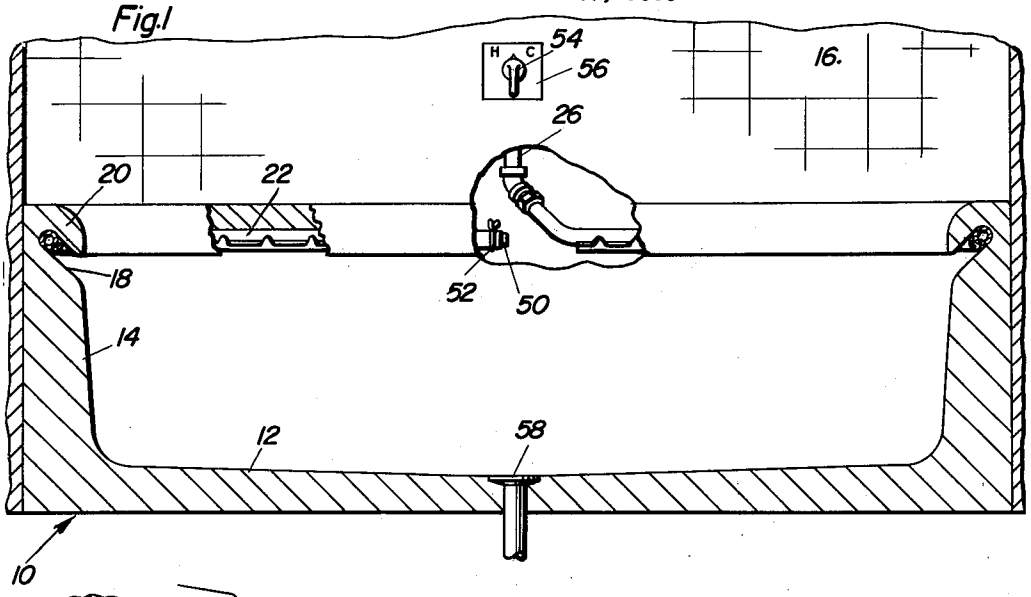
July 25, 1961 W. H. CARROLL 2,993,213

BATH TUB

Filed Feb. 26, 1959

Fig.1



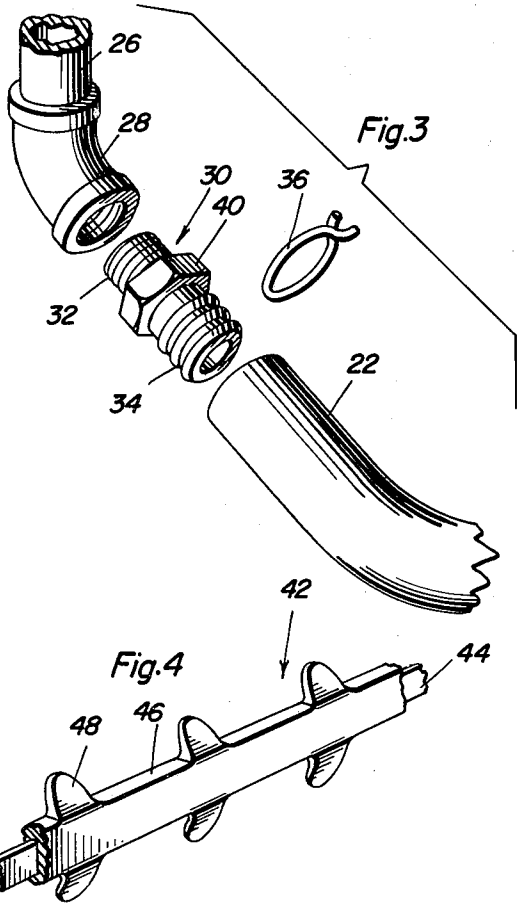


Fig.3

Fig.2

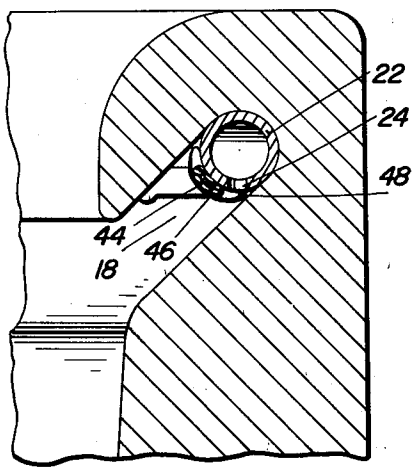


Fig.4

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BATH TUB

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4 Claims. (Cl. 4—181)

This invention relates generally to a bath tub construction and more particularly to a novel and improved bath tub wherein water is sprayed from below an overhanging rim of the bath tub eliminating external and dangerous faucets. Further, it is contemplated that a single control be utilized so that hazardous projections may be kept at a minimum to safe-guard against danger in case of falling.

Most bath tubs being utilized today include projecting faucets and handles which represent safety hazards inasmuch as a person may slip and strike against one of the projections. Further, these conventional designs make the bath tub unsightly and unattractive. In accordance with the contemplations of this invention, the novel bath tub construction is presented wherein a bath tub having an overhanging rim is provided for receiving perforated piping thereunder. A resilient retainer is utilized along the length of the piping to engage the piping and urge it into the recess. The recess and piping extend internally along the entire perimeter of the tub and accordingly, when a water supply is connected to the piping, the tub will be filled with water through the perforations along the entire perimeter thereof. The resilient retainer which urges the piping into the recess includes a spring steel band enclosed in a resilient casing, as of polyethylene. The retainer has projecting fingers thereon which, in a manner, surround the piping to force it upward into the recess, out of sight. A single control handle is utilized so as to present the simplest and most attractive construction.

