Feb. 18, 1936. H. S. DEUBELBEISS 2,031,255

BATHTUB

Filed March 7, 1934

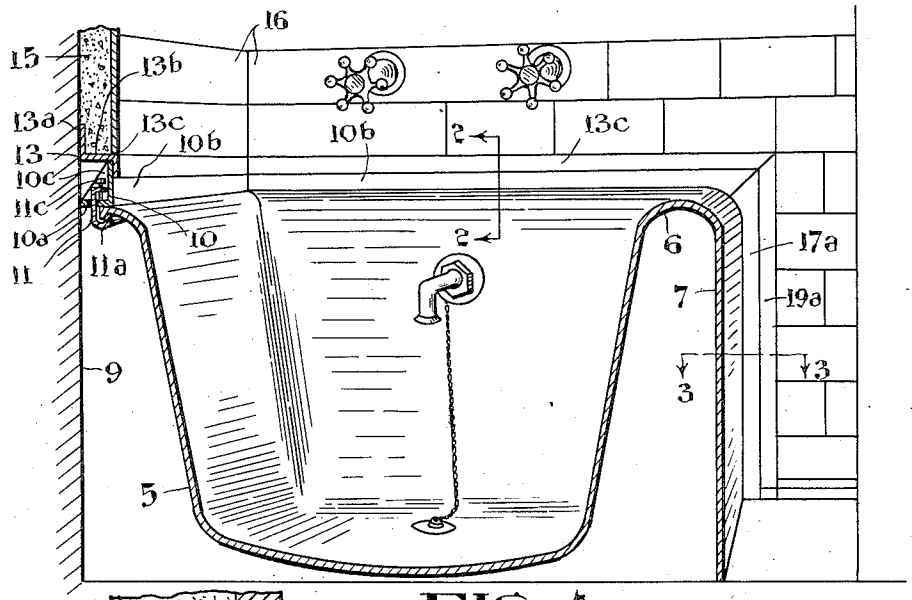


FIG. 1

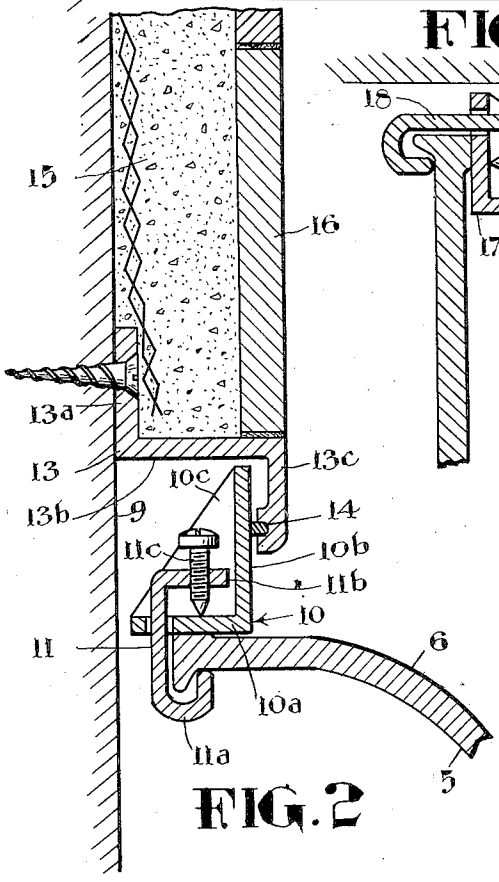


FIG. 2

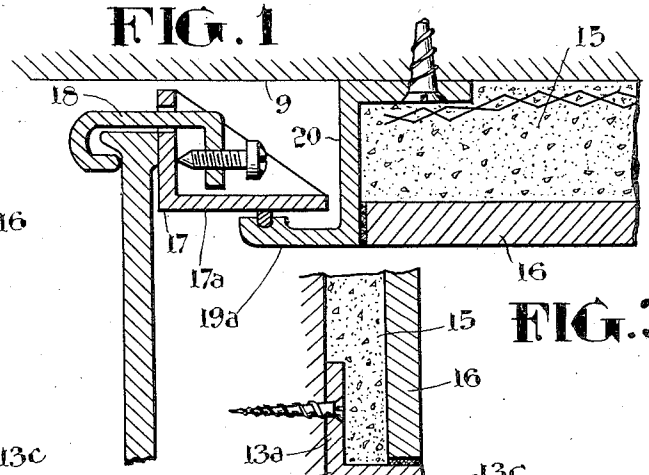


FIG. 3

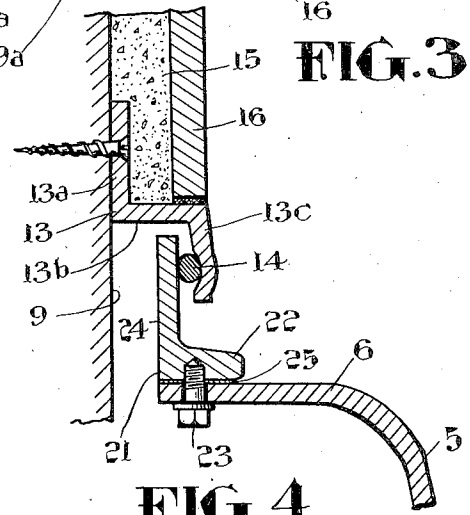


FIG. 4

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BATHTUB

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4 Claims. (Cl. 4—173)

This invention relates to expansion joints for use between the wall finish of a room and fixtures such as bath tubs, wash basins, shower basins, sinks, urinals and the like or between the wall finish and adjacent portions of the flooring.

In the present instance the invention will be described as embodied in a bath tub installation of the built-in type in which the rim and apron portions of the tub are ordinarily fitted against the studding or rough plaster of the wall structure and cemented to the tiling or other wall finish to provide leak-proof joints. In such installations relative movement between the wall and tub is inevitable owing to settling and/or expansion and contraction of the tub. This opens up the mortar joints between the wall and the rim and apron portions of the tub and frequently causes cracking or breaking of the tiling or wall finish. Aside from thus damaging the wall and the general appearance of the installation the opening of the joints gives rise to additional damage where the tub is equipped with a shower attachment since water from the shower head is permitted to enter the spaces between the tub and the wall structure.

With the foregoing in mind it is a particular object of this invention to provide an improved bath tub installation in which the rim and apron portions of the tub are slidably fitted to the tiling or other wall finish to provide expansible leak-proof joints permitting relative movement between the wall and tub to take place without opening up the joints or causing other damage.

A further object is to provide an expansion joint of simple and inexpensive design that may be used wherever it is necessary to provide for relative movement between the wall finish and toilet, plumbing, or other fixtures or between the wall finish and the flooring.

Proceeding now to a more detailed description reference will be had to the accompanying drawing wherein,

Fig. 1 is a view, partly in vertical section and partly in perspective, of a bath tub installation embodying one form of expansion joint designed in accordance with my invention.

