No. 627,919. Patented June 27, 1899.

# W. S. GLOVER.

## WATER CLOSET.

(Application filed Sept. 26, 1898.)

(No Model.)

FIG. 1.

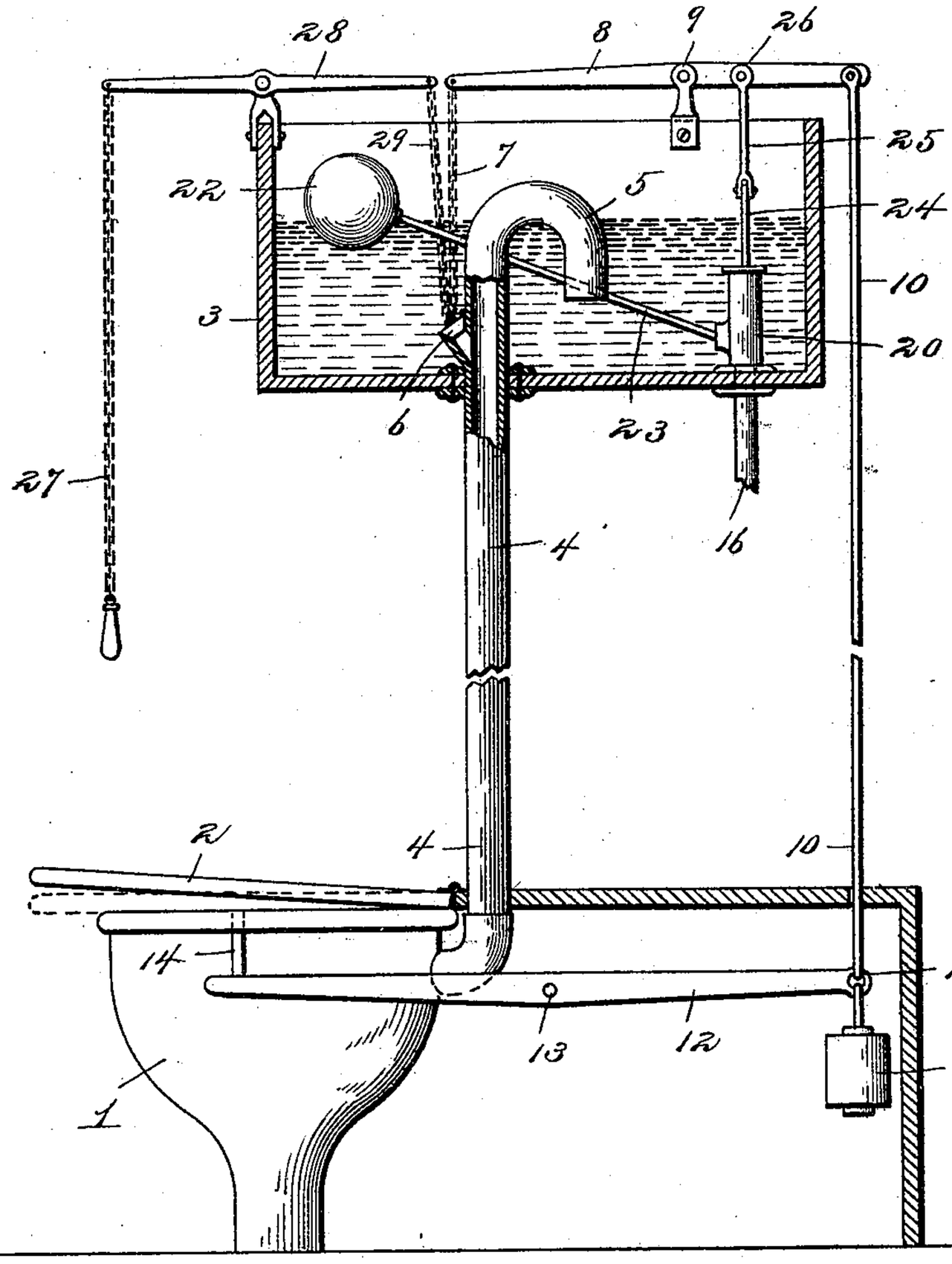
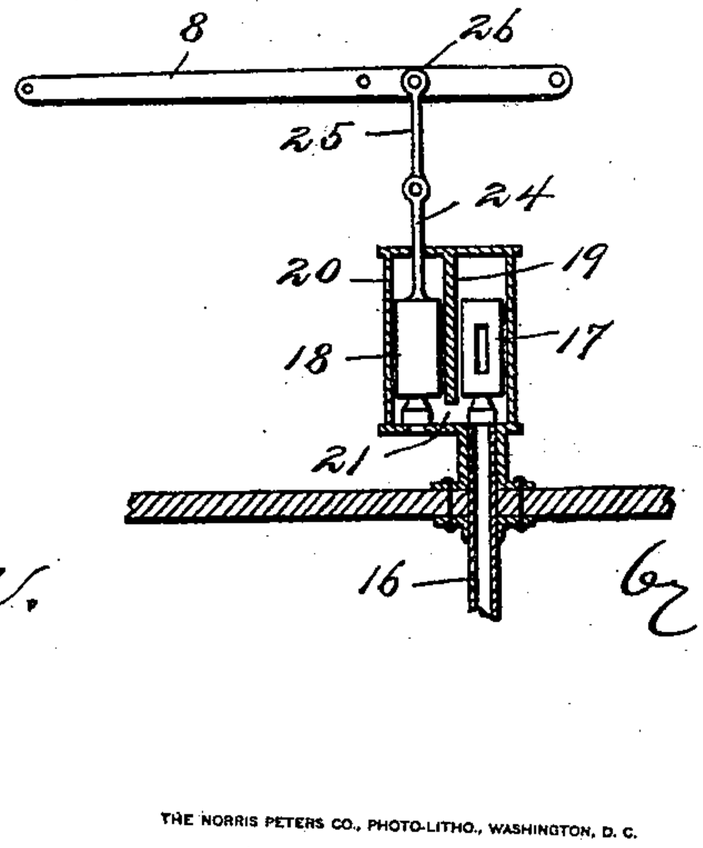



FIG. 2.

