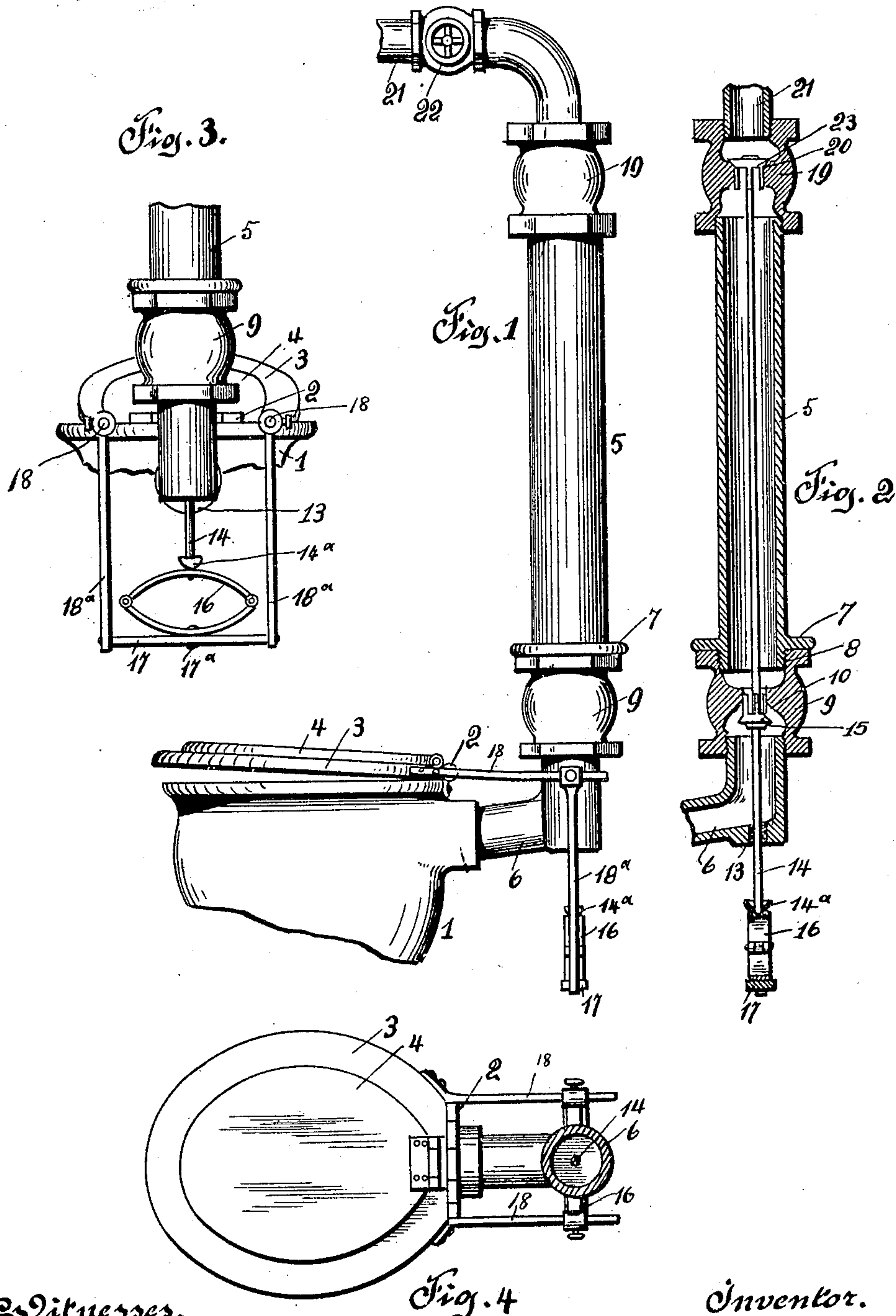


A. SUCCOP.  
FLUSHING MECHANISM.  
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909,961.

Patented Jan. 19, 1909.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

ALBERT SUCCOP, OF PITTSBURG, PENNSYLVANIA.

## FLUSHING MECHANISM.

No. 909,961.

Specification of Letters Patent.

Patented Jan. 19, 1909.

Application filed August 19, 1905. Serial No. 274,931.

*To all whom it may concern:*

Be it known that I, ALBERT SUCCOP, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Flushing Mechanisms, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to certain new and useful improvements in flushing mechanism for water closets, and the invention relates more particularly to that class of closets known as "seat action" closets, in which the  
15 flushing of the closet is produced by the raising and lowering of the seat of the closet.

The invention has for its object a novel form of flushing tank adapted to be used in connection with a bowl or hopper, the inlet  
20 and outlet of said tank being automatically controlled, by the raising and lowering of the seat of the closet.

Another object of this invention is to provide a novel form of flushing mechanism for  
25 closets which will be positive in its action, simple in its construction, and free from all danger of being injured by ordinary use.

