

(No Model.)

J. P. HYDE.

APPARATUS FOR FLUSHING WATER CLOSETS AND URINALS.

No. 259,985.

Patented June 20, 1882.

Fig. 1.

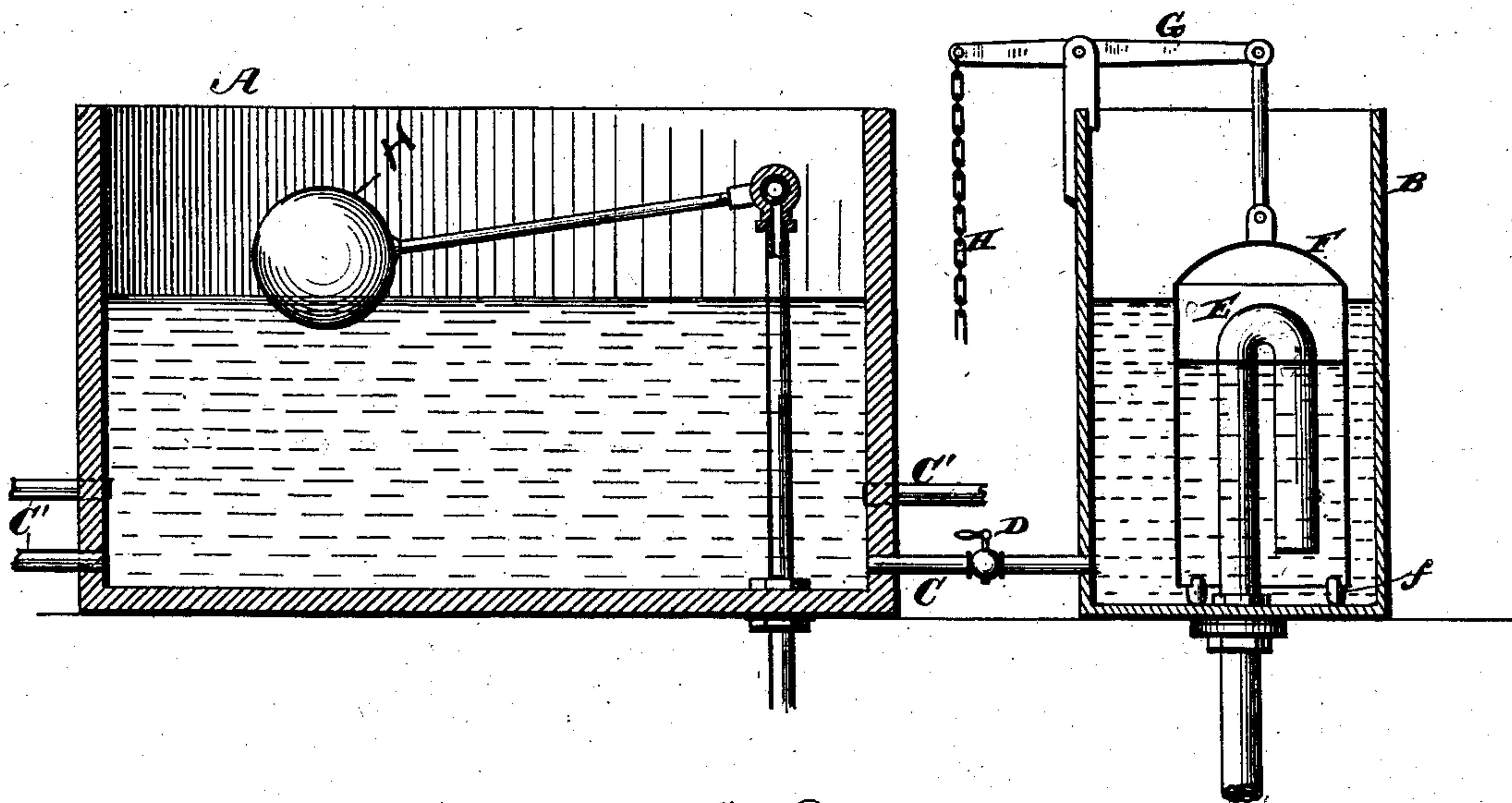
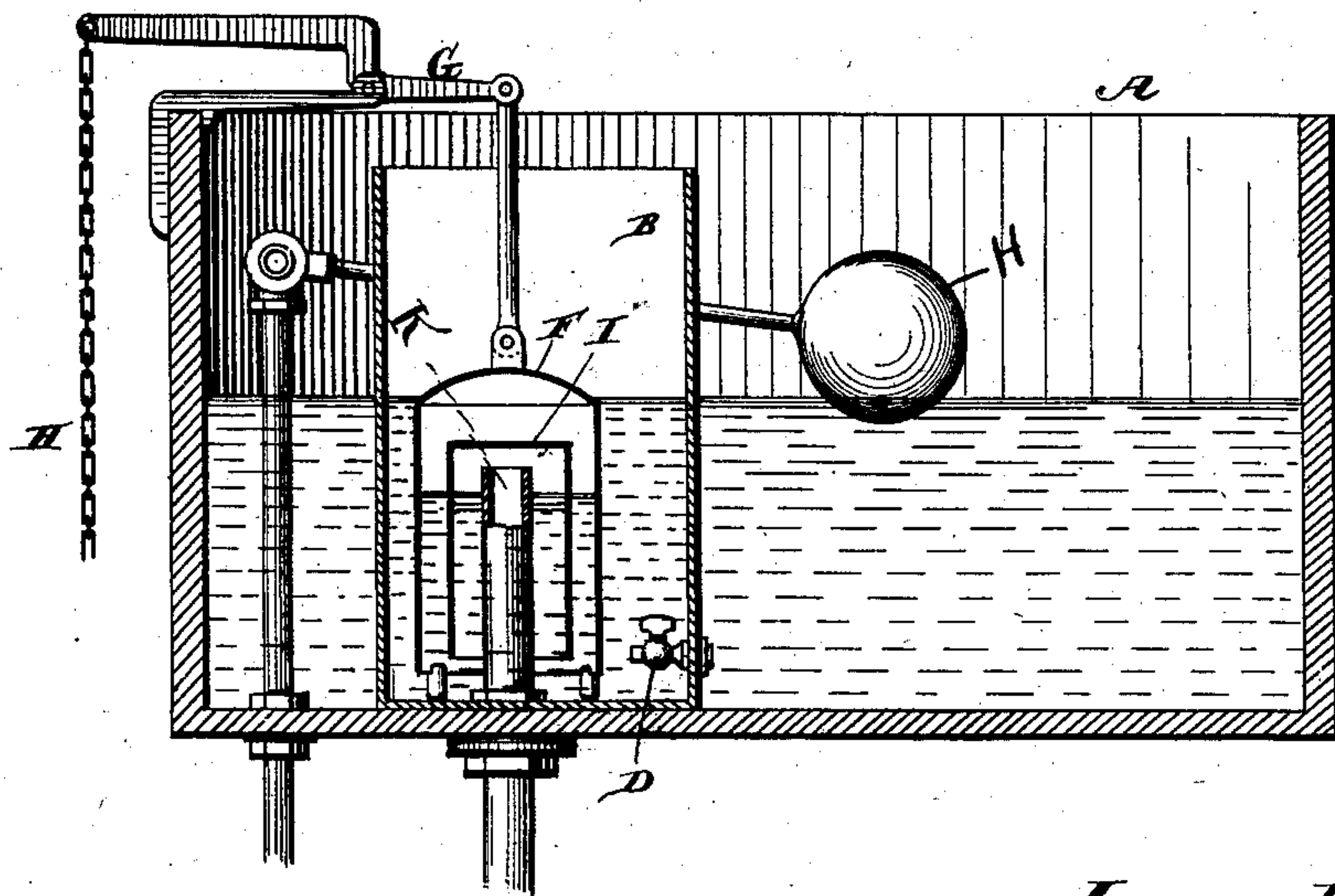


