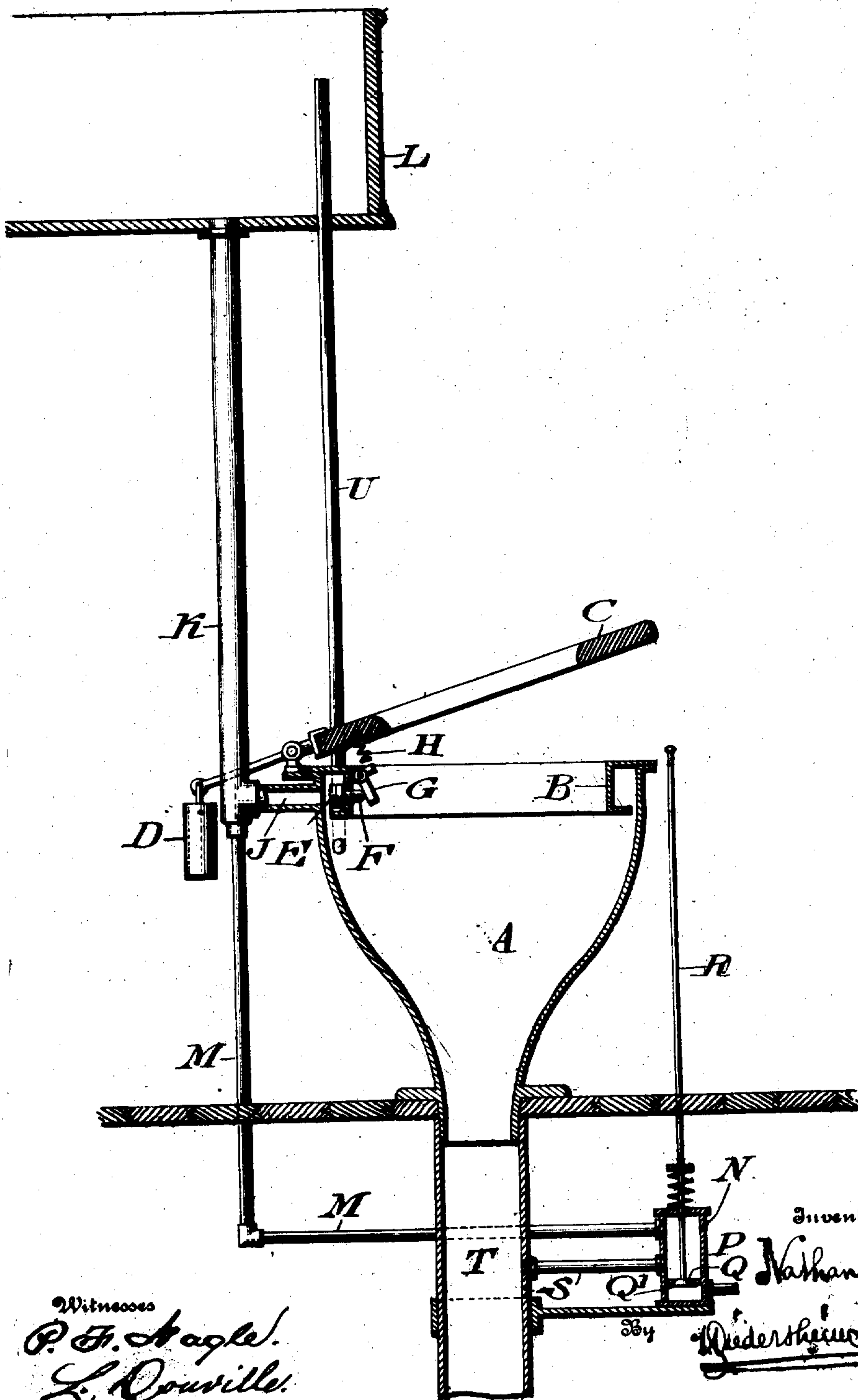


**WATER CLOSET.**

**900,071.**

**Patented Sept. 29, 1908.**



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## WATER-CLOSET.

No. 900,071.

Specification of Letters Patent.

Patented Sept. 29, 1908.

Application filed April 19, 1905. Serial No. 256,353.

*To all whom it may concern:*

Be it known that I, NATHAN B. GRIFFITH, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Water-Closet, of which the following is a specification.

My invention relates to improvements in water closets and the novelty resides in the peculiar construction and combination of parts hereinafter more fully described and claimed.

The view represents a vertical section of a water closet embodying my invention.

Referring to the drawings: A designates a hopper or bowl and B, the flush rim thereof.

C designates a self-rising seat, which is suitably mounted on a member of the hopper and provided, in the present case, with an attached weight D which effects the elevation of said seat and retains it in the elevated position.

E designates a valve having a head formed of or faced with rubber or other suitable elastic or pliable material, said valve having a stem F which occupies an opening in the rim B and projects somewhat therefrom, so as to be engaged by a limb of an elbow lever G which is mounted on ears on the rim B and has its other limb adapted to be engaged by the spring H which is connected with the under side of the rear portion of the seat C, so that the descent of the latter will operate the lever G and consequently the valve E as will be hereinafter more fully described. To prevent battering of the stem F or the member interposed between the seat and said stem should the seat be thrown down forcibly, the spring 'H, or H', is employed. The said spring is interposed between the seat stem so that the lever G, or the member G' will be gradually brought to act upon the stem of the valve, owing to the fact that the spring first acts lightly, and then as the spring is compressed it begins its work of operating the valve stem to its fullest extent, and thus the valve is closed without abruptness and consequently without liability of injuring the parts.

