H. N. A. McLEAN.

SANITARY CLOSET.

APPLICATION FILED DEC. 8, 1913.

1,107,685. Patented Aug. 18, 1914.

Fig. 1.

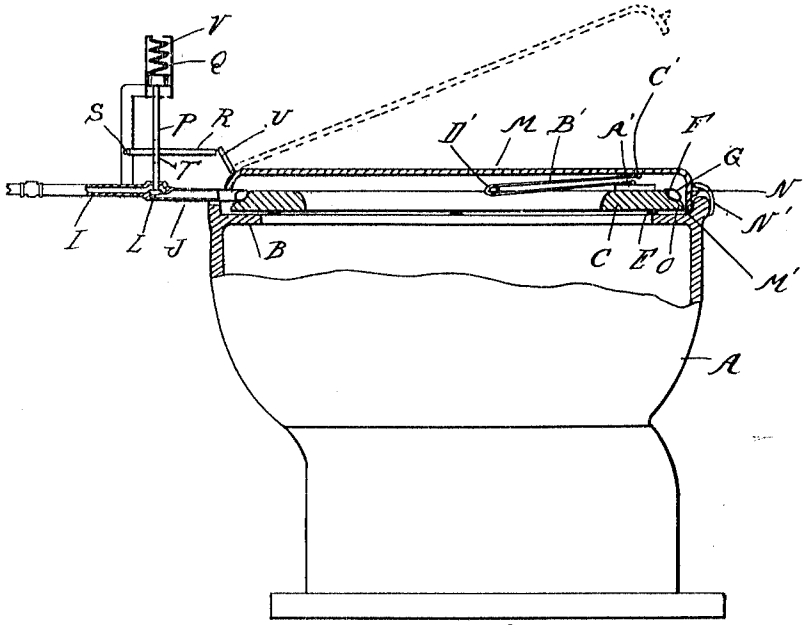


Fig. 2.

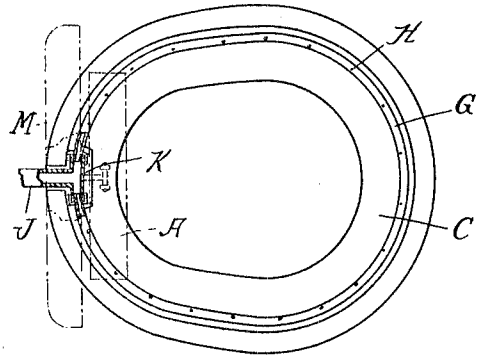
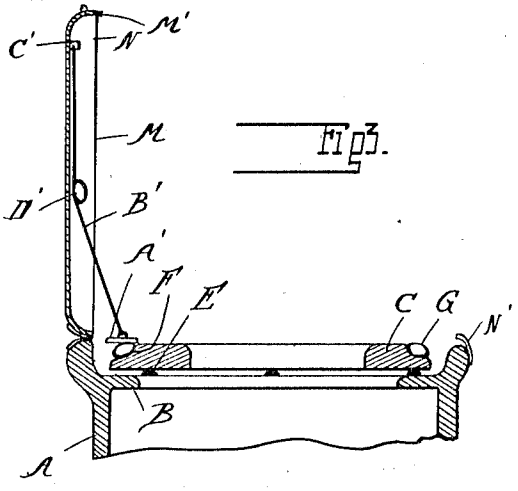


Fig. 3.



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SANITARY CLOSET.

1,107,685. Specification of Letters Patent. Patented Aug. 18, 1914.

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To all whom it may concern:

Be it known that I, HILLIARD N. A. McLEAN, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Sanitary Closets, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to sanitary closets and has among the objects thereof to provide a construction of closet in which the upper face of the seat may be readily cleaned when desired; to provide a construction which will automatically effect the cleaning of the upper face of the seat when the cover is closed; to provide a device which will spray liquid over the upper face of the seat; to provide a construction in which, when the cover is closed, the liquid sprayed over the upper face of the seat will be prevented from discharging over the upper edge of the bowl; and further to provide means for drying the upper face of the seat.

