July 24, 1962 R. G. COOK ET AL 3,045,254

BATHTUB WITH LINER

Filed May 5, 1961

FIG. 1

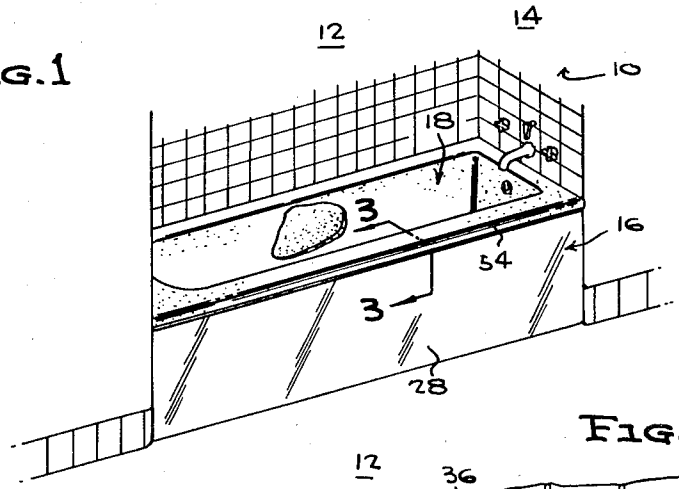


FIG. 2

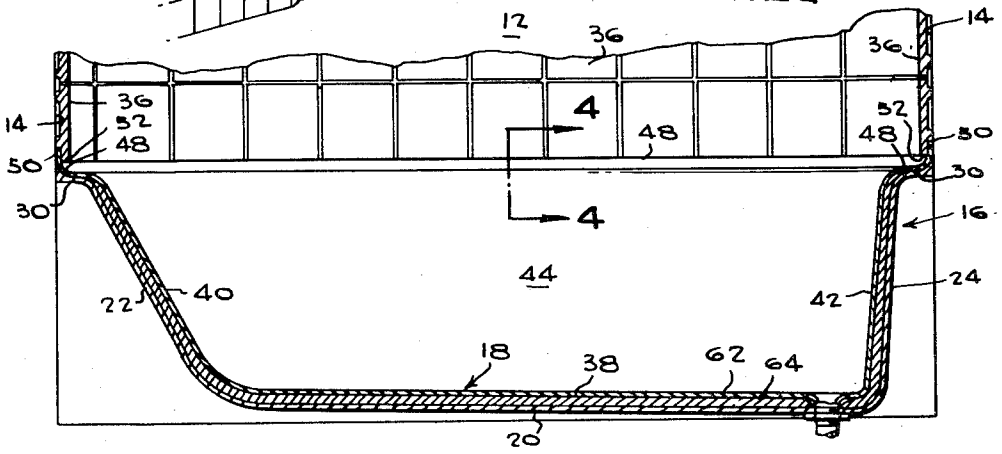


FIG. 3

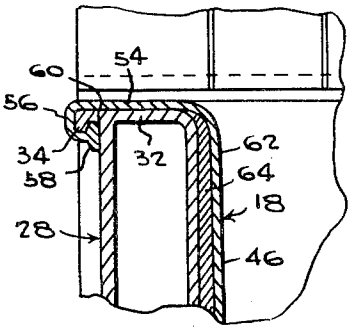
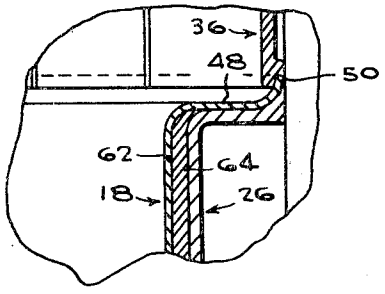


FIG. 4



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BATHTUB WITH LINER

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This invention relates to a novel combination of bathtub and a compressible liner, and to a novel liner for the tub.

The primary object of the invention is the provision of a more efficient, practical and comfortable combination of the kind indicated, wherein the liner covers the bottom and walls of the tub, as well as the tops of the tub walls and provides yielding and non-slip protection and comfort for the user of the tub, which renders the liners especially suitable for use in hospitals and nursing homes.

