May 4, 1954 F. HOBBS 2,677,268

COMBINATION OF WALLBOARD MOLDINGS AND LAVATORY FIXTURES

Filed Oct. 27, 1947

FIG_1

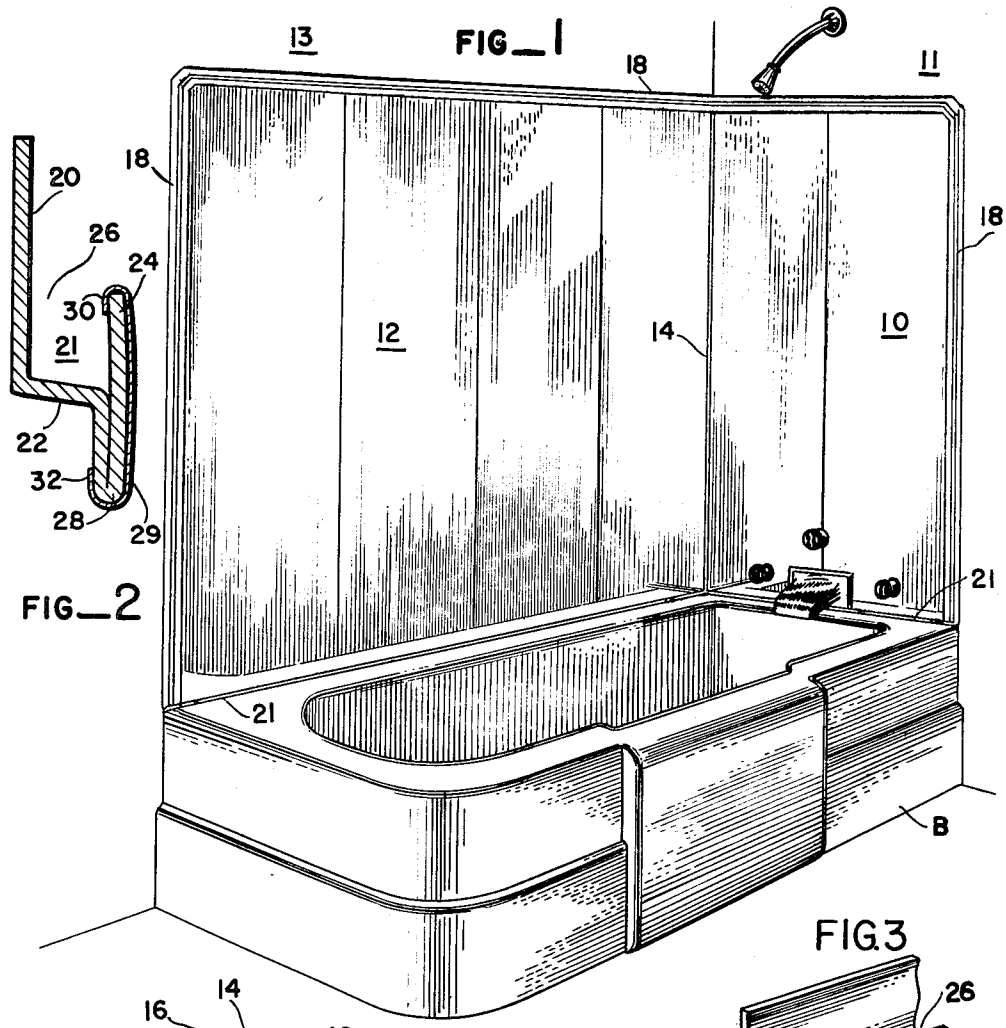
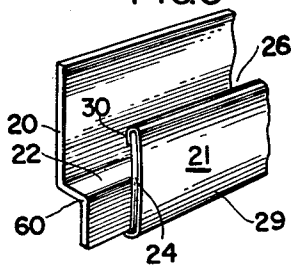


FIG_2

FIG.3



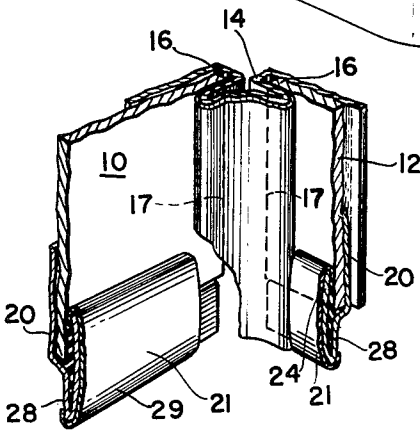


FIG_4

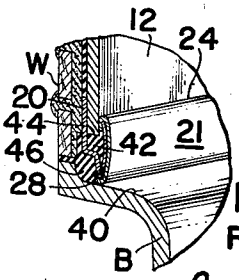


FIG.5

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COMBINATION OF WALLBOARD MOLDINGS AND LAVATORY FIXTURES

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1 Claim. (Cl. 72—0.5)