Fig. 2 is a vertical section along the line 2—2 of Fig. 1.

Fig. 3 is a horizontal section along the line 3—3 of Fig. 1.

Fig. 4 is a view similar to Fig. 2 but showing a further modification.

In the construction shown in Figs. 1 and 2, 5 designates a standard metal tub provided with the usual rim 6 and apron 7. The tub is installed in the manner characteristic of built-in bath tub installations, the end edges of the apron 7 together with the rear and end edges of the rim 6 being positioned close to the unfinished wall surface 9. Angle bars 10 are arranged in end to end relation upon the rear and end edge portions of the rim 6 and are firmly anchored in place by suitable screw clamps 11. Each angle bar 10 presents a horizontal leg 10*a*, which rests on the rim 6, and a vertical leg 10*b* which extends upwardly from the inner edge of the horizontal leg 10*a* to provide a flange perpendicular to the plane of the rim. The legs 10*a* and 10*b* of each angle bar are preferably joined together at intervals along their length by suitable reinforcing webs 10*c* between which the screw clamps 11 are located. As here shown each clamp 11 has its lower end bent to provide a hook 11*a* engaging the lower surface of the rim 6 and its upper end bent to provide a horizontal screw carrying portion 11*b* through which a clamping screw 11*c* is threaded into engagement with the horizontal leg 10*a* of one of the angle bars.

A series of Z-bars 13, arranged in end to end relation, are attached to the unfinished wall surface 9 so as to extend horizontally along said surface immediately above the rear and end edges of the tub rim 6. Each Z-bar 13 presents a vertical flange 13*a* attached to the wall surface 9, a horizontal flange 13*b* which extends outwardly from the lower edge of said vertical flange and an outer vertical flange 13*c* depending from the outer edge of the horizontal flange. As shown to advantage in Fig. 1 the depending flanges 13*c* of the Z-bars overlap and conceal the upper portions of the vertical flange-forming legs 10*b* of the angle bars 10. Sealing strips 14 are preferably fastened to the Z bar flanges 13*c* to engage the opposing flanges 10*b* so that a leak-proof expansion joint is thus provided between the wall 9 and the rim portions of the tub. The horizontal flanges 13*b* of the Z-bars form abutment shoulders for the edge portions of the rough plaster 15 and the tile finish 16 surrounding the tub.

