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BATHTUB CLEANER

Filed May 21, 1968

FIG. 1

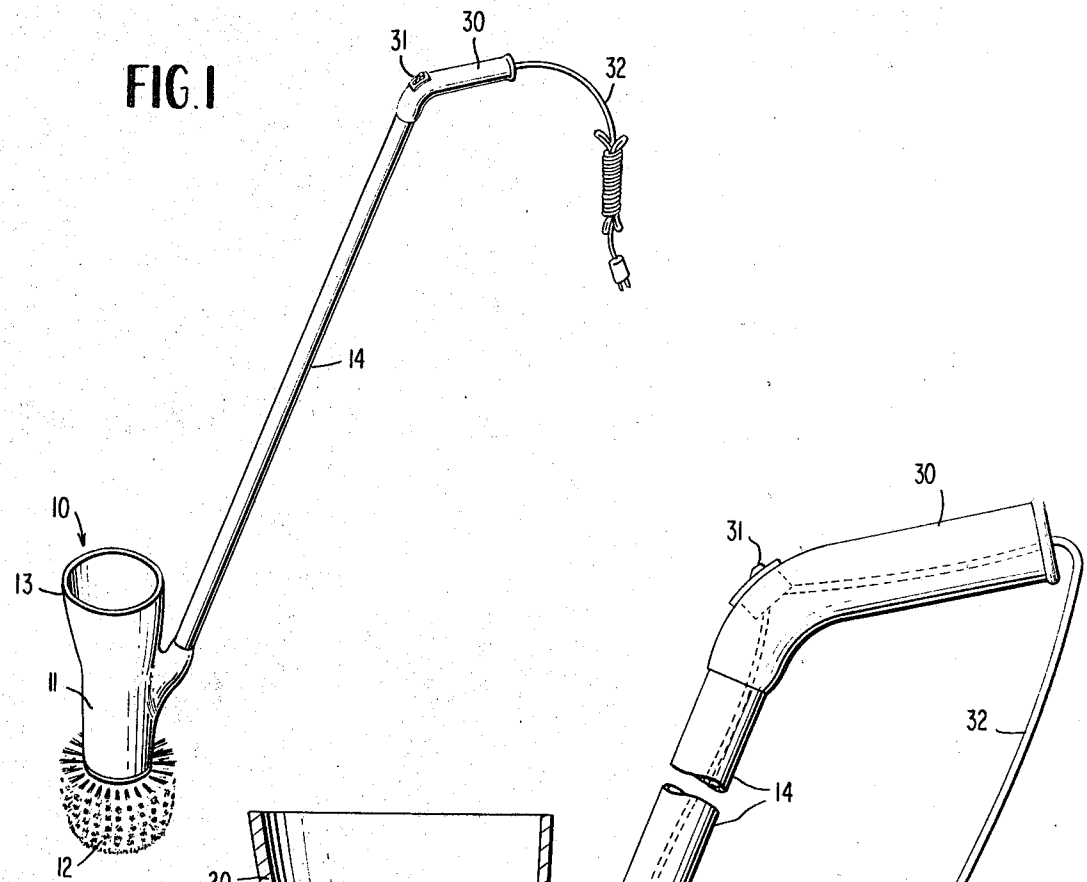
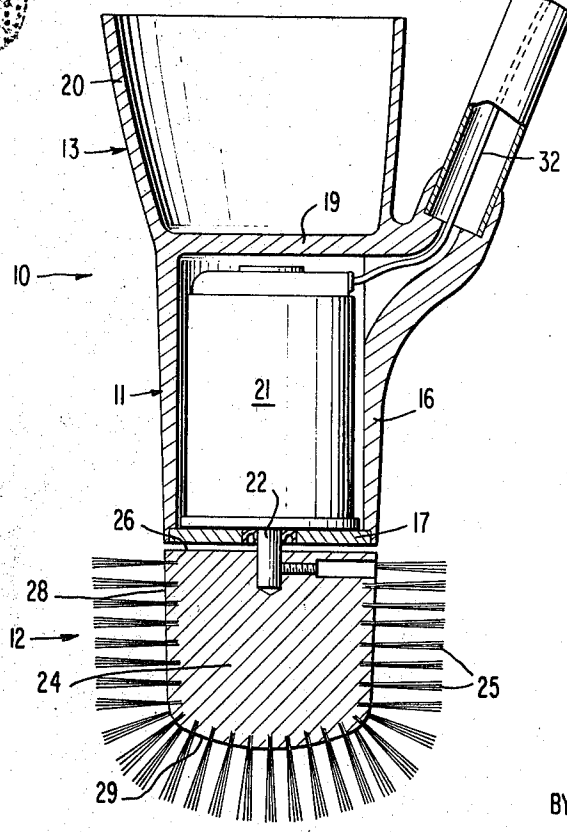