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This invention relates to improvements in combination of a wallboard molding and a lavatory fixture and, more particularly, to molding elements for use under varying conditions of heat and cold between normally non-movable wallboards and the edges of expansible contractible members, such as bathtubs, to seal the line of abutment in a watertight and sanitary manner.

During recent years the application of prefinished, baked, plastic enamel wallboards to old and new walls, in bathrooms and kitchens, has become a common method of obtaining smooth, attractive and sanitary wall surfaces, in harmony with the standards of modern living. Ordinarily, such wallboards are formed of a variety of sheet stock, usually of a woody origin, between ⅛" and ¼" in thickness, which may be plywood, hardboard or medium-density board, having a coefficient of expansion materially different from that of the tub, sink, or the like. Such boards have a prefinished surface of hard baked, plastic enamel, produced under controlled conditions to give them a glossy and highly reflective surface. This mirror-like surface reflects the contour of the normal plastered wall. It is most important that such boards be applied so that they are disposed in an absolutely flat plane, since the slightest wave is magnified when the board is viewed at slight angles, due to distortion of the reflections caused by the waves. This means that when such a board is applied to a wall alongside of or over a member that is expansible and contractible due to varying conditions of heat, it must be attached to the wall independent of the adjacent expansible-contractible member with a joint between the member and the wallboard that is closed in a watertight and sanitary manner, yet capable of permitting slight movement of the expansible-contractible member relative to the wallboard.

An excellent example of the application of this invention is found in its use in connection with wallboard abutting bathtubs. Tubs are ordinarily formed of cast iron or sheet steel and, consequently, are subject to movement by expansion and contraction as their temperature varies, both from fluctuations in the heat of the contents, as well as from fluctuations in the heat of the bathroom. Because of the expansion of the bathtub, the application of wallboard to the walls surrounding the tub has presented many difficulties. One such problem arises where it is attempted to pass the wallboard down behind the tub edge. This mode is impractical because splashed water, as well as dust and dirt, can

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enter and accumulate in the downwardly directed crack that is also often not straight and uniform. This problem is particularly aggravated by the common use of shower heads in recessed bathtubs which throw great amounts of water on the walls and wall-tub joints.

Since the wallboard can be edged to a straight line or a line that closely follows the contours of the tub edge, it has been found preferable to apply the wallboard to the walls so that it overlaps or overhangs the roll of the tub edge. Since much of the expansion of a tub is upward, unless expansion space is left between the tub and the bottom edge of the wallboard, pressure will be applied to the wallboard and cause it to buckle or to shove up out of position. Neither is satisfactory. It can readily be seen that is is most important that a suitable sealing molding be positioned between the tub and wallboard and that proper provision is thus made for expansion.

It is a prime object of this invention, therefore, to provide a molding that will adequately seal joints between expansible-contractible members and wallboards and which will function without permitting unsightly gaps and crevasses to occur because of such expansion and contraction.

Another object has been the provision, in a molding as mentioned above, of a space for caulking material, and of means for retaining elastic and adhesive caulking in operating position to insure a watertight, sanitary joint, providing a concealed joining that is not unsightly and one that will not be affected by the wear or normal use or by oxidation.

Still another object of this invention resides in providing, in a molding for the use described, of flexibility that will allow for movement of associated objects without a consequent transfer of pressure to an adjacent trimmed wallboard.

One other object of the invention relates to the provision of a molding to meet the foregoing problems and accomplish the above stated objects and which is simple to form at high speed with uncomplicated tools and may be used effectively with maximum results by relatively unskilled mechanics in making a wallboard installation.

