Jan. 9, 1962 H. R. BEEBE 3,015,828

SPRAY BATH

Filed July 12, 1960

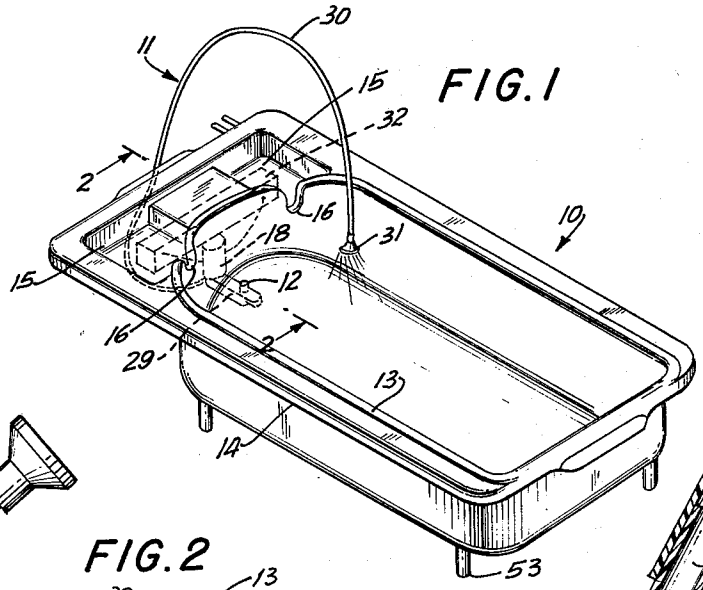


FIG. 1

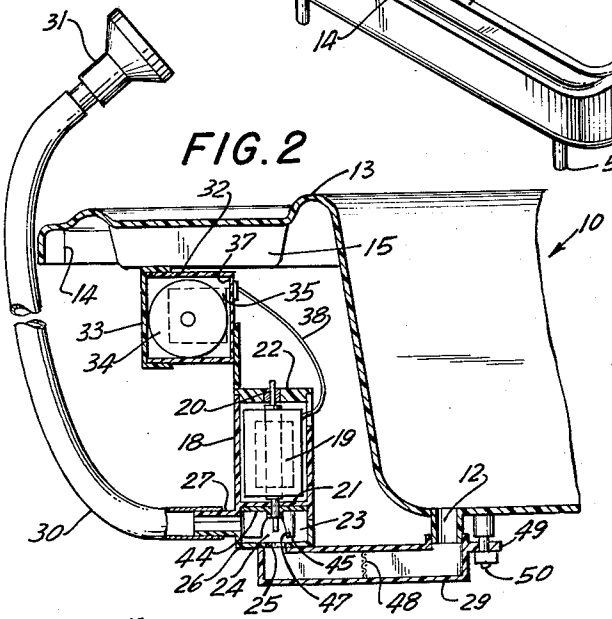


FIG. 2

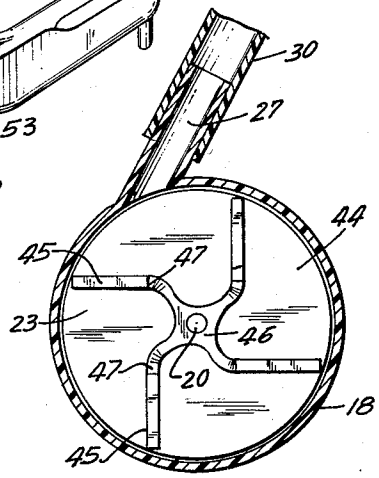


FIG. 4

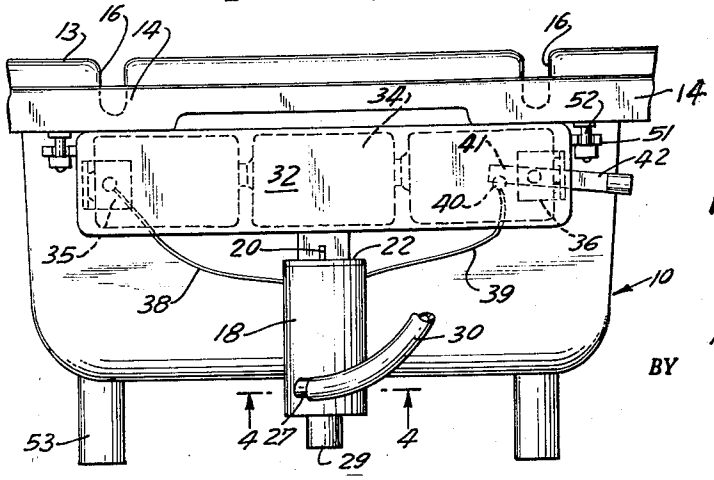


FIG. 3

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SPRAY BATH

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This invention relates to a spray bath and while not limited thereto, the same has particular reference to a spray bath for dolls.

An object of the invention is to provide a bath tub and a spray attachment for continuously recirculating water from the tub for the discharge thereof into the tub in the form of a spray.

A further object of the invention is to provide a motor driven impeller located below the bottom of the bath tub for gravitationally receiving a stream of water from the tub which is forced through a spray head mounted on the free end of a flexible hose adapted to be directed downwardly into the tub.

Still another object of the invention is to provide an impeller having a top wall and vanes connected therewith and extending outwardly in offset relation from the center of the impeller and with adjacent vanes disposed in substantially right angular relation.

With the foregoing and other objects in view, reference is now made to the following specification and accompanying drawings in which the preferred embodiment of the invention is illustrated.

