Nov. 25, 1969 H. M. JOHNSON 3,479,778

BATH SHELL ENCLOSURE FOR BATHTUBS

Filed Feb. 13, 1967 2 Sheets-Sheet 1

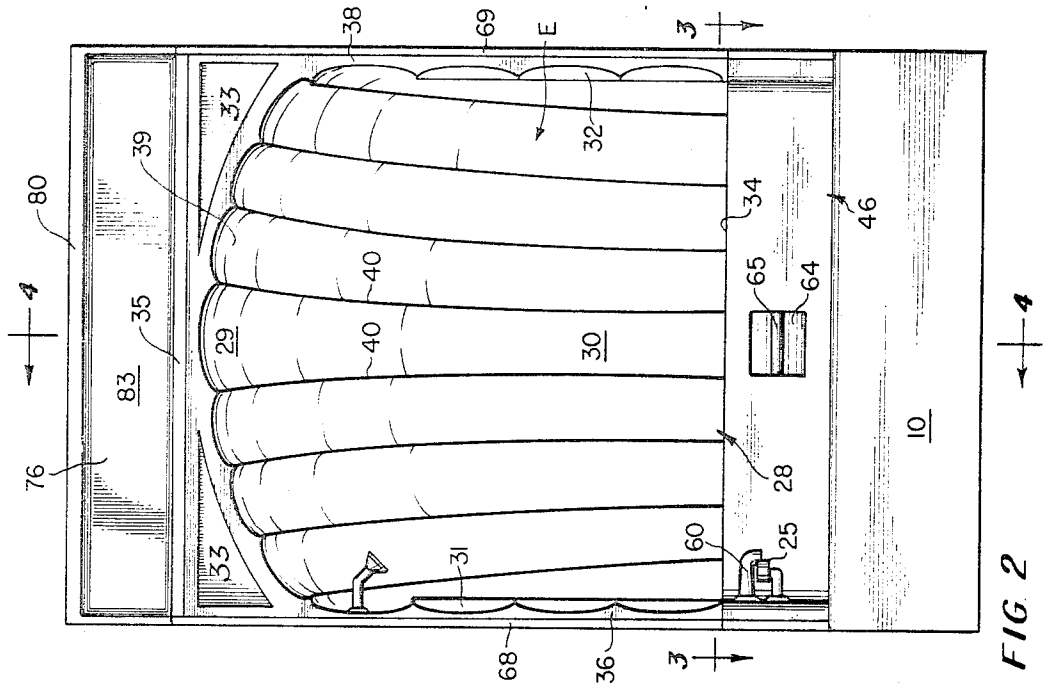


FIG 2

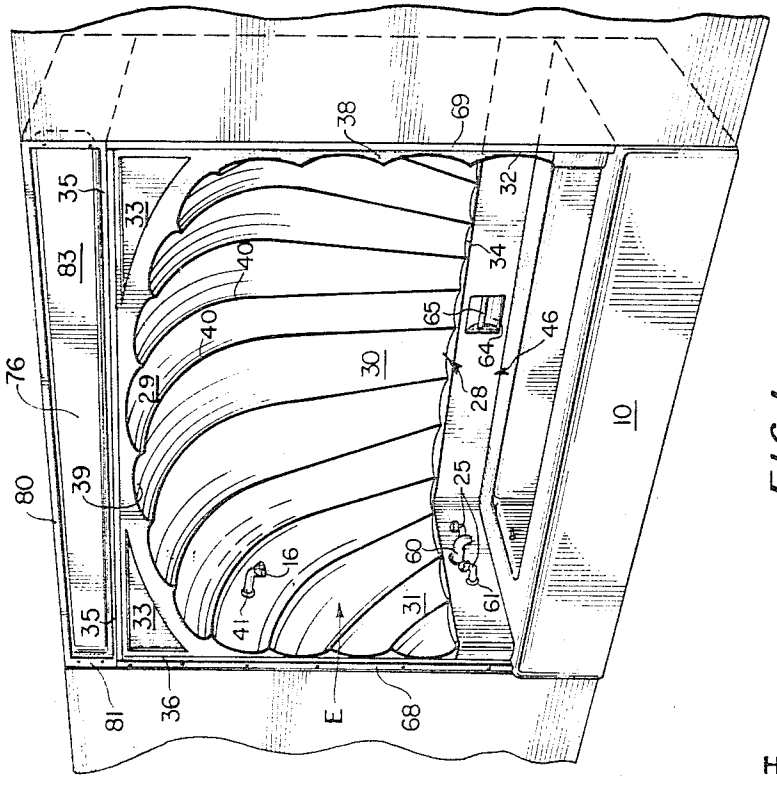


FIG 1

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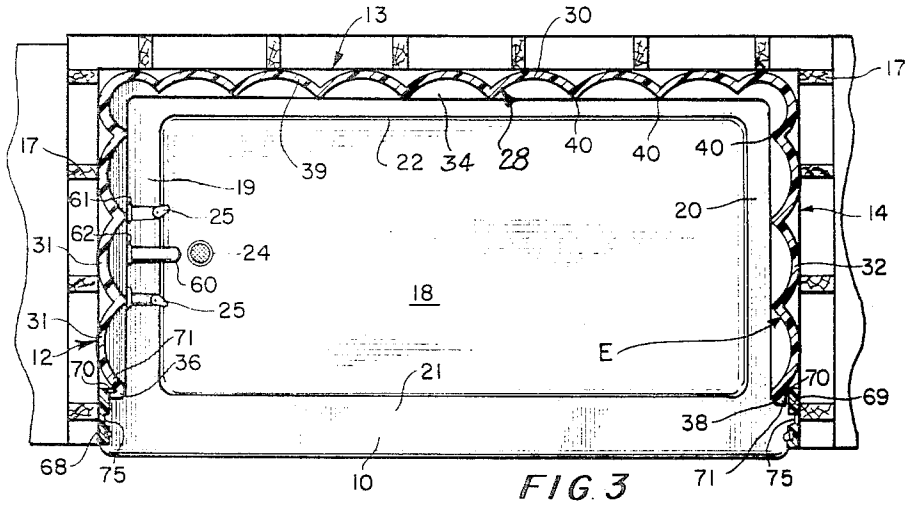
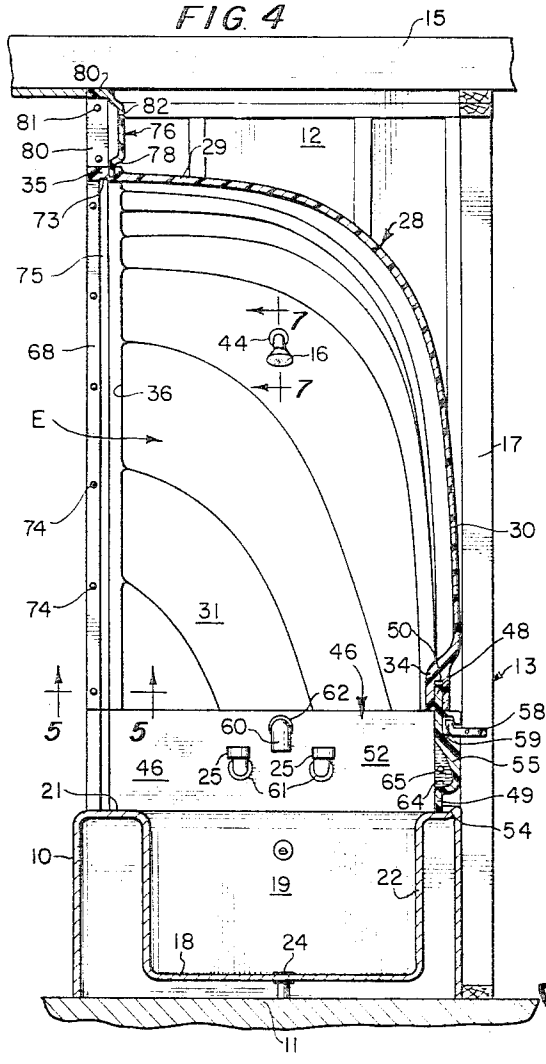



FIG. 3

FIG. 4



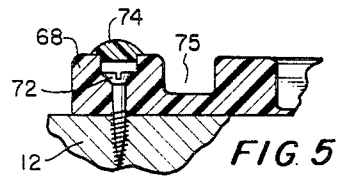




FIG. 5

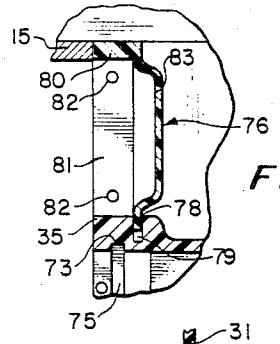



FIG. 6

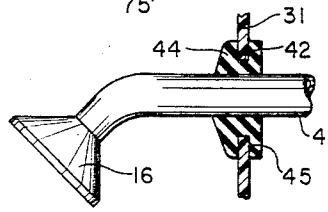



FIG. 7

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# BATH SHELL ENCLOSURE FOR BATHTUBS

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U.S. Cl. 52—35 4 Claims

## ABSTRACT OF THE DISCLOSURE

The bath shell enclosure, which is preferably of molded plastic material, available in various colors to match the tub and color scheme in the bathroom, encloses the three sides and top of the tub for protection of the walls as well as the ceiling over the tub from splatter to avoid the otherwise inevitable peeling of paint and cracking of plaster or cement around the tub where the wall is tiled, while giving a decorative background for the entire tub area. It may be installed to improve existing bathrooms or installed as a part of the original bathroom equipment.

