

E. FRÄNKEL.
FLUSHING APPARATUS.
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1,041,612.

Patented Oct. 15, 1912.

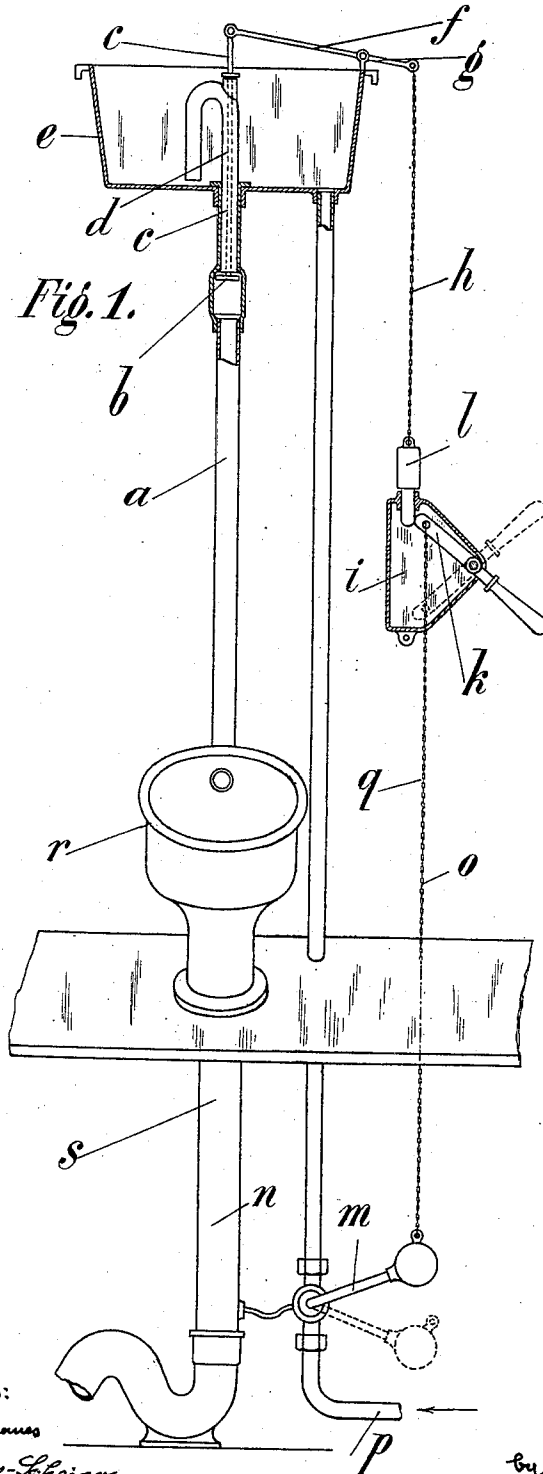


Fig. 2.

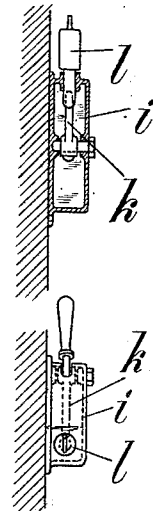
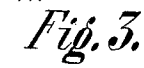


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

EUGEN FRÄNKEL, OF BEUTHEN, UPPER SILESIA, GERMANY.

FLUSHING APPARATUS.

1,041,612.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EUGEN FRÄNKEL, a subject of the German Emperor, and residing at Beuthen, Upper Silesia, German Empire, have invented certain new and useful Improvements in Flushing Apparatus, of which the following is a specification.

The present invention relates to improvements in flushing apparatus of that type in which the flush-tank is normally empty, the supply of water thereto being controlled by a cock or other valve, which after being opened is locked in such position by means of mechanism in connection with a device suspended in the flushing pipe, until on submergence of the flush-siphon, the latter conducts the water down upon the said device, which being thus depressed causes release of the supply-valve.

Prior apparatuses of this class have the defect that they are liable to fail in cold weather. This is owing to the supply-valve locking-mechanism lying more or less inside the flush-pipe, in closest proximity to the device suspended within the latter, so that the water falling upon the said device splashes onto the locking-mechanism and freezes so as to obstruct motion, the kinetic energy of the flushing water being then no longer able to effect release of the supply-valve.

I overcome this drawback by employing for the control of the flush-pipe a disk or the like which hangs freely therein and possesses suspension-means extending to the outside and there connected with the locking-mechanism of the supply-valve.

One embodiment of my invention is illustrated in the accompanying drawing, in which Figure 1 is a view (partly in section) of the entire plant, while Figs. 2 and 3 show respectively a vertical section and a plan view of the supply-valve actuating-lever and the locking-mechanism weight.

In the upper part of the flush-pipe *a* there is located a disk *b*, suspended from a rod *c*, which passes through the siphon *d* and is afforded guidance at a point lying above the top of the bend of the siphon, so that the said guide-parts may not be wetted by the flushing water, whereby there would be liability of the rod *c* becoming frozen fast at such parts. The rod *c* is jointed to the longer arm *f* of a lever fulcrumed to the wall of the flush-tank *e*. To the shorter arm *g* of this lever there is fastened a chain *h*,

carrying at its bottom end a weight *l*, which receives guidance from a casing *i* and maintains the disk *b* in its elevated position. The weight *l* hangs in the path of a hand-lever *k*, which is located within the casing *i* and is connected by a chain *o* to the weighted arm *m* of the supply-valve *n*.

To flush the closet-bowl *r* the lever *k* is thrown over from the broken-line position into the full-line position. The valve *n* is thus opened and communication established between the service-pipe *p* and the supply-pipe *q* leading to the cistern *e*. At the same time the lever *k* in rising will elevate the weight *l*, but immediately the lever has attained its top position the weight will drop back into its initial position and will thus lock the lever in the "open" position of the valve *n*. Water will thus continue to flow through the pipes *p* and *q* into the tank *e*, collecting there until the siphon is submerged and comes into operation. The disk *b* will now be depressed by the downrush of siphoned water, which flowing through the pipe *a* will flush out the bowl *r* and run off through the discharge-pipe *s*. The depression of the disk *b*, however, will cause the lever *f, g* to turn on its fulcrum, and thus raise the weight *l*, thereby releasing the lever *k*. The weighted arm *m* will now drop into the broken-line position again, drawing down the lever *k* and closing the valve *n*, thus cutting off communication between the pipes *p* and *q*, while establishing a communication between the pipe *q* and the discharge-pipe *s* through a branch-pipe *t*, which enables any water remaining in the flush-tank *e* to be drained off.

Having thus described my invention, I declare that what I claim as new and desire to secure by Letters Patent is—

1. In a flushing apparatus, in combination, a flush-tank having a water inlet and outlet, a siphon located therein and conducting to the outlet, a valve controlling the inlet, and a device hanging freely in the outlet and whose suspension-member extends to the outside, and mechanism for temporarily locking the inlet-valve in its open position, connected with the external part of the said suspension-member.

2. In a flushing apparatus, in combination, a flush-tank having a water inlet, a siphon located therein and forming the exit of the tank, valve mechanism controlling the inlet, a device hanging freely in the

siphon and whose suspension-member extends to the outside, and gravity-mechanism connected to the external part of the said suspension-member and hanging in the
.5 path of the said inlet-valve mechanism and adapted to lock the said mechanism in its open position after being raised by the same.

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

EUGEN FRÄNKEL.

Witnesses:

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LOUIS KATZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."