Accordingly, it is the principal object of this invention to provide a novel bath tub construction wherein hazardous projections are kept at a minimum.

It is a further object of this invention to provide a novel bath tub construction which is attractive, and inexpensive to manufacture and install.

It is a still further object of this invention to provide novel retainer means for mounting perforated piping along the internal perimeter of a bath tub so as to efficiently distribute water to the tub.

In accordance with these above stated objects, below will be particularly described the construction and utilization of the bath tub comprising this invention.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a vertical sectional view, partially broken away, illustrating the bath tub comprising this invention;

FIGURE 2 is an enlarged sectional view illustrating the internal bath tub recess receiving the perforated piping retained by the resilient retainer;

FIGURE 3 is a group perspective view of the pipe connections between the water supply and the perforated piping; and

FIGURE 4 is a fragmentary enlarged perspective view showing the resilient retainer construction in detail.

With continuing reference to the drawings and initial reference to FIGURE 1, the numeral **10** generally refers to the bath tub construction including a floor portion **12** and a continuous side wall **14**. Conventionally, the tub **10** is constructed of porcelain, but of course utilization of any material will fall well within the teachings of this

invention. The bath tub **10** is adapted to be positioned immediately adjacent a tiled wall **16**.

As will be noted in FIGURE 1, an internal recess **18** is formed in the side wall **14** and an overhanging rim **20** is formed adjacent thereto. The recess **18** extends internally about the entire perimeter of the bath tub **10**.

Piping **22** which is perforated as at **24** is received in the recess **18** along the entire length thereof. The piping **22** is adapted to be connected to the water supply line **26** through a passage formed in the tub **10** and wall **16**. The water supply pipe **26** is connected through an elbow **28** to a coupling **30**. The coupling **30** is threaded as at **32** and threadedly received within the elbow **28**. The piping **22**, which is preferably formed of a resilient hose, is received over the end **34** of coupling **30**. A conventional spring-type hose clamp **36** is received around the perforated piping **22** to crimp the piping **22** to the end **34** of coupling **30**. It will be noted that the central portion of coupling **30** includes an enlarged portion **40** having flat sides as illustrated for receiving a wrench thereon.

In order to retain the piping or hosing **22** within the recess **18**, a continuous resilient retainer **42** is provided to engage the piping or hosing **22** to resiliently urge the same into the recess **18** against the tub **10**. The resilient retainer **42** includes a spring steel band **44** which is enclosed in a resilient casing **46**, which may for instance, be constructed of polyethylene. Projecting fingers **48** are positioned along the length of the casing **46** and are arcuately constructed so as to grip the piping or hosing **22** as indicated in FIGURE 2. It will be apparent that when the continuous resilient retainer **42** is deformed to be received within the recess **18**, it will tend to bow outwardly and accordingly force the piping or hosing **22** up into the recess **18** below the overhanging rim **20** against the bath tub **10**. Of course, care must be taken to see that the fingers **48** extending around the piping or hosing **22** do not overlie the perforations **24**. The piping or hosing **22** receives a plug **50** at the end thereof secured by a spring-type hose clamp **52** identical to the clamp **36** discussed above.

A single control handle **54** is pivotally mounted in the wall **16** and extends to a valve supported therein. A wall plate **56** under the handle **54** designates the proper direction for increasing the hot or cold water being fed to the piping or hosing **22** to be distributed to the tub **10** through the perforations **24**.

It is further contemplated that a central drain **58** be provided to allow for easier and more efficient cleaning of the tub.

It should be clearly apparent now that the foregoing has described a novel construction in bath tubs wherein projecting elements are kept at a minimum so as to avoid the presence of hazardous conditions. Aside from the obvious safety precautions, the novel bath tub represents an attractive appearance when compared with the conventional fixtures now being utilized. Still further the novel means of retaining the piping or hosing **22** within the recess **18** in the tub **10** is simple and inexpensive. With the construction contemplated, the fixture is easy to clean and inexpensive to manufacture and install.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. The combination of a bath tub having a continuous

side wall provided at the inside thereof in a plane spaced downwardly from but adjacent to its upper edge with a continuous recess of a V-shaped cross-section opening toward the tub, said recess in cross-section being inclined upwardly and outwardly from the inside of said side wall and including upper and lower surfaces terminating in a substantially semi-circular upper end region, a perforated tube disposed in and substantially coextensive with the semi-circular upper end region of said recess in relation to the continuity of said side wall, means for supplying water to said tube, and an elongated keeper member disposed in said recess inwardly of and substantially coextensive with said tube, said keeper member including an elongated body portion in supporting engagement with said tube and a plurality of resilient fingers provided at longitudinally spaced points on and projecting laterally from said body portion, said fingers having a lateral span greater than the width of said recess and frictionally engaging said upper and lower

surfaces of the recess, whereby to retain the keeper member and said tube in position therein.

2. The device as defined in claim 1 wherein said tube is formed from resilient material.

3. The device as defined in claim 1 wherein said keeper member includes a resilient strip and a covering of resilient material thereon constituting said body portion thereof, said fingers being formed integrally with said covering.

4. The device as defined in claim 1 wherein said resilient fingers are in engagement with said tube as well as with said surfaces of said recess.

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