Aug. 13, 1968 L. R. FRANCOM 3,396,412

BATHTUB

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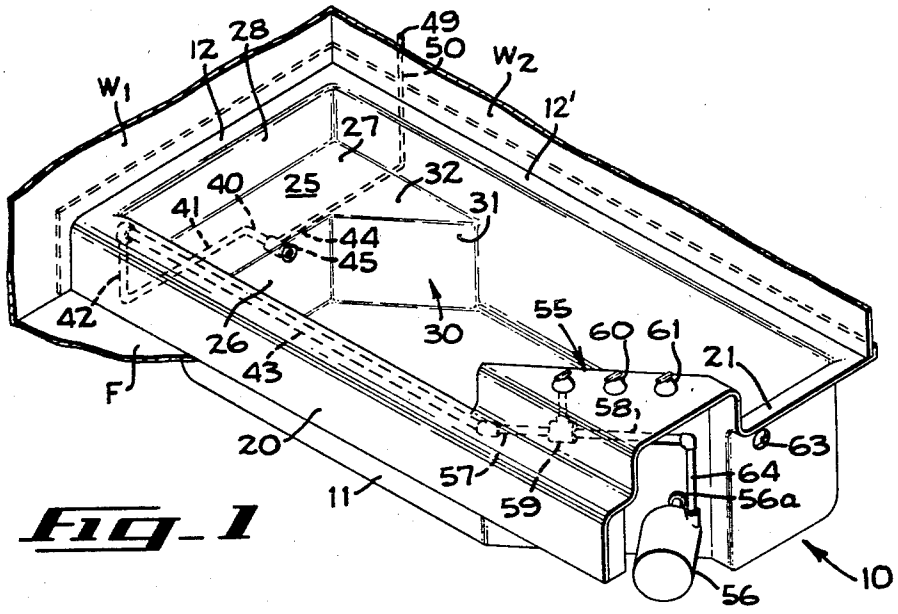

