

Dec. 1, 1925.

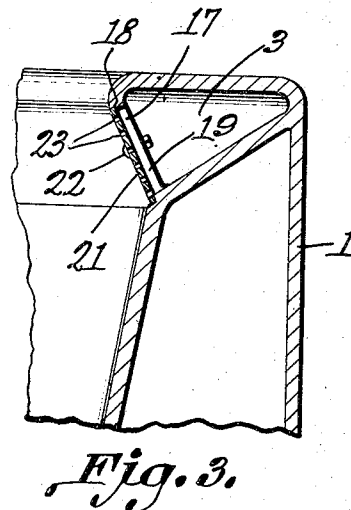
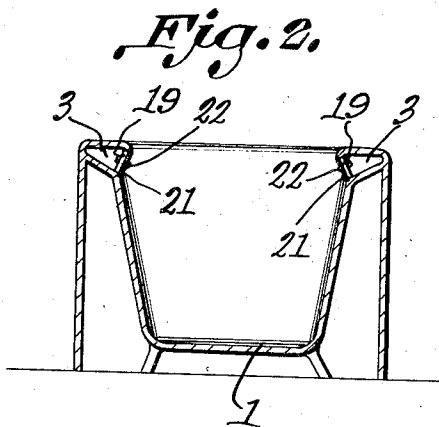
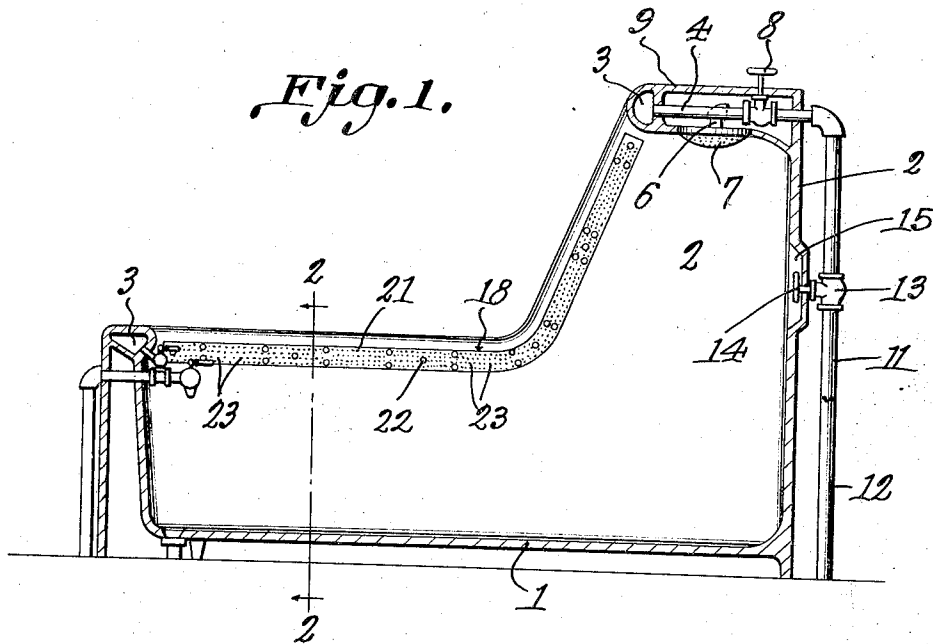
L. R. PAUL

1,563,783

SELF CLEANING BATHTUB

Filed Sept. 24, 1925

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 5.

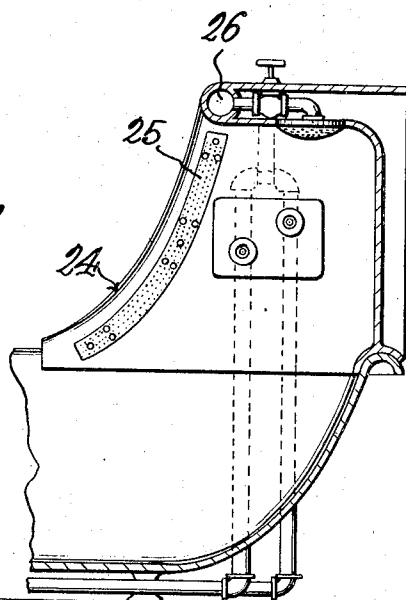


Fig. 7.

