

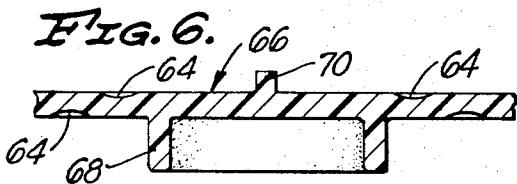
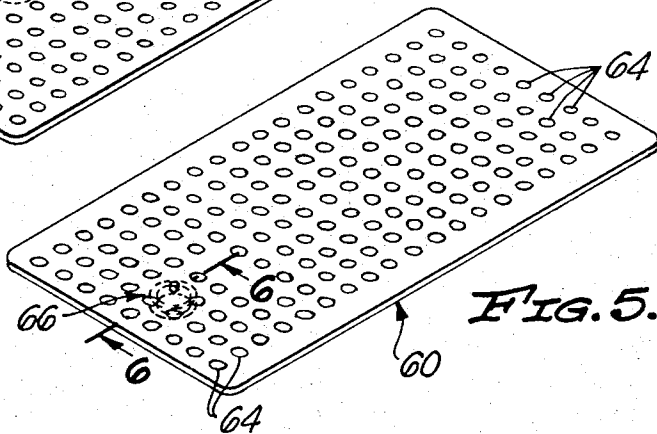
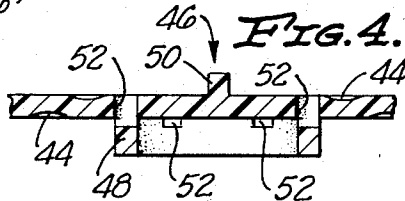
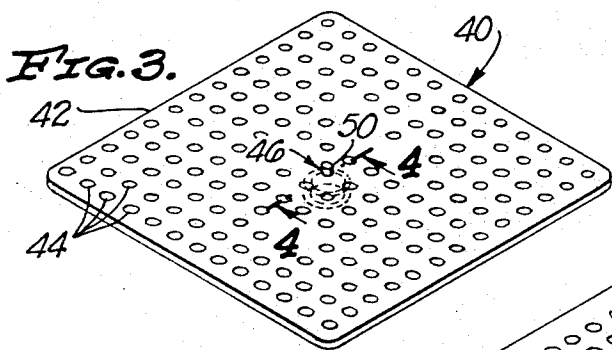
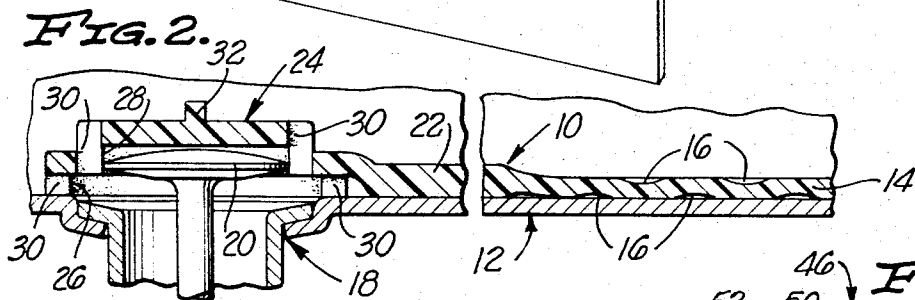
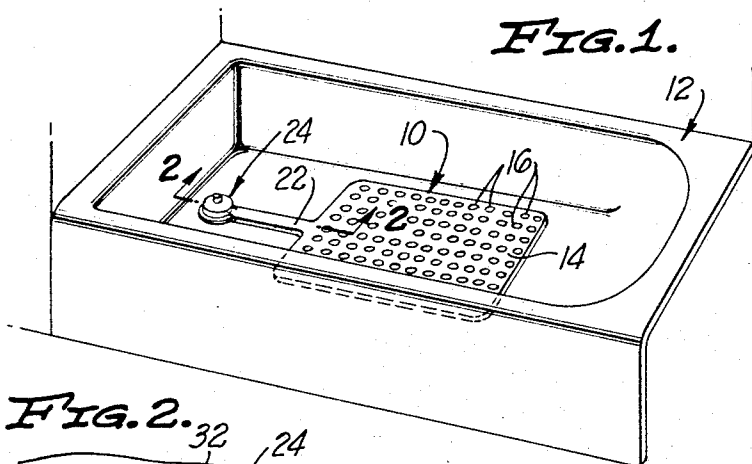
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NON-SKID MATS

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3,418,668

NON-SKID MATS

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ABSTRACT OF THE DISCLOSURE

The bath mat is provided with holding means on both of its surfaces, which holding means impede the sliding of the mat in a shower stall or bathtub. Interconnecting means is also provided on one side of the mat, which interconnecting means is capable of interlocking with a raised pop-up type drain valve. This interconnecting means comprises a cavity into which the pop-up valve is positioned. Perforations around the cavity permit the drainage of shower water. The other side of the interconnecting means has an extension or projection which can be engaged in the openings in an ordinary drain screen in a shower floor. Again, the perforations permit the discharge of shower water into the drain.

