No. 661,171. Patented Nov. 6, 1900.

M. GAUTIER.

AUTOMATIC FLUSHING AND DISCHARGING APPARATUS FOR SANITARY OR OTHER PURPOSES.

(Application filed Apr. 17, 1899.)

(No Model.)

Fig. 1

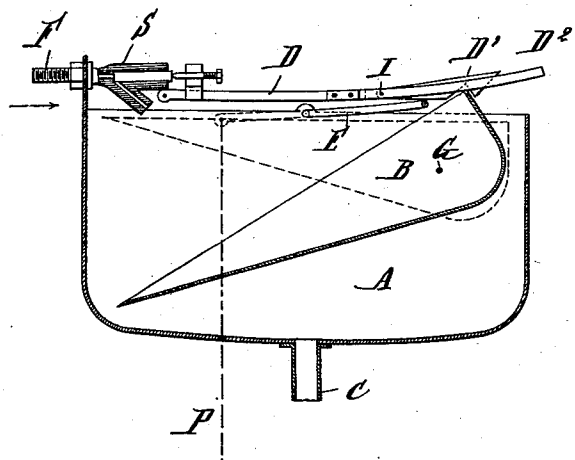
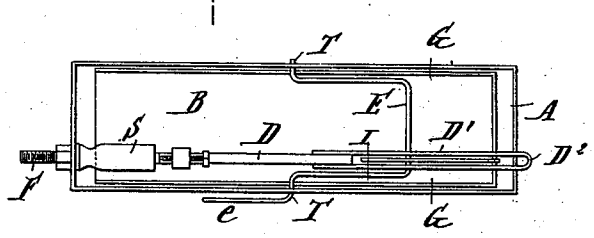


Fig. 2.



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AUTOMATIC FLUSHING AND DISCHARGING APPARATUS FOR SANITARY OR OTHER PURPOSES.

SPECIFICATION forming part of Letters Patent No. 661,171, dated November 6, 1900.

Application filed April 17, 1899. Serial No 713,360. (No model.)

To all whom it may concern.

Be it known that I, MAX GAUTIER, a subject of the King of Belgium, and a resident of Rue St. Lazare, Brussels, in the Kingdom of Belgium, have invented certain new and useful Improvements in Automatic Flushing and Discharging Apparatus for Sanitary or other Purposes; and I 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.

The object of this invention is a flushing and discharging apparatus which is very simple in construction, economical, and thoroughly effective and capable of being worked by hand or otherwise, as may be preferred. The apparatus, moreover, effects a great saving of water, as the discharge is effected in a more rational manner than is the case with float apparatus, and the whole force of the water is made use of under the most favorable conditions. The operating arrangement, which in this case comprises the regulating of the water-supply cock by means of a tipping pan or basin which effects the discharge by means of its swinging motion when it is filled, has the advantage of very simple action, and the various parts being reduced to the simplest forms always act effectively and with certainty, entirely obviating the many disadvantages connected with float or other known apparatus. Thus with the present apparatus there is absolutely no waste of water when the apparatus is not working, besides which the reservoir, which is always kept empty when the apparatus is not in action, is only actuated when the flushing or discharging mechanism is actuated. Finally the apparatus enables the discharge or flushing to be effected by means of the seat of the closet itself, thus rendering the action automatic in the most practical manner.

In the accompanying drawings an apparatus of the kind is shown by way of example.

Figure 1 is a longitudinal section of the whole of the working parts, the tipping pan or basin being shown in its position when tilted and held by the lever which regulates the water-supply cock and in this case closes it. Upon being released the pan or basin, being equilibrated by a counterweight forming part with it, comes into the position indicated by dotted lines, and which is the position in which it is filled. Then when sufficiently filled it forcibly raises the lever in consequence, in order to be retained again in its former position and to close the water-supply cock. Fig. 2 is a plan of Fig. 1.

In the drawings, A is the flushing or discharging cistern proper, made of sheet-iron or cast-iron, &c., and having in the bottom an opening running into the outlet-pipe C.

B is the tipping pan or basin, of a special form, which swings on the suitably-arranged axis G.