Fig. 2.



Witnesses.

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APPARATUS FOR FLUSHING WATER-CLOSETS AND URINALS.

SPECIFICATION forming part of Letters Patent No. 259,985, dated June 20, 1882.

Application filed May 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES P. HYDE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Apparatus for Flushing Water-Closets and Urinals, of which the following is a specification.

This invention relates to that class of apparatus in which a siphon is employed for the purpose of flushing water-closets, urinals, and the like.

The main object of my invention is to provide a cistern or supply-tank and an independent service-box or flushing-tank, with the latter so disposed with relation to the former that the water in the cistern cannot rise above the overflow-level in the flushing-tank. A further object is cheapness and simplicity of construction, compactness, and adaptability to be readily put up wherever designed. These objects I attain by means of the devices illustrated in the drawings, in which—

Figure 1 represents a section taken through my improved apparatus; Fig. 2, a like view of a modified form.

The cistern A and the service-box or flushing-tank B, both of appropriate shape and capacity, communicate with each other by suitable pipe-connection, C.

The flow of water from the cistern into the service-box or flushing-tank is regulated by a cock, D, which can be turned so as to regulate the size of stream passing from the former to the latter, according to the period of time which it is desired shall elapse before it shall attain such level in the flushing-tank as will admit of it being siphoned off from the same.

Within the flushing-tank is an ordinary siphon, E, from which the pipe can be conducted to either a water-closet or a urinal, as preferred, the bend in said siphon being below the top of the flushing-tank.

The siphon is inclosed by a bell, F, closed at its top and open at its bottom, the said bell inclosing the bend and both legs of the siphon, and being connected by a link or rod with the lifting-lever G, which is operated by a cord or chain, H, when it becomes desirable to raise the bell so as to fill the siphon.

When the flushing-tank is filled with water

to a level above the bend in the siphon the said bend will extend above the water-level in the bell into the body of compressed air contained in the upper portion of the latter, the weight of the bell serving to keep it seated upon suitable legs, *f*, located at the bottom of the tank. If now the chain or cord, which extends to within convenient reach of the person using the closet or urinal, be pulled, the lever will raise the bell, so that the water therein, which is normally below the bend, and a lower level than at the water-level in the flushing-tank, will rise above the bend in the siphon, thereby causing the latter to fill and draw off the contents of the tank, so as to flush the closet or urinal. As soon as emptied the tank commences to refill, the water being supplied thereto from the cistern in a small graduated stream. In order now to automatically check the inflow of water from the cistern into the flushing-tank before it reaches the overflow-level in the latter, I provide in the cistern a float-valve, H, adapted to control the feed of water into the cistern, the said valve being set so that as soon as the water in the cistern has attained a level just below the overflow-level in the flushing-tank the float-valve will cut off the feed of water into the cistern. This level being determined, it will be obvious that it will be at all times substantially maintained in the cistern, since the water passes slowly therefrom into the flushing-tank, and the valve opens as soon as the float commences to drop.

Fig. 2 is the same in principle as Fig. 1, the flushing-tank in this instance being located within the cistern, and the siphon formed by a tube or cylinder, I, closed at its top and placed over the straight pipe K. In this figure the valve or cock is preferably located within the flushing-tank, the water passing directly through its short pipe from the cistern to the flushing-tank.

From the foregoing it will be seen that the flushing-tank is placed at such elevation with relation to the cistern or supply-tank that the water-level in the latter shall not come above the overflow-level in the service-box or flushing-tank.

C' indicates branch pipes, which can be arranged to lead off to smaller flushing-tanks in other localities, as may be desired.

What I claim is—

1. In an apparatus for flushing water-closets and urinals, the combination, with a siphon located within the flushing-tank, of a bell inclosing the two legs of the siphon and provided with an open bottom and a closed top, and devices for raising the bell, whereby as the bell is lifted the atmospheric pressure upon the water in the tank around the bell will cause the water within the latter to rise above the bend in the siphon, substantially as described.

2. The combination, with the supply-cistern having a float-valve, of the flushing-tank connected with the cistern, the siphon located within the flushing-tank, a bell having an open bottom and inclosing the two legs of the si-

phon, and devices for raising the bell, whereby the water-level in the flushing-tank shall normally be above the water-level in the bell, in which latter the water-level is normally below the bend in the siphon, so that when the bell is raised the water within the same will rise over the siphon-bend, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JAMES P. HYDE.

Witnesses:

A. H. NORRIS,

J. A. RUTHERFORD.