Another object of the invention is the provision of a combination of the character indicated above, wherein novel and improved means are provided for securing the liner in place in the tub and non-shiftably relative to surrounding tub or other bathroom walls, and for securable engagement with the hook flange on the access side wall of the tub.

A further object of the invention is the provision of a more comfortable and efficient bathtub liner which is composed of an outer semi-flexible impervious plastic layer, and an inner supporting layer of compressible material, such as foam rubber.

A still further object of the invention is the provision of a tub liner of the character indicated above, wherein the outer layer lends itself to being colored and/or embossed with designs whereby the appearance of the tub, and hence that of the bathroom, is rendered attractively decorative.

Other important objects and advantageous features of the invention will be apparent from the following description and the accompanying drawings, wherein, for purposes of illustration only, a specific form of the invention is set forth in detail.

In the drawings:

FIGURE 1 is a schematic perspective view of a combination of the present invention installed in an alcove of a bathroom;

FIGURE 2 is an enlarged vertical longitudinal section taken through FIGURE 1;

FIGURE 3 is a further enlarged fragmentary vertical transverse section taken on the line 3—3 of FIGURE 1; and

FIGURE 4 is a fragmentary vertical section on the scale of FIGURE 3, taken on the line 4—4 of FIGURE 2.

Referring in detail to the drawings, wherein like numerals designate like parts throughout the several views, a bathroom alcove 10 has a longitudinal wall 12 and transverse walls 14, and set into the alcove is a tub 16 equipped with a liner 18, in accordance with the present invention. The bath tub 16 has a bottom wall 20, head and foot end walls 22 and 24, respectively, an inner side wall 26, and an outer or access side wall 28. The tub walls 22, 24 and 26 have laterally outwardly extending substantially plain horizontal flanges 30, on their upper edges. The access side wall 28 has a laterally outwardly extending horizontal flange 32 which terminates in a downwardly directed hook flange 34, which is spaced from the outer surface of the access wall.

As is conventional, the alcove walls 12 and 14, above the tub 16, are covered with tile coverings 36, the presence of which is taken advantage of for securing in place related portions of the liner 18.

The liner 18 comprises an elongated pan-shaped form having a bottom wall 38 to lie flat upon the tub bottom wall 20, a head end wall 40 to conform to and cover the tub head end wall 22, a foot end wall 42 to conform to and cover the tub foot end wall 24, an inner side wall 44 to conform to and cover the tub side wall 26, and an outer side wall 46 to conform to and cover the outer or access side wall 28 of the tub.

The walls 40, 42 and 44 have, on their upper edges, lateral flanges 48, to bear conformably upon and cover the tube wall flanges 30. The liner flanges 48 are on the outer layer only of the liner 18 and are continuous around their related liner walls, and terminate in free edge portions 50 which, as shown in FIGURES 2 and 4, are inserted upwardly between the alcove walls and their tile coverings 36, from their lower edges 52, and preferably secured in place, as by means of cement (not shown).

The liner's access wall 46 has, along its upper edge, and continuous with the flanges 48 of the liner, a lateral flange 54, on the outer liner layer only, which conforms to and overlies the tub access wall flange 32, as shown in FIGURE 3. The flange 54 terminates in a U-shaped free edge portion 56 which extends around the hook flange 34, and has a retaining strap or bar 58, which engages retainably in the groove 60 defined between the outer surface of the tub access wall and the hook flange 34.

The liner 18 is composed of an outer or upper layer 62 of semi-flexible water impervious sheet material, such as the type of plastic materials used in the molding of pails, dishpans, and the like; and an inner or lower layer 64, adhered to the layer 62 of compressible material, such as foam rubber. The compressible layer 64 is of sufficient cross section and density to provide substantial cushioning for occupants of the tub 16, without undue collapse thereof. The surface of the plastic outer layer 62 has inherent anti-slip characteristics which prevent sliding and slipping by occupants of the tub.

Although there has been shown and described a preferred form of the invention, it is to be understood that the invention is not necessarily confined thereto, and that any change or changes in the structure of and in the relative arrangements of components thereof are contemplated as being within the scope of the invention as defined by the claims appended hereto.