The foregoing objects, and others ancillary thereto I prefer to accomplish as follows:

According to a preferred embodiment of my invention, I dispose in a space between a wallboard and an expansible-contractible member such as a bath-tub, a flexible molding and elastic caulking to seal the joint and also to provide an

attractive and trimmed appearance. Specifically, the molding is formed of metal in a flexible assembly that is essentially J-shaped in cross-section, and has a depending tongue running throughout its length. Such a shape is attained by forming strips of metal in suitable machinery, so that there is a first wall that joins, at its lower edge, with a cross-web which, in turn, is joined to a second wall that is disposed parallel to the first wall, but in spaced apart relation thereto. The second wall is preferably materially shorter than the first wall, since it will be exposed in the final installation. Between the walls there is a groove which is bottomed by the web and it is into this groove that the edge of a sheet of wallboard is placed. The depending tongue, in the preferred form of my invention, is part of the second wall and is disposed below the web. When the molding is installed with the wallboard in place, the tongue presses on the expansible-contractible member. The molding groove receives a ribbon of elastic adhesive material to seal the wallboard edge and similar material is ribboned behind the tongue, and under the web to seal the under wall edge and the space between the web and the expansible-contractible member over which the web lies. The use of such elastic material permits movement of the expansible-contractible member, due to the various effects of heat and cold. By joining the first wall to the web at an angle of more than 90°, additional flexibility may be incorporated in the molding beyond that provided by the sealer material to further insure a joint that is always closed. The exposed second wall of the molding is usually covered by a facing of stainless metal that is laminated thereto and bends over the edges of the second wall and the depending tongue.

The novel features that I consider characteristic of my invention are set forth with particularity in the appended claim. The invention itself, however, both as to its organization and its method of operation, together with additional objects and advantages thereof, will best be understood from the following description of specific embodiments when read in connection with the accompanying drawings, in which:

Fig. 1 is a view in perspective of a bath-wall unit installed acording to my invention;

Fig. 2 is an enlarged end view of the molding of this invention;

Fig. 3 is a view in perspective of an end of a molding as prepared for joinder with a vertical corner molding;

Fig. 4 is an exploded view in perspective of the molding elements that join to form a wall corner; and

Fig. 5 is an enlarged perspective fragmentary view of the joint between a bathtub and wall panel including my wallboard molding strip.

A molding to overcome the defects hereinbefore described should have at least two totally distinct characteristics; it must be capable of conforming to an expansible-contractible member that is at times subject to a large degree of movement; and it must also provide a resiliently sealed joint that is substantially permanently effective under conditions of hard usage in the presence of substantial amounts of water. Accordingly, a preferred form of my invention is to be seen in Fig. 1 as constituting a resilient molding strip interposed between a bath-tub and a wallboard veneered wall to seal, in a watertight and effective manner, the joint at the tub edge.

The bath-wall unit comprises end panel 10 and side panel 12, formed of hardboard, normally from ⅛" to ¼" in thickness and pre-finished on the outer face to a glossy and attractive appearance. Walls 10 and 12 are veneered to the bathroom walls 11 and 13, respectively, by elastic and resilient adhesive means, such as mastic material of a rubber-like consistency. The latter is ordinarily skin-coated to the walls 11 and 13 and combed on the inner faces of panels 10 and 12 before the latter are pressed into upright contact with the walls. The joint between panels 10 and 12 is closed by upright molding 14 which has the grooves 16, 16, each of which receives an edge of a panel on top of a ribbon of elastic and adhesive caulking that has first been placed therein. The top and outer edges of panels 10 and 12 may be trimmed by the use of a cap molding 18 that is rabbeted to partially overlap the panel edge. The installation of the foregoing structure is comparatively easy to accomplish, first because the workman is dealing with upright elements only and secondly, because the work is being done in the opening. I have found, however, that the greatest cause of dissatisfaction arises because of poorly sealed joints along the tub edge, partially due to imperfections in the wall being veneered as well as to difficulties created by the expansion and contraction of the tub when it is hot or cold.

The molding 21 of this invention and the method that I employ to solve the main problem is shown in detail in Fig. 2 to comprise the first wall 20, that rises from web 22 in opposition to second wall 24, whereby there is formed the groove 26 therebetween. By forming these walls and the web from a single strip of metal, it is possible to provide, by downwardly extending from wall 24 the tongue 28 which lies beneath web 22. This is the most convenient method but it will be apparent that the tongue may be formed otherwise, and can even depend from between the edges of the web. In the preferred form of the invention, the molding, per se, is formed of comparatively mild steel or sheet iron so, for decorative and protective purposes, I veneer the face of wall 24 and tongue 28 with a thin strip 29 of stainless steel or similar material that is crimped in place, as shown, and has inside groove 26 and, behind tongue 28, the bent over lips 30, 32.

