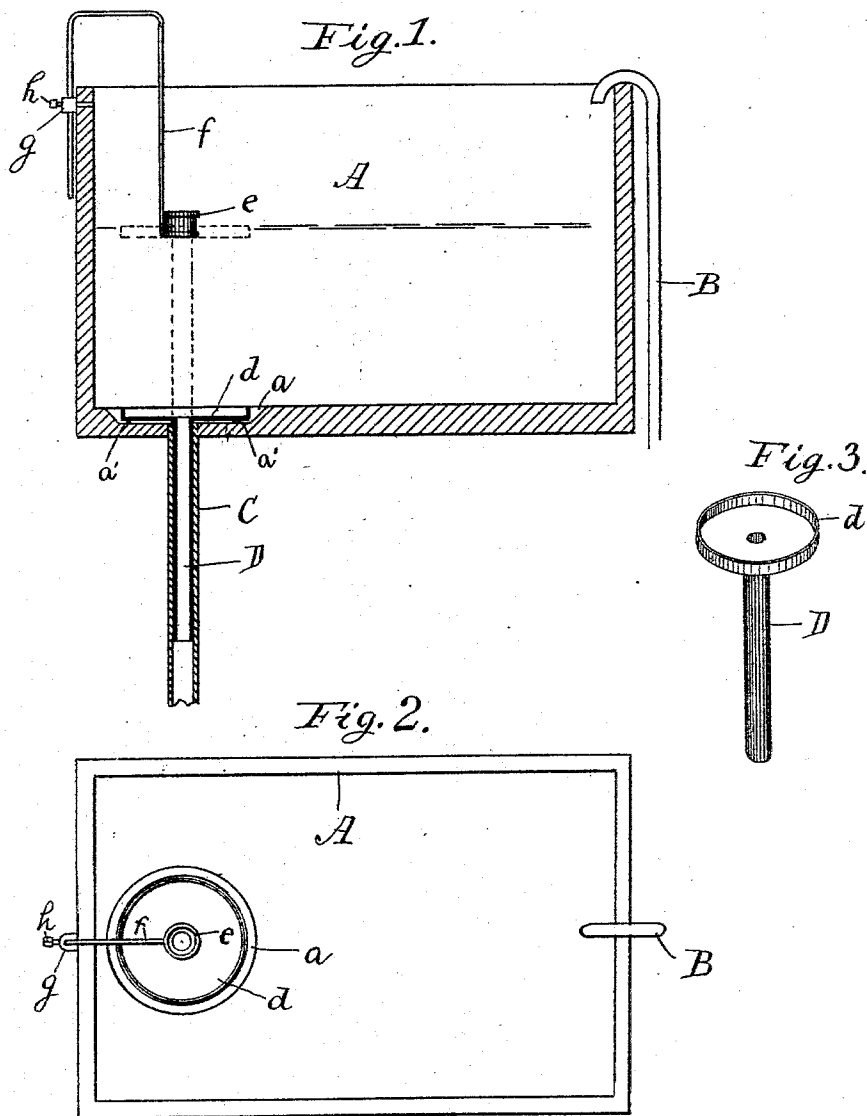


(No Model.)

J. R. DONNELLY & C. F. BARTON.
FLUSHING TANK.

No. 515,521.

Patented Feb. 27, 1894.



Witnesses
J. C. Lee Fadden
E. W. Mc Fadden

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UNITED STATES PATENT OFFICE.

JOHN R. DONNELLY AND CHARLES F. BARTON, OF FAIRFIELD, MAINE.

FLUSHING-TANK.

SPECIFICATION forming part of Letters Patent No. 515,521, dated February 27, 1894.

Application filed March 13, 1893. Serial No. 465,804. (No model.)

To all whom it may concern:

Be it known that we, JOHN R. DONNELLY and CHARLES F. BARTON, citizens of the United States, residing at Fairfield, in the county of Somerset and State of Maine, have invented certain new and useful Improvements in Flushing-Tanks; and we 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.