What is claimed is:

1. In combination, a bathroom alcove having a longitudinal wall and transverse walls, a bath tub positioned in said alcove along said longitudinal wall and between the transverse walls, said bath tub having a bottom wall, an inner side wall engaged with said longitudinal wall, and head and foot end walls positioned along related ones of said transverse walls and an outer access side wall, said alcove walls having coverings thereon having lower edges on a level adjacent to the upper edges of the tub walls, and tub liner disposed conformably within said tub and having walls having lateral flanges overlying the top of the walls of the tub, lateral flanges of the liner being upwardly and securably inserted between the tops of the tub walls and the lower edges of the coverings and between the covering and related walls of the alcove and means, securing a liner flange to the top of the access sidewall.

2. In combination, a bathroom alcove having a longitudinal wall and transverse walls, a bath tub positioned in said alcove along said longitudinal wall and between the transverse walls, said bath tub having a bottom wall, an inner side wall engaged with said longitudinal wall, and head and foot end walls positioned along related ones of said transverse walls and an outer access sidewall, said alcove walls having coverings thereon having lower edges on a level adjacent to the upper edges of the tub walls, and tub liner disposed conformably within said tub and having walls having lateral flanges overlying the tops of

the walls of the tub, lateral flanges of the liner being upwardly and securably inserted between the tops of the tub walls and the lower edges of the coverings and between the covering and related walls of the alcove, and means securing a liner flange to the top of the access side wall, said liner consisting of a resilient and compressible lower layer which bears against the inner surfaces of the tub walls, and an upper impervious semi-flexible layer secured to the lower layer.

3. In combination, a bathroom alcove having a longitudinal wall and transverse walls, a bath tub positioned in said alcove along said longitudinal wall and between the transverse walls, said bath tub having a bottom wall, an inner side wall engaged with said longitudinal wall, and head and foot end walls positioned along related ones of said transverse walls and an outer access side wall, said alcove walls having coverings thereon having lower edges on a level adjacent to the upper edges of the tub walls, and tub liner disposed conformably within said tub and having walls having lateral flanges overlying the tops of the walls of the tub, lateral flanges of the liner being upwardly and securably inserted between the tops of the tub walls and the lower edges of the coverings and between the covering and related walls of the alcove, and means securing a liner flange to the top of the access side wall, said liner consisting of a resilient and compressible lower layer which bears against the inner surfaces of the tub walls, and an upper impervious semi-flexible layer secured to the lower layer, said upper layer extending beyond the edges of said lower layer, the portions of the upper layer outwardly of the lower layer defining said liner flanges.

4. In combination, a bathroom alcove having a longitudinal wall and transverse walls, a bath tub positioned in said alcove along said longitudinal wall and between the transverse walls, said bath tub having a bottom wall, an inner side wall engaged with said longitudinal wall, and head and foot end walls positioned along related ones of said transverse walls and an outer access side wall,

said alcove walls having coverings thereon having lower edges on a level adjacent to the upper edges of the tub walls, and tub liner disposed conformably within said tub and having walls having lateral flanges overlying the tops of the walls of the tub, lateral flanges of the liner being upwardly and securably inserted between the tops of the tub walls and the lower edges of the coverings and between the coverings and related walls of the alcove, and means securing a liner flange to the top of the access side wall, said liner comprising a resilient and compressible lower layer which bears against the inner surfaces of the tub walls, and an upper impervious semi-flexible layer secured to the lower layer, said access tub wall having a laterally outwardly extending top flange having a pendant hook flange spaced from the upper surfaces of said access wall and defining a groove, and a retaining bar fixed on a top flange of the liner and engaged in said groove.

5. A bath tub liner comprising an elongated pan-shape having a bottom wall, head and foot end walls, an inner side wall, and an access outer wall, said walls terminating at their upper edges in laterally outwardly extending flanges, said liner consisting of a lower resilient and compressible layer and an upper semi-flexible layer secured to said lower layer, the peripheral edges of the lower layer being spaced inwardly from the peripheral edges of the upper layer so as to define said flanges.

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