(No Model.)

W. B. CHAMBERLIN.

ATTACHMENT FOR SUPPLY TANKS.

No. 376,292. Patented Jan. 10, 1888.

Fig 1

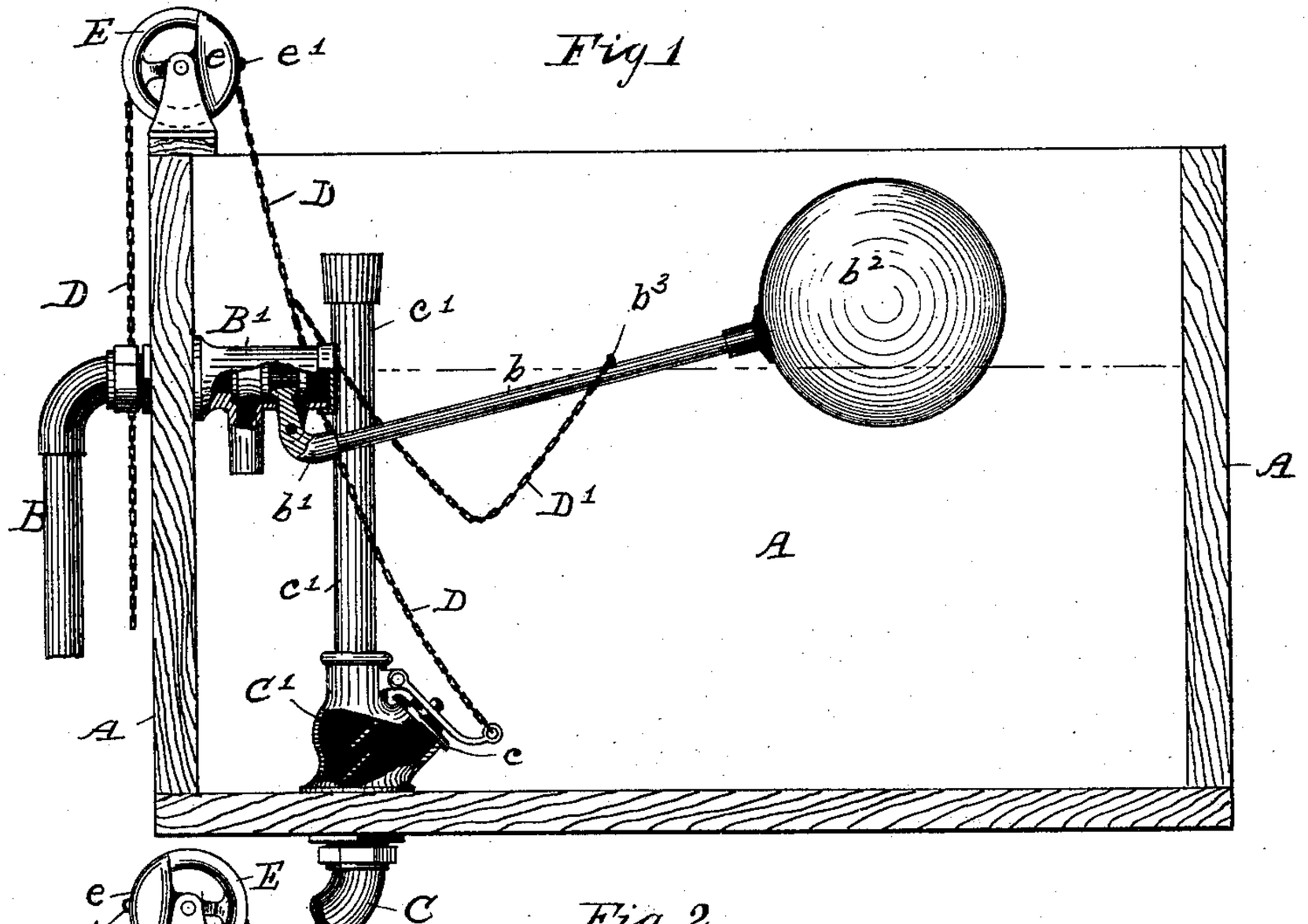
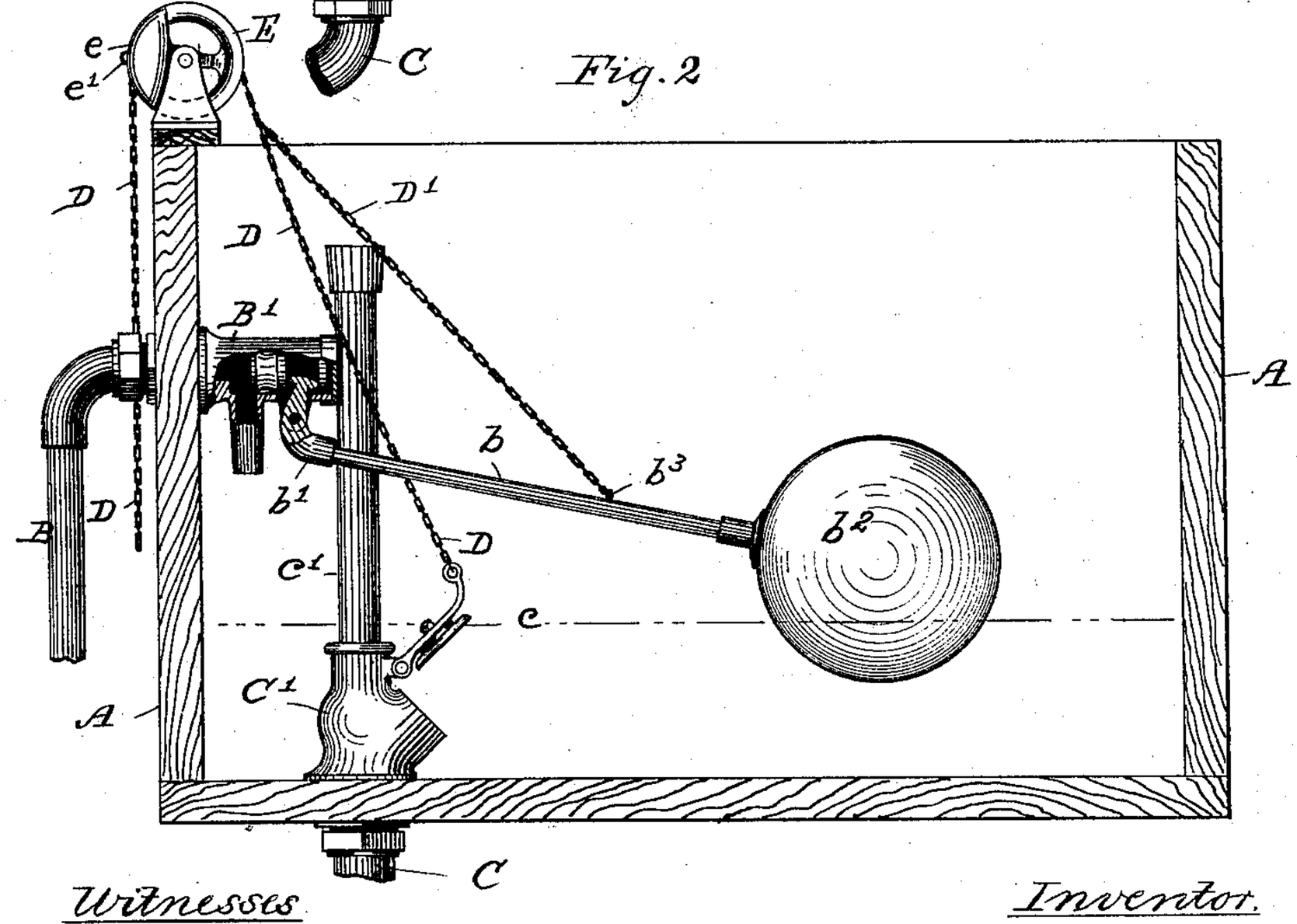


