

(No Model.)

A. F. MOLLRING.
AUTOMATIC FLUSH TANK.

No. 543,776.

Patented July 30, 1895.

Fig. 1.

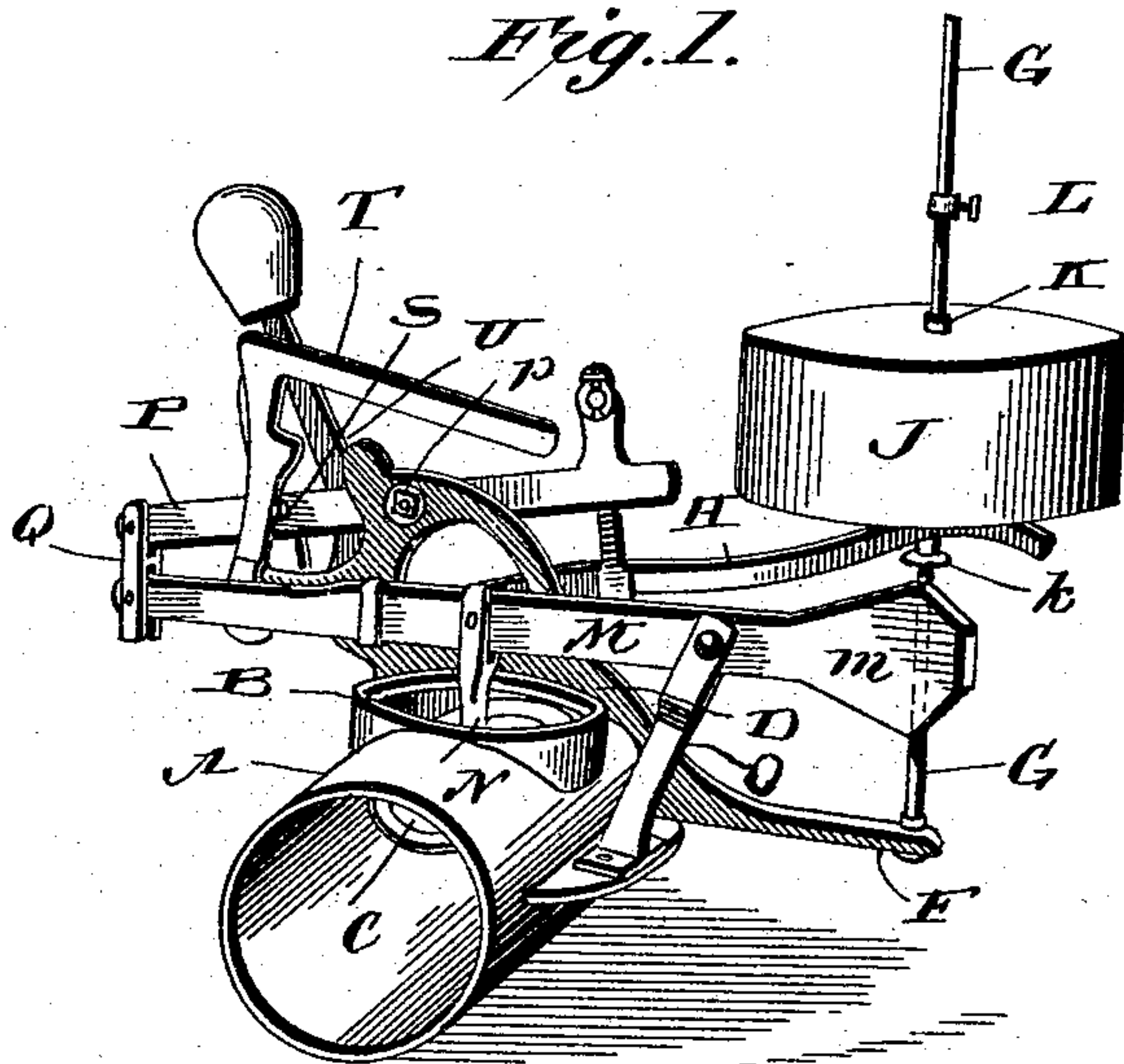
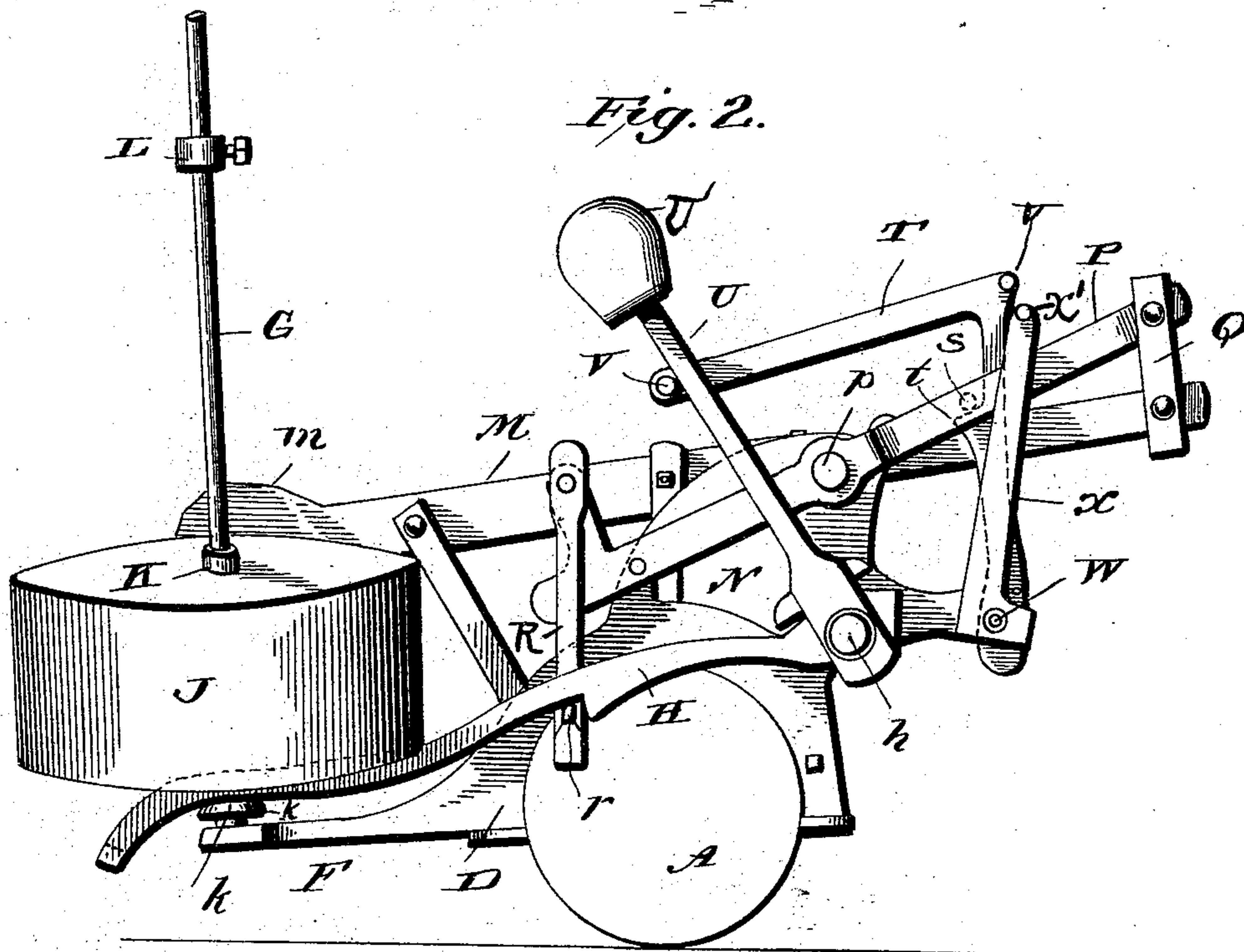