S is a plunger-cock, which regulates the opening of the water-supply pipe F, adjoining the reservoir. An engaging lever D, connected with the plunger of the cock S, opens and closes the cock by means of the action of the tipping pan or basin itself, which when tilting comes into engagement in such a manner as to keep the cock closed. For this purpose the end D^2 of the lever D is forked, and comprises among its arms a tongue-piece or catch D′, capable of turning freely around a transverse axis I when its front projection is raised by the back edge of the pan or basin upon the tilting of this latter. The said back edge then engages in the recess formed in the tongue-piece or catch and there remains until the regulating mechanism is once more actuated.

E is a lever forming a cross-stay and turning on pivots T, which run through the sides of the reservoir A in the upper part of the same. The arm *e* of this lever is attached to a cord, chain, or rigid rod P, which hangs down in the direction of the seat or is suitably joined to the seat in such a manner that the lifting of the tongue-piece D′, and thereupon the disengaging of the pan or basin, can be effected by simply pulling or pushing the rod P, according to circumstances.

The action, which is exceedingly simple and reliable, is as follows, and the apparatus may be regulated either at the will of the person using the closet by means of the rod or chain P or independently of him—that is to say, automatically, if P be a rigid rod joined to a suitable oscillating seat: The pan or basin B being in the position of rest—that is to say, held by the tongue-piece D′ of the lever D—

the cock S is closed and the reservoir A empty. The cross-stay lever E being raised by the pulling of the rod or chain P lifts the tongue-piece or catch D' by its front projection in such a manner as to allow of the releasing of the balanced pan or basin, which then takes of itself the position indicated by the dotted lines. The pulling or strain terminating, the lever D falls of its own weight, sliding as does likewise the tongue-piece or catch on the back edge of the pan or basin, so as to effect the opening of the cock S, and thereupon the filling of the pan or basin, which after being filled to a certain extent is tilted automatically and again comes into the starting position, where it is retained and hermetically closes the cock. The action or strain which brings the pan or basin back into the position mentioned is thus produced by the sudden displacement of the whole body of water which lodges on the front of the vessel in discharging. It will easily be understood that this strain is relatively great. It is in all cases sufficient to insure the engaging of the pan or basin by the tongue-piece or catch and to keep the cock S hermetically closed.

In order that the apparatus may work independently of the person using the closet upon his quitting the seat, a swing-seat of any form of construction may be used, by means of which, with the assistance of a suitable arrangement of any kind, the chain or rod P can be pushed or pulled as required and the tongue-piece or catch put out of engagement and the lever D kept in the raised position during the time the closet is occupied. The pan or basin being put out of engagement immediately assumes the horizontal position, but the lever D remaining raised the filling of the pan or basin is effected only when the rod P is no longer pulled or pushed—that is to say, when the occupant of the closet has actually quitted the seat. It is obvious that this arrangement is not limited to the form of carrying it out as described here by way of example, but that it includes all contrivances which effect the rational and automatic engaging of the tipping pan or basin.

The reservoir being kept empty may be used with advantage in cold countries where there is danger from frost, and the whole arrangement is specially suitable for the automatic distribution of liquids without any other modification than an apparatus whereby action could be induced by the introduction of a coin.

What I claim, and desire to secure by Letters Patent, is—

1. In flushing apparatus, the combination, with a tilting vessel, and a valve which discharges into the said vessel; of a pivoted lever for operating the valve, said lever being supported by the upper part of the said vessel when tilted, a catch pivoted to the said lever and normally holding the said vessel in its tilted position, and means for raising the said catch, thereby permitting the said vessel to right itself and allowing the said lever to open the valve, substantially as set forth.

2. In flushing apparatus, the combination, with a reservoir having a discharge-opening at its lower part, a tilting vessel pivoted in the said reservoir, and a valve which discharges into the said vessel; of a pivoted lever for operating the valve, said lever being supported by the upper part of the said vessel when tilted, a catch pivoted to the said lever and normally holding the said vessel in its tilted position, and a lever pivotally supported by the said reservoir and operating to raise the said catch, thereby permitting the said vessel to right itself automatically and allowing the first said lever to open the valve, substantially as set forth.

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

MAX GAUTIER.

Witnesses:

F. PARETTE,

GREGORY PHELAN.