Fig. 2



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIS B. CHAMBERLIN, OF WORCESTER, MASSACHUSETTS.

ATTACHMENT FOR SUPPLY-TANKS.

SPECIFICATION forming part of Letters Patent No. 376,292, dated January 10, 1888.

Application filed May 16, 1887. Serial No. 238,321. (No model.)

To all whom it may concern:

Be it known that I, WILLIS B. CHAMBERLIN, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improved Attachments for Sure Supply-Tanks, of which the following is a specification.

This invention relates to the so-called "sure supply-cisterns" for water-closets, the object being to provide improved means for controlling and regulating both the supply and discharge valves, which is accomplished by the mechanism illustrated in the accompanying drawings, forming part of the following specification, and clearly pointed out in the appended claims, reference being had to the drawings, of which—

Figure 1 shows a sectional elevation of a supply tank or cistern to which my improvements are applied; and Fig. 2 is a similar view, but showing the valves open.

Similar reference-letters indicate corresponding parts.

A is the tank or cistern; B, the supply and C the discharge pipes, the former being provided with the ordinary ball cock or valve, B′, its rod or tube *b* connecting the valve-operating arm *b′* with the loaded sphere or ball b^2, which is designed to float upon the surface of the water, and thereby control the supply of water to the tank, as hereinafter fully explained.

For the discharge-pipe C any of the valves in present use by the trade may be applied, that shown in the drawings being an ordinary valve, C′, having a flap-cover, *c*, hinged, as shown, and provided in its top with an overflow-pipe, *c′*, rising within two inches (more or less) of the top of the tank A.

A pull-chain, D, passes over a grooved pulley, E, located on top of the tank, as shown, and is attached to the cover *c* of the discharge-valve C′. A loose branch chain, D′, connecting the chain D with the rod or tube *b*, is also provided, for a purpose hereinafter explained.

In Fig. 1 of the drawings both supply and drain valves or cocks are represented closed, and in Fig. 2 both are shown open. The dotted line X in each view represents the surface of the water in tank.

The pulley E is provided with a counter-weight, *e*, which must be sufficient to overbalance the weight of the hinged cover *c* when the same is open, as seen in Fig. 2, and the branch chain D′ is of the required length and connected to the chain D at the proper point to be simply straightened when the discharge-cock C′ is opened. The chain D should be secured at the point *e′* upon the grooved pulley E, in order that it may be sure to move with said pulley and avoid slipping thereon.

In practice my invention is operated as follows: Assuming the water in the tank to be at the depth shown by the dotted line X in Fig. 1, when the pull cord or chain D is pulled the pulley E, cover *c*, and branch chain D′ assume the position shown in Fig. 2, the counter-weight *e* of the pulley E holding the hinged cover of the cock C′ open, thus permitting a full discharge through the pipe C. At the same time, as the water lowers, the supply-cock, which is controlled by the movement of the loaded ball-float b^2, is gradually opened, causing an increase in the supply as the ball drops. The outlet being so much larger than the inlet, however, the water and the ball-float b^2 are permitted to fall to a point shown by dotted line X, Fig. 2, when, by means of the branch chain D′ and the loaded float b^2, which is sufficiently heavy to overbalance the counter-weight on the pulley E, the said pulley is returned to its normal position and the outlet or discharge valve C′ is closed, thus allowing the water and the loaded float to again rise to the point designated at X, Fig. 1. In this manner a simple and automatic means for cutting off the discharge from the tank or the supply of water to a closet is readily and economically accomplished.

Having described my improvements and their especial application, what I claim, and desire to secure by Letters Patent, is—

1. In a supply-tank, the combination of a supply-cock, its operating-lever and a loaded float attached thereto, a discharge-valve, and a grooved counterweighted pulley located at the top of said tank for carrying a pull-cord which is connected thereto, the said pull-cord and branch cords or chains connecting said pull-cord with the operating-lever of supply-cock and the said discharge-valve, all operating

substantially in the manner and for the purpose set forth.

2. In a supply-tank, the combination of a supply-cock, its operating-lever and float, a discharge-valve, and a grooved counterweighted pulley located at the top of said tank for carrying a pull-cord which is attached thereto, the said pull-cord and branch cords or chains connecting the latter with the operating-lever of said supply-cock and the said discharge-valve, the float on the operating-lever of said supply-cock being sufficiently loaded to overthrow the weighted pulley at the proper time to automatically close said discharge-valve, all substantially as and for the purpose explained.

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

WILLIS B. CHAMBERLIN.

Witnesses:

J. B. THURSTON,

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