With the above and other objects in view, which will more readily appear as the nature of the invention is better understood,  
30 the same consists in the novel construction, combination and arrangement of parts to be hereinafter more fully described.

The essential features of the present invention are necessarily susceptible to structural change without departing from the spirit and scope of the invention, but the preferred embodiments of the invention are illustrated in the accompanying drawings,  
40 wherein:—

Figure 1, is a side elevation of a hopper or bowl equipped with my improved flushing mechanism, Fig. 2, is a vertical sectional view of a portion of the mechanism, Fig. 3,  
45 is a rear elevation of a portion of the flushing mechanism as connected with the seat of a hopper or bowl, and Fig. 4, is a plan view of the hopper equipped with the actuating mechanism of the flushing tank.

50 In the drawing, 1 indicates a bowl of ordinary form, on which is hinged, as at 2, a seat 3, provided with a lid 4.

5 indicates the reservoir or tank, usually in the form of a large stand pipe as shown.

55 6 indicates an elbow connection secured in the water inlet of the bowl. Mounted upon

the vertical leg or arm of this elbow connection 6 is a valve casing 9 in which is received the threaded lower end 8 of the stand pipe 5, said stand pipe 5 being provided adjacent its  
60 lower end with a flange 7 seated on the upper end of the valve casing 9. A similar valve casing 19 is positioned upon the upper end of said reservoir 5 and is provided with a centrally apertured partition, having the  
65 valve seat 20 in the upper side thereof. The valve casing 9 is provided with a centrally apertured partition having the valve seat 10 in its lower side.

A valve rod 14 is mounted in the stand  
70 pipe, extends into the valve casing 19, through the valve casing 9, and through the ordinary arm or leg of the elbow 6, an aperture 13 being provided in said elbow for said valve rod, and suitable packing being placed  
75 in said aperture to prevent leakage of the water therethrough. The lower end of the rod carries a cup 14<sup>a</sup>, which rests on a substantially elliptical shaped spring 16, carried by cross head 17 which connects the  
80 lower ends of two vertical rods 18<sup>a</sup>, attached at their upper ends to arms 18 which are carried by the seat 3, being rigidly connected at the rear end of said seat.

On the valve rod 14 below the partition in  
85 the valve casing 9 is a valve 15, adapted to seat, when the valve rod is elevated, with the valve seat 10, and upon the extreme upper end of said valve rod is a valve 23 adapted to normally seat with the valve seat 20 of the  
90 valve casing 19.

The seat 3 is adapted to remain normally in a slightly tilted position as seen in Fig. 1 of the drawings, and the valves 15 and 23  
95 are shown in their normal position in Fig. 2 of the drawings, the valve 23 being seated, and the valve 15 unseated.

When the seat 3 is depressed into engagement with the bowl, the outer ends of the  
100 arms 18 move upward, owing to the downward movement imparted to the forward part of the seat, the rods 18<sup>a</sup> are elevated, and through the medium of cross head 17 and spring 16, valve rod 14 is elevated, forcing  
105 valve 15 against its seat, and unseating valve 23, whereby the water from pipe 21 may flow in to fill the stand pipe 5. When, however, pressure upon the seat 3 is relieved, valve  
110 rod 14 descends by gravity and also by reason of the water against valve 23 as well as against valve 15, and valve 23 is seated, while valve 15 is simultaneously unseated, thus



allowing the water contained within the stand pipe 5 to flow into the bowl and flush the same.

5 It will be noted that the stand pipe constituting the reservoir is, in my device, normally empty and, when the valve rod 14 is elevated as above described, should the pressure of water delivered into the stand pipe increase for any cause above the normal pressure, the valve rod by reason of its being  
10 yielding supported at its lower end by the spring 16, will yield under such excess pressure so as to unseat valve 15 sufficiently to permit the water to pass through to the bowl.

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

In a flushing mechanism, the combination with a bowl, and a seat hinged thereto, of a pair of arms connected to the rear edge of  
20 the seat and projecting rearwardly, an elbow connected to said bowl, a valve-casing supported on said elbow, and provided with an apertured partition having a valve seat on its underneath face, a stand pipe supported  
25 on said valve casing and communicating therewith, a valve casing mounted on the upper end of said stand pipe having a central

apertured partition provided with a valve seat on its upper face, a supply pipe communicating with said second named valve casing, a valve rod extending through said elbow and stand pipe, a valve on the upper end of said rod normally seated on the valve-seat in said upper valve casing, a second valve on said rod below the partition in said lower valve casing and normally unseated from the valve seat in said casing, vertical arms connected to the arms carried by said seat on the bowl, a cross head connecting said vertical arms, a spring on said cross head engaged by the lower end of said valve rod, said valve rod being capable of longitudinal actuation for reversing the said positions of the valves, and said valves adapted to automatically return to their normal positions upon the existence of an excess of any predetermined water pressure in said supply pipe.

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

ALBERT SUCCOP.

Witnesses:

K. H. BUTLER,  
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