In the drawings:

FIG. 1 is a perspective view of a doll's bath tub and spray attachment therefor constructed in accordance with the invention.

FIG. 2 is an enlarged fragmentary sectional view taken approximately on line 2—2 of FIG. 1.

FIG. 3 is a fragmentary view in elevation at one end of the tub.

FIG. 4 is an enlarged fragmentary sectional view taken approximately on line 4—4 of FIG. 3.

Referring to the drawings, the spray bath includes a bath tub **10** and a spray attachment **11** affixed to the tub at one end thereof.

The tub **10** is preferably of integral formation and includes a rectangular shaped receptacle having a bottom outlet **12** adjacent one end thereof and with a rim **13** extending about the upper edge of the receptacle. The rim **13** is formed with a downturned flange **14** and depressed trays **15** are provided in the forward end of the rim **13** for receiving soap or other articles adapted for use during the bathing and spraying operation. The wall between the receptacle and the trays **15** is recessed as at **16** for draining water from the trays into the tub.

The spray attachment **11** is affixed to the tub below the forward end of the rim and includes a cylindrical housing **18** in which a direct current motor **19** is arranged in upright relation with the armature shaft **20** thereof journaled for rotation in a partition wall **21** and in a removable top wall **22**. The armature shaft protrudes through the partition wall **21** and has an impeller or pump **23** affixed to the protruding end thereof. The impeller is mounted for rotation within a cylindrical chamber **24** located in the lower part of the housing below the partition wall **21**. The impeller chamber **24** has an inlet opening **25** extending centrally through the bottom wall **26** of the housing and an outlet opening **27** in the side wall thereof. A conduit **29** is affixed to the bottom wall of the housing and is connected with the bottom outlet **12** of the tub for gravitationally receiving a flow of water from the tub and for directing the same upwardly into the impeller chamber **24** through the inlet opening **25**. The impeller chamber **24** is disposed

below the bottom wall of the tub whereby water will drain from the tub so as to fill the impeller chamber at all times when there is a flow of water into the tub. A flexible hose **30** having a spray nozzle **31** on the free end thereof is connected with the housing at the outlet opening **27** for receiving a flow of water from the impeller chamber which is discharged through the spray nozzle.

Affixed to the housing **18** is a container **32** having a removable cover **33** closing the outer side thereof in which is arranged a plurality of dry cell storage batteries **34** disposed in end to end relation with the endmost batteries in electrical contact with spring terminals **35** and **36** affixed to the side wall **37** of the container.

The motor **19** is in circuit with the batteries **34** by conductor wires **38** and **39**. The conductor wire **38** is connected with the spring terminal **35** and the conductor wire **39** is connected with a contact **40** carried by the side wall **37** adjacent the spring terminal **36**. A switch **41** is pivoted to the spring terminal **36** with the outer end **42** thereof projecting from the container and the inner end thereof being adapted to be moved into and out of engagement with the contact **40** for making and breaking the circuit with the motor by manipulating the projecting end **42** of the switch.

The impeller **23** is rotated in a clockwise direction by the motor **19** and functions to effect a continuous discharge of water through the flexible hose **30** and into the tub. The water is gravitationally fed into the impeller chamber from the tub. Thus, the water will be continuously recirculated from the tub and through the spray head. The impeller **23** is constructed for receiving an upward flow of water and for the discharge thereof laterally and includes a top wall **44** of annular formation from which depends a plurality of vanes **45**. The vanes are four in number and emanate from a central hub **46** in offset relation with reference to the center thereof and with adjacent vanes disposed in substantially right angular relation. The vanes extend below the hub so as to provide a space between the inner edges **47** thereof for the flow of water between the vanes upwardly from the inlet opening **25**. A filter **48** is arranged in the conduit **29** for filtering the water draining from the tub.

The spray attachment **11** constitutes a unit with the parts thereof connected together and affixed to the tub **10** and rim **13** by any desired means such as by the apertured extensions **49** and **51** through which extend lugs **50** and **52** with nuts secured on the outer ends of said lugs.

The tub is provided with feet **53** for spacing the receptacle from a supporting surface and to provide a clearance for the lower portion of the spray attachment.

While the preferred form of the invention is shown and described herein, it it to be understood that the same is not so limited but shall cover and include any and all modifications of the invention which fall within the purview thereof.

What is claimed is:

1. In a device of the character described, a bath tub open at the top and having a bottom wall provided with a drain opening, a spray device including a housing affixed to said tub exteriorly thereof and having a pump chamber at one end of said housing, a direct current motor arranged in said housing with the armature shaft protruding into said pump chamber, a centrifugal pump mounted in said pump chamber and affixed to the protruding end of the said armature shaft, said pump chamber having inlet and outlet openings, a conduit connected with the inlet of said pump chamber and with the drain outlet of the tub with the pump chamber disposed at a lower elevation than the bototm wall of the

tub for gravationally receiving the flow of water from the tub through said drain outlet, a flexible conduit connected with the outlet of said pump chamber and having a spray nozzle on the free end thereof, said flexible conduit being adapted to be manually held and moved for spraying a doll when disposed in the tub, electric storage means carried by said tub, and electrical circuit means connecting said storage means with said motor for driving the same and including a switch arranged in said circuit means for placing said motor in and out of operation.

2. In a device of the character described as set forth in claim 1 in which the tub is provided with a rim extending outwardly at one end thereof adjacent the top and the housing and the motor and pump contained therein and the electric storage means are supported under the rim.

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