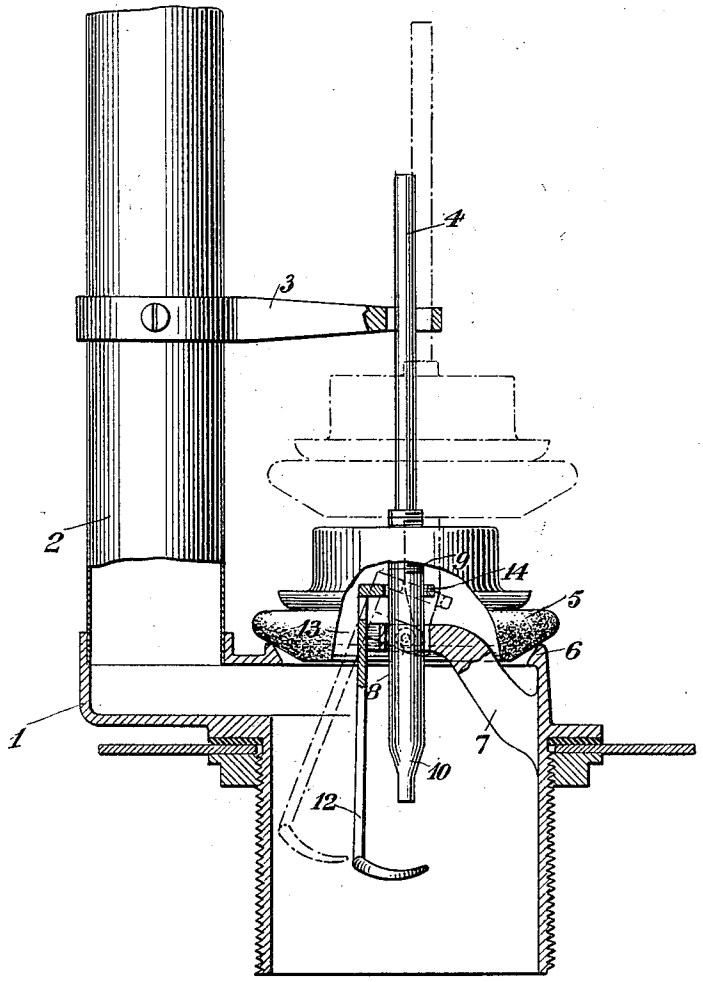
E. L. DELANY.

VALVE DEVICE.

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1,144,757. Patented June 29, 1915.



Witnesses:
Louis J. Noonan
Marian D. Balfour

E. L. Delany, Inventor

By his Attorney Edwin L. Wiegand

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDWARD L. DELANY, OF NEW YORK, N. Y.

VALVE DEVICE.

1,144,757. Specification of Letters Patent. Patented June 29, 1915.

Application filed March 20, 1915. Serial No. 15,866.

To all whom it may concern:

Be it known that I, EDWARD L. DELANY, residing at and whose post-office address is 828 Kent avenue, Borough of Brooklyn of the city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Valve Devices; 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.

I provide simple and effective means for holding a flush tank valve open while the water is passing through the spud, the holding means being rendered effective by the flow of the water to contact with the valve and hold it by frictional engagement, and release the valve and allow it to seat when the flow of water ceases.

In the accompanying drawing the figure shows a tank valve partly in side elevation and partly broken away to show the catch device.

The casing 1, adapted for attachment to a flush tank, is shown provided with an overflow tube 2 on which is mounted a laterally projecting arm 3 having an aperture in its extremity constituting a guide for the operating rod 4, by which the valve 5 is lifted from its seat. This arm also constitutes a stop for the valve when the latter is being elevated.

6 is the valve seat which may be of any preferred form.

Within the casing, and preferably cast therewith, I have shown a bracket 7 having an aperture 8 adapted to constitute a guide for the valve stem 9. This stem extends downward from the valve, through the aperture and into the spud. The stem is shown with its lower extremity tapered as at 10. When the valve is unseated to the extent allowed by the arm 3, the tapered portion of the stem is partly within and partly above the aperture 8 in the bracket, as shown in dotted lines, so that a force acting laterally on the stem will cause the valve to be held elevated by the frictional engagement of the tapered extremity with the wall of the aperture, the bracket acting as a catch or stop. To create this lateral force and effect the shift of the stem, I have shown a gravitating spoon shaped member 12. This is shown formed with ears 13 fulcrumed on the bracket and with a lateral top portion 14 having an aperture therein through which the valve stem extends. This spoon element, when the valve is seated or the tank is empty, hangs by gravity so that it will not interfere with the movement of the valve. It is substantially straight and extends down into the spud approximately parallel with the stem. When, however, the valve is unseated and the tapered portion of the stem is within the aperture in the bracket, the flowing column of water swings the gravitating spoon member and causes its top 14 to shift the valve stem so that the latter is held by positive engagement with the bracket 7. When the flow of water ceases and the spoon member releases the stem, the latter is free to drop and as it is, throughout its length above the extremity, of substantially the diameter of the aperture 8, the valve will be evenly guided to its seat.

I claim as my invention:—

1. In a valve device, the combination with a vertically movable valve having a depending stem, a catch for said stem, a gravitating lever fulcrumed in proximity to said catch and formed with an aperture through which said stem passes and adapted to be actuated by the flow of water to shift said valve stem into engagement with said catch to hold said valve unseated.

2. In a valve device, the combination with a vertically movable valve having a depending stem formed with a tapered extremity, a guide through which said stem extends, a stop limiting the upward movement of said valve, a gravitating lever adapted to be actuated by the flow of water and having a spoon at its lower extremity and disposed substantially parallel to said stem, and adapted to bear against said stem when the valve is unseated and hold the tapered extremity of said stem in frictional engagement with said guide.

3. In a valve device, a valve having a depending stem tapered at its lower extremity, a bracket having an aperture constituting a guide for said stem, a stop to limit the unseating movement of said valve, and a gravitating lever fulcrumed on said bracket and having a lateral top portion formed with an

aperture to receive said stem, said lever being adapted to be actuated by the flow of water when said valve is unseated to shift said stem laterally and hold the tapered extremity thereof in engagement with the wall surrounding the aperture in said bracket.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

EDW. L. DELANY.

Witnesses:
GRAFTON L. MCGILL,
MARION I. BALFOUR.

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