This invention pertains to new and improved non-skid mats for use in bathtubs, sinks, showers and the like.

So-called non-skid type mats consisting essentially of a patterned sheet of an elastomeric material such as rubber are commonly sold and used for the purpose of preventing slipping in bathtubs and showers. Even when these mats are formed so as to include as a part of the pattern on them suction cup like elements, they are considered to be comparatively ineffective for their intended purpose of preventing slippage.

Slippage is important to individuals using bathtubs and showers. To a significant extent it is also important in connection with the use of common kitchen sinks for purposes such as bathing infants. In bathing operations involving bathtubs, showers or sinks, safety is of utmost importance. A single fall or slip may cause physical injury. Such injury can be very pronounced and can lead to serious complications, particularly with infants and comparatively old and/or infirm individuals.

An object of the present invention is to provide new and improved non-skid mats. A further broad objective of the present invention is to provide non-skid mats which are effective so as to prevent slippage because of the fact that in use they are in effect interlocked to a drain structure by appropriate means serving to prevent significant movement of the mats themselves. These and various other objects of this invention as well as many specific advantages of it will be more fully apparent from a detailed consideration of the remainder of this specification, the appended claims and the accompanying drawing in which:

FIG. 1 is an isometric view of a non-skid mat of this invention in use in a bathtub;

FIG. 2 is a partial cross-sectional view taken at line 2-2 of FIG. 1;

FIG. 3 is an isometric view of a non-skid mat of this invention which is primarily intended to be used in conjunction with a shower stall;

FIG. 4 is a partial cross-sectional view taken at line 4-4 of FIG. 3;

FIG. 5 is an isometric view of a non-skid mat of this invention which is primarily intended to be used in a common household sink; and

FIG. 6 is a cross-sectional view taken at line 6-6 of FIG. 5.

It is to be understood that the accompanying drawing is primarily intended so as to clearly illustrate for explanatory purposes several presently preferred embodiments or forms of this invention. It is contemplated that these forms or embodiments of this invention can be modified in various ways depending upon specific manufacturing and utilitarian desires so as, for example, to have various different appearances for sales purposes, and so as to be useable with various different types of drains. For this reason the present invention is to be considered as being limited only by the appended claims forming a part of this disclosure.

As an aid to understanding this invention it can be stated in essentially summary form that it concerns non-skid mats which are preferably formed as a unitary article out of a material of an elastomeric character such as a common natural or synthetic rubber composition having a relatively high coefficient of friction so as to include a mat portion or section proper and interlocking or interconnecting means designed to engage or be engaged by a drain fixture of a bathtub, a sink, a shower or the like, so as to tend to hold the mat section against undesired movement during use. As hereinafter indicated the mat section may contain other holding means designed to aid in preventing slippage such as suction cup like elements.

The present invention is best more fully described by referring directly to the accompanying drawing forming a part of this disclosure. In FIGS. 1 and 2 of the drawing there is shown a non-skid mat 10 of the present invention in an operative position within a conventional bathtub 12. In use as shown the mat 10 provides a "stabilized" surface held against slippage which is primarily intended to prevent slippage as the tub 12 is employed for showering purposes, but which also serves to prevent slippage when the tub 12 is used for tub type bathing by functioning in much the manner of any other tub type bath mat. This mat 10 includes a mat section 14 of generally rectilinear configuration which was designed to fit within the center region of the bottom of the bathtub.

This section 14 is shown in the drawing as being substantially plain and unornamental except for the presence of comparatively small dished out areas 16 on both of its surfaces. These areas 16 are capable of serving the manner of suction cups so as to tend to prevent the section 14 from slipping with respect to the tub 12 or so as to prevent an individual using this tub slipping with respect to the section 14. It is to be understood that this section 14 may be provided with virtually an infinite variety of differently appearing surface constructions or the like which are designed to impede its movement or to impede the slippage with respect to it.

With the present invention the section 14 is connected in an operative manner to a drain fixture 18 having an upstanding valve like closure member 20. This member 20 is capable of being withdrawn in a conventional manner so as to fit within the fixture 18 in order to close off the interior of the tub 12 so that it will hold water.

The actual connection with the complete mat 10 takes a form of a rigidity link 22 connecting the section 14 to an interlocking or interconnecting member 24. This interlocking member 24 has a bottom which is formed so as to include first and second internal cavities, 26 and 28, respectively, of a disc like configuration. Preferably these cavities 26 and 28 are located so as to be concentric with one another with the second (28) being smaller than the first. This construction is designed so that the closure member 20 in an upstanding or conventional drain position will fit resiliently against the interior of either one of the cavities 26 and 28 as shown.

Holes 30 are provided in the interlocking member 24

so as to provide for drainage between the sides of the interlocking member when the closure member 20 is located so as to be in contact with the interior of the cavities 26 and 28. The interlocking member 24 is also provided with a common pin-like dowel-like extension 32 which enables the complete mat 10 to be used with bathtubs or the like having conventional perforate drain plates in place of the closure member 20. When the mat 10 is used with this type of a drain structure it is merely turned over and located so that the extension 32 merely fits within one of the perforations in the drain so as to stabilize the entire mat structure against moving.