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# UNITED STATES PATENT OFFICE.

WILLIAM S. GLOVER, OF ASHLAND, WISCONSIN.

## WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 627,919, dated June 27, 1899.

Application filed September 26, 1898. Serial No. 691,916. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM S. GLOVER, a citizen of the United States, residing at Ashland, in the county of Ashland and State of Wisconsin, have invented certain new and useful Improvements in Water-Closets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to water-closets; and the object in view is to provide in connection with a water-closet means which will operate automatically to flush out the bowl when weight is removed from the seat.

The primary object of the invention is to provide means whereby the flushing-tank will be normally empty, thus overcoming the liability of the tank to overflow, leak, or freeze in very cold weather.

The details of construction and arrangement whereby the above and other objects are carried out will be pointed out in the subjoined description.

The invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and set forth in the claims.

In the accompanying drawings, Figure 1 is a vertical section through a flushing-tank constructed in accordance with this invention, also showing in side elevation a closet and the connections to the tank. Fig. 2 is a detail vertical section through the double inlet-valve, showing also the upper valve-operating lever.

Similar numerals of reference designate corresponding parts in both views.

Referring to the drawings, 1 designates an ordinary water-closet bowl, and 2 a seat hinged preferably at its rear edge to the bowl in any convenient manner. The flushing-tank (indicated at 3) has communicating therewith a flushing-pipe 4, leading to the bowl 1 and provided within the tank with a recurved and pendent extremity 5 and also with a flushing or discharge valve 6.

The valve 6 is preferably pivoted at one side and has connected thereto a chain or other flexible connection 7, which is attached to one end of a lever 8, fulcrumed at 9 at a point intermediate its ends. Connected to the opposite end of the lever is a rod or other suitable connection 10, which leads downward to a point at one side or in rear of the bowl 1, where it connects pivotally by means of an eye 11 to one end of a second and lower lever 12. The lever 12 is also fulcrumed at a point intermediate its ends, as at 13, and is provided at its opposite end with an upwardly-projecting pin 14, upon which the hinged seat rests. On the same end of the lever as rod 10 is suspended a weight 15, which serves by rocking the lever 12 to normally raise the seat 2 and also rock the upper lever 8 for opening and keeping open the discharge-valve 6.

The service or supply pipe 16 enters the tank at a suitable point, preferably through the bottom, and at the junction of said pipe with the tank is located a double valve, consisting of a primary valve 17 and a secondary valve 18. Both of these valves are arranged within the same casing, although the casing comprises two chambers separated from each other by a division-wall 19, the casing itself being indicated by the numeral 20. The two valve-chambers communicate near their lower ends through an opening 21, the pipe 16 leading directly to the chamber of the primary valve and the secondary-valve chamber opening directly into the tank.

Both valves are similar in shape and move longitudinally within their respective chambers. The valve 17 is worked by means of the ordinary float 22 and arm or stem 23 in the usual manner, and the valve 18 is operated by connecting its stem 24 to a link 25, which connects pivotally to the upper lever 8 on one side of its fulcrum, as at 26.

From the foregoing description, taken in connection with the drawings, the operation will be readily understood to be as follows: In the normal position of the parts the seat 2 is elevated, the weight 15 is down, the valve 6 is open, the valve 17 is open, the valve 18 is closed, and the float 22 lies on the bottom of the tank, the latter being entirely empty. When weight is placed upon the seat 2, the counterbalance-weight 15 is lifted and the two levers 8 and 12 vibrated. This has the effect of closing the valve 6 and opening the valve 18. Water can now flow through both

valves 17 and 18 into the tank. When, however, the water reaches the proper level, the ascending float closes the primary valve 17 and shuts off the water-supply. When the weight is removed from the seat 2, the weight 15 rocks the lever 12 and raises the seat 2. The outer end of the lever 8 is also pulled downward, which causes the opposite end to rise, thus lifting and opening the flushing-valve 6. In the same movement of the lever 8 the secondary valve 18 is closed, and as the float 22 descends the primary valve 17 is opened. Thus while the valve 17 is open for the admission of water the valve 18 remains normally closed, and no water can get past said valve, so as to enter the tank. The tank 3 thus remains always empty, except when the closet is in use.

The flushing-valve 6 may have attached thereto a second chain or connection 29, leading to one end of a lever 28, fulcrumed on the top of the tank and having connected thereto a hand-chain 27, which hangs in convenient position to be grasped by the operator, who may thus flush the bowl without allowing the seat 2 to rise.

It will of course be understood that the apparatus hereinabove described is susceptible of changes in the form, proportion, and minor details of construction, which may accordingly be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a flushing device of the character specified, the combination with a hinged seat, and an overhead tank, of an inlet-valve for the tank, consisting of two members, a valve-casing common to both members, inlet and discharge orifices therefor, and a division-wall between the chambers in which the members operate, said wall having an opening which places the two chambers in communication, and operative connections between the valve and the hinged seat.

2. An inlet-valve, consisting of two members, a valve-casing common to both members, inlet and discharge orifices therefor, and a division-wall between the chambers in which the members operate, said wall having an opening which places the two chambers in communication.

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

WILLIAM S. GLOVER.

Witnesses:

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H. J. WEIR.