Fig. 2.



Witnesses:

L. C. Hills.
A. L. Hough

Inventor:

Arnold F. Mollring,
by Franklin H. Hough
Atty.

UNITED STATES PATENT OFFICE.

ARNOLD FREDRICK MOLLRING, OF NEBRASKA CITY, NEBRASKA.

AUTOMATIC FLUSH-TANK.

SPECIFICATION forming part of Letters Patent No. 543,776, dated July 30, 1895.

Application filed May 7, 1895. Serial No. 548,452. (No model.)

To all whom it may concern:

Be it known that I, ARNOLD FREDRICK MOLLRING, a citizen of the United States, residing at Nebraska City, in the county of Otoe and State of Nebraska, have invented certain new and useful Improvements in Automatic Flush-Tanks; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in flush-tanks, and the special object of my invention is to produce a float-operated valve carried in a tank or cistern, the said valve regulating the flow of water from the tank into a sewer-pipe which is to be flushed as the float rises with the water in the cistern, the valve being located at the bottom of the tank, and when not open is securely locked closed by means of an automatically-operated lever which allows the valve to be depressed as the float rises.

A further object of the invention resides in the adjustability of the device, so as to allow a greater or less quantity of water to flow from the tank into the sewer-pipes to be cleaned out.

To these ends and to such others as the invention may pertain, the same consists further in the novel construction, combination, and adaptation of the parts, as will be hereinafter more fully described and then specifically defined in the appended claims.

I clearly illustrate my invention in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which drawings similar letters of reference marked thereon refer to like parts, and in which—

Figure 1 is a perspective view of my invention. Fig. 2 is an end elevation from the opposite side.

Reference now being had to the details of the drawings by letter, A designates a section of a sewer-pipe having an aperture B in which is located a valve C.

D is a framework secured to the sewer-pipe,

on which the valve-operating levers are mounted.

E is a projecting portion of the said framework, and on its free end is secured the vertical rod G.

H is a lever pivoted at *h* to the main framework, and the forward end of said lever has an elongated slot through which the vertical rod G passes.

J is a float having a central tube K passing through the same, and *k* is a flanged end beneath the float to the said tube, and upon which flange the lever H rests.

L is a collar having a thumb-screw for regulating the height to which the float is allowed to rise.

M is a lever having a weighted end *m*, and near the middle of the said lever is pivoted the rod N, which carries at its lower end the valve C.

O is an arm acting as a fulcrum, to the upper end of which is pivoted the said lever M.

P is a lever pivoted near its longitudinal center to an upright portion of the framework by means of the pin *p*, the rear end of the said lever P being connected by means of the link Q to the lever M, the forward end on the lever P being pivoted to the upper end of the bar R, which carries a lug *r* near its lower free end and on which lug the lever H is designed to rest.

S is a lug carried on the lever P.

T is an anchoring angle-lever having a shoulder *t* on which the lug S is adapted to rest when the the valve C is locked shut, as seen in Fig. 2.

U is a lever pivoted on the pin *h*, and is designed to turn with the lever H, and U' is a weighted upper end to the said lever. The lever T carries the lugs V and is pivoted to an extension of the framework at W, and X is a post carrying a lug X' at its upper free end and against which the lever U abuts when the lug S is released from the shoulder on the lever T, thus arresting the backward movement of the said lever T after the valve is opened.

The operation of the device is as follows: In Fig. 2 the valve is closed, and as the water raises the float the lever H rises with the float, the lever U turns with the lever H until the

said lever U strikes against the lug V, which releases the lug S and allows the lever P to drop, and through the latter's connection with the lever M the valve is lowered or opened, 5 allowing the water to escape through the sewer-pipe. When the water in the tank has lowered a sufficient distance, the float lowering with the water depresses the lever H, which in turn causes the forward end of the lever P to 10 be depressed by means of the lever H bearing down on the lug r on the bar R, and the rear end of the lever P, carrying the lug S, to be raised in position to rest on the shoulder of the lever T as the latter is caused to turn for- 15 ward when the lever U strikes against the lug V, thus securely locking the valve closed until the float is again raised by the rising of the water in the tank.

Having thus described my invention, what 20 I claim to be new, and desire to secure by Letters Patent, is—

1. In combination in a device for flushing sewer-pipes from a cistern, a sewer pipe having a valve controlled aperture, a framework 25 carried on said pipe, a vertical rod carried on a projecting portion of said framework, a float vertically adjustable on said rod, a lever H pivoted to the frame work, its free end carried by said float, a lever U pivoted so as to turn 30 with the said lever H, and designed, to cause a valve in the sewer pipe to be opened, as the float rises, substantially as shown and described.

2. In combination, a sewer pipe located in 35 connection with a cistern, an aperture therein

a valve C regulating the same, the lever H pivoted to a framework held to said pipe, the rod G vertically secured to said framework, a float J having a central tube K which rides on said rod, a flange k on the tube K on which 40 flange the slotted end of the lever H is adapted to rest and to be raised and lowered by the float, and means for automatically opening and closing the said valve as the float is raised and lowered, substantially as shown and de- 45 scribed.

3. In combination, the sewer pipe, a valve seated in an aperture therein, a framework D, lever H pivoted to a portion thereof, a vertical 50 rod G float J tube K having a flanged lower end, the forward free end of the lever H slotted and resting on said flange, the lever U adapted to turn with the lever H, the lever M pivoted to a fulcrum a rod N connecting said lever M to the valve C, the lever P pivoted to the 55 framework and connected by link Q to lever M, the anchor lever T carrying lugs V, a shoulder on said lever T, a lug on lever P, and the bar R pivoted to the free end of the lever P, and a lug r at the lower free end of bar R on 60 which lever H is designed to rest, all combined to operate substantially as shown and described.

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

ARNOLD FREDRICK MOLLRING.

Witnesses:

JNO. W. STENCHARD,
FRED. W. RAEUNAM.