FIG. 2



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BATHTUB CLEANER

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ABSTRACT OF THE DISCLOSURE

A bathtub cleaner comprising a housing, an electric motor in the housing, a brush suspended below the housing and rotatably supported by the motor, and open ended liquid receptacle mounted on top of the housing, and a handle connected to and extending in an upward direction from one side of the housing.

BACKGROUND OF THE DISCLOSURE

When cleaning a bathtub or other large liquid receptacle, the person cleaning the tub must usually bend down close to the floor and extend his body over the tub in order to reach the bottom surface and side walls of the tub. Of course, assuming and maintaining such a position is rather difficult, and an elderly person or any person not physically fit may have a difficult time in properly cleaning a bathtub. Furthermore, in cleaning a bathtub it is usually necessary for the hands of the person cleaning the tub to contact the water and detergent used in the cleaning process, which is undesirable for some people. When the bathtub has been properly scrubbed with detergent, it is usually necessary to rinse out the residue of detergent from the tub. This usually requires the person cleaning the tub to splash the water from the bottom of the tub adjacent the drain over the rest of the tub, or use a pan or bucket to collect fresh water from the nozzle of the tub and pour the fresh water on the sides of the tub. Thus, the cleaning of a bathtub is a taxing and messy procedure.

SUMMARY OF THE INVENTION

Briefly described, the present invention comprises a bathtub cleaner which allows the person cleaning the bathtub to stand upright adjacent the tub and clean the tub without contacting the water or detergent used in the cleaning process. The cleaner includes a rotatable brush for scrubbing the bottom and wall surfaces of the tub, and a receptacle for receiving water from the faucet of the tub and pouring the water about the various points of the tub in rinsing or wetting the tub.

Thus, it is an object of this invention to provide a bathtub cleaner which allows the person cleaning the tub to stand upright adjacent the tub throughout the cleaning process.

Another object of this invention is to provide a bathtub cleaner for cleaning a bathtub without requiring the person operating the cleaner to contact the water or cleaning agent.

Another object of this invention is to provide a bathtub cleaner which is simple in construction, durable, and easy and convenient to operate.

Other objects, features and advantages of the present invention will become apparent upon reading the following specification, when taken in conjunction with the accompanying drawing.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the bathtub cleaner.

FIG. 2 is a side cross sectional view of the bathtub cleaner.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now particularly to the drawing, in which like numerals indicate like parts throughout the several views, FIG. 1 shows bathtub cleaner **10** which includes housing **11**, brush **12**, liquid receptacle **13**, and operating handle **14**. Housing **11** is generally cylindrical and includes annular side wall **16** and flat bottom wall **17**. Liquid receptacle **13** rests on top of housing **11**. Receptacle **13** includes a bottom wall **19** which is of a diameter approximately equal to the diameter of housing **11**, and outwardly tapered annular side wall **20**. The diameter of side wall **20** at its upper end is larger than the diameter of bottom wall **19**. The upper end of receptacle **13** is open, so that receptacle **13** is generally cup-shaped. Receptacle **13** is offset slightly from the center of housing **11**.

Motor **21** is positioned within housing **11**, and its drive shaft **22** extends downwardly through bottom wall **17** of housing **11**. Brush **12** includes base or support member **24** and bristles **25**. Base **24** includes a circular top surface **26**, an annular side surface **28**, and a dome-shaped bottom surface **29**. Circular top surface **26** of base **24** is positioned adjacent circular bottom surface **17** of housing **11**, and drive shaft **22** of motor **21** extends into an opening of base **24**, to support base **24** from motor **21**. The diameter of base **24** is approximately equal to the outside diameter of housing **11**. Bristles **25** extend outwardly from annular surface **28** and dome-shaped surface **29** of base **24**, so that all surfaces of base **24** have bristles extending therefrom except for circular top surface **26**.