The exposed surfaces of the Z-bar flanges 13*c* and the angle bar flanges 10*b* may be painted, enamelled or otherwise ornamented to give a pleasing appearance. The enamel may be applied to these flanges in any desired color to give the appearance of an ornamented border between the tile finish 16 and the rim and apron portions of the tub or it may be applied in such a way as to simulate a tile pattern similar to that afforded by the adjacent tiling 16.

Between each end of the apron 7 and the adjacent surface of the wall 9 there is provided an expansion joint which is a duplicate of the expansion joints provided between the wall and the rear and end edge portions of the rim 6. As shown to advantage in Fig. 3 a vertically extending angle bar 17 corresponding to the previously described angle bars 10 is secured to each end of the apron 7 by clamps 18 which are exactly the same as the clamps 11. Each angle bar 17 presents a flange 17a which is overlapped by the flange 19a of the Z-bar 19 which corresponds to the previously described Z-bar 13 in every respect except that it is attached to the wall to extend vertically instead of horizontally.

Fig. 4 shows a slight modification in which each of the angle bars 10 is replaced by a slightly different form of angle bar generally indicated at 21. In this case the horizontal leg 22 of the angle bar is fastened to the tub rim 6 by a screw 23 and the vertical leg 14 extends upwardly from the inner edge of the horizontal leg. The joint between the tub rim 6 and the horizontal leg 22 of the angle bar is also rendered waterproof by a thin layer of cement or other waterproof agent indicated at 24.

Having thus described what I now consider to be the preferred embodiments of my invention it will be understod that I reserve the right to such further modifications as fall within the scope and spirit of the invention as defined by the appended claims. For example, the angle bars carried by the rim and apron elements of the tub may be soldered or welded in place or may be produced as integral extensions of said rim and apron elements. It will also be understood that the expansion joints of the present invention are not confined to bath tub installations but are intended to be employed wherever they can be usefully applied.

Having thus described my invention, what I claim is:—

1. A bath tub installation comprising a tub presenting marginal members lying close to and parallel with unfinished side wall surfaces of the room in which the tub is installed, said tub resting directly on the floor of the room free of attachment to the side walls and being thus free to follow settling movements of said floor, a plaster or tile finishing wall on the sides of the room beyond the side wall area concealed by the tub, said finishing wall presenting edge portions lying adjacent to the aforesaid marginal members of the tub, and flange-forming elements projecting beyond the said edges of the finishing wall into overlapping relation with the inner surfaces of the marginal members of the tub to form a slip joint closing the gap between the tub and the finishing wall.

2. A bath tub installation as claimed in claim 1 in which the flange forming elements are constituted by flanges of metal bars secured to the unfinished wall surface of the room in contact with the said edges of the finishing wall.

3. A bath tub installation comprising a tub presenting marginal members lying close to and parallel with unfinished side wall surfaces of the room in which the tub is installed, structural metal bars rigidly attached to said unfinished wall surface in close proximity to the said marginal members of the tub, each bar presenting a flange attached to said wall surface and lying parallel therewith, a second flange projecting outwardly at right angles to said first flange, and a third flange projecting at right angles to said second flange into overlapping relation with the inner surfaces of the adjacent marginal member of the tub, and a finishing wall on the sides of the room presenting edge portions abutting the second mentioned flanges of the adjacent structural bars.

4. A bath tub installation comprising a tub presenting marginal portions lying close to and parallel with unfinished side wall surfaces of the room in which the tub is installed, said tub being unattached to the side walls of the room and free to follow the settling movements of the floor on which it rests, a finishing wall on the sides of the room beyond the unfinished wall area concealed by the tub, said finishing wall presenting terminal edges spaced from the aforesaid marginal portions of the tub, metal flanges extending outwardly from the unfinished wall portion of the room in contact with the aforesaid edges of the finishing wall, and other flanges extending at right angles to the first mentioned flanges into overlapping relation with the inner surfaces of adjacent marginal members of the tub, said last mentioned flanges serving to close the gap between the first mentioned flanges and the marginal members of the tub.

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