Other objects of the invention will more fully hereinafter appear.

The invention resides in the novel construction, arrangement and combination of parts as hereinafter set forth and particularly pointed out in the claims.

In the drawings,—Figure 1 is a sectional side elevation of a device embodying the invention; Fig. 2 is a fragmentary top plan view partly in section; and Fig. 3 is a vertical section through the device.

A designates the bowl of the closet, which may be of any suitable construction but is preferably provided with an inwardly-extending annular flange B adjacent the upper edge of the bowl.

C is the apertured seat which preferably is of a size to be arranged within the upper edge of the bowl and is provided with a plurality of spaced resilient lugs E which seat upon the flange B. These lugs provide a space E intermediate the flange and the seat, the purpose of which will hereinafter appear.

In order to maintain the seat sanitary, means is provided for spraying liquid, preferably water, upon the top face of the seat so as to wash the same. In the drawing I have illustrated one embodiment of the invention which is exceedingly desirable. Thus the seat C has a peripheral groove F within which is arranged an annular spray pipe G having perforations H arranged to spray the liquid discharged therefrom over the upper face of the seat C. I is a supply pipe and J is an inlet for the spray pipe G. K is a swiveled coupling between the pipes I and J which also forms the pivot about which the seat turns. L is a valve controlling the supply pipe.

In order to prevent the spray from discharging or spattering over the upper edge of the bowl the cover M for the closet is provided with a downwardly-extending flange N arranged within the upper edge of the bowl and adapted to seat upon the flange B. Preferably the latter has a rubber ring or packing M′ so as to form a tight joint between the flanges B and N.

N′ is a spring catch for releasably securing the cover in its closed position, and the flange N is spaced slightly from the outer edge O of the seat, thereby allowing the portion of the water draining outward toward the flange N to flow beneath the seat and flange B into the bowl. Preferably the spray pipe is of such a cross-section as to form a comparatively smooth edge for the periphery of the seat.

I find it desirable to so connect the valve to the cover that when the latter is closed the valve will be opened for a predetermined period. This may be accomplished in various ways but in the embodiment of the invention illustrated the valve rod P has a dash-pot Q connected therewith which will permit the free opening of the valve but will retard the closing movement.

R is a lever for opening the valve, which is pivoted at one end at S and travels in a slot T in the rod P while the other end is positioned in the path of a lug U on the cover.

V is a spring acting to seat the valve. By this arrangement when the cover is closed, the lug U will engage the outer end of the lever R, rocking the same upward which will cause the inner end of the lever to engage the top of the slotted portion T and thereby move the valve rod upward, opening the valve. When the cover reaches its completely closed position the lug U passes out of engagement with the outer end of the lever R and permits the spring V to close the valve. The closing of the valve is, as before stated, retarded by the dash-pot, thereby permitting the valve to remain open a short period. The arrangement of the lug

U and lever R is such that the valve is not opened until the cover is practically closed.

The lever R may be raised by any suitable mechanism or arrangement before the cover is raised whereby the device will operate in the manner above stated.

As the joint between the flanges B and N when the cover is closed is sealed by the ring M′, the water or other liquid sprayed from the pipe G cannot discharge or spatter over the upper edge of the bowl, but is caused to drain from the seat into the bowl.

Preferably the seat is made of pressed steel having an enameled surface, since the water will readily drain from the enameled surface. However, it may be desirable to provide means for drying the upper face of the seat, and I have provided an arrangement whereby a drying member is automatically moved over the upper face of the seat when the cover is raised. Thus A′ is a drying member of a size to extend completely across the upper face of the seat C and B′ is a spring having one end secured to the member A′ and the other end attached to the cover as at C′. Intermediate the ends of the spring B′ is a coil or loop D′. The arrangement is such that when the cover is raised the member A′ is arranged slightly in rear of the seat, as shown in Fig. 3, but when the cover is moved to its closed position, the member B′ will cause the member A′ to be pushed toward the front of the seat, the parts when the cover is closed being as shown in Fig. 1. Upon the opening of the cover the member A′ will be drawn across the upper face of the seat, the spring B′ acting to yieldably press the drying member in contact with the seat when said member is drawn over the upper face of the member G.