This invention relates to an enclosure for a bathtub or shower and, more particularly, one providing waterproof and washable walls for enclosing the tub in lieu of the usual tiled walls.

Accordingly, a general object of the invention is to provide an enclosure of the above character, which has few parts, of inexpensive construction, and adapted to be easily and quickly assembled about the bathtub.

Another object of the invention is to provide a bath enclosure having a low cost, one-piece body in the form of a shell made to extend upwardly from the tub around its opposite ends and inner side, as well as extend over the top of the tub to afford a waterproof enclosure about the tub.

A more detailed object of the invention is to provide an enclosure about a tub comprising a central shell body disposed over and about three sides of the tub and designed to be secured in place by peripheral strips and skirts fastened to room walls or partitions.

Other objects and advantages of the invention will be apparent from the following description taken in connection with the accompanying drawings in which:

FIGURE 1 is a perspective view of a bathtub enclosure embodying the novel features of the present invention;

FIGURE 2 is a side elevational view of the tub and enclosure of FIGURE 1;

FIGURE 3 is a horizontal section taken substantially along the line 3—3 of FIGURE 2;

FIGURE 4 is a vertical section taken substantially along the line 4—4 of FIGURE 2;

FIGURE 5 is a fragmentary sectional view taken along the line 5—5 of FIGURE 4;

FIGURE 6 is an enlarged fragmentary sectional view of a top panel; and

FIGURE 7 is a sectional view taken along the line 7—7 of FIGURE 4.

As shown in the drawings for purposes of illustration, the invention is embodied in an enclosure E surrounding three sides of a bathtub **10** and extending over the top of the tub, which may be a conventional and popular "built-in" bathtub. The bathtub rests on or may be slightly sunken in the floor **11** (FIGURE 4), within three roughed-in partition walls **12**, **13** and **14** each including a series of spaced vertical studs, such as studs **17** (shown only in FIGS. 3 and 4), which extend from the floor to the ceiling **15** to form a recessed compartment for the tub. A shower head **16** may extend over the tub from the partition wall **12**.

Herein, the tub is rectangular in shape with a bottom



wall **18** (FIGURE 4) from which extend upwardly a pair of vertical end walls **19** and **20** joined at generally right angles to a pair of front and back walls **21** and **22** extending longitudinally of and above the bottom tub wall. A suitable water drain **24** is provided in the bottom of the tub and a pair of valve handles **25** for controlling the mixture of hot and cold water extend from the end partition wall **12** at a point above the tub.

In accordance with the present inventions, the partition walls and the overhead ceiling are protected by the enclosure E comprising a shell **28** of a novel construction which, as contrasted with the usual tiled walls of the prior art, affords a low cost and easily installed bath enclosure which is less susceptible of leakage. Herein, the shell is molded in one piece from a waterproof and washable plastic material and surrounds the tub and protects the partition walls. To achieve light weight and low cost, the shell is thin in cross-section with integral wall portions including an overhead or top wall **29**, a rear or inner longitudinally extending vertical wall **30**, and a pair of opposed transverse end walls **31** and **32**. The three vertical walls **30**, **31** and **32** terminate in a common lower edge or rim **34** which is generally horizontal. From this lower edge, the end walls **31** and **32** extend vertically along the partition walls **12** and **14**, respectively, and then merge with the integral forwardly curved top wall **29**. The rear or inner wall **30** extends generally vertically from the lower rim **34** along the partition wall **13** and flares and curves upwardly and forwardly to merge with the top wall **29**, which extends forwardly to a position generally over the front longitudinal wall **21** of the tub. The shell end walls **31** and **32** join the shell rear or inner wall **30** at rounded corners which also flare upwardly to join the top wall **29** of the shell. At the front of the shell, as seen in FIGURE 1, triangular sections **33** are formed at the opposite, upper corners of the shell **28** to provide a right angle corner at the intersection of a top horizontal edge or strip **35** and vertical side edges or strips **36** and **38** on the shell **28**. The top and side strips **36** and **38** combine with the front bathtub wall **21** to define a generally rectangular opening.