Our invention relates to a flush tank of that class which intermittently fills and discharges when fed by a continuous stream of water.

The object of the invention is to devise a tank which will be especially adapted to the use of photographers for washing prints, &c., and the aim is to construct a tank which will intermittently discharge the entire contents of the tank and which will fill each time to any desired height.

We illustrate our invention in the accompanying drawings in which—

Figure 1 is a vertical section through a tank constructed according to our invention and Fig. 2 is a plan or top view. Fig. 3 is a perspective view of a detail.

A represents a tank of any suitable construction; it may be supported on legs or brackets or in any desired location according to the use to which it is to be put.

B is the water supply pipe and C is the waste pipe which extends vertically through the bottom. Within the waste pipe C fits the tube D. The fit must be somewhat loose so that the tube will slide easily up and down within the waste pipe. On the top of the tube D is an open topped float *d*. We prefer to use a float such as here shown consisting of a flat disk with a rim or flange around its edge and made as shallow as possible consistent with buoyancy. It must be somewhat more than sufficiently buoyant when resting on the water, to lift the tube D. The float *d* when down rests in a recess *a* which is formed in the bottom of the tank around the upper end of the waste pipe C. The rim of the float should be below or at the level of the bottom of the tank so as to drain off all the water when the tank discharges.

In order to allow the water to get under the

float to lift it, it rests when down on pins *a'* in the bottom of the recess *a*. Means are provided to limit the upward motion of the float and for this purpose we prefer to make use of a ring *e* which is held centrally in line with and above the tube at any desired height by means of a bent rod *f* which is adjustably secured in a lug *h* by means of a set screw *g*.

The operation of our tank is as follows:— When the water comes in it first gets under the float *d* filling the recess *a* and the buoyancy of the float lifts the tube D in the waste pipe. As the water rises, the float and tube rise, the waste pipe being all the time closed by the tube. When the float reaches the ring *e* which is set at the point to which it is desired to fill the tank, the lower edge of the ring surrounds the opening in the upper end of the tube and arrests the motion of the float. The water continues to rise and overflows the rim of the float filling it and causing it to sink. The water which first overflows into the float is prevented from running down through the tube, the opening of which is closed by the ring *e*, so that the filling of the float is assured however small the stream which is flowing through the inlet pipe. The water immediately begins to discharge through the top of the tube, passing down through the waste pipe and so on until it is entirely drained from the tank the fact that the float is entirely below the surface of the bottom allowing all the water to discharge as already pointed out. All the water being discharged from the tank and the float being within the recess *a*, the water continues to overflow into the float in a volume equal to what is running into the tank but the body of water under the float is sufficient to lift it even with a little water inside. The tube is again drawn upward and the tank again discharges and so on intermittently. If the tube when at its highest position sticks and refuses to settle when the float is full, the water simply continues to rise and overflow into the ring *e* and thence down the tube so that the tank can never overflow unless the tube gets clogged.

We claim—

1. The herein described flushing tank having a waste pipe, a tube fitting therein and

having on its upper end an open topped float
for lifting said tube, and a ring suspended in
the tank above said tube and axially in line
with the same for checking its upward mo-
5 tion the lower edge of said ring being adapt-
ed to form a tight joint with the surface of
said float the thickness of said ring being suf-
ficient to allow the float to fill before the wa-
ter runs over its upper edge, substantially as
10 described.

2. The herein described flushing tank hav-
ing a waste pipe, a tube fitting therein and
having on its upper end an open topped float
for lifting said tube, a ring centrally above
15 said tube and axially in line therewith, the

lower edge of said ring being adapted to make
a tight joint with the upper surface of said
float, the thickness of said ring being suffi-
cient to allow the float to fill before the water
runs over its upper edge a rod for supporting 20
said ring and means for adjusting said rod
vertically, substantially as described.

In testimony whereof we affix our signatures
in presence of two witnesses.

JOHN R. DONNELLY.
CHARLES F. BARTON.

Witnesses:

F. E. MCFADDEN,
E. W. MCFADDEN.