Referring to the enlarged inset sketch of Fig. 1, it will be seen that the molding is placed to frame the lower edge of the veneering panel and has its tongue abutting the edge 40 of tub B from above. This arrangement is produced in the following manner: a ribbon 42 of elastic and adhesive mastic material is run into groove 26 and the panel edge 44 is pressed into the groove against the ribbon 42. If, as here, the veneer is applied to an old plastered wall W, the plaster around the edge of the tub is scratched, and loose pieces removed before a thin ribbon 46 of mastic is spread thereon for a few inches above the tub. Also a bead of mastic is run along the corner between the tub and wall. The sealing molding is applied to the edge of the panel, with wall 20 lying against the rear or inside face of the panel, and with wall 24 overlapping the front face of the panel. With the corner molding in place, the panel is then applied to the wall, and the adhesive on the back of the panel in the ridges left by the combing action escapes, due to the rupture of the ridges from external pressure on the panel, and fuses with the adhesive that has been skin-coated to the wall. The panel is pressed downwardly so that tongue 28 abuts the tub edge 40

in an overhanging disposition and entraps a portion, if not all, of the bead of mastic that lies in the corner at the bottom of the wall.

With this arrangement, there is then elastic material behind tongue 28 and in groove 26 and behind wall 20, all of which functions to prevent the entrance of water. When the tub expands, as when hot water is run into it, the pressure of the expanding tub is against tongue 28 which moves upward and tends to compress ribbon 42, without exerting pressure on the wall panel itself. Such movement of the tongue and web 22 also tends to stretch the bead 46 that lies under the web, but without breaking the same loose from the tub or wall. As the tub contracts, when it cools, the resiliency of the mastic ribbons and beads, and of the molding itself, insures the return of the molding downwardly and the maintenance of the original tightly sealed joint.

I have found that by forming the molding so that the included angle of joinder between the wall 20 and web 22 is slightly greater than 90°, I am able to insure a slight downward urgence to the tongue 28 which materially enhances its ability to come and go with the expansion and contraction of the tub. Such an angle need only be a matter of two to six degrees to provide the desirable hinging action between first wall 20 and web 22.

The assembly in the lower inside corner where the panels 10 and 12 meet the tub is easily accomplished with my molding by cutting it as shown in Figs. 3 and 4. The front wall 24 and facing 29 is cut away for a short distance back from the molding end leaving the zig-zag lip 60 which cooperates with the lower end of molding 14 in the manner shown in Fig. 4. That portion of wall 22 that is cut away permits the remainder of the wall and web 22 to slip into a groove of corner molding 14, so that its exposed dovetail shaped portion overlaps the lip 60, as well as the edges 16 of panels 10 and 12.

Molding 20 may extend outwardly beyond the tub edge and serve as a horizontal divider between two panels, with the lowermost panel being slipped under tongue 28, in which case the end of molding 20 may meet in a neat and unprojecting manner with upright edges as 18, or other moldings commonly used.

While I have shown and described particular embodiments of my invention, it will occur to those skilled in the art that various changes and

modifications may be made without departing from the invention, and I therefore aim in the appended claim to cover all such changes and modifications as fall within the true spirit and scope of my invention.

Having thus described my invention, I claim:

The combination of a lavatory fixture, a thin stiff sheet of wall covering material positioned above and spaced from the top rear surface of said fixture, and a molding closing the space between the bottom of said sheet and said top rear surface of said fixture, said molding comprising a single elongated strip of material of thin, resilient metal forming a first vertical wall portion positioned at the back of said sheet, and having a web portion transversely extending forward from the lower edge of said first vertical wall portion under the lower edge of said sheet disposed at slightly over a right angle with said first vertical wall portion, and thence descending to form a tongue portion extending vertically downward from the forward edge of said web and folded back on itself and extending upward in abutting relation to the downward extension and continuing upward from the outer upper end of said tongue portion to form a second vertical wall portion extending above said web portion, said first and second wall portions and said web portion defining a channel in which the lower edge of said sheet is positioned with said first and second vertical wall portions abutting rear and front faces respectively of the same, the lower surface of said tongue portion at the point where it is folded back on itself pressing against said top rear surface of said fixture, and said second wall portion being shorter than said first wall portion.

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