating the pressure relief valve 12, through the medium of the spring controlled spindle 13, and the foot lever 14; said relief valve being connected in pipe 15 at a point remote from the pressure chamber 11. This pressure is relieved, upon opening valve 12, by permitting a discharge of water through one or more ports 16. Upon closing valve 12, and thereby preventing a further escape through port or ports 16, pressure is gradually restored in chamber 11. This is accomplished in the example illustrated, in the following way: The channel 17 is connected at its lower end, and in free communication with the pressure supply pipe 5, and at its upper extension, through port 18, with the pressure chamber 11. This port 18 is controlled by the adjustable valve 19 so that by nearly closing the port by said adjustable valve 19, the pressure of the water supply in pipe 5, is restored to chamber 11, only after an appreciable lapse of time, during which time the flushing water flows. The valve structure includes the horizontal cylinder 25, the valve 12 operating therein, the valve actuating spindle 13, foot operated lever or pedal 14 and the bracket 24 supporting said lever. The cylinder 25 is supported upon the stem 21 connected to plate 23, which secures said valve structure spaced away from the supporting surface 22, to provide space for the movement of the free end of lever 14, and also to afford access to all sides of said valve structure to facilitate maintaining the same clean and to minimize any tendency toward undesirable accumulation.

What I claim is:—

In combination with water flushing mechanism, a pressure relief valve for controlling the same, comprising a horizontal cylinder having a valve and a spring-controlled valve-operating spindle operating therein and projecting therefrom, a cylinder supporting stem and means for connecting the same to a supporting surface, such as the floor, with the cylinder spaced therefrom, a bracket projecting from said cylinder, and a foot lever having a portion substantially in line with the valve spindle, pivoted to the bracket and adapted to hang by gravity in engagement with the spindle.

JOSEPH W. SHARP, JR.

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