Operating handle **14** is connected to housing **11** at the juncture of housing **11** and receptacle **13**. Operating handle **14** extends upwardly from housing **11** at an angle convenient for an operator to grasp and manipulate bathtub cleaner **10**. The upper end of operating handle **14** terminates in hand grip **30**, and switch **31** is located at hand grip **30**. Switch **31** functions to control the supply of electricity to motor **21** through wires **32**. If desired, motor **21** can be a multi-speed motor, and switch **31** can be a multi-position switch to operate the motor at various speeds. Operating handle **14** is positioned on the side of housing **11** away from the direction in which liquid receptacle is offset from housing **11**. Thus, liquid receptacle **13** is offset away from operating handle **14**.

OPERATION

When bathtub cleaner **10** is used to clean a bathtub the operator merely plugs in the cord extending from operating handle **14**, and the cleaner is ready for use. Under normal procedures, the bathtub to be cleaned will be wetted down by opening the faucet. The sides and rear of the tub can be wetted by extending liquid receptacle **13** beneath the faucet to fill the receptacle, and by pouring the water from the receptacle on the portion of the tub that it is desired to have wet. The operator then applies the cleaning compound to the tub, usually by shaking the compound from a commercially available container on the portions of the tub which need cleaning. The bristles **25** of brush **12** are then applied to the portions of the tub to be scrubbed, and switch **31** is then closed to energize motor **21**. As motor **21** is energized, brush **12** will rotate about an upwardly extending axis, so that bristles **25** will encounter the bottom and wall surfaces of the tub, to perform the necessary scrubbing action. Since base **24** of brush **12** is rounded in conformance to the usual corners of a tub, bristles **25** will be highly effected in cleaning the corners of the tub. Furthermore, the height and shape of annular side surface **28** of base **24** of brush **12** is such that the bristles extending from this surface of the base will be highly effective in cleaning the vertical walls of the tub. Since operating handle

14 extends almost directly upward from housing 11, brush 12 can be easily manipulated to clean the side of the tub adjacent the operator without causing operating handle 14 to unduly hinder the scrubbing operation. Also, since bristles 25 extend beyond the diameter of housing 11 and liquid receptacle 13, bristles 25 will be effective to maintain housing 11 and liquid receptacle 13 spaced away from the side walls of the tub during the scrubbing operation.

After the scrubbing operation has been completed, the operator can reposition liquid receptacle 13 beneath the tub faucet to collect some fresh water, and the water can be poured over the previously scrubbed areas of the tub to rinse away the cleaning agent. Since the liquid receptacle is offset away from operating handle 14, it will be offset toward the tub faucet in normal use as the operator fills the receptacle. Also, when the water is poured from receptacle 13, it can be conveniently poured from the portion of the lip of receptacle 13 away from operating handle 14 since the center of gravity of bathtub cleaner 10 will normally cause cleaner 10 to tilt in this direction as it is held by the handle. Thus, the offset of liquid receptacle 13 away from operating handle 14 aids in the collecting and pouring of the water. Of course, cleaner 10 can also be easily tilted to its side to pour water from the receptacle.

It will be obvious to those skilled in the art that many variations may be made in the embodiments chosen for the purpose of illustrating the present invention without departing from the scope thereof as defined by the appended claims.

What is claimed is:

1. A cleaning apparatus for cleaning bathtubs or the like, comprising a housing, a liquid receptacle mounted on top of said housing, a handle connected to and extending in an upward direction from one side of said housing, an electric motor in said housing, and a brush suspended below said housing and rotatably supported by

said motor, said brush including a base with a flat circular top, an annular side wall, and a dome-shaped bottom wall, said base including bristles extending outwardly from said annular side wall and said dome-shaped bottom wall.

2. The invention of claim 1 wherein the outside diameter of said receptacle is larger than the outside diameter of said housing.

3. The invention of claim 1 wherein said base is approximately the same diameter as the outside diameter of said housing, and the bristles extending from said annular side wall project beyond the limits of the diameter of said housing.

4. A cleaning apparatus for cleaning bathtubs or the like comprising a housing, a handle rigidly connected to and extending in an upward direction from one side of said housing for normally maintaining said housing in an upright attitude, an electric motor in said housing, a brush suspended below said housing and connected to said motor for rotation with respect to said housing, and a liquid receptacle mounted on top of said housing at a position offset to the side of said housing away from said handle, said receptacle defining an open upper end with the cross sectional area of the lip of the opening of the receptacle being larger than the cross sectional area of the base of the opening.

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