The rim B is composed of two walls, the outer wall being the upper portion of the bowl, said rim and wall forming a chamber which is closed at top and open at bottom. The walls have each an opening forming valve seats opposite to each other, the open-

ing in the inner wall receiving the stem of the valve E which is adapted to be operated by a leg G or G' on the seat C as has been stated. The back of said valve is adapted to close against the valve seat on said inner wall. The outer face of said valve is adapted to close against the valve seat of the outer wall of said rim. Connected with said outer wall at the valve seat thereof is the branch J which is in communication with the pipe K which latter is connected with the open flush tank L and opens thereinto. The pipe K is continued below the branch J as at M and extends to the casing N which is below the hopper and with which is connected the primary supply pipe P, said casing also containing the valve Q and seat Q' therefor, said valve having its stem R passing upwardly through the top of the casing N and the floor on which the hopper is supported and having its upper end below the under side of the seat C and in the path of the latter in its descent.

S designates a waste pipe which extends from the side of the casing N above the valve Q to the soil pipe T and is in communication with said casing and soil pipe for draining said casing when the valve Q is closed.

U designates the overflow pipe of the tank L, the same leading from the latter to the hopper A into which it discharges.

The operation is as follows; it being noticed that the tank L is empty. The seat C is occupied, whereby it lowers and contacting with the stem R, opens the valve Q. The lever G is also operated by said seat, whereby the valve E is forced against its seat on the branch J thus placing said branch and consequently the pipe K out of communication with the hopper. As water is permitted to enter the casing N, it flows therefrom into the pipes M and K and so reaches the tank L which is thus supplied.

It will be here noticed that the valve Q and pipe M are so sized that the filling of the tank will be accomplished sufficiently slow to allow occupation of the seat to a considerable extent before the overflow of the tank begins by the pipe U, this then being direct into the hopper.

As soon as the seat is vacated, or released, it rises when the valve Q closes and the supply of water to the casing N ceases. The lever G now returns to its normal position,



when the water in the branch J will press against the head of the valve E and force it from its outer seat thus opening said valve, whereby the water in the pipe K and the tank L will be forcibly injected into the rim B and so effectively flush the closet, it being noticed that the tank L is empty, consequently there will be no possibility of freezing said tank, it being also noticed that there is no trap, valve and connected mechanism in said tank and thus there is a maximum simplification of the tank.

It will also be seen that whatever water may remain in the pipe M, when the valve E opens to flush the closet, will enter the casing N from whence it will drain into the soil pipe through the pipe S by which provision there will be no freezing of the pipe M and casing N. Furthermore, owing to the pliable nature of the head of the valve E, when the valve is closed, it will freely leave the back of its seat without sticking and when said valve is open, its head will be forced against and seated upon the inner wall of said rim. By means of the double faced valve E and the two seats for the same, when the valve leaves the seat which directs water to the bowl, its back closes the opposite seat through which the stem F passes and in which it is movable, hence the water from the branch J will drain through the open bottom of the rim and so directly into the bowl. This will prevent the lodgment of any water about the stem F, hence there can be no freezing between the back of the valve E and the seat through which its stem passes. Again, as said valve is contained within the flush rim, and as when the closet is not in use, said valve is not in contact with water, it will not freeze on its seats in either of its positions.

The following-named features of construction are deemed important: The opening in the inner wall of the flush rim serves merely to guide the stem F of the valve E when the latter is opened. In the opened condition of the valve the back of the valve closes against said opening to prevent any leakage therethrough, whereby the water will not reach the elbow lever or trip G or the ears or axis thereof. This obviates the necessity of packing said stem. The seat of the valve E in the opposite direction, at the terminal of the branch pipe J, is virtually on the interior of the bowl, so that said valve

when open occupies the channel formed by the flush rim and thus when the seat C is unoccupied the valve always remains open in said channel and practically out of the way of the passage through the bottom wall thereof. Consequently should there be leakage at the valve Q, water may enter the pipes M and J, and instead of rising in the pipe K and the flush tank, it unobstructedly passes the open valve in the chamber and enters the bowl. This prevents freezing of water in the tank L, the pipe K and the pipe J. The trip or lever G has its axis on the inner wall of the flush rim thus utilizing the latter to support the former, said trip or lever being virtually covered by the back portion of the seat C.

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

1. In a water closet, the combination with a bowl and a seat of an endwise compressible member outside the flush pipe and depending directly from the under side of the seat in front of its hinge, a horizontally-movable valve stem on the bowl beneath the seat, and a lever mounted on the bowl with one arm bearing directly against the end of the said stem and the other arm arranged to receive one end of said compressible means, whereby as the seat is lowered the lever is actuated to move said stem and said means are compressed.

2. In a water closet, the combination with a bowl and a seat, and a flushing pipe connected with the bowl and having a valve seat, of an endwise compressible member outside of said flushing pipe and depending directly from the under side of the seat in front of its hinge, said member being compressible at right angles to the direction of movement of the valve a horizontally-movable valve stem on the bowl beneath the seat, a valve carried by said stem, and a lever mounted on the bowl with one arm bearing directly against the end of the said stem and the other arm arranged to receive one end of said compressible means, whereby as the seat is lowered the lever is actuated to move said stem and said means compressed.

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