While I have illustrated in the drawings a desirable form of my invention, I do not wish to be limited to the particular construction shown, but consider my invention broad enough to embody various modifications.

What I claim as my invention is,—

1. In a sanitary closet, the combination with the bowl and its seat, of means for washing the upper face of the seat, and a cover for the seat, said cover when closed inclosing the washing means.

2. In a sanitary closet, the combination with the bowl and its seat, of means for washing the upper face of the seat, and a cover for said seat inclosing the latter and the washing means and forming a tight joint with the bowl.

3. In a sanitary closet, the combination with the bowl having an annular flange, of a seat supported by the flange, means for spraying liquid over the upper face of the seat, and a cover inclosing said means and the seat and forming a tight joint with said flange.

4. In a sanitary closet, the combination with the bowl and its movable seat, of means carried by the seat for spraying liquid over the upper face thereof.

5. In a sanitary closet, the combination with the bowl and its movable seat, of an annular spray pipe carried by the seat.

6. In a sanitary closet, the combination with the bowl and its seat, the latter being provided with a peripheral groove, of an annular spray pipe arranged in said groove and adapted to spray liquid over the upper face of said seat.

7. In a sanitary closet, the combination with the bowl and its seat, of a spray pipe carried by the seat and arranged to discharge liquid upon the upper face of the seat, a pivotal connection between the bowl and the seat, a supply pipe for said spray pipe, and a swiveled connection between said pipes.

8. In a sanitary closet, the combination with the bowl and its seat, of means for spraying liquid over the upper face of the seat, a valve controlling said means, a cover, and means actuated by said cover for opening said valve.

9. In a sanitary closet, the combination with the bowl and its seat, of means for spraying liquid over the upper face of the seat, a valve controlling said means and cover, and means actuated by said cover when the latter is substantially closed for opening said valve.

10. In a sanitary closet, the combination with the bowl and its seat, of means for spraying liquid over the upper face of the seat, a valve controlling said means, a cover, means actuated by said cover for opening said valve, and means for retarding the closing of said valve.

11. In a sanitary closet, the combination with the bowl and its seat, of means for discharging liquid over the upper face of the seat, a valve controlling said means, and means for automatically opening said valve.

12. In a sanitary closet, the combination with the bowl and its seat, of means for discharging liquid over the upper face of the seat, a valve controlling said means, means for automatically opening said valve, and means for retarding the closing of said valve.

13. In a sanitary closet, the combination with the bowl and its seat, of means for discharging liquid over the upper face of the seat, a cover, and means for automatically moving a drying member over the upper face of the seat upon the raising of the cover.

14. In a sanitary closet, the combination with the bowl and its seat, of means for discharging liquid over the upper face of the seat, a cover for the seat, a drying member arranged in operative relation to the upper

face of the seat, and a connection between the drying member and the cover for effecting upon a raising of the cover a movement of the drying member over the upper face of the seat.

15. In a sanitary closet, the combination with the bowl and its seat, of means for discharging liquid over the upper face of the seat, a cover for the seat, a drying member arranged in operative relation to the upper face of the seat, a spring having one end connected to said drying member and the other end operatively attached to the cover, said spring having a coil intermediate its ends and being arranged to effect a movement of the drying member over the upper face of the seat when the cover is raised, said spring and drying member being arranged within the cover when the latter is closed.

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

HILLIARD N. A. McLEAN.

Witnesses:
WM. J. BELKNAP,
JAMES P. BARRY.

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