Fig_1

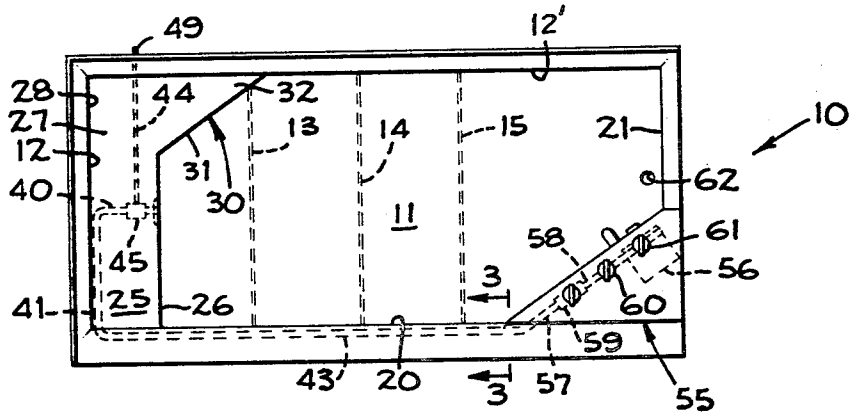

Fig_2

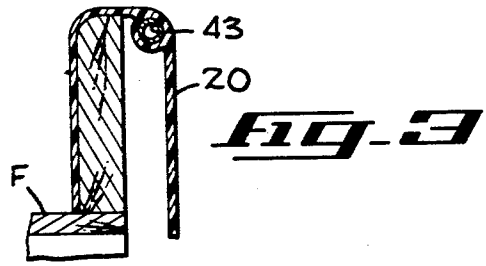

Fig_3

INVENTOR
LAWRENCE R. FRANCOM

BY Jack M. Wiseman

ATTORNEY

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BATHTUB

Lawrence R. Francom, 15277 Sobey Road, Saratoga, Calif. 95070

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ABSTRACT OF THE DISCLOSURE

A sunken fiberglass bathtub having a bottom wall with rigidifying galvanized strips disposed in the wall. A pair of upright surfaces integrally formed with the bottom wall and a pair of horizontal surfaces integrally formed with the upright wall provide a head and arm rest. A pump chamber is formed in the interior wall of the tub with faucets being mounted on top of the chamber. A pump within the pump chamber receives water from the tub through a drain in the pump chamber wall and pumps this water through an adjustable valve into an imbedded conduit which leads to a nozzle recessed in the head rest. The pump water is mixed with air in the recessed nozzle through a remote air vent, and is sprayed over the neck and shoulders of the body.

The present invention relates in general to bathroom fixtures, and more particularly to a bathtub.

An object of the present invention is to provide an improved bathtub.

Another object of the present invention is to provide an improved sunken bathtub.

Another object of the present invention is to provide a bathtub that can be installed with facility without sacrificing durability.

Another object of the present invention is to provide a bathtub in which the conduits therefor are molded within the tube at the time of construction thereof.

Another object of the present invention is to provide a bathtube in which a compartment is formed in the bathtub to accommodate a pump.

Another object of the present invention is to provide a bathtub with a step and body support and with a nozzle for spraying water disposed adjacent the step and body support.

Other and further objects and advantages of the present invention will be apparent to one skilled in the art from the following description taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view of a bath tub embodying the present invention.

FIG. 2 is a plan view of the bathtub shown in FIG. 1.

FIG. 3 is an enlarged vertical sectional view taken along line 3—3 of FIG. 2.

Illustrated in FIGS. 1 and 2 is the fiberglass or plastic bathtub **10** of the present invention which, in the preferred embodiment, is made from sheets of moldable plastic or fiberglass material. The bathtub **10** is partially sunken into a floor F or a suitable supporting surface so that the bottom wall **11** thereof is below the floor level. In addition, adjacent upright walls **12** and **12'** of the bathtub **10** are in flush engagement with adjacent walls W_1 and W_2, respectively.

It has been found that fiberglass or plastic is a desirable material from which to mold a bathtub, because of its good heat retaining characteristics. However, such fiberglass or plastic has greater flexibility or yieldability than is desired for a bathtub. According to the present invention, rigidifying or stiffening straps **13**, **14** and **15** in the form of galvanized straps are disposed within the bottom wall **11** of the bathtub **10**. In this manner, the bottom wall **11** and the fiberglass or plastic bathtub **10** are sufficiently rigidified to withstand the weight of a person standing within the bathtub **10**.

The bathtub **10** also includes adjacent walls **20** and **21** which face the walls **12'** and **12**, respectively. Along the upper edges of the walls **12** and **12'** are rim flanges or lips, whereby the surrounding wall whether it be wallboard or tile can be mounted thereon in flush fitting relation, thereby, in effect, mounting the bathtub **10** within the surrounding walls and below the floor level.

As shown in FIG. 1, the bathtub **10** is formed with a step **25** having a riser or vertical wall **26**, a horizontal wall or body rest **27**, and a second riser or vertical wall **28**. In this manner, a person can conveniently step into or step out of the bathtub **10**. Adjacent to the step **25** is a triangular prism support **30** having a vertical wall **31** that joins the upright wall **26** of the step **25** and a horizontal wall **32** that joins the horizontal wall **27** of the step **25**. Through the foregoing arrangement, a person sitting on the bottom wall **11** with the back of the body against the upright wall **26** can rest the head on the horizontal wall **25** and an arm on the horizontal wall **32**.