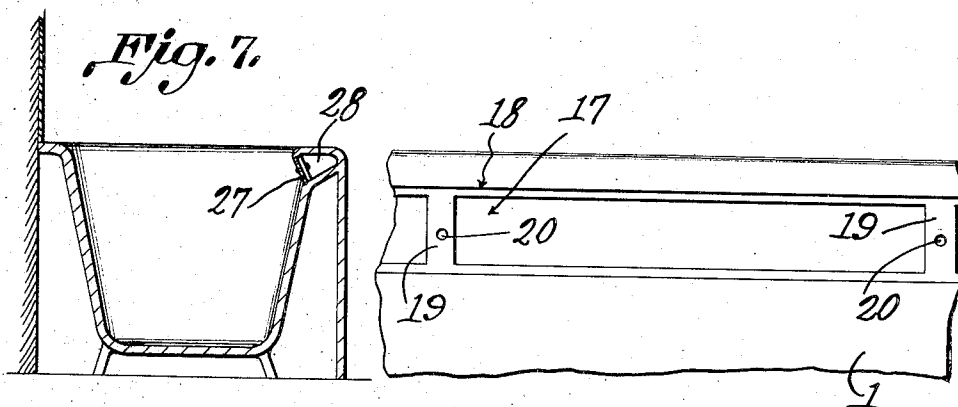


Fig. 4.

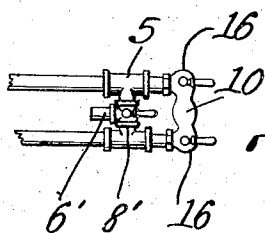


Fig. 6.

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UNITED STATES PATENT OFFICE.

LEON R. PAUL, OF CHICAGO, ILLINOIS.

SELF-CLEANING BATHTUB.

Application filed September 24, 1925. Serial No. 56,393.

To all whom it may concern:

Be it known that I, LEON R. PAUL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Self-Cleaning Bathtub, of which the following is a specification.

This invention relates to bath tubs, one of its objects being to provide simple and efficient means whereby, when it is desired to clean the tub, the opening of a valve will result in the discharge of small jets of water from the rim portion of the tub against the opposite wall of the tub so that any accumulations on the surface of the tub will be washed downwardly toward the outlet.

A further object is to provide a bath tub which is practical to produce, it being understood that the improvements constituting the present invention can be built into a tub of special construction or into a hood attachment to be applied to an ordinary bath tub.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings,

Figure 1 is a vertical longitudinal section through a specially constructed bath tub having the present improvements combined therewith.

Figure 2 is a section on line 2—2 Figure 1. Figure 3 is an enlarged section through the rim portion of the tub.

Figure 4 is a face view of a portion of the tub showing one of the openings over which the apertured plate is to be secured.

Figure 5 is a section through a hood adapted to be applied to an ordinary bath tub, said hood having the present improvements combined therewith.

Figure 6 is a view showing in detail a means for controlling the flow of water to the rim of the tub.

Figure 7 is a transverse section through a

bath tub having cleaning means at one side only.

Referring to the figures by characters of reference 1 designates a bath tub one end portion of which is extended upwardly to constitute a hood or housing 2. The rim portions of the tub and hood are cast hollow so as to provide a water conducting passage 3 extending continuously along the rim. Opening into this passage are pipes 4 having a branch pipe 6 which opens into a spraying nozzle 7 supported within or against the bottom wall of the overhanging portion of hood 2. A valve 8 may be provided for controlling the flow of water to the nozzle 7.

The pipes 4 and their connections are preferably located between the upper and lower walls of the overhanging portion 9 of the hood and these pipes can be extended outwardly from said overhanging portion where they are joined to hot and cold water supply pipes 11 and 12 each of which can be provided with a valve 13 having its handle 14 arranged within a recess 15 in one of the upstanding walls of the tub.