To provide additional rigidity for the relatively large expanses of shell walls and to give the enclosure E an aesthetically pleasing appearance, the shell **28** is formed herein with a series of elongated fluted or scalloped panels **39** (FIGURE 3) which are joined along continuous meeting lines **40** extending from the upper and forward edge of the shell rearwardly across the top wall **29** and then downwardly along the rear or inner wall and the end walls toward the bottom rim **34** of the shell. As seen in FIGURE 3, the panels **39** have arcuate cross-sections with rounded rear surfaces on the panels engaging the partition walls **12–14** along the lower portion of the shell at the rim **34** as best seen in FIGURE 3.

Where a showerhead **16** is provided, a water pipe **41** (FIGURE 7) for the head is admitted through an opening **42** in the shell end wall **31**, and a suitable resilient gasket **44** which has a water-tight fit on pipe **41** affords a seal about the pipe against the seepage of water through the pipe opening **42** to the rear surface of the shell. Herein, the resilient gasket is formed with a circumferential retaining groove **45** to receive the shell wall **31** around the opening.

To attach the shell **28** to the tub and partition walls **12–14**, there is provided in the present instance a three-sided plastic skirt **46** disposed vertically in the space between the tub and the shell with the grooved lower rim **34** of the shell attached to the upper edge **48** of the skirt while the lower edge **49** of the skirt is disposed in engagement with the upper peripheral top rim of the tub along the ends **19–20** and inner wall **22**. The lower rim

34 of the shell 28 has a tongue receiving groove 50 opening downwardly in the enlarged lower rim 34 of the shell receiving the upstanding edge portion 48 in the groove 50, so water flowing down along the lower rim of the shell flows across the inner vertical face wall 52 of the skirt into the tub. To provide a water-tight connection between the tub and the skirt, the latter includes a lower flexible sealing tongue or edge 49 (FIGURE 4) adapted for a relatively tight fit along the top rim of the tub adjacent to an upstanding rib 54 usually found on the bathtub. If desired, a suitable seal or calking material may be employed along the juncture of the lower edge of the skirt and tub to prevent water seepage behind the skirt towards the upwardly projecting tub rib 54.

For the purpose of attaching the skirt 46 to the partition walls 12–14, a central body portion 55 of the skirt is of increased cross-sectional thickness and extends rearwardly to abut the respective partition walls as seen in FIGURE 4. To fasten the skirt to a series of vertical wall studs 17, metal fastening clips 58 are attached by suitable nails or screw fasteners to the studs and have upwardly projecting hooks inserted into a grooved packet 59 formed in the rear wall of the skirt. When assembling the enclosure E on the tub 10, the skirt 46 is fastened by the clips 58 to the studs prior to connecting the shell 28 onto the upper edge of the skirt.

In installations where the handles 25 for the shower control valves are disposed above the tub and where a water faucet 60 is also disposed above the tub, suitable openings are formed in the wall of the skirt 46 to permit the handles and faucet to project through the latter. Encircling the handles and faucet are suitable gaskets 61 and 62 (FIGURES 1 and 3) which are similar to the gasket 44 for the showerhead pipe 41.

A receptacle 64 (FIGURE 4) for soap or the like is formed by a rectangular pocket in the front wall 52 of the skirt 46. A horizontal rod 65 extends across the receptacle opening between the vertical side walls of the latter to serve as a holder for a wash cloth or as a safety handle or grab bar.

To attach the shell 28 to the partition falls 12–14 along its front, vertical strips 68 and 69 are attached to the shell and are secured by suitable fasteners to the respective partition walls 12 and 14. The strips are preferably formed of a molded plastic material and have a vertically extending and outwardly projecting lip 70 (FIGURE 3) along their edges to fit behind and into a hooked edge 71 formed on the inner edges 36 and 38 of the vertical end walls 31 and 32 of the shell. The strips 68 and 69 are attached to the partition walls 12 and 14 by fasteners in the form of screws 72 (FIGURE 5) projecting through the strip and threaded into the partition wall. The heads of the screws fit into seats formed in the strip and a plug 74 with a cylindrical projection is forced fitted into each seat to conceal the screw head and prevent the entry of water. To receive a vertical edge of a shower door (not shown), the vertical strips each has a vertical channel 75 opening inwardly toward its associated shower door to receive it with a close fit. Herein, a groove 73 is also formed on the underside of the top forward edge 35 of the shell, which edge extends forwardly of the vertical side edges 36 and 38 to overlie the top ends of the strips 68 and 69, whereby to define further guides for the upper edges of the shower door or doors.