Embedded in their entirety within the bathtub **10** during the molding of the fiberglass or plastic sheets are suitable plumbing conduits or pipes **40–44**. At the discharge end of the pipe **40** is a suitable nozzle **45**, which fits within a recessed area of the upright wall **26** of the step **25**. The nozzle **45** does not project outwardly from the seat **25**, but is capable of ejecting a water spray outwardly therefrom. A remote air vent inlet **49**, preferably mounted from the wall W_2, receives air by being exposed from and projected from the wall W_2. The air received by the air vent inlet **49** is conducted through a pipe **50** and the embedded pipe **44** into the nozzle **45**. Hence, the water discharged from the nozzle **45** is in the form of an aerated jet or spray. It is to be observed that the nozzle **45** is mounted within the upright wall **26** of the step **25** to spray water onto the parts of the body, such as the neck and the shoulder.

Integrally formed with the walls **20** and **21** of the bathtub **10** is a pump and fixture chamber or compartment **55**, which accommodates a conventional pump and motor **56** of the type used for swimming pools. Suitable tubes, such as copper pipes **57** and **58** connect the pump **56** to the embedded circuit **43**. The pump **56** is connected to a suitable time switch, not shown. Interposed between the pipes **57** and **58** is a manually operated flow control valve **59** for controlling the flow of water through the pipe **57**, and, hence, through the nozzle **45**. Adjacent the valve **59** are disposed water faucets or taps **60** and **61**, which control the flow of hot and cold water into the tub **10**. A drain opening **62** is formed in the bottom wall **11**. Through an inlet **56***a*, the pump and motor **56** drains water from the tub **10** and discharges the water through a conduit **64** into the conduits **58** and **57** for recirculation by discharging the water out of the nozzle **45**.

As illustrated in FIG. 1, the fixtures **60** and **61** are built into the raised walls of the chamber **55** and are mounted above an overflow opening **63**, which is formed in the wall **21**. Thus, the raised compartment **55** for the

pump and motor **56** provides a fill spout disposed above the overflow opening **63** adjacent to the rim of the wall **21** and above the threshold of the tub **10**.

When the valve **59** is opened, water flows through the valve **59**, the conduit **57**, conduit **43**, conduit **42**, conduit **41**, conduit **40** and is discharged from the nozzle **45**. Water under pressure controlled by the pump and motor **56** flows over the path above described for recirculation and is drawn from the tub **10** through an inlet **56***a* of the pump and motor **56**. The conduit **64** interconnects the output of the pump and motor **56** with the conduit **58**. This action provides a jet stream recirculating flow of water out of the nozzle **45** for the comfort of the user of the bathtub **10**.

In operation, the flow control valve **59** is opened and the pump **56** is turned on through an electrical switch, not shown, for operation to draw water thereon through an inlet **56***a* and discharging the water through the pipe **64**. Said inlet **56***a* is fitted in a watertight manner in the front wall of the chamber **55**, but the inlet opening is exposed to the interior of the bathtub to communicate with the interior of said bathtub to drain water therefrom. Water under pressure flows through the pipes **58**, **57**, **43**, **42**, **41** and **40** and is discharged for recirculation through nozzle **45**. An aerated spray or jet is provided through the air vent **49** communicating with the nozzle **45** through the conduits **50** and **44**.

It is to be understood that variations and modifications of the embodiment of the inventions disclosed herein may be resorted to without departing from the spirit of the invention and the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

1. A bathroom fixture comprising a fiberglass bathtub, said bathtub comprising a bottom wall and an upright wall integrally formed with said bottom wall and a horizontal wall integrally formed with said upright wall and spaced above said bottom wall, said upright wall and said horizontal wall forming a step and a rest upon which a portion of the person's body may be supported, said upright wall being formed with a recessed area, said bathtub being formed with an integrally formed pump chamber, a nozzle disposed within the recessed area of said upright wall for discharging water into said bath, a conduit embedded in its entirety in said fiberglass bathtub for conducting water to said nozzle, and a pump mounted within said pump chamber for drawing water from said bathtub and communicating with said conduit for pumping water under pressure through said conduit for recirculation by said nozzle.