From the foregoing it will be apparent that water can flow within pipes 11 and 12 through the open valves 13 to the respective pipes 14. By opening the valve 8 water will not only be directed into the passage 3 but will also be directed to the nozzle 7. The valves 14 provide a means whereby the occupant of the tub can control readily the flow of water to the nozzle and to the passage 3.

Located at the foot of the tub is a water inlet 10 controlled by mixing valves 16. This inlet has supply pipes 5 leading thereto and a branch pipe 6' communicates with the supply pipes and opens into the hollow rim of the tub. A mixing valve 8' controls the flow through the branch pipe.

Formed within the inner wall of passage 3 is a series of slots 17 extending longitudinally of the passage, each of these slots being provided with a continuous recess in the wall thereof as shown at 18 thereby to provide a continuous shoulder.

Narrow webs or connecting strips 19 are located between the slots and are provided with apertures 20 for the reception of fastening means hereinafter explained. By referring particularly to Figures 2 and 3 it

will be noted that the bottom wall of the passage 3 is inclined downwardly and inwardly so that any liquid contained within the passage is thus free to drain through the slots and into the tub.

Extending longitudinally of the slots are a desired number of strips 21 of metal or any other suitable material which will not corrode, these strips being adapted to fit snugly within the recesses 18 and being fastened in place by bolts 22 or the like extending through the strips and through the apertures 20. Each of these strips 21 is provided with a plurality of small apertures 23 so arranged as to direct jets of water downwardly and inwardly from the strips and against the opposite sides of the tub.

Thus it will be seen that when the valves are opened the jets of water will be directed from the passage 3 through the apertures 23 and against the opposite sides of the tub so as to wash down the sides and remove therefrom all accumulations.

Importance is attached to the fact that the inner wall of the passage 3 is formed with elongated slots. It is thus possible to readily construct the tub whereas, should the tub be formed with small openings in its walls the construction thereof would be practically impossible. Instead of providing small openings in the tub the apertured strips 21 are employed, these strips fitting snugly in the recesses 18 so as to bridge the slots.

It is to be understood, of course, that if desired a detachable hood section 24 can be mounted on one end portion of the tub, this hood section being provided with an apertured strip 25 which extends across slots formed in the inner wall of the passage 26 formed in the rim of the hood.

Furthermore it is to be understood that if desired, an apertured strip 27 can be located at only one side of the tub, as shown in Figure 7 wherein the water receiving passage 28 only extends along the rim and one side of the tub.

As before stated the construction of the

bottom wall of each passage is such that water will not be trapped therein but all of the liquid contents of the passage can drain therefrom. In this connection see particularly Figure 3 of the drawing.

What is claimed is:

1. A bath tub having an overhanging hood portion, there being a passage within the rim of the hood portion for the reception of water, said passage being provided with spaced longitudinal slots opening through the inner wall of the hood portion, means for directing water into the rim, and an apertured plate flush with the inner surface of the hood portion and bridging the slots, said plate constituting means for directing jets of water inwardly and downwardly against the opposite wall of the hood portion and tub.

2. A bath tub having a hollow rim provided with spaced slots extending longitudinally of the inner surface of the rim, the walls of the slots being recessed, means for directing water into the hollow rim, an apertured plate seated in the recesses with its inner surface flush with the inner surface of the wall of the tub, the apertures in said plate being positioned to direct jets of water inwardly and downwardly against the opposed wall of the tub.

3. A bath tub having a hollow rim provided with longitudinal slots, the bottom wall of the passage within the rim being inclined downwardly to the lower walls of the slots thereby to drain through the slots, there being recesses along the walls of the slots, webs connecting opposed walls of the slots, a plate seated in the recesses and detachably secured to the webs, said plate having its inner surface flush with the inner surface of the wall of the tub, there being apertures in the plate for directing jets of water downwardly and inwardly against the opposite wall of the tub.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

LEON R. PAUL.