

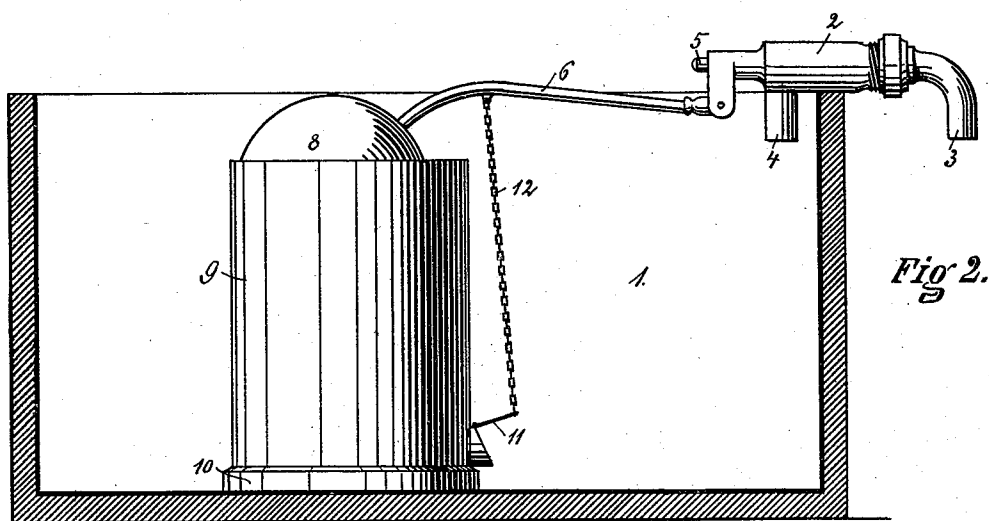
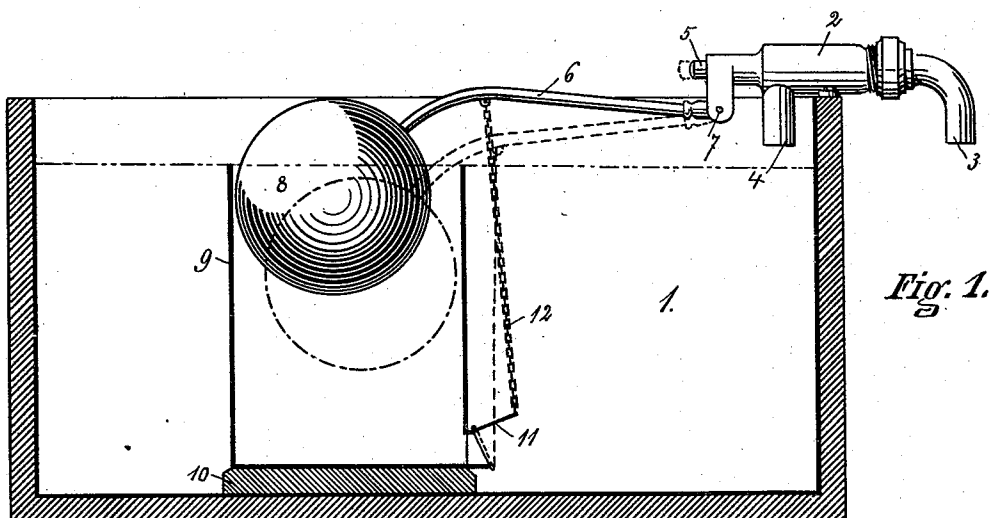
(No Model.)

G. H. HUGHES.

WATER CLOSET.

No. 393,070.

Patented Nov. 20, 1888.



WITNESSES.

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UNITED STATES PATENT OFFICE.

GEORGE H. HUGHES, OF UTICA, NEW YORK.

WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 393,070, dated November 20, 1888.

Application filed February 13, 1888. Serial No. 263,843. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. HUGHES, a citizen of the United States, and a resident of the city of Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Water-Closets; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to an improved device for stopping the flow of water into a cistern or tank used in connection with a water-closet or a device adapted to a similar use.

In the use of the class of water-closets to which my device is designed to be applied heretofore considerable annoyance has been caused by the inflow of water being shut off gradually and slowly, and hence the sound of flowing water has been long-continued and disagreeable. It is one of the important objects of my device to overcome these bad features.

In the drawings, Figure 2 shows my device in position in a cistern or tank, and Fig. 1 shows a partial sectional view of the same for the purpose of showing the mechanism thereof. Like or similar letters or figures of reference refer to like and similar parts in the several figures of the drawings.

Referring to drawings, 1 is a tank or cistern. 2 is a valve for automatically admitting water to the cistern, of which 3 is the supply-pipe and 4 the discharge-nozzle. 5 is the stem of the valve, actuated by a bell-crank on arm 6, pivoted at 7. A float, 8, is provided upon the end of arm 6. I provide a receptacle, 9, adapted to set in the cistern or tank and receive the float. The receptacle 9 is provided with a weighted or loaded bottom, 10, to prevent its being floated when the receptacle is empty and the tank or cistern partially filled. Receptacle 9 is provided near the bottom with an outwardly-opening valve, 11, connected by a chain, rod, or suitable mechanism, 12, with arm 6. The height of receptacle 9 is such that when placed in the tank or cistern 1 it will reach nearly to the high-water line of the tank or cistern. The dotted lines of Fig. 2 show the lower position of the float and arm

and the closed position of the valve 11 of receptacle 9, in which position valve 2 is open.

The operation of my device is as follows: The tank being full of water, substantially to the high-water line, which also fills receptacle 9, and the water being drawn from the cistern or tank 1, the float descends, opening valve 2 and allowing the water to flow into the tank from nozzle 4. In the use of tanks or cisterns for water-closets, as herein described, the water is drawn from the tank or cistern usually in a heavy stream, which lowers the water in the tank fast and would open valve 2 comparatively quickly. As the water is drawn from the tank, the water in receptacle 9 is also drawn through valve 11. When the flow from the tank has ceased, the float 8 has descended and closed valve 11. In this position it remains until the cistern has been filled until the water runs over the top of receptacle 9, the valve 2 remaining fully open during the entire filling of the cistern, and thus filling the cistern in the shortest practical time with the size of valve used. When the water flows over the top of receptacle 9 and begins to raise the float, the valve 11 is open, allowing the water to rush into receptacle 9 from cistern 1 and quickly raise the float and close the valve 2, thus promptly shutting off the inflow of water into the cistern. By this arrangement of parts the cistern is more quickly filled, as the valve regulating the inflow of the water into the cistern remains entirely open during the whole time that the cistern is filling, and the disagreeable noise attending the filling of water-closet tanks as ordinarily arranged is largely diminished or entirely overcome.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of a cistern, an inflow-valve, a float for operating the inflow-valve, a receptacle for containing the float, having an outwardly-opening valve at the bottom of the receptacle opening into the cistern operated by the float, substantially as described, for the purposes stated.

In witness whereof I have affixed my signature in presence of two witnesses.

GEORGE H. HUGHES.

Witnesses:

L. L. LAPAUGH,
MILTON E. ROBINSON.