With the mat 10 the link 22 is preferably of comparatively thick mass as compared to the section 14, and is of sufficient width and dimension so that it will not readily bend or slide to one side or another during the use of a mat 10. Thus, it provides rigidity which is transmitted from the interlocking member 24 to the section 14 tending to prevent undesired movement or slippage of the section 14. Because of the fact that the interlocking member 24 engages or is engaged with the drain fixture 18 during use this tends to preclude unnecessary slippage of the entire mat 10. During use in showering water can constantly pass from the tub 12 through the holes 30.

In FIGS. 3 and 4 of the drawing there is shown a modified mat 40 which is intended to be used in a shower stall. This mat 40 includes a mat section 42 corresponding to section 14. This mat section 42 may have various areas 44 corresponding to the areas 16 formed on its surface, or it may be provided with other related or similar means tending to prevent slipping on one or both of these surfaces. Within the center of the section 42 there is provided another interlocking means 46 consisting of a cylindrical flange 48 defining a cavity extending from one surface of the section 42 and an extension 50 corresponding to the extension 32 extending from the other surface of the section 42 within the center of the flange 48. A plurality of holes 52 for drain purposes are provided so as to lead between the surfaces of the mat 40 immediately around the extension 50 to within the flange 48.

This mat 40 is designed so that if desired it can be used with a shower drain consisting of essentially a hole leading into a drain pipe by inserting the extension 50 into such a cavity. The extension 50 is intended to be dimensioned so as to fit within such a drain opening in a close or tight manner. If desired, however, the mat 40 may be reversed or turned upside down so that the extension 50 fits within an opening in a perforate drain plate such as is conventionally used. In either of these manners of use the mat 40 is effectively held or interconnected by the drain fixture employed so as to prevent slippage or the like during use. During use drainage is always possible through the holes 52. In order to eliminate a tripping hazard, if desired, it is possible to cut off either the flange or the extension 50 which is not used with a particular shower.

In FIGS. 5 and 6 of the drawing there is shown a non-skid mat 60 which is primarily intended to be used in sinks or the like for the purpose of bathing infants. This mat 60 includes a mat section 62 corresponding to the sections 14 and 42 previously described. The section 62 may be provided with areas 64 such as the area 16 and 44 previously indicated or with other non-skid and/or holding type means such as are indicated in connection with sections 14 and 42. It employs an interlocking means 66 corresponding to the interlocking means 46 previously described having a flange 68 corresponding to flange 48 previously described and an extension 70 corresponding to extension 50 previously indicated.

The flange 68 and the extension 70 are designed or intended to be utilized in this same manner as the flange 58 and the extension 50. No holes are provided, however, in the interlocking means 66 because normally a constant drainage is not desired during the use of the mat 60 for

the purpose of bathing infants. If desired, however, for other uses holes such as the holes 52 may be provided. It is also possible to form the mat sections 62 in various configurations such as circular so as to facilitate its use in holding an infant in a desired bathing position.

The various mats herein described are of such a nature that they are designed to stay put when used in their intended manner. It will be realized that the various different constructions described herein cannot only be used so as to facilitate bathing operations, but that they can be used with various different types of liquids in various specialized equipment, such as fluids and especially formed enclosures, for therapeutic and other purposes. For such other purposes it is possible to vary the shape of the mat sections indicated so as to conform to the shape of the bottom of a specific vessel within which the mats are to be used.

Because of the nature of this invention it is to be considered as being limited solely by the appended claims forming a part of this disclosure.

What is claimed is:

1. A non-skid mat for use in bathtubs, said mat being formed as a unitary article out of a resilient, elastomeric material having a co-efficient of friction sufficient to impede sliding of said mat along the bottom inside surface of said bathtubs, said mat having first and second surfaces, said mat comprising:

a mat section arranged to rest on the surface of the bottom of a bathtub away from the drain fixture of said bathtub;

means on both surfaces of said mat section tending to prevent slippage of said mat section;

an interlocking means having sides, and having an extension capable of fitting within a perforate part of a drain fixture located on one of said sides, and at least one cavity engageable by a part of a drain fixture on the other of said sides, said cavity having a closed top and having side walls, perforations extending through said interlocking means from one side to the other thereof.

2. A non-skid mat formed as a unitary article out of a resilient, elastomeric material having a co-efficient of friction sufficient to impede sliding of said material along a first surface which comprises:

a mat section intended to be located on said first surface at the bottom of an area in which a liquid is intended to be present;

means tending to impede sliding of said mat section along said first surface located on the surface of said mat section adapted to be located against said first surface; and

interlocking means adapted to be held by at least a part of a drain fixture secured to said mat section;

said interlocking means including two different means for being held by a part of a drain fixture, each of said means being located on a separate side of said interlocking means, one of said separate means being a projection and the other of said separate means being a ringlike flange, perforations extending through said locking means.

3. The non-skid mat of claim 1 wherein link means interconnects said interlocking means and said mat section so as to aid in preventing horizontal movement of said mat section with respect to a drain fixture when said mat is employed in a bathtub.

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