2. A bathroom fixture comprising a bathtub, said bathtub being formed with an integrally formed pump chamber extending to a higher elevation than adjacent walls of said bathtub, valve means fixedly secured to said pump chamber, and a pump mounted within said pump chamber and communicating with said valve means.

3. A bathroom fixture comprising a fiberglass bathtub, said bathtub comprising a bottom wall and an upright wall integrally formed with said bottom wall and a horizontal wall integrally formed with said upright wall and spaced above said bottom wall, said upright wall and said horizontal wall forming a step and a rest upon which a portion of a person's body may be supported, said upright wall being formed with a recessed area, said bathtub being formed with an integrally formed pump chamber, a nozzle disposed within the recessed area of said upright wall for discharging water into said bathtub, a conduit embedded in its entirety in said fiberglass bathtub for conducting water to said nozzle, a pump mounted within said pump chamber for drawing water from said tub and communicating with said conduit for pumping water under pressure through said conduit for recirculation through said nozzle, an air conduit embedded in said fiberglass bathtub and communicating with said nozzle, and venting means with an opening removed from said bathtub connected to said air conduit for supplying air to said nozzle to be mixed with the water discharged from said nozzle.

4. A bathtub comprising a bottom wall on which a person may sit with legs extended, a first upright wall against which said person may place his back integrally formed with said bottom wall, a first horizontal wall integrally formed with said first upright wall and spaced above said bottom wall, said first upright wall and said first horizontal wall forming a step and a rest upon which the head of said person may be supported, a second upright wall disposed contiguous with said first upright wall and said bottom wall, and a second horizontal wall integrally formed with said second upright wall and disposed contiguous with and at even height with said first horizontal wall, said second upright wall and said second horizontal wall forming a rest upon which an arm of said person may be supported.

5. A bathroom fixture comprising a bathtub, said bathtub comprising a bottom wall and an upright wall integrally formed with said bottom wall and a horizontal wall integrally formed with said upright wall and spaced above said bottom wall, said upright wall and said horizontal wall forming a step and a rest upon which a portion of a person's body may be supported, said upright wall being formed with a recessed area, said bathtub being formed with an integrally formed pump chamber, a nozzle disposed within the recessed area of said upright wall for discharging water into said bath, a conduit imbedded in its entirety in said bathtub for conducting water to said nozzle, and a pump mounted within said pump chamber for drawing water from said bathtub and communicating with said conduit for pumping water under pressure through said conduit for recirculation by said nozzle.

6. A bathroom fixture comprising a bathtub, said bathtub comprising a bottom wall and an upright wall integrally formed with said bottom wall and a horizontal wall integrally formed with said upright wall and spaced above said bottom wall, said upright wall and said horizontal wall forming a step and a rest upon which a portion of a person's body may be supported, said upright wall being formed with a recessed area, said bathtub being formed with an integrally formed pump chamber, a nozzle disposed within the recessed area of said upright wall for discharging water into said bathtub, a conduit imbedded in its entirety in said bathtub for conducting water to said nozzle, a pump mounted within said pump chamber for drawing from said tub and communicating with said conduit for pumping water under pressure through said conduit for recirculation through said nozzle, an inner conduit imbedded within said bathtub and communicating with said nozzle, and venting means with an opening removed from said bathtub connected to said air conduit for supplying air to said nozzle to be mixed with the water discharged from said nozzle.

7. A bathroom fixture comprising a bathtub, the interior wall of said bathtub being formed with an integrally formed pump chamber, and a pump mounted within said chamber, said pump chamber extending to a higher elevation than adjacent walls of said bathtub.

8. A bathroom fixture as claimed in claim **7** and comprising faucet means mounted on the upper portion of said pump chamber.

9. A bathroom fixture as claimed in claim **8** and comprising a drain mounted on the lower portion of said pump chambers for admitting water into said pump for recirculation into said bathtub.

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LAVERNE D. GEIGER, *Primary Examiner.*

H. J. GROSS, *Assistant Examiner.*