While the upper peripheral edge 35 of the shell 28 could be extended to the cealing 15, this edge in this embodiment of the invention is shown as spaced downwardly from the cealing, and a forward front adapter panel 76 is provided, which extends from this edge up to the cealing. The front adapter panel 76 can be provided of whatever height dimension is necessary to suit the job and has a lower horizontal adge in the form of a tongue 78 (FIGURES 4 and 6) fitted into a groove 79 formed in the top of the upper horizontal edge 35 of the shell. An upper horizontal flange 80 on the front panel 76 is disposed flush against the ceiling 15, and end flanges 81 on the top panel are secured to the partition walls 12 and 14 by screw fasteners, similarly as at 72, covered by sealing plugs 82 similar to the plugs 74 for the screws 72. Herein, the front panel 76 is recessed and has a rear vertical wall 83 which extends between the upper flange 80 and the lower tongue 78. The front panel 76 is also formed of a molded plastic material and assists in adding rigidity to the shell and securing the same in place.

From the foregoing it will be seen that the enclosure E may be quickly assembled to afford a unique and low cost construction for enclosing a bathtub and protecting all adjacent partition walls. While a preferred embodiment has been shown in the drawings and described herein, it is not intended to limit the invention by such disclosure, but, rather, it is intended to cover all modifications and alternative constructions coming within the spirit and scope of the invention as defined in the appended claims.

I claim:

1. A bathtub enclosure surrounding three sides of the tub in a building having adjacent walls and the area over the tub, comprising in combination, a shell of thin sheet material having a pair of opposite end walls, an overhead wall, and a rear or inner wall joined integrally with the overhead wall and end walls, said end walls extending upwardly from the bottom edges of the shell at opposite ends of the tub, said rear or inner wall extending upwardly from the bottom edge of the shell along the inner side of the tub, and means for holding the shell in position with its end and rear or inner edges adjacent the ends and inner side of the tub so as to completely enclose the tub on all sides except the front thereof, said holding means including a vertically disposed lower peripheral skirt having a lower edge fitting against the top of the tub along the ends and the covered inner side, an upper edge on the skirt having a tongue and groove connection with the lower edge portion of the shell, an adapter panel filling in a space between the front edges of the shell and the adjacent walls of the building, and means to secure the same in place.

2. A bathtub enclosure surrounding three sides of the tub and the area over the tub, comprising, in combination, a shell of thin sheet material having a pair of opposite end walls and a rear or inner wall joined integrally with the end walls, said end walls extending upwardly from bottom edges of the shell at opposite ends of the tub, said rear or inner wall extending upwardly from a rear or inner edge of the shell along the inner side of the tub and curved forwardly toward the front of the tub, an overhead wall on said shell formed integrally with the end walls and the rear or inner wall and extending forwardly from the latter wall toward the front of the tub, means for holding the shell in position with its end and rear or inner edges adjacent the ends and inner side of the tub so as to completely enclose the tub on all sides except the front thereof, and vertical strips having tongue and groove connections with the forward vertical edges of the end walls of the shell and including means on said strips attaching the same to supporting walls of a building around the tub.

3. In a bathtub compartment, the combination of a rectangular bathtub having a pair of transverse end walls and a pair of longitudinal front and rear walls joined to the opposite end walls, roughed-in walls and ceiling of a building surrounding the rear and ends of the bathtub, a unitary shell extending upwardly from the tub at the ends and rear portion and adjacent to the roughed-in walls and having an overhead portion spaced from and disposed over the tub to afford a ceiling for the compartment, means to secure the shell to the roughed-in walls to provide a protective enclosure for the latter, an adapter panel of generally rectangular form and of dimensions to fit between the top front portion of the shell and the ceiling, and means to secure the panel along its lower edge portion to the top front portion of the shell

and along its ends and upper edge portion to the roughed-in walls and ceiling of the building surrounding the tub.

4. In a bathtub compartment, the combination of a rectangular bathtub having a pair of transverse end walls and a pair of longitudinal front and rear walls joined to the opposite end walls, roughed-in walls and ceiling of a building surrounding the rear and ends of the bathtub, a unitary shell extending upwardly from the tub at the ends and rear portion and adjacent to the roughed-in walls and having an overhead portion spaced from and disposed over the tub to afford a ceiling for the compartment, and means to secure the shell to the roughed-in walls to provide a protective enclosure for the latter, the last named means comprising two vertical strips at opposite ends of the shell fitting detachably onto the said ends and adapted to be secured to the roughed-in walls of the building, an adapter panel of generally rectangular form and of dimensions to fit between the top front portion of the shell and the ceiling, and means to secure the panel along its lower edge portion to the top front portion of the shell and along its ends and upper edge portion to the roughed-in walls and ceiling of the building surrounding the tub.




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U.S. Cl. X.R.

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